

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/84-24(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

Inspection Conducted: May 14-18 and May 25, 30, and June 1-14, 1984

Inspector: R. S. Love *R.S. Love*

6/28/84  
Date

Approved By: *C. C. Williams*  
C. C. Williams, Chief  
Plant Systems Section

6/28/84  
Date

Inspection Summary

Inspection on May 14-18, May 25, 30, and June 1-14, 1984 (Report No. 50-483/84-24(DE))

Areas Inspected: A special safety inspection was initiated following receipt of allegations and concerns relating to safety-related electrical work activities. This inspection consisted of a review of pertinent procedures, records and interviews of licensee and contractor personnel. This inspection involved 43 inspector-hours on-site and 126 hours of in-office review by one NRC inspector.

Results: No items of noncompliance were identified.

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## DETAILS

### 1. Persons Contacted

#### Union Electric Company (UECo)

- \*W. H. Weber, Manager, Nuclear Construction
- \*H. W. Millwood, Quality Assurance Engineer
- \*J. R. Veach, Supervising Engineer, Quality Assurance
- \*C. J. Plows, Lead Quality Assurance Engineer
- R. L. Powers, Assistant Manager, Quality Assurance

#### Daniels International Corporation (DIC)

- \*L. R. Smith, Regional Manager
- \*D. L. Vandergrift, Senior Quality Assurance Engineer
- \*M. K. Smith, Audit Response Coordinator
- \*S. Bailey, Materials Engineer
- J. R. Hazlip, Materials Engineer
- K. A. Distel, Instrumentation Engineer
- D. A. Boone, Project Quality Engineer
- D. R. Dunning, Project Quality Engineer
- N. Durlin, Supervisor, Startup Document Control

#### Westinghouse Electric Company (W)

- J. J. Mora, Site Electrical Engineer

The inspector also contacted and interviewed other licensee and contractor personnel during this reporting period.

\*Denotes those present at the exit interview on May 18, 1984.

### 2. Review of Allegations and Concerns

#### A. Background

On July 28, 1982, an alleged contacted the Office of Investigations (OI) Region III Field Office by telephone. The alleged indicated that he had been terminated as a QA Auditor at the Callaway Site and wanted to discuss about twenty quality concerns with an NRC representative.

On October 27, 1982, the alleged was interviewed at his home by an OI investigator and a Region III inspector. The alleged stated that he was 49 years of age and had been employed by DIC (Callaway Site) as a Quality Assurance Engineer - Lead Auditor from August 5, 1981 until March 1982, when he was forced to take five weeks off from work due to medical problems. The alleged stated that he had extensive nuclear experience, including North Anna, Three Mile Island, Waterford III, San Onofre, Hanford 2 and Fermi 2.

The allegor indicated that he had developed various concerns regarding the QA/QC program as implemented by DIC at Callaway, and in May 1982, he (the allegor) contacted the DIC Vice President for Quality Assurance with his concerns. He also stated that a DIC representative came to his home on two occasions (described as being a six hour meeting) to interview him regarding his concerns. The investigation of the allegors concerns were delegated to the DIC Regional Quality Assurance Manager. The allegor stated that on August 12, 1982, the Regional Quality Assurance Manager and the Corporate Manager of Quality Assurance met with him for approximately 5 1/2 hours to discuss the study performed by Daniel as a result of his concerns. After providing the above background, the allegor provided the OI investigator with 25 allegations and concerns.

On October 28, 1982, a site visit was made by the OI investigator. During this visit, the investigator queried the licensee and DIC personnel as to their actions in response to the allegor's previously expressed concerns. A large package of several file folders was displayed, and it was indicated that each folder detailed the response to one of the allegor's concerns. The OI investigator requested a copy of the entire package and also a copy of the allegor's audit reports. This information was received by the OI Region III Field Office. On April 13, 1984, the above noted documentation was transmitted to the Region III Office for technical review and followup of the allegor's concerns.

B. Details of the Review

(1) Allegation - Quality Assurance effort is being suppressed.

No examples were provided.

Licensee Action - The DIC QA staff engineers were interviewed by the DIC Corporate Manager of Quality Assurance and the DIC Regional Quality Manager. The interviews were conducted during a two week period independent of each other. The conclusions reached by the two managers after their independent interviews were:

- a. There was no evidence of the QA effort being suppressed at the Callaway plant.
- b. There was a moral problem within the QA Department due to the management style of the QA Manager.

NRC Followup - The Region III inspector reviewed the licensee actions, interviewed licensee and contractor QA/QC personnel, and reviewed findings by QA auditors and inspection reports, DRs and NCRs prepared by the QC inspectors.

Conclusion - This allegation could not be substantiated.

- (2) Allegation - Equipment suppliers came on site to rework/repair their equipment. They were allowed to work without a QA/QC program and they provided no documentation. Examples provided were Control Room Equipment.

Licensee Action - Identified that between July 1981 and July 1982, three vendors performed rework on field changes to equipment in the Control Room. They are Comsip, Inc., Foxboro Company, and Beta Products, Inc.. Verified that all 3 vendors were on the approved vendor list for Callaway, had an approved QA/QC program and compiled sample documentation packages provided by the vendor.

NRC Followup - The Region III inspector reviewed the licensee actions, verified that the vendor's QA/QC program had been approved by Bechtel Power Corporation (Bechtel), (SNUPPS A/E), and reviewed Field Changes/Rework Plans, Test Procedures, and documentation supplied by the vendors.

- a. Beta Products, Inc., on September 8, 1981, Bechtel approved Revision 10 of the Beta QA/QC Manual and their Rework Plan.
- b. ITE Gould, Inc., QA Program and Rework Plan approved by Bechtel on E-018-001, Submittal 10.
- c. General Electric Company - QA Manual, Revision 10, and Rework Plan approved by Bechtel on November 24, 1980.
- d. Foxboro Company, Systems Operations Quality Manual and Rework Plan approved by Bechtel on 10466-J-110-0810-07.

Conclusion - This allegation could not be substantiated.

- (3) Allegation - Several Daniel procedures are not consistent with ANSI N45.2.6 and the Project QA Manager would not accept any findings against 1973 edition of N45.2.6, "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel." Examples provided were:

- a. N45.2.6 requires inspection procedures to be approved by a Level III inspector and several procedures still have the Project Manager's approval.
- b. Procedure AP-VII-01 does not require a color vision test per ANSI N45.2.6-1973.

Licensee Action - Performed a research of DIC Quality Audit Report (QAR) findings and failed to produce specific information which either supports or refutes the statement that several Daniel procedures are/were not consistent with N45.2.6 and that findings against the 1973 revision of the ANSI standard were excluded from QARs.

NOTE: QARs attached to the licensee action report were UECO audit report No. UTD-QA-1068a, dated December 18, 1981 and DIC QA audit report Numbers 82-02-08 (performed by the alleged), 82-01-01 and 82-03. These four audits pertained to N45.2.6 in whole or in part.

