

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/84-11(DE)

Docket No. 50-483

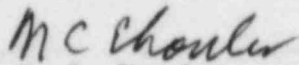
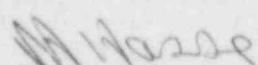
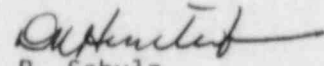
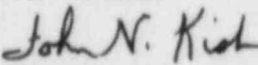
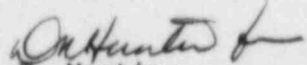
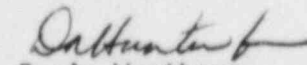
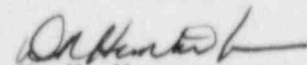
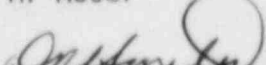
License No. CPPR-139

Licensee: The Union Electric Company
Post Office Box 149
St. Louis, MO 63166

Facility Name: Callaway, Unit 1

Inspection At: Callaway Site, Callaway County, MO; St. Louis, MO

Inspection Conducted: Callaway Site on February 21-24, February 28-29,
March 1-2, March 5-9, and March 14-16, 1984;
St. Louis, MO on March 1-2, 1984

Inspectors:	 N. C. Choules	<u>5/18/84</u> Date
	 R. A. Hasse	<u>5/18/84</u> Date
	 R. Schulz	<u>5/18/84</u> Date
	 J. N. Kish	<u>5/18/84</u> Date
	 T. Martin	<u>5/18/84</u> Date
	 R. A. Westberg	<u>5/18/84</u> Date
	 M. M. Moser	<u>5/18/84</u> Date
Approved By:	 D. R. Hunter, Chief Management Programs Section	<u>5/18/84</u> Date

Inspection Summary

Inspection on February 21-24, February 28-29, March 1-2, March 5-9 and March 14-16, 1984 (Report No. 50-483/84-11(DE))

Areas Inspected: Routine, announced inspection by regional inspectors of QA/QC program administration; audit program; document control; maintenance program; design change program; surveillance test and calibration control program; procurement; receipt, storage, and handling of equipment and material; records; tests and experiments; calibration and control of measuring and test equipment; non-licensed training; offsite review committee; and corrective action.

The inspection involved 333 inspector-hours onsite by seven inspectors including 0 inspector-hours onsite during off-shifts and 26 inspector-hours at corporate headquarters by two inspectors.

Results: Of the fourteen areas inspected, no items of noncompliance or deviations were identified in eleven areas; two items of noncompliance were identified in the remaining three areas (failure of record vault to comply with RG 1.88 and ANSI N45.2.9 commitments - Paragraph 3.i (2); failure to follow procedures regarding evaluation and traceability for measuring and test equipment, notification of QA, and initiation of an incident report - Paragraphs 3.f(2)(a), 3.f(2)(b), 3.f(2)(c), and 3.m(2)(b)).

DETAILS

1. Persons Contacted

Union Electric Company

Corporate Office

*R. J. Schukai, General Manager Engineering
*F. D. Field, Manager, Quality Assurance
*D. W. Capone, Manager, Nuclear Engineering
*W. H. Zvanut, Superintendent Quality Engineering
R. Wendling, Superintendent Nuclear Engineering
J. T. Stoecklin, Supervising Engineer - Nuclear Engineering
*H. W. Gast, Buyer, Purchasing
*J. E. Wobbe, Assistant Purchasing Agent
W. S. Strothman, Supervising Engineer, Supplier Qualifications

The inspectors also interviewed other corporate licensee employees including employees in the engineering and quality assurance organizations.

*Denotes those attending the exit interview on March 2, 1984 at the corporate office.

Callaway Plant

***S. E. Miltenberger, Manager Callaway Plant
***A. H. Neuhalphen, Assistant Manager, Operations and Maintenance
**R. L. Powers, Assistant Manager QA
*G. Randolph, Assistant Manager, Technical Services
**P. T. Appleby, Assistant Manager, Support Services
**W. F. Powell, Assistant Manager, Materials Management
*R. H. Leuther, Superintendent, Maintenance
**J. E. McLaughlin, Superintendent Administration-Records
**J. E. Davis, Superintendent, Compliance
**G. J. Czeschin, Superintendent, Planning and Scheduling
***J. M. Price, Superintendent, Training
***W. H. Sheppard, Superintendent, Engineering
*W. J. Shanks, Superintendent, Chemistry
**J. Gearhart, Supervising Engineer, QA Operations
**K. L. Wickes, Supervisor, Instrument & Control (I&C)
***J. A. McGraw, Supervising Engineer, Nuclear Engineering
*J. V. Laux, Supervising Engineer, QA Technical Support
*E. J. Forck, Supervisor, QA Training
*M. Reinhart, Engineering, QA
*G. Shanker, Engineer, QA
***R. J. McCann, Engineer, QA
*S. J. Smith, Maintenance Advisor
D. Ostrander, Supervising Engineer, Materials Engineering

The inspectors also interviewed other Callaway Plant employees including engineering, training, operations, quality assurance, quality control, planning and scheduling, I&C, maintenance, records and document control, and materials personnel.

USNRC

***J. H. Neisler, Senior Resident Inspector (Construction)

*B. H. Little, Senior Resident Inspector (Operations)

*Denotes those attending the exit interview on March 2, 1984 at the Callaway Plant only.

**Denotes those attending the exit interviews on March 2 and 16, 1984.

***Denotes those attending the exit interview on March 16, 1984 only.

2. Program Areas Inspected

a. Design Change and Modification Program

The inspector reviewed the licensee's Design Change and Modification Program to ascertain whether the QA program relating to design change activities had been established in accordance with the licensee's Quality Assurance Program; 10 CFR 50, Appendix B; the Technical Specifications and ANSI N45.2.11, 1974. The implementation of the licensee's Temporary Modification Program was also reviewed.

(1) Documents Reviewed

- . APA-ZZ-00030, "Conduct of Operations-Engineering," Revision 0
- . APA-ZZ-00110, "Qualification of Qualified Reviewers," Revision 1
- . APA-ZZ-00140, "Conduct of Engineering and Safety Evaluations," Revision 1
- . APA-ZZ-00380, "Temporary System Modification," Revision 2
- . APA-ZZ-00600, "Design Change Control," Revision 1
- . APA-ZZ-20001, "Control of Documents," Revision 1
- . EDP-ZZ-04005, "Design Change Review," Revision 2
- . EDP-ZZ-04006, "Design Change Coordination and Implementation," Revision 1

- . QE-318, "Design Interface Control," Revision 0
- . QE-323, "Design Change Control," Revision 1
- . QE-324, "Design Control," Revision 0
- . QE-325, "Design Input Control," Revision 0
- . QE-326, "Owner's Design Specifications," Revision 0
- . QE-327, "Calculations," Revision 0
- . QE-328, "Design Verification," Revision 0
- . QE-329, "Design Revisions," Revision 0
- . QE-330, "ALARA Reviews," Revision 0
- . QE-331, "Outside Engineering Assistance," Revision 0
- . QE-332, "Safety Evaluations," Revision 0
- . QE-336, "Development of Installation Packages," Revision 0
- . QE-337, "Review and Approval of Nonconformance Reports and Deviation Requests," Revision 1
- . QE-338, "Fire Protection Reviews," Revision B
- . QS-20, "Preparation and Review of Specification," Revision 1
- . QS-26, "Drawing Development and Review," Revision 0
- . Union Electric Quality Assurance Manual, Revision H

(2) Results of Inspection

The procedures established for the control of design changes were APA-ZZ-00600, "Design Change Control," Revision 1; EDP-ZZ-00405, "Design Change Review," Revision 2; and EDP-ZZ-00406, "Design Change Coordination and Implementation," Revision 1. The Corporate Union Electric Nuclear Engineering (UENE) department procedure established for the control of design changes was QE-323, "Design Change Control," Revision 1, which interfaced with plant procedures for implementation of design changes. Several other procedures as listed in the "Documents Reviewed" section above supported design change activities. Concerns identified during review of the licensee program are identified in the following paragraphs.

(a) Review of Procedure APA-ZZ-00600 revealed the following:

- . Design changes were initiated by filling out a form, Callaway Modification Request (CMR). Section 4.1.2 of the procedure specified that an employee can initiate a CMP and shall designate it as Non-Safety Related or Safety Related. There was no specific requirement for a qualified reviewer to review this decision and assure the determination was correct.
- . Section 4.1 specified the approval route for CMPs. Interviews revealed that this section needed to be revised to coincide with the current approval route.
- . After a CMP was approved, a Callaway Modification Package (CMP) was prepared. A CMP approval form controlled the CMP. The onsite Review Committee (ORC) recommendations were only indicated by a check mark on the CMP form and there were no requirements for recording the ORC meeting number at which the CMP was reviewed or to document the ORC decision with a signature by an ORC representative.

The licensee agreed to revise the procedure and form to correct the above concerns. This is considered to be an open item pending further review during a subsequent inspection (483/84-11-01).

(b) Review of EDP-ZZ-04006 revealed the following:

- . There was no guidance in the procedure which addressed what documents should be included in the final modification history package.
- . The turnover requirements at the time a design change was completed were weak. Items such as training, updating drawings, and procedures were addressed but the timing relating to turnover was not addressed. There was no requirement that a responsible person document by signature that all items related to the design change were complete and the system was ready for turnover to operations.
- . A note to Section 4.2.6 required that testing for a CMP be completed prior to declaring the equipment operable. It did not require the testing to be acceptable.

