

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

Report of Construction Inspection

RO Inspection Report No. 050-346/74-05

Licensee: Toledo Edison Company
Edison Plaza
300 Madison Avenue
Toledo, Ohio 43652

Davis-Besse Unit 1
Oak Harbor, Ohio

License No. CPPR-80
Category: A

Type of Licensee: PWR (B&W) - 872 Mwe

Type of Inspection: Special - Unannounced

Dates of Inspection: July 17 & 18, 1974

Dates of Previous Inspection: June 4-5, 1974 (Construction)

Principal Inspector: *M. W. Dickerson*
M. W. Dickerson 8-15-74
(Date)

Accompanying Inspector: *D. M. Hunnicutt*
D. M. Hunnicutt 8/15/74
(Date)

Other Accompanying Personnel: *G. A. Phillip*
G. A. Phillip 8-16-74
(Date)

Reviewed By: *D. W. Hayes*
D. W. Hayes, Senior Reactor Inspector 8-15-74
Construction Branch (Date)

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SUMMARY OF FINDINGS

Enforcement Action

A. Violations

Certain of your activities in connection with the fabrication of Davis-Besse Unit 1 appear to be in violation of AEC Regulations and in noncompliance with THE TOLEDO EDISON COMPANY AND THE CLEVELAND ELECTRIC ILLUMINATING COMPANY DAVIS-BESSE NUCLEAR POWER STATION UNIT NO. 1 CONSTRUCTION, TECHNICAL SPECIFICATION FOR FIELD PAINTING (Specification No. 7749-A-24), as identified below. Apparent violations 2, 3, 4, 5, 6, 7, 8, and 10 are considered to be of severity Category II and violations 1 and 9 are considered to be of severity Category III.

1. 10 CFR 50, Appendix B, Criterion I, states, in part, that:
"... The authority and duties of persons and organizations performing quality assurance functions shall be clearly established and delineated in writing. Such persons and organizations shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions, and to verify implementation of solutions. In general, assurance of quality requires management measures which provide that the individual or group assigned the responsibility for checking, auditing, inspecting, or otherwise verifying that and activity has been correctly performed is independent of the individual or group directly responsible for performing the specific activity."

Contrary to the above, the Bagwell Coatings, Incorporated organization implemented at the Davis-Besse site does not have sufficient authority and/or organizational freedom to identify and correct quality related problems. This conclusion is based on the combined facts that the QA/AC Engineer and Technicians are under the direct authority of the Project Manager and that 90 percent of the containment vessel liner primer coating had been applied with no identification and correction of the significant deficiencies.

2. 10 CFR 50, Appendix B, Criterion II, states, in part, that: "The applicant shall establish at the earliest practicable time, consistent with the schedule for accomplishing the activities, a quality assurance program which complies with the requirements of this appendix. The applicant shall regularly review the status and adequacy of the quality assurance program. Management of other organizations participating in the quality assurance program shall regularly review the status and adequacy of that part of the quality assurance program which they are executing."

Contrary to the above, only one informal audit was performed by the licensee. No followup of items identified as possible deficiencies was made by the licensee. The Contractor made no audits or documented reviews of the status and/or adequacy of the sub-contractor's quality assurance program. (Paragraph 2)

3. Criterion V, Appendix B, 10 CFR 50 states, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with those instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Contrary to the above, approximately 90% of the containment vessel liner primer coating has been applied without the use of an approved procedure. There was no evidence that acceptance criteria had been established for; repairs, edge feathering, surface preparation, inspection requirements for surface preparation, paint adherence testing, paint received for application onto the liner plating or for verifying the paint drying time during and immediately subsequent to application. (Paragraph 3)

4. 10 CFR 50, Appendix B, Criterion VI, states, in part, that: "Measures shall be established to control the issuance of documents such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approval for release by authorized personnel . . . Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval . . ."

Contrary to the above, documents were not controlled in that the project manager for the sub-contractor stated that most of the original BC-4 Forms (Inspection Forms) had been destroyed. Typed information had been prepared on BC-4 forms and was available for RO:III review. This typed information had many hand written corrections. None of the corrections had been initialed or signed to indicate that the person responsible for the original recorded information had made or was aware of the changes. In many instances these typed BC-4 forms had been signed or initialed by individuals other than the originator.