The licensee, site contractors, and subcontractors were committed to ANSI Standards N45.2.6-1978 and N45.2.23-1978 on December 31, 1981 as a result of commitments to the NRC. Applicable DIC procedures were in a state of flux from approximately November 1981 to January 1982.

NRC Followup - The Region III inspector reviewed the licensee actions, reviewed the attached audit reports, DIC procedure AP-VII-01, Revision 8, "Selection, Training, and Indoctrination of Quality Personnel." The following observations were made:

- a. Procedure AP-VII-01, Revision 8, requires Jaeger J1 and color vision eye examinations. Revision 4 of this procedure was in effect at the time of the alleged's audit, i.e., February 1982. Revision 4 did not specify a color vision test. The procedure stated that a Jaeger J1 and other physical examinations, as specified by the supervisor, would be conducted annually. This is in compliance with ANSI N45.2.6-1978.
- b. A review of QC inspector's qualification files and UECO audit report UTD-QA-10682 indicates that QC inspectors were given color vision examinations.
- c. Paragraph 4.9 of QAR 82-01-01 states, "A record of the most recent physical examination was on file for each of the listed employees." QAR 82-02-08 indicated that the qualification and certification records reviewed were satisfactory.
- d. QAR 82-03 closed several items pertaining to Civil Quality Control Training Program.
- e. During the review of personnel qualification records, it was observed that Form CP-25, Revision 11/80, required the Jaeger J1 and color vision eye examinations.
- f. As a result of NRC Generic Letter 81-01, the licensee committed to ANSI Standards N45.2.6-1978 and N45.2.23-1978.
- g. All procedures reviewed had been approved by the Quality Manager. An unsigned memo indicated that three of the procedures were in fact signed by the Project Manager (prior to January 1981) and these procedures would be approved by the Quality Manager when they were revised (No procedure numbers were noted). Quality Manager approval was required after January 1981.

Conclusions - Allegation (3).a. could not be substantiated nor refuted by the inspector's observations. Allegation (3)b. was substantiated, however, the 1973 edition was not the controlling document and for the records reviewed, color vision eye examination records were on file.

- (4) Allegation - Grouting vs dry pack of anchor bolts is a problem. QC was to inspect prior to installation of the plate. The Project QA Manager closed the audit finding by revising the procedure to have QC inspect after the plates were installed. Dry packing instead of grouting was not identified as a problem until an audit was conducted.

Licensee Action - A research of audit reports indicates that the allegor was referring to DIC audit QAR 81-09-01, dated October 26, 1981, (not performed by the allegor). The auditor observed expansion anchor bolts being dry packed around the bolt peripheries during the dry packing of adjacent abandoned holes.

DIC civil engineering performed a test on October 27, 1981 on the subject anchor bolts. Projections of the anchor bolts were noted before the test on all bolts. A torque of 250 ft/lbs was applied. This was approximately 200% of minimum torque. No relaxation of torque was noted during the test. The engineering evaluation of the test indicated that the expansion anchors were not being held in place by the skin friction of the dry pack, but by the wedge and sleeve as designed. The tests and engineering evaluation were reviewed by the auditor and this item was closed in DIC audit QAR-81-11-01. Furthermore, quality procedures require quality inspectors to be involved prior to and during installation of drilled type anchor bolts and post applied plates.

NRC Followup - The Region III inspector reviewed the licensee actions, reviewed DIC audit reports QAR-81-09-01 and QAR-81-11-01. The inspector also reviewed DIC procedures QCP-100, Revision 16, dated June 2, 1982, "Installation of Post-Pour Embedded Items" and procedure QCP-109, Revision 25, dated June 23, 1982, "Concrete Placement, Grouting and Post-Pour." The following observations were made:

- a. Paragraph 4.1.2 of procedure QCP-100 requires the Civil Quality Inspector to receive the original PEIF (Post-Pour Embed Checklist, Form CP-534) from the Area Engineer upon notification of a hold point. Paragraph 4.1.3 requires the inspector to inspect the area behind the surface mounted items to verify that the requirements of paragraph 3.16 have been met. Paragraph 3.16 discusses the dry packing of abandoned concrete expansion anchor bolt holes.

- b. Paragraph 4.10.8 of procedure QCP-109 requires the Civil Quality Inspector to be present during mixing operations of dry pack mortar and monitor the placement of the dry pack. Paragraph 4.10.14 requires the inspector to complete a Grouting and Dry Pack Inspection Report and a Post-Placement Inspection Report.
- c. DIC audit reports QAR-81-09-01 and QAR-81-11-01 were as stated under Licensee Action.

Conclusion - This allegation could not be substantiated except as noted in DIC audit report QAR-81-09-01.

- (5) Allegation - Instrumentation areas not audited in 5 years. First audit in this area was in late 1981 or January 1982. Many things were found which needed to be fixed, i.e. work procedures and traveler system. Instrument travelers are a mess.

Licensee Action - The licensee determined that safety-related mechanical instrumentation work started about October 1979, safety-related instrumentation cable pulling started about April 1981, and safety-related instrumentation cable terminations started about December 1981. The licensee also determined that from July 1979 thru March 1982, DIC QA performed four instrumentation audits and from March 1980 thru March 1982, UECO QA performed four audits and seventeen surveillances of instrumentation work activities.

NRC Followup - The Region III inspector verified the licensee finding and reviewed several audit reports and instrumentation travelers. The following observations were made:

- a. Audit QAR-82-02-08, February 1982, was performed by the allegor to verify compliance with, and determine the effectiveness of the implementation of the QA Program in the area of Instrumentation Inspection. The Audit Summary states in part, "The results of this audit were Generally Satisfactory with some deficiencies noted." The deficiencies noted were:
  - 1. Work procedure WP-205, Revision 14, was not clear as to whom was responsible for completing column 19 on the Bill of Material Form. WP-205 was revised to clarify the responsibility requirements for completing column 19. Item was closed in QAR 82-04.
  - 2. The Special Instruction Sheets (SIS) for two travelers were signed off as complete when the Bolted Connection Control Record (BCCR) of both travelers was being worked during the audit. The SIS's were corrected to show date completed as noted on the BCCR's. Inspector was retrained. Determined to be an isolated case. Item closed in QAR 82-04.

- b. During this inspection the inspector reviewed random instrument travelers and found them to be adequate.
- c. In addition to the audits and surveillances of the instrumentation work activities, the NRC performed 13 inspections in the electrical/instrumentation area from 1978 thru 1981. Six of these inspections were performed in 1981 when the work activities were the heaviest.

Conclusions - This allegation could not be substantiated.

- (6) Allegation - Control Room cabinets RP053C and RP053E do not have to be seismically qualified in accordance with Bechtel Specifications 10466-J-110. This does not meet the requirements of Regulatory Guide 1.29. Bechtel said these cabinets did not have to be seismically qualified. I wrote up these findings.