The licensee agreed to make appropriate revisions to the procedure. This is considered to be an open item pending further review during a subsequent inspection (483/84-11-02).

(c) Review of Procedure EDP-ZZ-04005, Revision 1, revealed the following:

- . Section 4.2.2.7.4 required that Work Requests (WR) as necessary be prepared for installation of the design change. There was no guidance when a detailed installation procedure would be required such as for complicated modifications or a WR for very simple modifications. Since installation procedures were not discussed in the procedure there was no guidance on what should be in an installation procedure, such as plant conditions, testing requirements, and reference to drawings, weld procedures and construction procedures.
- . The procedure did not specify who could perform an independent review of a design change as described in ANSI N45.2.11, 1974, "Quality Assurance Requirement for the Design of Nuclear Power Plants."

The licensee agreed to include the description of an independent reviewer in the procedure and consider the inspector's comment regarding installation procedures. This is considered to be an open item pending further review during a subsequent inspection (483/84-11-03).

(d) Review of the licensee's drawing control associated with design change revealed the following:

- . The licensee plans to update drawings required for day-to-day operation of the plant prior to turnover to Operations of a completed design change. The drawings had been identified and referred to as "0" drawings but a listing of these drawings had not been prepared. The licensee agreed to prepare the OP drawing list by fuel load.
- . APA-ZZ-20001, "Control of Documents," Revision 1, described the distribution of documents including drawings. There were no requirements for the updating of OP drawings with marked-up drawings when a design change was turned over to Operations. The licensee agreed to revise the procedure to require providing updated drawings at turnover to the Control Room, Technical Service Facility, Emergency Offsite Facility, and Document Control; and to stamp the affected drawings in other controlled files to indicate a change had been made, referencing to Document Control for the updated drawing. The licensee agreed to complete this revision by fuel load.
- . There was no drawing control procedure which described how drawing revisions were handled between initiation and completion of a design change. The licensee stated that such a procedure was being prepared.

These items are considered to be an open item pending further review during a subsequent inspection (483/84-11-04).

- (e) Other matters identified in the review of the plant design change program were as follows:

Review of Procedure AA-ZZ-00380, "Temporary System Modification," Revision 2, revealed that for an emergency temporary modification Section 5.2.4 required that an effort be made to obtain the approval of the Emergency Duty Officer (EDO) prior to installation of the temporary modification in addition to the approval of the Shift Supervisor. If the EDO approval was not obtained prior to installation then the procedure required his approval to be obtained as soon as practicable. The inspector stated that emergency temporary modifications which affect nuclear safety shall have the approval of a qualified person in addition to the Shift Supervisor prior to installation. The qualified person could be another Senior Reactor Operator. The licensee agreed to review this item and make revisions to the procedure as required.

Review of the licensee's Nuclear Safety Evaluation Check List (NSECL) used to document 10 CFR 50.59 reviews showed that there was little space provided on the form to document the basis for the determination that the change did not involve an unreviewed safety question. The inspector stated that from a human factors standpoint this did not provide any incentive to document an adequate basis. The licensee agreed to delete the basis section from the form and require the basis to be documented on an attached sheet.

Interviews revealed that the responsibilities and methods to obtain the information required by 10 CFR 50.59 to be reported annually regarding changes, tests and experiments had not been established. The licensee agreed to establish these controls.

These items are considered to be an open item pending further review during a subsequent inspection (483/84-11-05).

- (f) The concerns addressed above were primarily related to the plant's part of design change process. The inspector also reviewed the design change process handled by the Corporate Union Electric Nuclear Engineering Department. This review consisted of interviews, review of procedures, and review of training records. The following concerns were identified during these reviews.

- . The engineering procedures related to design change did not address all of the design inputs listed in Section 3.2 of ANSI-N45.2.11, 1974, "Quality Assurance Requirements for the Design of Nuclear Power Plants."
- . For design changes initiated outside of the Callaway Plant (Nuclear Operations), Section 5.1.3.1 of Procedure QE-323, Revision 0, specified that an employee could initiate a CMR and classify it safety-related or nonsafety-related. There was no specific requirement for a qualified reviewer to review this decision and assure the determination was correct.
- . Review of training records for UENE personnel showed that individual training files had not been established. Records were filed on a group basis. Also the required reading lists for new engineers had not been established.

The licensee stated it would review and consider the inspector concerns for inclusion in its programs. These items are considered to be an open item pending review during a subsequent inspection (483/83-11-06).

- (g) Implementation of the Temporary Modification Program was reviewed.

The following temporary modifications were selected from the temporary modification log and reviewed with the following results:

- . 84-E036, Cabinet No. CPK C1004 jumper from TP-N10 to TBN-11 removed, verified and logged closed.
- . 84-E045, Cabinet No. RP053AC lifted lead on terminal No. 35 replaced, verified and logged closed.
- . 84-E043, Loose Parts Monitor CPU card removed and unit unplugged - properly logged and tagged.
- . Two cabinets, each from the Reactor Protective System (RPS), Emergency Safety Feature (ESF) and the Emergency Diesel Generator (EDG) were selected and inspected for jumpers or lifted leads with the following results.
 - RPS - Preop test No. CS035A01 in progress, no lifted leads or jumpers were found.
 - ESF - Cabinets ORK 045D2 and SA 066B inspected, no lifted leads or jumpers were found.
 - DG - Cabinets KJ 122 and NE 106 inspected, no jumpers or lifted leads were found.

Implementation of the licensee's permanent design change program could not be reviewed since no safety related design changes had been accomplished under the operational design change program.

No items of noncompliance or deviations were identified.

b. Maintenance Program

The inspector reviewed the licensee's maintenance program to ascertain whether the QA program relating to maintenance activities had been established in accordance with the Quality Assurance Program and 10 CFR 50, Appendix B requirements. The following items were considered during this review: written procedures had been established for initiating requests for routine and emergency maintenance; criteria and responsibilities had been designated for performing work inspection of maintenance activities; provisions and responsibilities had been established for the identification of appropriate inspection hold points; methods and responsibilities had been designated for performing testing following maintenance work; methods and responsibilities for equipment control had been clearly defined; documentation requirements have been established to identify the persons who performed the maintenance, the replacement parts used, the corrective action taken, and the root cause of the equipment failure; and administrative controls had been established for controlling special processes.

The inspector also reviewed the licensee's preventative maintenance program to verify that a written program had been established which included responsibility for the program, a master schedule for preventative maintenance, and documentation requirements.

Implementation of the licensee maintenance and preventative maintenance program was reviewed.

(1) Documents Reviewed

- . APA-ZZ-00011, "Conduct of Operation-Maintenance," Revision 1
- . APA-ZZ-00141, "Approval of Vendor Manual and Revisions," Revision 0
- . APA-ZZ-00310, "Workman's Protection Assurance and Caution Tagging," Revision 2
- . APA-ZZ-00320, "Initiating and Processing Work Requests," Revision GR1
- . APA-ZZ-00321, "Initiating and processing of Repeating Work Request," Revision GR1

- . APA-ZZ-0330, "Preventative Maintenance Program," Revision 1 and Draft Revision 2
- . APA-ZZ-00360, "Control of Special Processes," Revision 1
- . APA-ZZ-00361, "Administration of Maintenance Welding," Revision 1
- . APA-ZZ-00370, "General Plant Housekeeping," Revision GR-1
- . APA-ZZ-00740, "Requirements for and Duties of Fire Watches," Revisior 3
- . APA-ZZ-00743, "Fire Team Organization and Duties," Revision 2
- . CS-06EL06, Generic Procedure, "Motor Operated Valve," Revision 4
- . MOP-ZZ-C0001, "System Cleanliness Control," Revision 0
- . MDM-BG-QP002, "Centrifugal Charging/Safety Injection Pump Replacement," Revision 0
- . MDM-EM-QP003, "Safety Injection Pump Seal Replacement," Revision 0
- . MTM-ZZ-QA001, "Limitorque Operator Inspection and Maintenance Types SNB-0 through SNB-4/4T, SB-0, 1, 2, and SBD-3," Revision 0
- . MTM-ZZ-QA003, "Limitorque Operator Inspection and Maintenance Types HBC and WBO," Revision 0
- . MTM-ZZ-QA001, "Limitorque Operator Inspection and Lubrication," Revision D
- . DOP-ZZ-0002, "Equipment Status Control," Revision 0
- . ODP-ZZ-0004, "Locked Valve/Breaker Control," Revision 0
- . QCP-ZZ-04001, "Hold, Witness, and Monitor Point Assignment for Maintenance," Revision 2
- . QCP-ZZ-04002, "Performance of Inspections on Maintenance Activities," Revision 1
- . Work Request No. 0101112, Disconnect of Temporary Leads

- . Work Request No. 017927, Reset Relief Valve FIKC1002
- . Work Request No. 018110, Emergency Exhaust Fan Maintenance
- . Work Request No. 0084911, Check of RHR Pump Room Sump Pump Motors
- . Selected Preventative Maintenance Task Sheets
- . Audit Report No. AD5A8307A, QA Audit of Preventative and Corrective Maintenance, August 8, 1983

(2) Results of Inspection

The licensee's procedure for the control of corrective maintenance activities was APA-ZZ-00320, "Initiating and Processing Work Request," Revision GRI.