Also the BC-0 (weather information) forms were sometimes incomplete with no explanation of why the required data had not been entered.

Furthermore no procedure was in effect for control of the issuance and/or changes to the quality assurance manual. (Paragraph 4)

5. Criterion VII, Appendix B, 10 CFR 50 states in part that, "Measures shall be established to assure that purchased material, equipment, and service, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery The effectiveness of the control of quality by contractors and subcontractors shall be assessed - - - at intervals consistent with the importance, complexity, and quantity of the product or services."

The licensee's Technical Specification for Field Painting, Specification No. 7749-A-24, paragraph 12.2 states in part that, "The CONTRACTOR shall submit to the CONSTRUCTION MANAGER for approval five (5) samples of each paint system on 6" X 8" blased steel panels, one complete set of which is to remain on the construction site....."

The licensee's Technical Specification for Field Painting, Specification No. 7749-A-24, paragraph 13.4 states in part that, "The CONTRACTOR shall provide, for each shipment of "Q" and "N" PAINTS, manufacturer's Certification of Conformance to be included in the shipment. compliance with Proposed ANSI Standard N 101.5 - 1969".

Contrary to the above, the sub-contractor did not prepare samples, as required, of each paint system on blasted steel panels.

No verification of the manufacturer's Certification of Conformance of formulation and manufacturing of the paint materials as required by Specification 7749-A24 was made. Nor did the sub-contractor have access to a copy of the referenced ANSI Standard N 101.5 - 1969 as required by Specification 7749-A24. (Paragraph 5)

6. 10 CFR Part 50, Appendix B, Criterion XII, states that "Measures shall be established to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits".

Contrary to the above requirement, surface thermometers had not been calibrated on the date when recalibration was due and, at the time of the inspection, was thirteen days overdue. Moreover, the subcontractor's representative indicated that the surface thermometers had never been adequately calibrated using a primary standard. (Paragraph 6.e)

7. 10 CFR Part 50, Appendix B, Criterion XV, states, in part, that: "Measures shall be established to control materials, parts, or components which do not conform to requirements, in order to prevent their inadvertent use of installation."

Contrary to the above requirement, the subcontractor stated that nonconformance tags were being placed on newly received material so that older material in storage would be used first. (Paragraph 6.d)

8. 10 CFR Part 50, Appendix B, Criterion XVI, states, in part, that: "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies and nonconformances are promptly identified and corrected The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management."

Contrary to the above requirement, a review of nonconformance reports indicated that corrective action had not been accomplished in an expeditious manner. In addition, it could not be determined if corrective action had been completed or if the NCR's had been properly approved. (Paragraph 6.d)

9. Criterion XVII, Appendix B, 10 CFR 50 states in part that, "Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: Operating logs, and the results of reviews, inspections, tests, audits, monitoring of work performance and material analyses. The records shall also include closely related data such as qualifications of personnel, procedures and equipment Records shall be identifiable and retrievable."

Contrary to the above, almost all of the original inspection records (BC-4 Forms) were destroyed by the sub-contractor project manager or with his prior concurrence. In addition, records related to: (1) examinations of the quality assurance program, (2) inspections of the containment vessel liner plates subsequent to completion of preparation prior to application of the primer coating, (3) inspections to determine the adherence of the coating to the liner plating, (4) drying time measurements of the primer coating applied to the liner plates, and (5) measurements of the primer coating feathering and build-up along the interface between the previously applied primer coating and the newly applied primer coating in

adjacent areas were not maintained by either the sub-contractor, the contractor or the licensee.

10. Criterion XVIII, Appendix B, 10 CFR 50 states that, "A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits shall be performed in accordance with the written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Followup action, including reaudit of deficient areas, shall be taken where indicated."

Contrary to the above, only one informal audit was performed by the licensee. The results of this June 28, 1973, audit were not followed up to assure that corrective action or sub-contractor evaluation was completed for identified deficiencies.

The sub-contractor performed an internal audit in June 1974. No work in the containment vessel had been performed since December 1973.

The sub-contractor was placed on the "Q" List by the licensee in December 1973. Neither the sub-contractor, the contractor nor the licensee have developed nor implemented an audit system to determine that a quality assurance program has been developed or documented in accordance with specified requirements, verified by examination and/or evaluation that a documented program has been implemented, assessed the effectiveness of a quality assurance program, identified quality assurance program nonconformances nor verified correction of identified nonconformances.