Licensee Action - The licensee confirmed that this item was documented in DIC audit report QAR-81-09-01. To resolve this item, a Request for Clarification of Information (RCI), Number 2-1112-E, dated October 29, 1981, was forwarded to Bechtel Power Corporation, (SNUPPS A/E). The RCI states in part, "Are cabinets RP053A, RP053B and SB033P isolated sufficiently from RP053 C & E to maintain their integrity during a SSE? If not, does their present mounting comply with II/I requirements? Is there any Bechtel/vendor documentation which can substantiate that RP 053 C & E were designed to the same specification as the safety-related cabinets procured on specification 10466-J-110?"

Bechtel response, dated November 25, 1981, states, "Drawing J-110-639-2 is the drawing for the cabinets in this specification. All Foxboro cabinets in Spec. J110 have the same Model #N-2ES-1 Style B. The seismic qualification identifies Model #2ES-Style B as being seismically qualified. Therefore, they can be placed side by side."

On December 18, 1981, RCI 2-1173-E was forwarded to Bechtel. This RCI states, "The response to RCI 2-1112-E addresses the questions of isolation and seismic qualification of RP503C and E. It does not clarify the question of II/I mounting of these cabinets. RP053 C and E and other non-safety cabinets located in the main control room are not listed as II/I. Are these control cabinets considered II/I by Bechtel? If so, on which design document will their status and required detail be shown?"

Bechtel response, dated January 7, 1982, states, "As addressed in BLSE 9538, dated 5 June, 1981, the II/I design program has considered the adequate anchorage of non-safety-related floor mounted panels though they are not considered II/I. Mounting information for RP503 panels is furnished in vendor drawing J110-551-06 which was received on site 5/21/80."

A review of Bechtel letter BLSE 9538 indicates that this letter was prepared in response to Information Notice 80-21, "Anchorage and Support of Safety-Related Equipment." This letter states in part, "Enclosure A provides the Bechtel evaluation of the Power Block design and confirms that the concerns of this information notice have been adequately addressed for permanently installed equipment." Enclosure A states in part, "Although not specifically addressed in the information notice, the II/I design program has considered the anchorage of non-safety-related floor-mounted equipment and racks. Adequate anchorage of all panels was an original design consideration. All panels are attached to substantial anchorage systems provided by Bechtel. None are free standing. All attachment configurations are engineered and recommended by the equipment vendor and reviewed by Bechtel."

NRC Followup - The Region III inspector reviewed the DIC QA audit reports, licensee referenced RCIs, Bechtel letter BLSE 9538, DIC receiving inspection reports and the SNUPPS Safety Analysis Report that describes the implementation of Regulatory Guide 1.29. It was concluded that Callaway plant was meeting the intent of Regulatory Guide 1.29 as relating to the installation of Control Room cabinets RP053C and RP053E. It was also observed that the allegor reached the same conclusions in that the original concern was closed out by the allegor in DIC QA audit report QAR 82-01-01.

Conclusion - This allegation could not be substantiated.

- (7) Allegation - Materials Engineer was harassed by numerous audits as a personal affront (Review November-February Reports).

Licensee Action - Reviewed the DIC audit schedule of material related activities and it did not seem unusual in terms of frequency and scope. The Materials Engineer was interviewed and he does not feel that he has been harassed.

NRC Followup - The Region III inspector reviewed the DIC QA audit and surveillance schedule from January 1981 thru June 1982. The frequency of audits and surveillances of material related activities during this time frame was fairly consistent. Examples: August 1981, 2 audits and 1 surveillance; September 1981, No audits or surveillance; October 1981, 1 audit and 1 surveillance; November 1981, 2 audits and 1 surveillance; December 1981, 1 surveillance; January 1982, 2 audits and 1 surveillance; February 1982, 1 audit and 1 surveillance, March 1982, 1 audit and 1 surveillance.

Conclusion - This allegation could not be substantiated.

- (8) Allegation - Raychem did not comply with the Purchase Order (P.O.), they did not comply with IEEE Standards; Certificates of Compliance (C of C) were missing; Raychem would not impose Part 21 on themselves. P.O. was not clear on whether or not the exceptions were allowed; during testing (Wycoff), the termination kits failed. Vendor attached memo trying to whitewash the test. Delcom accepted the whitewash. Bechtel accepted at Wolf Creek (Reference: DIC QA audit report QAR-81-11-01).

Licensee Action - The statements concerning Raychem Corporation purchase order, lack of documentation, testing, and possible employee conflict of interest were reviewed. This review indicated that quality and procurement related concerns were handled properly.

NRC Followup - The Region III inspector reviewed the documentation utilized by the licensee to formulate their conclusions. The following observations were made:

- a. Purchase Order (P.O.) 7186-SR-82409 states that the Raychem Commercial Terms were accepted. Also Bechtel letter BLSE-8576, dated August 11, 1980, states in part, "The Raychem proposal #512-A in response to the DIC Callaway RFQ7186-SR-82409-01 as supplemented by the Raychem letter to DIC (W. Lottman) dated July 31, 1980 provides sufficient justification that the proposed material qualifications can envelope the SNUPPS environmental requirements. DIC Wolf Creek should coordinate with DIC Callaway to secure the proper termination materials and documentation."
- b. The Technical Requirements attached to the P.O. states in part, "10 CFR Part 21 applies. Termination material shall be qualified for operation in accordance with IEEE 383-1974. Certified test results shall be provided for all prototype tests required by IEEE 383-1974. The supplier shall certify that the test results submitted are from tests made on samples identical in construction, materials, and processing methods as those furnished for use. The supplier shall provide certified test reports for all production tests. Certificate of Conformance required that all material provided on the purchase order conforms to the Technical Requirements attached, a copy will accompany each shipment."
- c. QAR 81-11-01 states in part, "The quality requirements of the P.O. did not invoke Regulatory Guide 1.74 "Quality Assurance Terms and Definitions." Regulatory Guide 1.74 endorses ANSI Standard N45.2.10-1973, "Quality Assurance Terms and Definitions." Both the Regulatory Guide and the ANSI Standard are referenced on Attachment G to the Purchase Order."

- d. The inspector reviewed the Certificate of Compliance (C of C) for 54 Termination Kits. Attached to the C of C were 10 production test reports as required by the P.O. From documentation reviewed, it appeared that there were C of Cs missing on three occasions as documented on DIC Deficiency Reports: DR-2SD-5048-ER, dated January 7, DR-2SD-5255-ER, dated January 18, 1982; and DR-2SD-5256-ER, dated January 18, 1982. The C of Cs were received and all 3 DRs were closed on February 24, 1982.
- e. With reference to tests performed by "Wycoff", the allegor may have been referring to Wyle Laboratories who performed tests for Raychem. The test report by Wyle indicated that two of the termination kits did in fact fail the tests, however, the report (Environmental Qualification Test Report of Raychem N-MCK Nuclear Motor Connection Kits No. 5844-2, dated July 28, 1980) states that all bonded N-MCK caps supplied were manufactured using improved methods. The test report also states in part, "Subsequent testing substantiates the ability of these N-MCKs to maintain electrical integrity throughout the test program. The results of this comprehensive test program confirm, by type testing, the adequacy and suitability of the Raychem N-MCK nuclear motor connection kits for use on Class 1E systems within the containment of a nuclear power generating station." Also see paragraph a. above for additional information from Bechtel letter BLSE-8576.
- f. With reference to the possible employee conflict of interest discussed in the Licensee Action section, a review of DIC procurement activities with Raychem was performed to ascertain whether or not any improprieties or favorable treatment had been afforded Raychem. This review was requested by upper Daniel management as a DIC employee (by name and position) who held a responsible position in the Daniel Engineering Department had tendered his resignation to accept employment with the Raychem Corporation. This review of procurement activities is documented in a memo to file, dated September 2, 1980. This memo describes the problems encountered in obtaining qualified termination kits for use at Callaway. To show that all the decisions were not made by this one employee, the memo references the Construction Review Group meeting, DIC to UECO letters, UECO internal correspondence and Bechtel letter BLSE-8576. In that this DIC employee went to work for Raychem, and he was in the review cycle, this may be where the allegation of items being "whitewashed" came from.