- (a) The inspector's review of APA-ZZ-00320 and the associated Work Request (WR) form revealed the following:

- . The procedure required shift supervision to approve in writing WRs for implementation which require a Workman's Protection Assurance (Tagout) and verbal approval of most other WRs. With this approval system several safety related type maintenance activities which did not require a tagout would not require written approval of shift supervision, thus increasing the potential for safety related maintenance to be performed without shift supervisor's knowledge. The licensee agreed to have shift supervision approve in writing all safety related Work Requests.
- . Shift supervision was not required to get a copy of the WR at the time work commenced which could be used to keep the control room informed on what maintenance was in progress for plant status and turnover purposes. The licensee plans to make copies of the WRs when the shift supervision approves them and retain them in the control room.
- . There was no requirement for cognizant maintenance supervision to review the completed WR and assure that the root cause of the failure was determined and documented. In this same area the licensee's QA Audit of Corrective and Preventative Maintenance identified in Report No. AD5AT307A on July 19, 1983, stated that, "No mechanism exists for evaluation of the generic implications of identified items nor for assuring action necessary to

prevent recurrence will be taken." This item was being held open by the licensee pending the preparation of a procedure addressing malfunction of plant equipment.

There were no instructions for completing the planning checklist section of the WR form. The licensee agreed to add these instructions to the procedure.

Section 4.2.4.1 of the procedure discussed some of the Shift Supervisor's functions regarding the implementation of a WR. There was no discussion of what shift supervision does to prepare equipment for maintenance prior to maintenance performing the work. There was no reference to the Work Protection Assurance procedure, AA-ZZ-00310, which is used for tagging equipment out of service. The licensee agreed to revise the procedure to specify shift supervision's actions regarding WRs prior to releasing equipment for maintenance.

It was not clear to the inspector at the time of the inspection if the documentation of spare parts used during maintenance was traceable to the purchase order. The licensee agreed to review this and assure that the documentation would be traceable to the purchase order.

The procedure and the work request form required the shift supervision to accept the completed maintenance prior to the performance of retesting of equipment which was out of service for maintenance rather than after the completion of testing. The licensee indicated that it was a mistake to place this approval prior to retesting and that it would be changed to after retesting.

Step (057)a. of the Work Request Explanation instruction required the maintenance planner to review and sign the completed work request. The instruction lacked specific instructions what to review for, such as required signatures, cause of failure documented, and corrective action documented.

Interviews revealed that the licensee planned to enter completed WR information into their Computerized History and Maintenance Planning System (CHAMPS). There was no instruction in the procedure that completed WR information would be put into CHAMPS. Also there was no instruction regarding the handling and storage of WRs in accordance with ADA-ZZ-00220, "Records Management." These instructions were included in other procedures for records such as APA-ZZ-00330, "Preventive Maintenance

Program," and APA-ZZ-00321, "Initiating and Processing of Repeating Work Requests."

- . There was no requirement to record the equipment tagout number on the WR form to provide traceability from the WR to the tagout.
- . There was no requirement to put the date and time that the work activity was initiated on the WR form. This could be useful when reviewing an event.

All of the above items are considered to be an open item pending further review during a subsequent inspection (483/84-11-07).

- (b) Interviews revealed that the licensee's independent verification program as required by NUREG-0737, Item I.C.6, had not been applied to instrument isolation and bypass valves that were manipulated for calibration or maintenance. The licensee committed to include these valves in the independent verification program. Permanent implementation of this independent verification requirement will require the revision of approximately 300 calibration procedures. At the exit interview the licensee committed to require independent verification by the use of temporary instructions prior to fuel load and power operation. After power operation the licensee committed to having the individual calibration procedures revised to include independent verification of instrument valve positions prior to using each procedure. This item is considered to be an open item pending further review during a subsequent inspection (483/84-11-08).

The inspector reviewed how the licensee intended to document the verification. The licensee trained the I&C Technicians to properly remove instruments from service and align for service. Therefore, in the calibration procedure the licensee intended to specify the verification of the specific instruments, identified by an identification number, were properly aligned with a signoff. No valve positions will be specified.

- (c) The licensee's procedure for the control of locked valves and electrical breakers was DOP-ZZ-00004, Revision 0. The procedure required that a locked valve/breaker list be maintained. This list had not been prepared at the time of the inspection. The licensee committed to have a locked valve/breaker list prepared by fuel load. This item is considered to be an open item pending further review during a subsequent inspection (483/84-11-09).

- (d) The licensee had developed a firewatch procedure APA-ZZ-00740, which specified the requirements for fire watches. A weakness was noted in Revision 5 of the procedure in that it did not require the fire watch to be capable of communicating with the control room when a fire hazard activity was performed in the proximity of flammable material, cable trays, or vital equipment. The licensee agreed to include this requirement in the procedure. This item is considered to be an open item pending further review during a subsequent inspection (483/84-11-10).
- (e) Procedure ODP-ZZ-00002, Revision 0, was the licensee's procedure for maintaining the status of equipment that was out of service. This procedure required specific shift supervision action when equipment was removed from service. There was no reference to this procedure regarding shift supervision responsibilities in the tagout procedure, APA-ZZ-00310. This procedure is used to remove equipment from service. The licensee agreed to revise APA-ZZ-00310 to reference ODP-ZZ-00002. This item is considered to be an open item pending further review during a subsequent inspection (483/84-11-11).
- (f) During the review of the licensee's preventative maintenance program as given an APA-ZZ-00330 Revision 1, the inspector noted that section 4.5 required a detailed evaluation of the program every five years. In the proposed revision to this procedure, the five year evaluation had been deleted and an ongoing evaluation specified. In discussion with the licensee the inspector indicated that he believed a periodic evaluation was still a good practice, but that five years was probably too long of an interval initially. The licensee stated it would include a combination of an ongoing and periodic evaluation in the final revision of APA-ZZ-00330.
- (g) The inspector's review of maintenance procedures showed that QC hold points were not included in these procedures. Interviews and review of some procedure which had been used showed that QC inserted hold points in a procedure just prior to the time the procedure was used for a maintenance activity. Interviews further revealed that the licensee planned to add permanent hold points to the procedures where they were required each time the procedure was used.

No items of noncompliance or deviations were identified.

c. Test and Experiments Program

The test and experiment program was reviewed to ascertain whether the licensee had developed an adequate QA program relating to the control of tests and experiments that were in conformance with the applicable requirements specified in the Technical Specifications and 10 CFR 50.59.

(1) Documents Reviewed

APA-ZZ-00104, "Special Test Procedure Development, Conduct and Results Approval," Draft Procedure.

(2) Results of Inspection

The licensee was in the process of developing a QA program for test and experiment which falls under the provision of 10 CFR 50.59. The licensee had written a draft procedure APA-ZZ-00104 for this program. This procedure was out for comments and had not been completed. The completion and approval of this procedure is considered an open item pending further review during a subsequent inspection. (483/84-11-12)

No items of noncompliance or deviations were identified.

d. Surveillance Testing and Calibration Control

The inspector reviewed the program for the control and evaluation of surveillance testing, calibration, and inspection required by Section 4 of the Technical Specifications, Inservice Inspection of Pumps and Valves as described in 10 CFR 50.55a(g), and calibration of safety related instrumentation not specifically controlled by the Technical Specifications. The following items regarding the surveillance testing program and the calibration of safety-related instrumentation were considered during this review: master schedules for surveillance testing, calibration, and inservice testing had been established; responsibility had been assigned for the maintenance of the master surveillance schedule; formal requirements for the conduct of surveillance test, calibrations, and inspections in accordance with approved procedures had been established; responsibilities and definition of methods for the review and evaluation of surveillance test and calibration data had been established; responsibility to assure that required schedules were satisfied had been established; and calibration requirements for non-technical specification safety related instruments had been established.

(1) Documents Reviewed

- . APA-ZZ-00340, "Surveillance Program," Revision 2
- . APA-ZZ-00012, "Conduct of Operations, Instrumentation, and Control," Revision 0
- . APA-ZZ-00380, "Temporary System Modifications," Revision 2
- . QDP-ZZ-04100, "Surveillance Tracking Procedure," Revision 0, (Draft)

- . ISL-BB-0T411, "Loop Calibration," Revision 0
- . ISL-BB-0L459, "Loop Calibration," Revision 0
- . ISL-BB-0P455, "Loop Calibration," Revision 0
- . ISL-BB-0F414, "Loop Calibration," Revision 0
- . ISL-AE-0L517, "Loop Calibration," Revision 0
- . ISF-FC-00P25, "Functional Test," Revision 0
- . ISF-FC-00P125, "Functional Test," Revision 0
- . OSP-SB-00001, "Trip Actuating Device Operational Test,"
Revision 0
- . ITG-ZZ-WNLP3, "Generic Procedure 7300 Card," Revision 0
- . ITG-ZZ-LN002, "Generic Procedure Leeds and Northrup
Indicator," Revision 0
- . ITG-ZZ-FX001, "Generic Procedure Dual Absolute Alarm,"
Revision 0
- . ITG-ZZ-BT004, "Generic Procedure Barton Duff Pressure
Indicator," Revision 0
- . ITG-ZZ-WNCI1, "Generic Procedure 7300 Card," Revision 0
- . C-ML085, "Calibration of Heise Model CM Gauge," Revision 0
- . C-ML077, "Calibration of Digital Thermometer," Revision 2
- . C-ML079, "Calibration of Sling Psychrometer," Revision 0
- . C-ML077, "Calibration of Digital Thermometer," Revision 2
- . C-ML079, "Calibration of Sling Psychrometer," Revision 0
- . C-ML123, "Calibration of Meg Checker," Revision 0
- . "Inservice Testing Program" - Callaway Nuclear Plant,
November 30, 1983

(2) Results of Inspection

Twenty surveillance tests, required by Technical Specifications, were selected at random and it was verified that they were included

in the master schedule. The inspector then verified that these scheduled tests were in accordance with the requirements of the Technical Specifications.