B. Safety Matters

No safety matters were identified.

Licensee Action of Previously Identified Enforcement Matters

Not inspected.

Design Changes

No new design changes were identified.

Unusual Occurrences

No unusual occurrences were identified.

Other Significant Findings

Not applicable.

Management Interview

- A. The following persons attended the management interview at the conclusion of the inspection:

Toledo Edison Company (TECO)

J. D. Lenardson, Quality Assurance Manager
G. W. Eichenauer, Field QA Representative
E. C. Novak, Project Engineer

Bechtel Corporation (Bechtel)

H. A. Ablondi, Project Quality Assurance Engineer
C. L. Huston, Construction Manager

- B. Matters discussed and comments, on the part of management personnel, were as follows:
1. The inspector stated that a review of the sub-contractors QA manual and discussion with the sub-contractor's Project Manager indicated that the sub-contractor QA/QC personnel did not have sufficient authority and/or organizational freedom to perform their critical functions effectively and without reservation. The licensee was informed that this appeared to be in violation of 10 CFR 50, Appendix B, Criterion I. The licensee stated that the matter would be reviewed. (Paragraph 1).
 2. The inspector stated that a review of the licensee's, the contractor's and the sub-contractor's Quality Assurance Programs indicated that the present program was in violation of the requirements stated in 10 CFR 50, Appendix B, Criterion II. The licensee stated that the matter would be reviewed. (Paragraph 2).
 3. The inspector stated that a review of the available procedures indicated procedures had not been prepared, approved or used during the application of approximately 90% of the containment vessel liner primer coating. The inspector stated that this appeared to be in violation of 10 CFR 50, Appendix B, Criterion V. The licensee stated that the matter would be reviewed. (Paragraph 3).
 4. The inspector stated that neither the licensee, the contractor, nor the sub-contractor had prepared, issued or approved appropriate instructions or procedures for primer coat application on the containment vessel liner. The sub-contractor had destroyed almost all of the original BC-4 Forms (Inspection Forms) and that the

typed copies of these forms contained many hand written corrections. The BC-0 (weather information) forms were sometimes incomplete with no explanation of why the required data had not been entered. No procedure was in effect for control of the issuance and/or change to the Quality Assurance Manual. The licensee was informed that these items appeared to be in violation of 10 CFR 50, Appendix B, Criterion VI. The licensee stated that the matter would be reviewed. (Paragraph 4).

5. The inspector stated that the requirements of Specification 7749-A24 for Field Painting had not been adhered to during application of the primer coating on the containment vessel liner. The licensee was informed that this appeared to be in violation of 10 CFR 50, Appendix B, Criterion VII, and Specification 7749-A24. The licensee stated that the matter would be reviewed. (Paragraph 5)
6. The inspector stated that the surface thermometer had not been calibrated on the date when re-calibration was due and that the surface thermometer had never been adequately calibrated using a primary standard. The licensee was informed that this appeared to be in violation of 10 CFR 50, Appendix B, Criterion XII. The licensee stated that the matter would be reviewed. (Paragraph 6.e)
7. The inspector stated that there is no apparent mechanism for corrective action for the NCR's. The licensee was informed that this appears to be in violation of 10 CFR 50, Appendix B, Criterion XVI. (Paragraph 6.d).
8. The inspector stated that the original BC-4 Forms (Inspection Forms) were reported destroyed by the sub-contractor Project Manager. No records to indicate examinations of quality assurance program, audit and surveillance or inspection results related to the primer coating on the containment vessel liner were available for review. The licensee was informed that the lack of records appeared to be a violation of 10 CFR 50, Appendix B, Criterion XVII. The licensee stated that the matter would be reviewed. (Paragraph 7).
9. The inspector stated that there appeared to be no system of planned and/or periodic audits or audits performed in accordance with written procedures. The licensee was informed that the failure to develop and/or implement an audit program appeared to be in violation of 10 CFR 50, Appendix B, Criterion XVIII. The licensee stated that the matter would be reviewed. (Paragraph 8).

REPORT DETAILS

Persons Contacted

The following persons, in addition to individuals listed under the Management Interview Section of this report, were contacted during the inspection.