Conclusion - With respect to C of Cs missing, this was substantiated, however, this was documented on DRs and the material was controlled. Failure of termination kits during test was substantiated, however, the allegor failed to state that they passed subsequent tests after the manufacturing process was changed. Bechtel accepted Raychem termination

kits at Wolf Creek was substantiated in that Bechtel letter BLSE-8576 accepted Raychem material for the SNUPRS plants, i.e., Callaway and Wolf Creek. The remaining allegations could not be substantiated.

- (9) Allegation - Quality Assurance noted that anchor bolts were hit with a sledge hammer and wrote it up. Corrective action was not sufficient. A laboratory test proved this action weakened the bolts below ASTM requirements.

Licensee Action - As documented in DIC audit report QAR 81-09-01 on September 9, 1981, the QA auditor observed 2 electricians using a sledge hammer to bend 2-1 1/4" concrete expansion anchors (CEA) to match the holes in the surface mounted plate they were installing. On September 10, 1981, Stop Work Order 40 was issued, suspending all work on surface mounted plates. Also, these two CEAs were documented on DR 2SD-4351-C. On September 14, 1981, Civil QC processed DR 2SD-4352-C for 2-3/4" CEAs that sheared prior to reaching the normal test torque of 125 ft. lbs. Examination of these bolts after they had been removed from the concrete indicated that the bolts were bent during or after installation.

The 2-3/4" CEAs that sheared during torquing and 6 new CEAs were sent to Newport News Shipbuilding and Dry Dock Company for testing to determine the cause of failure. The Newport News Technical Report Number U-5756, dated December 10, 1981, indicated that one of the bolts had cracked prior to final failure. This report states in part, "It was evident that both bolts had been bent about 10 degrees and that cracking was initiated in the first thread of each bolt. The fracture face of bolt #2 was about 25% covered with rust which indicated that it was cracked for a period of time before the final failure. The fracture face of bolt #1 was too badly damaged to yield any useful information. A chemical analysis showed that the two failed bolts were made from AISI 1144 resulfurized (free machining) carbon steel. Tensile testing of samples machined from the failed bolts showed that they had adequate strength and ductility. Conclusions reached by Newport News were: (1) Anchor bolt #2 was partly cracked due to stress concentrated on the first thread on the inside of the bend during the original torquing operation, (2) The material used is adequate for this application."

With respect to the 2-1 1/4" CEAs that was documented on DR 2SD-4351-C, both CEAs were torqued to 500 ft. lbs. After the CEAs were successfully torqued, they were removed and replaced. This DR was closed on November 9, 1981. DR 2SD-4352-C, 2-3/4" CEAs that failed the torque test, was closed March 30, 1982.

Craft personnel were retrained to the applicable procedures as part of the corrective action to prevent recurrence and Stop Work Order 40 was lifted on September 15, 1981. In conjunction with the retraining program, craft personnel were required to sign a memo that states, "you are hereby notified that previously installed plates bolts, or expansion anchors must not be adjusted by hammering or moving in anyway. Your signature below signifies your understanding of this requirement."

With respect to the 6 new CEAs that were sent to Newport News for testing, the Technical Report (U-5756) states in part, "In order to demonstrate that concentrating the stress on one side of a threaded bolt will reduce the load carrying capacity it was elected to tensile test three new bolts with a 10 degree wedge under the nut (ASTM A370) and three bolts with a straight pull. The results showed that the wedged samples failed with an average of about 3,000 lbs. less load. The 10 degree wedge tests did demonstrate that a threaded material will not carry as much load as an axially loaded one will if the load is concentrated on one side of the thread."

NRC Followup - The Region III inspector reviewed the aforementioned Deficiency Reports, Stop Work Order, DIC QA audit reports, and the Newport News Shipbuilding and Dry Dock Company Technical Report and determined that the licensee action was adequate.

Conclusion - With respect to the allegation that the corrective action was not sufficient, this was not substantiated. As stated under the Licensee Action, the CEAs tested with a 10 degree wedge showed that the bolts failed at about 3,000 lbs less load. This confirms the alleger's statement that bending will weaken the tensile strength of bolts.

- (10) Allegation - Low hydrogen welding rods were found to have the hermetically sealed cans penetrated by staples both in the warehouse and in the field store rooms. Cans had been punctured when the QC Accept Tags were applied.

Licensee Action - The licensee confirmed that this item had been identified in DIC QA audit report QAR 82-01-01. During the audit, the QA Engineer identified several cans of E308 weld rod that had been punctured by staples. To institute immediate action, the QA Engineer issued Quality Assurance Audit Finding (QAAF) 82-01-01-01 on January 13, 1982, and the warehouse was instructed not to issue weld rod until a reinspection was performed. On January 15, 1982, DR 2SD-5235-MR was issued to document the punctured weld rod cans. The warehouse and field rod rooms were inspected for punctured rod cans, and any damaged container found were rejected. On February 25, 1982, this rejected weld rod was transferred to the off-site training center on Field Material Requisitions 503-27 and 503-28 (approximately 900 pounds). Receiving QC and warehouse personnel were

instructed to use tape to attach tags to weld rod cans. DR 2SD-5235-MR was closed on February 26, 1984 and the audit finding was closed in DIC QA audit report QAR 82-03.

NRC Followup - The Region III inspector reviewed the applicable DIC QA audit reports, DR 2SD-5235-MR, QAAF 82-01-01-01, and Field Material Requisitions 503-28 and 503-28. The corrective action taken by the licensee appeared to be adequate.

Conclusion - This allegation was substantiated, however, it had been documented in DIC QA audit report QAR 82-01-01, QAAF 82-01-01-01 and DR 2SD-5235-MR.

- (11) Allegation - Instrument installation procedures (WP-205) are inadequate and are not being followed by engineering, QC, or construction. Also, construction foremen are signing for the ANI (Authorized Nuclear Inspector), documentation signed-off by QC before work was completed or not signed-off after completion of various stages of work, and lost quality documents were either found or forged.