Five safety-related plant instruments which were not specifically required to be calibrated by Technical Specifications were selected at random and it was verified that they were included in a master calibration program and that calibration procedures had been prepared. To date, no calibrations of these instruments have been performed.

No items of noncompliance or deviations were identified in this area.

e. Audits

The licensee's QA audit program was reviewed to verify conformance with regulatory requirements and operational QA program commitments. The inspection findings were attained through the review of documents and personnel interviews.

(1) Documents Reviewed

- . FSAR, section 17.2.18, "Audits," Revision 7
- . QA Procedures
 - QS-3, "Surveillance," Revision 9
 - QS-15, "Management Assessment Audits," Revision 0
 - QA-106, "Audits: Scheduling, Planning, Performance, Documentation and Follow-up," Revision 12
 - QA-112, "Training and Qualification of Quality Assurance Lead Auditors," Revision 8
 - QA-117, "Quality Assurance Indoctrination and Training," Revision 3
- . Audit Schedule 1984-1985, dated 1/11/84
- . Audit Reports
 - AD5A8310B, Document Control
 - AD5A8308A, Nuclear Operations Corrective Action
 - AD5A8305, Weld Examination and Pre-Service Inspection
 - AD5A8311A, Fire Protection
 - AD5A8310C, Chemistry
 - AD5A8306A, Training

(3) Results of Inspection

- (a) Review of the licensee's QA audit program identified the following items of concern:

ANSI N45.2.12 requires that an audit system include several essential elements, such as a policy statement establishing the organizational independence and authority of auditors, and provisions for access of audit personnel to facilities, documents, and personnel necessary in the planning and performance of audits. Interviews with Quality Assurance personnel revealed that auditors were currently having no difficulty in this area, but programmatic coverage of the above items was found to be superficial. Licensee personnel stated that management policy statements explicitly covering ANSI N45.2.12 requirements were forthcoming.

Section 6 of the Technical Specifications states that audits of unit activities shall be performed under the cognizance of the NSRB. Licensee personnel stated that their present approach to this requirement was to send the NSRB a copy of each completed audit report. The licensee agreed to expand its action in this area to include NSRB review of scoping documents for intended audits.

10 CFR 50, Appendix B, criterion XVIII, states that audits shall be carried out to verify compliance with all aspects of the quality assurance program. Discussion with the licensee revealed that, to date, no audit has covered the quality classification of parts, components, and systems as specified by APA-ZZ-00430. The licensee agreed to audit the area of quality classification either as a separate audit or in conjunction with another area such as design or modification control.

The above items are considered to be an open item pending further review of the licensee's action during a subsequent inspection (483/84-11-13).

- (b) 10 CFR 71.101(f) states that a commission approved quality assurance program which satisfies 10 CFR 50 Appendix B and is executed with regard to transport packages will be accepted as satisfying the 10 CFR 71 quality assurance program requirements. This section further states that prior to first use, the licensee shall notify the Director, Office of Nuclear Material Safety and Safeguards, of its intent to apply an approved Appendix B program to transportation activities. Discussion with the licensee revealed its intention to apply its Appendix B program to 10 CFR 71; however, no action had been taken to date regarding the required notification. The licensee agreed to make the required notification prior to conducting 10 CFR 71 related activities. This item is considered to be an open item pending further review during a subsequent inspection (483/84-11-14).

No items of noncompliance or deviations were identified.

f. Measuring and Test Equipment (M&TE)

The licensee's M&TE program was reviewed to verify conformance with regulatory requirements and operational QA program commitments. The inspection findings were attained through: review of procedures, personnel interviews, review of M&TE usage and calibration records, inspection of M&TE storage facilities, and review of work requests to verify M&TE traceability.

(1) Documents Reviewed

- . FSAR, section 17.2.12, "Control of M&TE," Revision 7
- . APA-ZZ-00350, "M&TE Program," Revision 0
- . SAI-9, "Calibration, Certification, Use and Control of Metrology Laboratory Standards and M&TE," Revision 5
- . IDP-ZZ-00001, "M&TE Laboratory Operational Program," Revision 0
- . APA-ZZ-00012, "Conduct of Operations Instrumentation and Control," Revision 0
- . MDP-ZZ-MT002, "Control and Use of Maintenance Department M&TE," Revision 0
- . Calibration Records for the following M&TE:
 - OS-2001-HP, Oscilloscope
 - TW-2001-MT, Torque Wrench
 - RCSC-2004-IC, Strip Chart Recorder
 - T1-2009-QC, Temperature Indicator
 - TS-2005-MT, Test Set
 - CS-2001-IC, Current Shunt
 - MMD-1006-IC, Digital Multimeter
 - GAP-2059-IC, Pressure Gauge
 - DWT-1002-IC, Deadweight Tester
 - MMA-2022-MA, Analog Multimeter
 - RCSC-2005-IC, Strip Chart Recorder
 - MMD-2009-MA, Digital Multimeter
 - TW-2006-IC, Torque Wrench
 - GAP-2034-IC, Pressure Gauge
- . Work Request No. 453, Instrument Replacement
- . Work Request No. 8716, Reactor Protection System Testing

- . Work Request No. 2148, Power Supply Replacement
- . Work Request No. 5496, Valve Repack
- . Work Request No. 6560, Valve Packing Torque
- . Work Request No. 15796, Valve Setpoint Adjustment
- . Work Request No. 1986, Instrument Calibration

(2) Results of Inspection

The following were examples of failure to follow procedures:

- (a) The following two investigations conducted subsequent to M&TE being found out of calibration were not adequate to establish the acceptability of previously performed tests and measurements:

<u>M&TE*</u>	<u>Date of Investigation</u>	<u>Period of Questionable Performance</u>
MMD-2010-IC	4/5/83	3/2/83 - 3/23/83
G-97-U	1/27/83	11/5/82 - 1/17/83

In the case of MMD-2010-IC, measurements taken on the following components were not evaluated:

- EP-LT-956, Level transmitter
- NK-21, 22, 23, 24, Ammeters
- EJ-AV-8804B, Air valve
- BN-LCV-112E, Level control valve
- DE-FIT-3008, Flow indicating transmitter

In the case of G-97-U, measurements taken on pressure indicator CB-PI-96 were not evaluated.

Procedure SAI-9, Revision 5 required the applicable supervisor to evaluate the calibrations done with suspect instruments and determine if any retests and/or recalibrations were required. The failure to perform evaluations of instruments found out-of-calibration in accordance with Procedure SAI-9 is an example of an item of noncompliance with Criterion V of Appendix B to 10 CFR 50 (483/84-11-14(A)).

- (b) A review of work requests revealed seven cases of M&TE usage not being documented in accordance with the check-out card system specified by Procedures SAI-9 and IDP-220001, Revision 0. The following examples pertain:

<u>M&TE #</u>	<u>Usage Date</u>	<u>Work Request No.</u>
ERT-2001-IC	12/2/83	8716
ERT-2002-IC	12/2/83	8716
RCSC-2005-IC	12/2/83	8716
MMD-2009-MA	12/2/83	8716
TW-2006-IC	8/19/83	5496
GAP-2059-IC	5/12/83	1986
GAP-2034-IC	2/3/84	15796

The failure to document M&TE usage in accordance with Procedures SAI-9 and IDP-ZZ-00001 is an example of an item of noncompliance with Criterion V of Appendix B to 10 CFR 50 (483/84-11-15(B)).

- (c) A visual inspection of various pieces of M&TE revealed that there were no calibration stickers on ERT-2001-IC and ERT-2002-IC. The calibration and control records for these instruments also did not specify a calibration frequency on the next scheduled calibration date. These instruments were logged into the M&TE program on 12/1/83 and recorded as used on Work Request 8716 on 12/2/83. APA-ZZ-00350, Revision 0, required that a calibration sticker be attached to each M&TE device and that the sticker contain calibration information including the next scheduled calibration date.

The failure to specify and apply calibration stickers with calibration information to the M&TE in accordance with Procedure APA-ZZ-00350 is an example of an item of noncompliance with Criterion V of Appendix B to 10 CFR 50 (483/84-11-15(C)).