Bagwell Coatings, Incorporated (Bagwell)

C. H. Ridgdell, Project Manager
R. Reifsnyder, Quality Control Engineer
L. S. Sullivan, Quality Control Technician

Results of Inspection

1. Organization

The sub-contractor's Organization Quality Control Chart (following page 7, Revision 3) of the sub-contractor's Quality Control/Quality assurance Program Manual, approved April 11, 1974, indicates that the QA/QC Engineer and QA/QC Technicians are under the direct authority of the Project Manager. The sub-contractor Project Manager stated that the QA/QC personnel are responsible to him and that the Project Manager has the right to hire/fire/transfer and can affect the pay and work performance rating of QA/QC personnel.

Based on the above and the fact that about 90 percent of the containment vessel liner primer coating had been applied with no identification and correction of the significant deficiencies, it is evident that the QA/QC personnel of this sub-contractor do not have sufficient authority and/or organizational freedom to enable QA/QC personnel to perform their critical functions effectively and without reservation. It is required by 10 CFR 50, Appendix B, Criterion I, for QA/QC personnel to have the necessary freedom and independence from the pressures of production requirements, costs and other factors to ensure that QA/QC personnel can perform their functions in an objective and responsible manner.

Neither the licensee nor the contractor have reviewed and/or evaluated the sub-contractor's organization to determine that the duties, responsibilities, and/or authority vested in QA/QC personnel responsible for verifications of quality by testing, inspecting and auditing are being carried out as required by 10 CFR 50, Appendix B.

The sub-contractor was placed on the approved "Q" List in December 1973 by the contractor with approval of the licensee without this evaluation being conducted.

2. Licensee's QA Program

The inspectors examined the licensee's quality assurance program to determine conformance with commitments in the application and the requirements of Appendix B to 10 CFR 50. The examination included: (1) in-depth examinations of the quality assurance program, organization and procedures for inspection, audit and surveillance of the containment vessel liner preparation prior to application of the primer coating, inspection of the liner plating prior to application of the primer coating, repairs to liner plate coating, inspection for adherence of primer coating to the liner, feathering of liner coating prior to application of coating to adjacent prepared liner plate surface areas, determination of coating thickness on the liner plating and drying time of coating on the liner plating; (2) past performance of the contractor and the sub-contractor at the Davis-Besse site; and (3) detailed discussions of the results of the inspection findings with the management of Toledo Edison Company and the contractor.

Based on these inspection results, it appears that: (1) the licensee has not provided nor has an acceptable quality assurance program for containment vessel liner protective coating commensurate with the project status; (2) The contractor has not developed and/or implemented an acceptable quality assurance program commensurate with the project status. The present program does not conform to 10 CFR 50, Appendix B; (3) The sub-contractor has not developed and/or implemented an acceptable quality assurance program commensurate with the project status and the present program does not conform to 10 CFR 50, Appendix B; (4) Neither the licensee nor the contractor has implemented a quality assurance program through surveillance of the sub-contractor nor have qualification and performance audits of the sub-contractor been conducted in accordance with the provisions of Criterion XVIII of Appendix B, 10 CFR 50; (5) The licensee's and the contractor's QA program has not included coverage of the activities of the sub-contractor.

3. Application of Primer Coating to Containment Vessel Liner

Records and discussions with site personnel indicated that approximately 90% of the containment vessel liner primer coating has been applied. There are no approved procedures and the sub-contractor stated that the only written instructions were those from the paint manufacturer in the form of the concise "flyer instructions". There is no evidence that acceptance criteria had been established for repairs, edge feathering, surface preparation, inspection requirements for surface preparation, paint adherence testing, length of time allowed or length of time between completion of the surface preparation and application of the primer coating, paint received for application met applicable specifications, paint was applied to the prepared surface in accordance with standard instructions or that the method from one time period

to another time period was reproduceable or for verifying that the paint drying time during and immediately subsequent to application was acceptable.

4. Document Control

No procedure is in effect for control of the issuance and/or changes to the Quality Assurance Manual.

Inspection forms (BC-4 Forms) had not been properly controlled. The original Inspection forms had been destroyed by the sub-contractor's Project Manager or at his direction. Information typed on BC-4 Forms with various signatures of individuals, many of these signatures were signed by one individual for another. The typed information on these replacement BC-4 Forms had many hand written corrections with no initial or signature to indicate who made the changes or if the person making the changes had received concurrence from the originator of the information prior to entering the corrections. Several of these hand written corrections changed numbers from outside acceptable limits to numbers within the limits with no indication of why the change or who made the change.