Licensee Action - Performed a review of DIC QA audits in the area of instrument installation to determine if procedures were adequate and were being followed. The following audits were reviewed:

- a. QAR 82-02-06 states, "the overall audit of component supports installation was Generally Satisfactory. One support was 6° out of plane and another support was 2° out of plane, identified on finding 82-02-06-01C. Drawing FS-M5333, Revision 6 was issued to allow engineering judgement to establish the acceptable out of plane tolerance. This item was closed in QA Audit Report QAR 82-03.
- b. QAR 82-02-07 states that the overall audit of component support traveler program was Generally Satisfactory. Three findings were noted.
  - . Lack of procedural direction for placing hanger travelers on "Hold", now utilizing a "Reply Message" form (Closed QAR-82-03-06).
  - . The original design drawings are not being reviewed and stamped as required by WP-205, instead, engineering is performing a review of the reproducible (sepia) and stamping the sepia (Closed QAR-82-04).
  - . Copy 48 of specification 10466-M-204, Revision 29, was not stamped as having been reviewed (Closed QAR 82-03).

- c. QAR 82-02-08 (by allegor) states that the results of this audit (Instrumentation Inspection) were Generally Satisfactory with some deficiencies noted. Also see allegation (5).
- . Work procedure WP-205, Revision 14, was not clear as to whom was responsible for completing column 19 on the Bill of Material Form. Procedure revised and this item closed in QAR 82-04.
  - . The Special Instruction Sheets for two travelers were signed-off (same inspector) with work still in progress. Corrected and item closed in QAR 82-04.
- d. QAR 82-03-01 states that the results of this audit (required entries on Bill of Material) were satisfactory.

The allegation that procedures are inadequate and are not being followed could not be substantiated based on the review of the above listed audits, including one by the allegor. The findings appeared to be minor in nature and did not affect the quality of installed hardware. The findings were tracked and closed out through the QAR program.

The statement, "construction foreman signing for ANI" could not be substantiated. Discussion with the Senior ANI on this subject revealed that he did not have any concern or reason to believe that anyone had ever forged the ANI's signature. He stated that ANI signatures are looked at very carefully and should there be doubt about signature authenticity, a check of the ANI's daily activity work log would immediately identify that the signature was forged.

Documentation being signed-off by QC before work was completed was documented in QAR 82-02-08 by the allegor. From this audit report, it appeared to be a single occurrence (two travelers) by one inspector. Also during this audit, the allegor identified one checklist missing from the QA records, however, this checklist was found and placed in the file during the audit. At that time, there was no apparent concern by the allegor nor did he allude to the checklist or any other document being forged.

NRC Followup - The Region III inspector reviewed the licensee action, including review of audit reports and procedures, and is satisfied that all of the allegor's concerns were adequately addressed.

Conclusion - Procedures are inadequate and are not being followed - could not be substantiated except as noted below. Construction foremen are signing for ANI - could not be substantiated. Documentation signed-off by QC before work was completed - this item was substantiated, see QAR 82-02-08. Forged documentation - could not be substantiated.

- (12) Allegation - Work Procedure (WR) 220 and Quality Control Procedure (QCP) 220, "Cleaning", are good but are not referenced in other documents to incorporate need and use of same.

Licensee Action - Conducted a review of QA Audits and Surveillances (DIC/UE) which addressed system or component cleaning/flushing and failed to identify any findings or concerns that would indicate that WP220/QCP220 are not being fully implemented.

Reviewed completed documentation which demonstrates implementation of WP220/QCP220.

NRC Followup - The Region III inspector reviewed licensee action, including the review of completed Cleaning Program Verification Reports (Form CP-658) and Cleaned System Rework Forms (Form CP-653) which had been signed by DIC QC and countersigned by Union Electric.

Conclusion - This allegation could not be substantiated.

- (13) Allegation - Receiving QC files in the warehouse are being maintained in 1-hour fire rated cabinets instead of 4-hour cabinets as required by ANSI N45.2.9.

Licensee Action - A review of audit and surveillance reports indicate that this allegation may have emanated from DIC QA audit report QAR 82-03-03. During this audit it was determined that Calibration Data Sheets (Quality Records) are not being processed in accordance with procedures. The Data Sheets were being filed in the Calibration Laboratory. During a followup audit, QAR 82-04, it was determined that these records were not being stored in accordance with ANSI N45.2.9.

As a result of the audit finding in QAR 82-04, the DIC Project Quality Manager instituted an evaluation of record storage in all areas. As a result of this evaluation, it was determined that records in receiving inspection (warehouse) which had been final accepted by DIC were also impacted. These records had been removed from the records vault and were being retained in receiving inspection record cabinets to complete a technical review effort as directed by UECO. In July 1982, these records were transmitted back to the records vault for storage.

Per ANSI N45.2.9, a document is considered a quality assurance record when the document has been completed. DIC considers a document as being complete after it has received a final review and acceptance by DIC Quality Department. As records are completed, they are processed and filed in the Quality Control or Document Control vault which meets the environmental and physical requirements of ANSI N45.2.9. Inprocess records do not require special storage.

NRC Followup - The Region III inspector reviewed the licensee action, including a review of the subject audit reports and corrective action taken to resolve the audit findings. The inspector concluded that the audit findings were adequately addressed.

Conclusion - This allegation was substantiated in that completed receiving inspection documents had been removed from the records vault and stored in cabinets in the warehouse that were not 4-hour fire rated.

- (14) Allegation - Instrument sensing lines installed with incorrect slope.

Licensee Action - A review of DIC and UECO QA audits and surveillances in the area of instrumentation installation failed to reflect a specific finding on this subject. Quality Control Procedure QCP-230, "Inspection of Fabrication and Installation of Instrumentation", checklist requires the inspector to verify the slope of the sensing lines. A review of Instrumentation Checklists indicate that nonconformance reports (NCR) have been prepared to document inadequate slope of instrument sensing lines. Also, the checklists indicate that sensing line slope was acceptable based on an approved Field Change Request (FCR). Even though some lines may be installed with incorrect slope, inspection for this attribute will assure discrepancies are identified and corrected.

NRC Followup - The Region III inspector verified the licensee action by reviewing Instrumentation Checklists (Form CP-786), Field Change Request 2-182-2, and nonconformance reports 2SN-1588-P and 2SN-6211-J. Licensee action appeared to be adequate.

Conclusion - The allegation was substantiated, however, review indicates that instrument sensing line slope deficiencies are being documented on NCRs after the fact and by FCRs before the fact.

- (15) Allegation - Have concerns with the NSSS security/housekeeping. Examples:

- a. Doors at the vessel head can be sneaked around easily.
- b. Reports are required to be written for security violations.
- c. Water in the vessel, NCR written but never closed.
- d. NSSS area a mess (eating, cleanliness, damage, etc.).
- e. Reactor coolant pump has been deluged with water. Procedure require a storage report and NSS NCR. In this case QC made a judgement and disposition instead of recording what happened and letting qualified Westinghouse personnel make disposition.

Findings closed out within 1 month (QAR 82-01-01).