- (d) The licensee was found to be using two different administrative procedures to control the use of M&TE in operations phase activities. These procedures were SAI-9, a startup administrative instruction, and APA-ZZ-00350, a Callaway Plant administrative procedure. Although similar in program content, the two procedures were considerably different in the specifics of implementation. Instruments controlled under the two different administrative programs were being stored and calibrated in common facilities. The licensee agreed to consolidate the control of M&TE under the APA-ZZ-00350 procedure. Additionally, Criterion XII of Appendix B to 10 CFR 50 requires that measures be established to assure that measuring and test devices used in activities affecting quality are properly controlled and that these activities be accomplished in accordance with procedures. Two items in this regard were brought to the attention of the licensee: (1) the plant administrative procedure for the control of M&TE, APA-ZZ-00350, did not contain a mechanism

to control the issuance of M&TE, and (2) the mechanical maintenance group was controlling the issuance of M&TE from its tool room by using a log which was not described or controlled by procedure. The licensee stated that their computerized data tracking system was being used to provide traceability of M&TE and that this activity was procedurally defined. However, the licensee agreed to conducting a review in this area and make improvements as appropriate. The items are considered to be an open item pending further review during a subsequent inspection (483/84-11-15).

- (e) The FSAR, section 17.2.12, requires that the calibration of M&TE be traceable to nationally recognized standards. The certificates of calibration for four viscometer tubes, serial numbers J859, J856, J759, and J813, were reviewed. These certificates were being retained as quality assurance records and provided no indication of the interval of calibration, what organization performed the calibration, and whether or not the calibration was traceable to nationally recognized standards. The licensee agreed to investigate this issue to establish the traceability of the viscometers. This item is considered to be an unresolved item pending further review during a subsequent inspection (483/84-11-17).
- (f) As a result of the findings regarding traceability of M&TE and evaluations of discrepancy reports (DRS), the licensee's QA department reviewed M&TE traceability, process instrumentation used during preoperational testing, and closeout of DRs related to M&TE. This review disclosed the following:
 - . Review of six completed preoperational tests showed 7 out of 42 instruments were not recorded on M&TE usage cards. The instruments were identified in the test procedure. The licensee committed to review all preop tests performed and determine what instruments were not recorded on usage cards. An evaluation will then be performed to determine if any instruments used were out of calibration during performance of preoperational testing and if recalibration or retesting was required.
 - . Approximately 600 DRs issued since January 1, 1983, related to M&TE were reviewed and the dispositions evaluated. This review showed approximately ten reports needed additional evaluation and may result in recalibrations. The licensee committed to complete the evaluations of the DRs and evaluate any effect on preoperational testing and take appropriate corrective action.

. Permanent process instruments used for preop testing were not recorded on usage cards and several process instruments were not scheduled for calibration until after fuel load. The licensee committed to evaluate the use of process instruments used during preop testing and calibrate those instruments which could affect preop test results.

These items are considered to be an unresolved item pending further review during a subsequent inspection (483/84-11-18).

g. QA/QC Administration

The licensee's program for administration of the QA/QC program was inspected, including compliance to ANSI N18.7-1976. This included program boundary, QA/QC procedure control, inspections, audits, surveillances, stop work authority, corrective actions, review of operating experiences, and the mechanism for evaluating the QA program. The corrective action program was reviewed in more detail in Section 2.m.

(1) Documents Reviewed

- . APA-ZZ-00430, "Classification of Systems, Components, and Parts," Revision 0
- . APA-ZZ-00510, "Nonconformance Control and Reporting," Revision 1
- . APA-ZZ-TAP08, "Temporary Control of Operational Incident Reporting," Revision 0
- . QA-101, "Processing of Documents by the Quality Assurance Department," Revision 9
- . QA-102, "Review of Bidders Lists," Revision 4
- . QA-103, "Stop Work Action," Revision 6
- . QA-108, "Design Document Review by Quality Assurance," Revision 5
- . QA-109, "Supplier Evaluation," Revision 5
- . QA-112, "Training and Qualification of Quality Assurance Lead Auditors," Revision 8
- . QA-115, "Initiation of Review of Nonconformance Reports, Deficiency Reports and Startup Field Reports," Revision 6

- . QA-118, "Review of Construction - Related, Preop, Initial Startup, and Operational Procedures," Revision 2
- . QCP-ZZ-02001, "Stop Work Action," Revision 0
- . QCP-ZZ-04001, "Hold and Witness Point Assignment for Maintenance and Modification," Revision 1
- . QCP-ZZ-04002, "Performance of Maintenance and Modification Inspections," Revision 0
- . QE-306, "Review of Corrective Action Reports," Revision 2
- . QE-317, "Review of Preoperational Test Procedures, Plant Operating Procedures and Other Related Procedures," Revision 3
- . QP-402, "Review of Bidders Lists," Revision 4
- . QP-404, "Review of Procurement Organizations Evaluation and Selection of Suppliers and Contractors," Revision 4
- . QP-409, "Bid and Contract Evaluation and Supplier or Contractor Selection," Revision 4
- . QS-1, "Preparation, Issue, Control and Revision of Quality Assurance Procedures," Revision 16
- . QS-7, "Corrective Action Report," Revision 4
- . QS-10, "Notification and Reporting of Significant Deficiencies or Defects and Noncompliances," Revisions 7 and 8
- . QS-13, "Preparation, Issue, and Control of Revisions and Change Notices to the Operating Quality Assurance Manual," Revision 1
- . QS-14, "Preparation, Review and Document Control of Safety Analysis Reports and Subsequent Changes," Revision 2
- . QS-15, "Management Assessment Audits," Revision 0
- . QS-21, "Review of Current Operating Experiences," Revision 0
- . QS-23, "Request for Corrective Action," Revision 1
- . SAI-3, "Start-Up Trending Analysis," Revision 2
- . SAI-4, "Construction Completion Testing Procedure Development, Test Conduct and Results Approval," Revision 7

- . SAI-7, "System Release for Testing," Revision 7
- . SAI-12, "Test Program Problem Resolution," Revision 8
- . SEGI-8, "Operating Experience Review Program," Revision 4

(2) Result of Inspection

- (a) Review of the Surveillance Test Program revealed that the licensee did not have an Operational QA Program requirement to witness or observe the performance of selected surveillance tests. During the second week of the inspection the licensee revised the QA surveillance program to include by observation, the performance of selected surveillance tests. This revision was documented in the "Summary Statement of Functional Areas." The matter appears to be acceptable as revised.
- (b) Procedure QS-23, "Request for Corrective Action," did not adequately provide for the timeliness of review of "Requests for Corrective Action" as related to their safety significance. The licensee stated that the procedure would be revised to provide a programmatic requirement for timely review of "Requests for Corrective Action." This item is considered an open item pending further review during a subsequent inspection (483/84-11-19).
- (c) A procedure did not exist specifying the purpose and scope of the Master Tracking System. The following type documents were entered in the computer system and tracked by the Master Tracking System.
- . design related documents
 - . nonconformance reports
 - . start-up field reports
 - . start-up work requests
 - . nonconforming material reports
 - . QA open items
 - . NRC identified items

The licensee agreed to prepare a procedure and was in the process of issuing a procedure delineating the purpose and scope of the Master Tracking System.

No items of noncompliance or deviations were identified.

h. Receipt, Storage and Handling of Equipment and Materials

Receipt, storage and handling of equipment and materials was reviewed to ascertain whether the licensee was implementing a QA program that was in conformance with Regulatory Guide 1.38, Revision 2, ANSI N45.2.2-1972, commitments in the Quality Assurance Program, and implementing procedures. The inspector verified that responsibilities were assigned for receipt, acceptance, release, storage, and handling of items. Nonconforming items were reviewed for identification, segregation, control and release. Receipt inspection reports were examined for applicable signatures, justification for use, damage recorded, and stipulated inspection criteria. Procedures were reviewed for levels of storage, preventive maintenance, and appropriate environmental conditions, including shelf life.

(1) Documents Reviewed

- . APA-ZZ-00330, "Preventive Maintenance Program," Revision 1
- . APA-ZZ-00410, "Storeroom Receiving, Storage, and Handling of Material, Components, and Equipment," Revision 1
- . MDP-ZZ-MH001, "Hoisting Equipment Inspections," Revision 0
- . MDP-ZZ-MH002, "Operation and Inspection of Portable Hoisting Equipment," Revision 0
- . MDP-ZZ-MH003, "Rigging," Revision 0
- . MDP-ZZ-MH004, "Control of Heavy Loads and Special Lifting Devices," Revision 0
- . MDP-ZZ-MH005, "Control of Material Handling Equipment/Rigging," Revision 0
- . QCP-ZZ-03001, "Review of Bill of Material Followers," Revision 0
- . QCP-ZZ-03002, "Material Receipt Inspection Checklist Preparation," Revision 0
- . QCP-ZZ-03003, "Material Receipt Inspection," Revision 0
- . WSP-ZZ-00002, "Storeroom Storage and Control of Materials, Components and Equipment," Revision 0

- . WSP-ZZ-00003, "Storeroom Material Receiving, Preliminary Inspection and Identification," Revision 0
- . WSP-ZZ-00005, "Storeroom Material Handling, Hoisting, and Rigging," Revision 0
- . WSP-ZZ-00008, "Storeroom Issue, Release and/or Return of Material, Components and Equipment," Revision 0
- . WSP-ZZ-00009, "Control and Disposition of Preventive Maintenance Items while in Storage," Revision 0
- . WSP-ZZ-00010, "Control and Disposition of Shelf Life Items While in Storage," Revision 0

(2) Results of Inspection

- (a) During inspection of the "operation" warehouse the inspector determined, through discussions with warehouse personnel, that the licensee intended to issue items from its "construction" warehouse after fuel loading. Material control personnel stated that the "construction" warehouse would remain under Daniel International control which did not have an operational QA program. The inspector discussed this issue with the Assistant Manager QA and it was resolved that the "construction" warehouse would either remain under Daniel International and have an operational QA Program equal to the licensee's or be transferred to the licensee and controlled by the licensee's QA program. The inspector was also concerned with shelf life items and corrosion/deterioration of items in storage since the initial stages of construction. This item is considered to be an open item pending further review during a subsequent inspection (483/84-11-20).
- (b) A required reading list for receipt inspection personnel qualified to ANSI N45.2.6 did not exist. From discussion with inspectors and a review of various receipt inspection reports it appeared the receipt inspectors were adequately trained, but documentation of their training involving procedures that had been read or that needed to be read in order to assure correct job performance was absent. The licensee was in the process of issuing a procedure delineating the required reading for receipt inspection personnel and entailing the documentation of the procedures read by receipt personnel qualified to ANSI N45.2.6.