The Weather Information (BC-0 Forms) were sometimes incomplete, with no explanation of why the required data had not been entered in the appropriate section of the form.

5. Specification 7749-A24 for Field Painting

The inspectors reviewed the contractor approved Specification, 7749-A24, Revision 4 and Revision 5.

The sub-contractor had not prepared five (5) samples of each paint system on blasted steel panels nor was one complete set retained at the construction site, as required by this specification. Neither the licensee the contractor nor the sub-contractor indicated that anyone was aware of this specification requirement. Subsequently, during the Management Interview the contractor stated that the blasted steel panels had been located, but these panels had never been painted as required by the specification.

This specification requires each shipment of "Q" and "N" Paints to include manufacturer's Certification of Conformance. The certification is required by this specification to state verbatim: "The formulation and manufacturing of the paint materials contained in this shipment are in all respects precisely identical to the formulation and manufacturing of the paint materials used in the governing original sworn statement of compliance with Proposed ANSI Standard N 101.5 - 1969 furnished by this Manufacturer to Bechtel Corporation, Washington Office, Gaithersburg, Maryland." This certification statement was

not on any paint manufacturer's certification presented for the inspector's review. In addition, the sub-contractor did not have access to a copy of the referenced ANSI Standard N 101.5 - 1969 nor did he know that this Standard was adopted as ANSI Standard N 101.2 - 1972. Apparently, no attempt was made to locate or to comply with the ANSI Standard as required by the specification.

There was no evidence that shipments of "Q" and/or "N" paints were compared by sub-contractor, contractor or licensee personnel to assure that the paints met the formulation and/or manufacturing requirements required by the specification verbatim statement.

6. Record Review

Documentation relative to the Class I coatings, which were applied during the period May 17, 1973, to the present, were reviewed by the inspector. The results of this review are as follows:

a. BC-0, Daily Weather Log

A review of the daily weather logs indicated that they contained incomplete data and/or insufficient information as to why data was missing. Examples are those for December 13, 1973, and December 20, 1973, where the data for a time of 1600 hours was missing with no indication as to why the data was not recorded, and for December 31, 1973, when no data was taken for 1200 and 1600 hours.

b. BC-1, Manufacturer's Product Identity Certification

None of the certifications examined contained the verbatim statement as required by paragraph 13.4 of Bechtel Specification 7749-A-24, Revision 5, Technical Specification for Field Painting, dated December 4, 1973. This paragraph requires that the certification shall state verbatim: "The formulation and manufacturing of the paint materials contained in this shipment are, in all respects, precisely identical to the formulation and manufacturing of the paint materials used in governing original sworn statement of compliance with proposed ANSI Standard N 101.5 - 1969, furnished by this manufacturer to Bechtel Corporation, Washington Office, Gaithersburg, Maryland". Moreover, a certification, dated May 15, 1972, for Amercoat 66, solution No. 1-42130 and solution No. 2-42129 was unsigned. In addition, no BC-2 form (Shipping and Receiving) was available for this particular batch, although a BC-3 form (Daily Warehouse Disbursements) did indicate that 20 gallons of this material was issued May 22, 1972, for use in Auxiliary Building, Rooms No. 104, No. 104A, No. 113, and No. 105.

c. BC-4, Coating Work Inspection Record

The coating work inspection records for the period May 17, 1973, through June 4, 1974, were reviewed by the inspector. This review established that the typewritten records contained handwritten changes, whited-out areas, crossed-out notations, and signatures which are questionable. Specific examples of these are for the dates of November 6, 1973 (containment vessel 725' elevation, floor of structure boxes) November 5, 1973 (containment vessel 585' elevation) and September 5, 1973 (containment vessel shell 735' and 753' elevations). The hand entries, changes, and other irregularities (without notation by those who made the changes) make the records of questionable value in establishing a valid record of the work as accomplished.

d. BC-5, Nonconformance Report (NCR)

During the application of the containment coating, no NCR's have been written, and only six have been issued by Bagwell to date for the entire job. While this total number of NCR's (six) is extremely small, a review of the NCR's also indicated that, although the proper, corrective action had been recommended for each, it could not be determined from review of the NCR's whether any of the recommended corrective action had been properly completed. A date on two NCR's No. 8172-2-QC and No. 8172-1-QC, implied that corrective action had been completed. However, there was no corresponding responsible signature indicating that action had been completed and was acceptable. The NCR's reviewed covered the period from August 17, 1972, to May 23, 1974.