Licensee Action - During an interview with the NSSS Mechanical Superintendent, it was learned that security had been breached in the upper reactor vessel internal. In accordance with Security Unusual Incident Report (Form CP-36), on September 3, 1980 at 7:45 a.m., Mr. XXXX approached the upper reactor vessel internals area, which is located on the 2047' level of the Reactor Building. He found that the door showed signs of forcible entry. Mr. XXXX immediately called Security.

Officer XXXX was sent to the area. His investigation revealed that the hasp had been forced from the anchor plate on the door facing. The lock was found on the floor and was undamaged. The report also states that no damage to the upper internals is visible to the eye. Two units of NSSS tools were missing. The Superintendent stated that the reactor vessel area is being maintained on a controlled access system, however, the physical configuration of this area would make it virtually impossible to eliminate access to an individual who was determined to gain entrance by unauthorized means.

NCR 2SN-4969-M, dated December 7, 1981, was prepared to document that approximately 50 gallons of water was found inside the reactor vessel. During preliminary hydrolasing of EPA-02-Samples Point 4, valve 8956-D leaked, allowing water to enter the reactor vessel. Water removed and accessible areas were wiped with demineralized water. As of July 21, 1982, NCR 2SN-4969-M remains open pending acceptance of final system cleaning operations.

With respect to NSSS housekeeping, a review of audits/surveillances by DIC, UE, and Construction Management and NRC inspections indicate that the NSSS areas have received good comments as relating to housekeeping. There were several instances where water entered the vessel or a reactor coolant pump was wet down.

During a November 27, 1981 flushing operation of piping located above Reactor Coolant Pump "C", demineralized water sprayed onto the pump/motor protective cover, wetting the temporary "Air Mat Blue" material used to cover the motor louvers and openings into the pump motor shaft area. Construction personnel immediately cleaned up the water and replaced the "Air Mat Blue" material. The amount of water that actually penetrated the protective cover was minimal and the "Air Mat Blue" material prevented water from entering the motor louvers and pump/motor shaft area.

DIC, Union Electric and Westinghouse personnel visually inspected the pump/motor and concluded that no damage was incurred. RCP Motor PBB01C is a drip-proof squirrel cage induction motor with thermalastic epoxy insulation. As a result of this inspection, it was decided that an NCR was not required. This is documented on inspection reports and in correspondence between UECO and Westinghouse.

During an audit (QAR 82-01-01) on February 1, 1982, the alleged became aware of the November 27, 1981 occurrence where RCP "C" was sprayed with water. The alleged issued an audit finding because no NSSS NCR had been generated to document the incident. It appeared from the audit report that the auditor assumed that the temporary "Air Mat Blue" material was in fact permanent filters for the RCP motor. This item was closed in QAR 82-03 which was issued on April 1, 1982.

NRC Followup - The Region III inspector reviewed the licensee action, including a review of the licensee referenced documentation. It was also determined that NCR 2SN-4969-M was properly closed on March 2, 1983. With reference to the forced entry into the reactor internals area, 7 indepth inspections of the reactor internals were performed prior to hot functionals. A review of the storage and maintenance insulation resistance checks for RCP "C" motor indicated that the motor windings suffered no detrimental effects from the November 27, 1981 incident. Also, a storage and maintenance check was performed on November 27, 1981 for RCP "C".

Conclusion - These allegations could not be substantiated.

- (16) Allegation - Radwaste storage tank area and valve house - whiskey bottles, mud, water, trash, etc. Owner knows about it but no findings.

Licensee Action - A review of DIC-QA, UE-QA, and UENC audit/surveillance reports was made to determine if the specific statement had been addressed. UE-QA surveillance report UTQA-1153 addresses issues similar to the allegation. There were numerous other reports that addressed housekeeping, however, this report was chosen as it most closely corresponds to the statements made. This report states that numerous liquor bottles (Jack Daniels, Schnapps, etc.), 2 empty Busch beer bottles, and 1 marijuana cigarette butt were found during a tour of the power block. This report was sent to the UECO Manager for Nuclear Construction for action to prevent recurrence.

DIC letter (DLUC-7773) to UECO states in part that immediate disciplinary action will be administered to personnel with contraband in their possession. DIC letter (DLUC-7813) to UECO states in part that personnel with contraband in their possession have been and will continue to be subject to immediate termination as a means to prevent recurrence.

An inspection of the Radwaste Storage Tank and Valve House areas was conducted on July 16, 1982 as part of the investigation of the allegation. The following observations were made: (a) a small collection of potato chip bags, plastic soda bottles, and miscellaneous tin cans were observed outside the south doors of the Auxiliary and Diesel Buildings, (b) two plastic soda bottles and a lunch bag were on the ground at the

steps of the Reactor Makeup Tank Valve House, and (c) the Radwaste Storage Tank Valve House had one soda can lying on an electrical box in the basement.

NRC Followup - The Region III inspector verified the licensee actions and reviewed the documents referenced by the licensee. The inspector reviewed past NRC inspection reports and determined that several housekeeping problems had been identified but in general, housekeeping at Callaway was adequate.

Conclusion - The allegation that whiskey bottles were found on site was substantiated by UECO surveillance report UTD-QA-1153, dated February 20, 1982. The allegation that the Owner (UECO) knew about the conditions and took no action is refuted by UTD-QA-1153 and attached documentation.

- (17) Allegation - Daniel Construction Company QA is never aware of 50.55(e) reports or their close out.

Licensee Action - DIC procedures AP-II-09 and AP-VII-02 specify and control DIC's responsibilities and activities relating to reporting of potential Part 21 and 50.55(e) deficiencies. The tracking, statusing and closing of DIC corrective actions arising from Part 21 or 50.55(e) reporting is the responsibility of the QE department and DIC Audit Coordinator.

NRC Followup - 10 CFR 50.55(e).2 states, "The holder of a construction permit shall within 24 hours notify the appropriate Nuclear Regulatory Commission Regional Office of each reportable deficiency. For Callaway, the construction permit holder is Union Electric Company. A review of DIC procedures AP-II-09, "10 CFR Part 21 Defect Reporting" and AP-VII-02, "Nonconformance Control and Reporting" do not require DIC QA involvement in statusing and tracking 10 CFR 21 or 10 CFR 50.55(e) reports.

If a DIC QA Engineer, or other persons, has a concern about a potential Part 21 or 50.55(e) report at Callaway, they could contact the DIC QA Department, DIC Audit Coordinator, DIC Project Discipline Manager, or the UECO QA Department. If a Part 21 or 50.55(e) report had been filed with the NRC, the status of the report could also be obtained from the Site NRC Resident Inspector's office or the Region III Office.

During this reporting period, the Region III inspector verified that the Callaway site is meeting the posting requirements of 10 CFR 21, paragraph 21.6.

Conclusion - This allegation could not be refuted nor substantiated, however, there are no requirements for DIC QA involvement in 10 CFR 21 or 10 CFR 50.55(e) reports except to verify the implementation of the program as outlined in DIC procedures.

- (18) Allegation - An RCI (Request for Clarification of Information) was written regarding instrumentation specification J-36. Bechtel said the referenced specification had been deleted but it has not been recalled. DIC Lead Instrumentation Engineer can't get Bechtel to move on this or anything else.