No items of noncompliance or deviations were identified.

i. Records Program

A review of the Records Program was conducted to ensure the following requirements were met: responsibilities have been assigned to assure that records will be maintained; responsibilities assigned and controls established to assure transfer and retention of construction phase records; a filing system has been established for timely retrieval of records; a method has been established for verifying that records received and reviewed were in agreement with the transmittal receipt; provisions have been established for governing access to the files and for maintaining accountability of records removed; methods have been established for handling of superseded records; and the storage facilities meet ANSI N45.2.9-1974 requirements.

(1) Documents Reviewed

- . QCP-ZZ-03004, "Quality Control Receiving and Inspection Files," Revision 0
- . APA-ZZ-00024, "Conduct of Operations, Administrative - Records," Revision 0
- . ADP-ZZ-20003, "QA Vault, Fire Suppressant System," Revision 0
- . APA-ZZ-00220, "Records Management," Revision 0
- . APA-ZZ-00101, "Preparation, Review, Approval, and Control of Plant Procedures," Revision 5
- . Callaway File Index, VOSAR 84-029 of February 16, 1984
- . Audit Report No. ADSA8310B of December 5, 1983, "Quality Assurance Audit of Document Control"
- . RMS-5, Part III, "Plan for Accumulation and Retention of Plant Records for the Standardized Nuclear Unit Power Plant," Revision 0
- . Daniel Administrative Procedure AP-XV-01, "Records Turnover," Revision 0
- . Daniel Administrative Procedure, AP-X-04, "Records and Filing," Revision 10

(2) Results of Inspection

Review of the Records Program indicated that as a result of an audit in October 1983, a large number of corrective action measures were in the process of being implemented to correct previously identified problems. The inspector determined that prior to the audit the records program was not functioning

properly. However, due to an increase in resources and personnel, the program was functioning to the point where records were being properly reviewed and filed within a reasonable amount of time. Some corrective action measures were not fully implemented yet. It appeared that all the responsibilities and commitments described above have been met with the exception described below:

Onsite inspection of the Records Vault used to store radiographs and certain other QA records revealed that the vault did not meet ANSI N45.2.9 requirements. Union Electric Procedure No. APA-ZZ-00220, Revision 0, Paragraph 2.4, states "These vaults meet the recommended storage condition for special process records (i.e., photographs, radiographs, negatives or microfilms) which are light, pressure and temperature sensitive. These vaults also meet the requirements specified in ANSI N45.2.9-1974." Inspection of the vault revealed that penetrations for piping/tubing were not sealed and contained breakthroughs around the diameter of the piping into the outside office area of the vault. These penetrations could allow the spread of combustion products inside the vault and result in deterioration of the records and thus invalidate the fire resistance rating of the structure. Also, the unsealed penetrations would provide an escape path for the Halon fire suppressant and potentially degrade the fire protection system.

N45.2.9-1974 and Appendix 3A of the Union Electric Operating Quality Assurance manual require..."storage vaults to be Class A fire-rated with a recommended two hour minimum rating."

The failure to seal piping penetrations is an item of noncompliance with Criterion XVII of Appendix B to 10 CFR 50, the Quality Assurance Program as described in Section 17.2.17 and Appendix 3A of the FSAR, Regulatory Guide 1.88, ANSI N45.2.9 and APA-ZZ-00220 (483/84-11-21).

j. Document Control

A review of the licensee's Document Control program was conducted to ensure the following requirements were met: current as-built drawings including piping and instrumentation drawings were provided to the plant site in a timely manner; proposed drawing changes and revised drawings received the same level of management review required of original drawings and that drawings having outstanding revisions were appropriately marked; control of obsolete drawings was provided for; discrepancies found between as-built drawings and as-constructed facility were handled as "Design Changes"; responsibilities to ensure the above criteria were met and designated; and master indices were maintained for drawings manuals, technical specifications, and procedures which indicate the current revision.

(1) Documents Reviewed

- . APA-ZZ-00200, "Document Control," Revision 2
- . ADP-ZZ-20007, "Process and Control of Plant Operating Manual Procedures," Revision 1
- . ADP-ZZ-10006, "DBF:TRACK, Data Base File," Revision 0
- . DIC Construction Procedure AP-X-03, "Document Control," Revision 13
- . Vol. 1 of Administrative Procedures and Quality Control Procedures Distribution List
- . Distribution List for Controlled Drawings Available at Pre-determined Access Points

(2) Results of Inspection

Approximately ten drawings were chosen from the master distribution file and reviewed at the following access points: Control Room, Technical Center, Emergency Off-Site Facility (EOF), Maintenance Department and Materials Department. The drawings were chosen at random and were reviewed for revision number and latest incorporated Design Change Number (DCN). These latest revisions and DCNs were then checked against the number listed in the master file index and Document Retrieval & Distribution (DRD) cards. All of the drawings had the correct revision and DCN number on them except for a J-06 series of drawings (per the master list) in the EOF. Review of the DRD cards at the master index indicated the control number for these drawings was missing from the cards. Also found at the EOF were two drawings, COL 2902 and COL 2906, that did not have the latest DCNs incorporated. The inspector was informed that due to utilization of the EOF as a training facility the document control people were sometimes denied access and thus could not update the drawings on a required basis.

The inspector discussed the above items with the licensee and noted both appeared to be isolated cases. Licensee personnel stated they would correct the problems noted above. This is considered to be an open item pending further review of the licensee's actions during a subsequent inspection (483/84-11-22).

No items of noncompliance or deviations were identified.

k. Procurement Program

The procurement program was inspected for compliance with regulatory requirements and the operational QA program (FSAR Section 17.2). The inspection consisted of a review of applicable procedures, procurement documents and interviews with involved personnel.

(1) Documents Reviewed

- . APA-ZZ-00400, "Procurement of Parts, Supplies, Materials and Services," Revision 0
- . APA-ZZ-00430, "Classification of Systems, Components and Parts," Revision 0
- . APA-ZZ-00390, "Review of Equipment Qualification Documentation," Revision 1
- . APA-ZZ-00401, "Control of Vendor and Contractor Activities," Revision 0
- . QP-401, "Processing of Purchasing Documents," Revision 4
- . QP-402, "Review of Bidders Lists," Revision 4
- . QP-404, "Review of Procurement Organizations Evaluation and Selection of Supplies and Contractors," Revision 4
- . QP-408, "Preparation and Review of Bid Documents," Revision 0
- . QP-409, "Bid and Contract Evaluation and Supplier or Contractor Selection," Revision 4
- . QP-410, "Preparation and Handling of the Purchase Order and Changes to a Purchase Order," Revision 9
- . QP-411, "Review of Contractor (Construction) Procurement Procedures," Revision 3
- . QP-412, "Preparation and Handling of the Purchase Order and Changes to a Purchase Order for Materials Requisitioned on Other than Form 102," Revision 2
- . QA-109, "Supplier Evaluation," Revision 5
- . AP #1, "Callaway Plant - The Purchasing Function"
- . AP #2, "Purchasing Department Procedures for Processing Safety Related Procurements"
- . Selected Purchase Orders Processed by UE Purchasing
- . Selected Parts Classification Worksheets
- . Qualified Suppliers List
- . SNUPPS Q List
- . Selected Vendor Audit Files

(2) Results of Inspection

The UE procurement process for safety related materials is basically as follows:

- . Preparation of Bill of Materials (requestor)
- . Determine if item is safety related (Materials Engineering)
- . Determine procurement level (Materials Engineering)
- . Establish quality and technical requirements (Materials Engineering)
- . QA review and approval (QA)
- . Procurement (UE Purchasing)
- . Receiving inspection (QC)

The determination as to whether or not an item is safety related is accomplished through the use of worksheets. The initial step is to determine if the item is on the Callaway Q-List (which incorporates the SNUPPS Q-List). If the item is not on the list, it is evaluated against a set of criteria to determine if it is safety related. If it is not safety related, it is reviewed against another set of criteria to determine if it is "special scope," i.e., within the scope of supplemental QA programs.

If the item is determined to be safety related or special scope, it is assigned a procurement level, i.e., method of procurement. The levels are:

<u>Level</u>	<u>Method</u>	<u>QA Qualification of Supplier</u>
I	Specification	Yes
II	Replacement in Kind	Yes
III	Verification	No
IV	Catalog	Yes (limited)
V	Commercial	No

The levels differ in the methods of stating technical ordering requirements and acceptance. Various restrictions apply to each level. Pressure boundary parts must be ordered under Level I, parts requiring qualification may not be ordered under Level V, etc. The inspector reviewed selected purchase orders and classification documents and determined that the system was being properly implemented. Interviews with involved personnel verified that they understood the system and were knowledgeable of its requirements.

The following items of concern were identified during the inspection:

- . Procedure WEP-ZZ-00001, "Procurement Level I and Level V Lists Development, Control and Revision," has not been issued. This procedure is required to fully implement the requirements of APA-ZZ-00400, "Procurement of Parts, Supplies, Materials and Services."
- . Procedure WEP-ZZ-00002, "Classification of Materials, Parts and Equipment," has not been issued. In the interim, APA-ZZ-00430, "Classification of Systems, Components and Parts," is being used for the classification of non-system specific items.
- . Although a vendor history file has been established, it was not controlled by a formal procedure covering content and use. The procedure should address the guidance provided in Section C.3.b.(2) of Reg. Guide 1.144. The licensee agreed to address this issue.

The above items are considered to be an open item pending further review during a subsequent inspection (483/84-11-23).

Several other items of concern as follows were discussed with the licensee and were closed during the inspection:

- . Paragraph 6.5.5.2 of Procedure APA-ZZ-00400 stated in part (relative to Level V procurements), "...The item's critical characteristics, are sufficiently controlled by industry to assume adequate quality to meet safety related applications." The licensee agreed to change the word assume to assure. The term "assume" was likely a typographical error.
- . Procedure APA-ZZ-00400 does not define the term "dedication" relative to 10 CFR 21. The licensee agreed to include the definition in the procedure.
- . Procedures QP-409, 410, and 412 require revision to reflect the five level procurement system. The inspector was satisfied that these revisions were in progress.
- . The SNUPPS Q-List (which will be incorporated into the Callaway Q-List) was not complete. Procedure APA-ZZ-00400 could accommodate this although at some increased administrative burden. The SNUPPS Q-List was scheduled for completion by mid-April 1984.

No items of noncompliance or deficiencies were identified.

1. Nuclear Safety Review Board (NSRB)

The activities of the NSRB were inspected to determine if the board was fully functional and if the activities were being conducted in accordance with the proposed Technical Specifications. The inspection included a review of the NSRB charter and meeting minutes and an interview with the NSRB Chairman.

(1) Documents Reviewed

- . "Charter for the Operation of the Nuclear Safety Review Board," Revision 1
- . NSRB meeting minutes for meetings conducted on November 1, 1983 and July 27, 1983

(2) Results of Inspection

The NSRB charter was consistent with the proposed Technical Specifications. While some detail was provided on how committee responsibilities were to be discharged, additional detail should be included. For example, the charter did not mention the Independent Safety Engineering Group (ISEG) which acts as a subcommittee for the review of safety evaluations (meeting minutes of July 27, 1983) or how this function would be monitored by the NSRB. Further, the Corporate Radiation Protection Committee which reported to the NSRB was not mentioned in the NSRB charter.

During the review of the NSRB meeting minutes the inspector noted that no On-site Review Committee (ORC) meeting minutes had been reviewed as required by the proposed Technical Specifications. The chairman of the NSRB stated that currently the ORC minutes were being reviewed by the NSRB secretary and only significant items were referred to the NSRB for review. This was being done since most ORC activity at this time was procedure review and the ISEG was providing overview of this activity. The ISEG could then be considered as functioning as a subcommittee to the NSRB for this function. The chairman of the NSRB expected that after the plant became operational ORC minutes would be distributed and reviewed by all NSRB members.

The inspector was satisfied that the NSRB was properly constituted and capable of performing its assigned functions. However, the inspector is concerned about the lack of documented methods to be used in performing these functions (see Section e(2) above also) and the use and control of subcommittees. This is considered an open item pending further review during a subsequent inspection (483/84-11-24).

m. Corrective Action

The corrective action systems were inspected for compliance with regulatory requirements and the operational QA program (FSAR). The inspection consisted of a review of applicable procedures, corrective action documents, and interviews with involved personnel.

(1) Documents Reviewed

- . APA-ZZ-00500, "Nonconforming Operations Reporting and Corrective Actions," Revision 1

- . APA-ZZ-00510, "Nonconformance Control and Reporting," Revision 0
- . QS-23, "Request for Corrective Action," Revision 2
- . QA-106, "Audits: Scheduling, Planning, Performance, Documentation and Followup," Revision 12
- . QA-115, "Initiation or Review of Nonconformance Reports, Deficiency Reports and Startup Field Reports," Revision 6
- . QS-7, "Corrective Action Report," Revision 4
- . WE-313, "Nonconformance Report, Review, Approval and Disposition," Revision 6
- . 32 Startup Field Reports
- . 27 Incident Reports
- . 22 Nonconforming Materials and Deviation Reports

(2) Results of Inspection

- (a) Corrective action documents to be used during startup and operations include:
- . Nonconforming Materials Report (NMR) - hardware deficiencies
 - . Deviation Report (DR) - documentation deficiencies
 - . Startup Field Report (SFR) - deficient conditions identified by the startup organization
 - . Request for Corrective Action (RCA) - used primarily by QA (audit findings, etc.)
 - . Correction Action Report (CAR) - Similar to RCA for significant issues
 - . Incident Report (IR) - event, procedure violation, etc.
 - . Work Request (WR)
 - . PM or Surveillance Task Sheets

There appeared to be a vehicle for documenting all deficiencies and tracking the completion of required corrective actions. The inspector had some concern that there were a number of systems for documenting deficiencies and tracking corrective actions resulting

in making the collective corrective action system unwieldy. For example, several cases were reviewed in which both IRs and NMRs were prepared for a single event. This led to two separate systems for tracking the corrective action for a single event. This was discussed with QA personnel who also had some concern in this area. The inspector was satisfied that this issue will be monitored by the licensee and appropriate actions taken if problems do arise.

The licensee did not have a trending program in place at this time as required in SAR Sections 17.2.15 and 17.2.16. This had also been identified by internal audit and corrective action was in progress. This is considered an unresolved item pending further review during a subsequent inspection (483/84-11-25).

- (b) On February 22, 1984, the NRC inspector reviewed documentation classified within the Operating Experience Review Program. One of the documents reviewed was Startup Field Report (SFR) No. GK-045A, dated January 23, 1984, concerning the control building HVAC. The Startup Field Report stated, "Per CPOE 84-1 the control room can become filled with dangerous levels of exhaust fumes from the aux boiler. This can affect control room habitability during normal plant operation." CPOE 84-1, Callaway Plant Operating Experience, dated January 16, 1984, contained the following information:

"SUBJECT: Exhaust fumes entering control room HVAC fresh air intake.

UNIT: Callaway Unit 1

EVENT DATE: 12/30/83

NSSS/AE: Westinghouse/Bechtel

SUMMARY: The control room atmosphere became close to unacceptable limits due to exhaust fumes being drawn into the control room HVAC fresh air intake.

DESCRIPTION: With appropriate prevailing winds and air inversion, the exhaust from the auxiliary boiler was blown past the control room HVAC fresh air intake. These fumes were drawn into the control room filling it with exhaust fumes. The personnel in the control room became nauseated. Daniel Safety was called to the control room and determined the air was close to unacceptable level of carbon monoxide. To clear the building air, the fresh air intakes were secured and, HVAC placed on recirculation." (Note: An interview with Daniel Safety, revealed that no carbon monoxide readings were taken.

- "COMMENTS: 1. The control room HVAC air intake has no monitor for carbon monoxide or carbon dioxide. If a monitor were installed in the intake with an alarm in the control room, the ventilation could be placed on recirc prior to reaching unacceptable levels in the control room atmosphere.
2. The emergency diesel exhausts could cause the same type of problem if the atmosphere conditions were appropriate.
3. Altering of the exhausts or the air intakes to prevent this problem may be a permanent solution.
4. However infrequently this situation may occur, once Callaway has loaded fuel and begun operation, the habitability of the control room must be maintained."

Based on statements by a Daniels Shift Safety Engineer, it appeared that the incident was caused by atmospheric conditions. In a statement regarding the incident the Safety Engineer stated the following:

"The smoke was coming from the auxiliary boiler room stack, it went up a certain distance above the buildings and then it was like it hit a plexiglass sheet and came back to settle on the building. The slight breeze (very slight) had the smoke held close to the buildings and it flowed like a fog over the Power Blocks Contours."

On January 4, 1984, the Operations Superintendent, M. E. Taylor, wrote a memo to Mr. W. R. Campbell, the Assistant Superintendent of Engineering who was acting as Superintendent of Engineering. The memo stated:

"A potentially significant problem was noted recently. During Hot Functional Testing, a specific combination of operational and environmental conditions existed (on one occasion) that resulted in exhaust fumes from the auxiliary boiler entering the Control Room. Due to the respective locations of the auxiliary boiler exhaust stack and the Control Building HVAC normal air inlet, an unacceptable concentration of fumes built up in the Control Room. Corrective action was taken (Control Building normal air supply was secured). (This, in fact, was remedial action.)

Please evaluate the designs associated with this problem and determine if this was an oversight. Depending on the results of your evaluation, I could submit a Design Change Request."