Licensee Action - Discussed allegation with DIC Lead Instrumentation Engineer on July 14, 1982. Reviewed RCIs submitted to Bechtel for period October 1981 thru January 1982. Could not locate RCI for described J-36 specification, however, did find RCI 7186, Specifications J-361-A and J-363, which is believed to be the subject RCI. RCI 7186, dated November 3, 1981, was prepared regarding instruments SH-RE-1 and 2 in J-363(Q), Revision 5 and instruments SH-RE-3 and 4 in J-361A(Q), Revision 1.

Bechtel response on RCI 7136, dated November 11, 1982, states in part, "Specification J-363 has been canceled. Instruments SH-RE-1 and SH-RE-2 have been canceled."

As of July 20, 1982, Bechtel has not withdrawn Revision 5 of their specification J-363. The technical issues were resolved on the RCI and the Lead Instrumentation Engineer considers a one week response as being excellent.

NRC Followup - The Region III inspector reviewed the licensee action including a review of RCI 7186. The inspector reviewed UEC's copy of specification J363, Revision 5, "Technical Specifications for Post-Accident Area Radiation Monitors for the Standardized Nuclear Unit Power Plant System (SNUPPS)" and determined that as of May 15, 1984, J-363, Revision 5, had not been cancelled. This was confirmed with Site Document Control and Bechtel Site Organization. During interview with the Bechtel Senior Supervisor for Control Systems, it was learned that he contacted Bechtel's Power Division Office in Gaithersburg, MD and they stated that specification J-363 had been cancelled. Additional followup indicates that on April 10, 1981, Bechtel informed SNUPPS that the instruments ordered under specification J-363 did not meet the requirements of Regulatory Guide 1.97 and NUREG 0737. The letter also stated that the instruments for all SNUPPS plants had been fabricated and were in storage at the vendor's facilities (Eberline). On April 30, 1981, SNUPPS informed Bechtel that the instruments purchased under specification J363 had been deleted from SNUPPS design and replaced with instruments purchased under specification J361A. In a letter dated July 14, 1983, Bechtel reminded SNUPPS that the instruments purchased under specification J363 did not qualify for use on a SNUPPS plant and indicated that the instruments were still in storage at the vendor's facilities. In summary, the design cancelled the installation of the instruments procured under J-363, however, the purchase order and specification J363 were not cancelled.

Conclusion - This allegation could not be substantiated.

- (19) Allegation - Audits are inefficient because you never have an exit or closing interview.

Licensee Action - DIC procedure AP-III-3, "Quality Assurance Surveillance and Audit", paragraph 4.1.6, requires a pre-audit conference with the affected Daniel or subcontractor management and paragraph 4.1.9 requires a post-audit conference. A review of DIC QA audit reports show that compliance with these paragraphs is uniform. This includes audits performed by the allegor.

NRC Followup - The Region III inspector reviewed the licensee action, including a review of procedure AP-III-3 and numerous audit reports. The inspector concurs with the licensee's conclusion.

Conclusion - This allegation could not be substantiated.

- (20) Allegation - Quality Engineering (QE) should review all responses to QA audit findings.

Licensee Action - In a DIC letter (DLUC-7126) to UECO, dated September 18, 1981, DIC requested concurrence from UECO to implement the reorganization of the Quality Project at the Callaway Site. This proposal defined a new group, titled Quality Engineering. Paragraph A.4 of the Quality Engineering Functions states that the QEs will track, evaluate, and approve DIC prepared responses to NRC audit findings and UE/QA audit and surveillance findings. Also, the QE will review DIC QA and PMP audit report findings and track due dates and review and approve responses prior to submittal to the Project Manager.

As stated in Quality Engineering letter QE-27, dated March 2, 1982, the above described functions would be implemented on March 15, 1982.

NRC Followup - The Region III inspector reviewed the licensee action, including a review of the licensee referenced documents. It should be noted that the program was implemented 7 days after the allegors last work day at Callaway site, i.e. March 8, 1982.

Conclusion - The allegors statement was concurred with by DIC and UECO as evidenced by letters DLUC-7126 and QE-27.

- (21) Allegation - Records for assembly/disassembly of valves are not retrievable or assessable.

Licensee Action - Investigation of this item consisted of asking the Lead Quality Inspector to pull randomly selected Special Instruction from travelers which required valve disassembly. The records were retrievable and were completely in order.

NRC Followup - Valve disassembly/assembly checklists (Form CP-530) are addressed in procedure QCP-200, "Inspection of Fabrication and Installation of Piping and Component Supports." The Region III inspector reviewed several travelers requiring the valve disassembly/assembly checklists and they were in the traveler package and complete. Several of the alleged audits were also reviewed. In QA audit report QAR-82-02-08, dated February 17, 1982, it was noted that 2 of the inspection checklist Form CP-520, were missing from the files. The report also states that the two missing checklists were found and placed in the files during the audit. The audit indicated that this was an isolated case and at that time, the alleged did not list this item as a concern.

Conclusion - This allegation could not be substantiated based on the inspectors observations and the alleged's audit reports.

- (22) Allegation - Hydrostatic pressure tests were scheduled and started when hangers were missing, indicating flushing routine, etc. were performed without hangers installed.

Licensee Action - Reviewed DIC procedure WP-204, "Hydrostatic and Pneumatic Testing". Paragraphs applicable to this item require an engineering evaluation to ascertain that the piping is adequately supported for hydrostatic testing. A review of Hydrostatic and Pneumatic Test Reports show implementation of this requirement. DIC QA audit report QAR 82-04-01 indicated a satisfactory performance in this area.

NRC Followup - The Region III inspector verified the licensee action by reviewing procedure WP-204, Hydrostatic and Pneumatic Test Reports, and audit report QAR 82-04-01. The following observations were made:

- a. WP-204, Paragraph 4.4, requires the lead hanger engineer to determine if the system is adequately supported for the test, direct the superintendent to install additional supports as necessary, and when the support is adequate, sign the verification on the Hydrostatic and Pneumatic Test Report, Form CP-157.
- b. A review of Hydrostatic and Pneumatic Test Reports, indicated that the pipe support verification was performed as evidenced by a signature and date for this attribute.

- c. QA audit report QAR 82-04-01, dated April 12, 1982, states in part, "The auditor observed the performance of Hydrostatic Tests 157, 158 and EJ-01 and reviewed records of completed tests 160, 161, and 163. All test reports contained a signed statement from the lead hanger engineer stating that the items within the boundaries of the test were adequately supported for the test. This item was considered satisfactory."

Conclusion - This allegation could neither be refuted nor substantiated in that there is no requirement that all hangers be installed, only that the system be adequately supported. In some cases, additional temporary support may be required to support the system when all the permanent hangers are in fact installed.

- (23) Allegation - Instruments and instrument materials are not stored by part numbers or correctly. Mixed accept/reject items are on the same shelf with tags in a drawer. Instrument storage is different than rest of site.