On January 24, 1984, the Startup Field Report was dispositioned to Bechtel Engineering for resolution. On February 2, 1984, Bechtel Engineering provided the following disposition:

"During the Callaway Plant Operating Experience (CPOE) 84-1, the Control Building fresh air supply fan intake smoke detector GK-XSH-199 (ref. M-651-120) was inoperative. This detector will indicate on the fire detection panel if any combustion products entered the intake line to the fan (ref. FSAR 6.4.2.4). In those few cases where the atmospheric condition are appropriate leading to the exhaust from the Aux Boiler being taken into the system the fire protection panel will indicate the condition to control room personnel who can manually isolate the fresh air intake using HIS 151 and 150 to close dampers GKD 128 and 129, then switch the system to internal recirculation until the condition has cleared."

On February 7, 1984, Union Electric's Startup Engineering Group accepted the Bechtel response, thereby resolving and closing this issue, based on the Bechtel evaluation. Acceptance of the Bechtel response was documented on the Startup Field Report by a Startup Engineer, the Startup Group Supervisor, with final acceptance and close-out of the Startup Field Report by the Problem Resolution Engineer.

After NRC involvement in the incident on February 22, 1984, the licensee submitted a potential significant deficiency report, according to 10 CFR 50.55(e), on February 24, 1984, and revised the report to a significant deficiency report on March 2, 1984. Additional information provided by the licensee concerned a February 17, 1984, pencil notation on the Corporate Superintendent of Engineering's copy of Startup Field Report No. GK-045A stating that the document was to be reviewed by a Supervising Engineer, General Office, St. Louis. Interviews revealed that the SFR and Bechtel's response were being evaluated; however, prior to February 22 this was not a high priority item.

Since February 22 the licensee and Bechtel have reevaluated the incident. The licensee issued a final 10 CFR.50(c) report on March 28, 1984. In this report the licensee committed to install redundant non-IE monitors for carbon monoxide and carbon dioxide gases. These were expected to be installed and operational prior to ascension above 5% power.

Although the licensee intended to install carbon monoxide and carbon dioxide monitors, review of the evaluation of the incident by Bechtel indicated that with an operable smoke detector and the fact that Regulatory Guide 1.78 recognized human detection as a means of detection of hazardous chemical buildup, no modification to the plant was recommended. Also Bechtel concluded that the event was not reportable under 10 CFR 50.55(e). In a letter dated March 26, 1984, from the SNUPPS organization to the licensee, SNUPPS concurred with the Bechtel conclusion on the reportability of the item but also agreed with the licensee that the CO and CO₂ detectors should be installed. Region III accepted this position.

Review of this event and the subsequent evaluation and reporting identified the following:

- . The incident took place on December 30, 1973. The Union Electric Quality Assurance Department was not notified of the incident until NRC involvement on February 22, 1983. Quality Assurance Procedure QS-10, Revision 7, Section 4.5 required:

"Union Electric Company personnel who identify an apparent significant deficiency, defect or noncompliance are responsible for promptly notifying the Manager, Quality Assurance; the Superintendent, Site Quality Assurance; or the appropriate Supervising Engineer, Quality Assurance."

As previously discussed, this incident was identified on January 4, 1984, as a potentially significant problem by the Operations Superintendent and written up as an SFR on January 23, 1984. The failure to notify the Quality Assurance department of the exhaust gases in the control room incident in accordance with Procedure QS10, Revision 7, is an example of an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (483/84-11-14(D)).

- . The SFR was not initiated until January 23, 1984, some 25 days after the incident regarding smoke in the control room occurred. Procedure APA-ZZ-TAP08, Revision 0, Sections 2.1 and 3.0, required the Shift Supervisor/Operating Supervisor to have an SFR initiated at the time of notification of an incident. The failure to initiate an SFR in a timely manner in accordance with Procedure RPA-ZZ-TAP08 is an example of an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (483/84-11-14(E)).
- . The adequacy of the installation of a single non-IE smoke detector in regard to redundancy and accident conditions will be evaluated by the NRC. This item is considered unresolved pending completion of the NRC review (483/84-11-25).
- . Procedural and operator training and retraining regarding operator actions in event of a similar exhaust gases in the control room event needs to be addressed by the licensee. This matter is considered to be an open item pending review of the revised procedures regarding operator actions and training and retraining activities (483/84-11-27).

(c) Other items of concern identified during the inspection were:

- . Several RCAs written as a result of a vendor audit were closed after receiving the vendor's corrective action plans without verifying implementation. The justification documented in the audit file noted that the items were minor,

had no significant impact on the acceptability of the vendor's QA program, and verification of corrective action did not justify the cost of a separate trip to the vendor's plant. The inspector agreed with the assessment except that the RCAs should have remained open and closed during the next regularly scheduled audit. The closure of these RCAs prior to verifying the corrective action is not in accordance with Regulatory Guide 1.144, Revision 1, Section C.6 and Sections 17.2.16 and 17.2.18 of the FSAR (Rev. 6). This was discussed with licensee personnel who agreed to assure verification of corrective action implementation at the next regularly scheduled audit of this vendor and to review controlling procedures for corrective action documents and assure that they clearly implement the FSAR commitments. This is considered an open item to be reviewed during a future inspection (483/84-11-28).

The IR form had no clear indication of item closeout. This was also identified during an internal audit and corrective action has been committed. The inspector had no further concern with this item.

Three completed PM Task Sheets (Nos. P.0003231, 0005130, and 0005033) were reviewed which required followup corrective action but did not document the corrective action initiated as required. This was discussed with licensee personnel who verified that corrective action had been initiated. An IR was initiated and changes to the controlling procedure drafted to clarify responsibilities for properly documenting the required information on the form. The inspector was satisfied with the corrective action and has no further questions on this matter.

One NMR reviewed involved the conditional release to install a connector other than the one specified in the design. The manufacturer no longer produced the connector specified by the design and supplied the subject connector as "fully equivalent or better". The condition of the release was engineering review and approval of the substitution. The NMR was closed upon engineering approval. Since the originally specified connector was no longer available, a change in the specification was required if a repeat of this process was to be avoided each time the connector was replaced. A change to the specification had in fact been initiated but was not required by nor documented on the NMR. The inspector suggested to the licensee that in such cases design documentation changes should be required by or at least referenced on the NMR to provide a track for following completion of these changes. The licensee agreed to consider this in a pending revision to the controlling procedure, APA-ZZ-00510.

n. Non-Licensed Training

The inspectors reviewed several training programs for non-licensed personnel. The review consisted of interviews with responsible personnel and procedure review.

(1) Documents Reviewed

- . QS-2, "Indoctrination and Training," Revision 6
- . QS-12, "Certification of Inspection and Test Personnel," Revision 4
- . QA-112, "Training and Qualification of Quality Assurance Lead Auditors," Revision 8
- . QA-117, "Quality assurance Indoctrination and Training," Revision 3
- . QAP-ZZ-00- , "Quality Assurance Training Manual," draft dated March 6, 1984

(2) Results of Inspection

- (a) Procurement Department personnel involved in purchases for nuclear operations have received documented training. A required reading list is also maintained. However, other training requirements have not been formally documented.
- (b) The Materials Engineering staff is receiving training in plant systems offered by UE's Nuclear Operations Training Center. Other training is planned but a formal training program has not been established.
- (c) The Training Program for Quality Assurance Department personnel had been drafted. The Training Program consisted of 3 phases. Phase I consisted of 11 areas and was entitled "Basic Quality Assurance." Courses include General Employee Training - I, General Employee Training - II (administrative controls and basic systems training), Basic Quality Concepts, Industry Codes and Standards, Auditor Training, etc. Most QA personnel had completed this phase. Phase II was entitled Advanced QA Training and consists of courses such as Operating License and Technical Specifications, Design Control, Inservice Inspection, Maintenance Program, etc. It contained a total of 12 courses. Some QA personnel had started this training. Phase III provided specialized training such as Statistics, Metrology, NDE, etc. Training requirements were established individually based on a skills assessment performed by the QA Training Supervisor and reviewed by the employee's supervisor.

- (d) The inspector reviewed the licensee's maintenance and I&C training programs. Maintenance supervision, maintenance crafts, and the training department supervisor of training for maintenance and I&C were interviewed. Training courses had been established for plant systems, administrative controls, radiation protection, specialized training in the mechanical and electrical areas, and I&C specialized training. The training staff for maintenance and I&C training consisted of two mechanical instructors, two electrical instructors, and three I&C instructors. Interviews indicated the training program was being implemented. It appeared the maintenance and I&C training programs should assure that maintenance and I&C personnel receive adequate training.

The inspectors were satisfied that training was being conducted although not all programs had been fully developed. This area will be inspected in greater depth as part of the routine inspection program.

3. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during the inspection are discussed in Paragraphs 2.f.(2)(e), 2.f.(2)(f), 2.m.(2)(a), and 2.m.(2)(b).

4. 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. Open items disclosed during the inspection are discussed in Paragraphs 2.a.(2), 2.b.(2), 2.c.(2), 2.e.(2), 2.f.(2), 2.g.(2), 2.h.(2), 2.j.(2), 2.k.(2), 2.l.(2) and 2.m.(2).

5. Exit Interviews

On March 2, 1984, Messrs. Choules and Hasse met with licensee representatives at the Corporate Office. Also on March 2, 1984, Messrs. Schulz and Martin met with licensee representatives at the Callaway Plant. On March 16, 1984, Messrs. Choules and Hasse met with licensee representatives at the Callaway Plant. Licensee representatives in attendance at each exit interview are denoted in Paragraph 1. The inspectors summarized the purpose, scope and findings of the inspection at the exit interviews.