Licensee Action - A review of audit and surveillance reports indicate that these allegations came from UECO audit report UTD-QA-1147b, which was conducted February 22 thru March 3, 1982, and DIC's Storage Correction Report E-WS-2193-HK, dated April 1, 1982. As of July 21, 1982, correction of all identified deficiencies is in process.

Instruments procured on the "J" series Bechtel Purchase Orders require Level "A" storage (Reference: ANSI Standard N45.2.2). All instruments procured have been stored in Level "A" storage.

A review of DIC QA audit reports did not reveal any related findings to the specific alleged statements.

NRC Followup - The Region III inspector verified the licensee action by reviewing: UECO QA audit report UTD-QA-1147b; DIC Storage Correction Report E-WS-2193-HK; applicable specifications; nonconformance reports; purchase orders; and conducted personnel interviews. The following observations were made:

- a. Storage Correction Report (SCR) E-WS-2193-HK identifies numerous items of instrumentation material (tubing, valves, piping, transmitters, etc.) that were not identified in accordance with DIC procedures and ANSI N45.2.2. Items were corrected and SCR was closed on April 19, 1982.
- b. UECO audit report UTD-QA-1147b identified 13 open items and 9 unresolved items. These findings fall into the following general categories:

- . Identified instruments without accept tags,
- . Items were identified that were not receipt inspected,
- . Material Receiving Instructions and/or Receiving Inspection Reports identified instruments as non-safety-related while the Instrument Index identified the instruments as safety-related,
- . Defective instruments commingled with accepted instruments,
- . Safety-related instruments not properly identified,
- . Device identification number not shown on receiving inspection report,
- . Instrumentation cables in Level "D" storage, should be in Level "C" storage,
- . Deficiencies in the Storage and Maintenance Program.

The findings in this audit report were closed as of August 24, 1983.

- c. During a review of UECo internal correspondence, it was identified that approximately 22 non-safety-related instruments were installed in Safety-Related Systems. This was documented on DIC NSSS NCR 2SN-6396J, dated September 21, 1982. These instruments were procured on Westinghouse (W) Purchase Orders (P.O.) 285842 and 401667.
- d. During a review of P.O. 285842, "Pressure Instruments," and the associated specification sheets, it was observed that a W quality release was not required prior to shipment nor was W QA required. During interview with W personnel, it was confirmed that this was a non-safety-related purchase order.

During a review of P.O. 401667, "Group C Transmitters," and the associated Specification Sheets, it was observed that quality requirements were imposed on the vendor and that W quality release was required prior to shipment.

- e. During interviews with W personnel and review of W drawings, it was observed that the items procured on P.O.s 285842 and 401667 were intended for non-safety-related systems. Research by the licensee indicated that these instruments appeared on Bechtel "Q" drawings. Further research indicated that both Safety-Related (Q) and non-safety-related systems/instruments appear on the same drawing. It should be noted that if a single instrument/system on a drawing is safety-related, the drawing is designated "Q" or safety-related. It would appear that an incorrect assumption was made when it was stated that the instruments listed on NSSS NCR 2-SN-6396J were being installed in safety-related systems. This resulted in an NCR being improperly prepared on non-safety-related items. The licensee took immediate action to rectify the improperly prepared NCR in accordance with DIC procedures.

- f. During a review of DIC QA audit report QAR 82-02-04, conducted February 1-25, 1982, it was observed that the auditor checked 42 items for proper statusing in accordance with DIC procedure AP-VII-10 and identified 26 items that were not properly identified by tags or stamping.

Fourteen of the 26 items were instruments located in Level "A" storage or in the instrument room. These items were subsequently identified and the audit finding closed.

Conclusion - These allegations were substantiated, however, they had been previously identified by UECO and/or DIC audit or surveillance reports and subsequently corrected.

- (24) Allegation - As-build drawings for cadwelds were not generated. This was identified on a DIC QA audit report.

Licensee Action - Review of DIC QA audit reports indicate that the allegor was alluding to QAR 81-11-01. This audit was conducted November 16-27, 1981. This audit report identified the following deficiencies:

- a. The location of Cadwelds could not be determined on the Field Sketches for 5 pour packages (2C163S02, 2C155W01, 2C133W12, UC306W35, and 2C231W32).
- b. Cadweld DT-V-010 was not shown on pour 2C261W23.
- c. Cadwelds GF-H-106, GF-V-18, and GF-V-19 were not shown on pour 2C125W02.

The following actions were taken to resolve the auditors concerns:

- a. A complete review was performed on the five packages which were identified by the auditor as being unsatisfactory. Of these five packages, all Cadwelds were located on master sepias for their respective pours with no discrepancies noted.
- b. Cadweld DT-V-10 (Pour 2C261W23) was found to be a production test specimen, which are not required to be shown on field sketches.
- c. Pour 2C125W02 - Cadweld GF-H-106 was cut out (Ref: Cadweld Log book). Cadwelds GF-V-18 and 19, as identified by the auditor, do not exist for this pour. Cadweld FF-V-18 had been cut out and FF-V-19 was properly located on the Field Sketch and on the master sepia.

- d. DIC procedure QCP-113, "Reinforcing Steel Joining Cadweld," was revised to provide detailed instruction for the preparation of "As-built Drawings". Also a training class was conducted for all personnel involved with preparing and transmitting Cadweld as-built drawings.

Two of the auditor's concerns were closed in QAR 82-01-01 and the third concern was closed in QAR 82-02.

NRC Followup - The Region III inspector verified the licensee action by reviewing the subject audit reports, procedure QCP-113 and as-built drawing number CAD-2005.

Conclusion - This allegation was substantiated, however, the concerns were identified in a DIC QA audit report and subsequently corrected.

- (25) Allegation - Electrical Cables at dropouts and rollouts violate the minimum bend radius requirements.

Licensee Action - None. Did not appear that this allegation was provided to the licensee.

NRC Action - Review of DIC and UECO audit and surveillance reports and NRC inspection reports indicate that this allegation may have emanated from NRC inspection report 50-483/82-10. During this inspection, the NRC inspector identified that the minimum bend radius had been violated during or subsequent to the installation of 7 safety-related electrical cables. As a result of this inspection, the licensee performed a 100% reinspection of safety-related cables to check for minimum bend radius violations. During a reinspection in this area, the NRC inspector found the licensee's corrective action to be adequate. This item of noncompliance was closed in NRC inspection report 50-483/83-03.

UECO audit/surveillance reports UTD-QA-1335, 1345, 1402, and 1417 also addressed minimum bend radius violations of safety-related electrical cables.

Conclusion - This allegation was substantiated, however, this type of violation had been identified by the NRC and UECO.

### 3. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the on-site portion of the inspection on May 18, 1984. The inspector summarized the scope and findings of the on-site portion of the inspection. The inspector informed the licensee that a review of the documentation provided would be conducted in the Region III Office. Also, if the findings of the inspection changed, the inspector would conduct an additional exit interview by telephone. NOTE: The findings of each allegation did not change after all the documentation was reviewed. The licensee acknowledged this information.