During this review, the subcontractor representative stated that NCR tags were placed on newly incoming material to assure that the older material was utilized first. The inspector informed the subcontractor that NCR tags were not intended for use in this manner and defeated the purpose of the NCR system.

e. BC-6, Instrument Calibration and Maintenance

Calibration records for Micro test gauge No. 2930 and those for measurement of ambient temperatures, dewpoint, and relative humidity were examined and determined to be acceptable. However, records for the surface thermometer indicated that it had been calibrated on June 20, 1974, was due for recalibration July 5, 1974, and was overdue by thirteen days on the date of the inspection. Moreover, the contractor's representative stated that the surface thermometer had never been properly calibrated, i.e., for linearity.

7. Maintenance of Records

The inspectors found that almost all of the original inspection records (BC-4 Forms) had been destroyed either by the sub-contractor's Project Manager or with his prior concurrence. In addition, no records were available to indicate that in-depth examinations of the Quality Assurance Program had been performed. No audits and/or inspection reports or inspection results were available to verify that the containment vessel liner preparation had been inspected prior to application of the primer coating or that inspections of the primer coating had been applied to the liner within the specified time period. There were no records indicating the results of adherence tests of the primer coating to the containment vessel liner plating. Records were not presented to show that required measurements had been made relative to feathering of the adjacent liner surface areas. No records of coating drying time measurements for primer coating applied to the liner plating were available.

No procedures for performing the above described inspections had been prepared, reviewed and/or approved by either the licensee, the contractor or the sub-contractor.

8. Audit Evaluation and Audit Results

The licensee has performed one informal audit of the sub-contractors work. This informal audit was completed on June 28, 1973. No follow-up audit was given though this audit identified possible need for additional QC surveillance of production and documentation. This audit stated that all documentation required was on file for auditors and review.

The inspectors were informed by the sub-contractor Production Manager that almost all of the original Inspection Forms (BC-Form 4) had been destroyed. The sub-contractor Production Manager stated that the information from the original BC-4 Forms had been typed to make it easier to read and the original copies were then destroyed. However, the destruction of the original Inspection Forms and their substitution by typed forms that have been signed by personnel other than those who had originally recorded the data, and the fact that some forms had signatures that did not appear to match signatures for the same name on other sheets, indicates that the typed-in information may be incorrect, incomplete or inaccurate. Changes to the typed-in information include hand written entries. These changes were not initialed nor were they signed or otherwise verified to show that the person knowledgeable of the original information approved of the change(s) in question.

One audit of the sub-contractor has been performed by a Vice-President of the sub-contractor firm. This audit was performed on June 13, 1974. The sub-contractor had been placed on the applicant's "Q" list in December 1973. No coating application work has been performed since December 1973. The results of the audit included the following:

- a. 10 CFR 50, Appendix B, not covered by procedures listed in the Manual.
- b. Could not find the QC file copies of the original information to which the statement in Section 13.2 applies.
- c. No standard was available for determining the accuracy of any temperature indicating instruments at the site.
- d. NCR (Non-conformance Report) #BCI 5222 QC/QA was reviewed. No date was shown on which corrective action was taken and NCR cleared. The nonconformance report was not readily traceable to the appropriate work inspection form BC-4.

The audit by the sub-contractor did not state that the original BC-4 Forms were unavailable; therefore, it is assumed that these important records were destroyed subsequent to this audit.

The contractor had made no audits of the sub-contractor. The contractor, with apparent concurrence from the licensee, placed the sub-contractor on the "Q" List in December 1973. No evaluation or audit was apparently made or subsequent to placing the sub-contractor on the "Q" List.

The licensee stated that this sub-contractor was "new" to the field of coating applications to containment vessel liners, yet no apparent attempt was made to fully evaluate the sub-contractor's qualifications or expertise prior to start of applying the primer coating to the containment vessel liner. The inspectors found that the sub-contractor had no approved procedures for containment vessel liner preparation, inspection of the prepared surfaces prior to application of the coating, records to verify that the time limits for the exposed prepared surface was adhered to, that all coating materials met the specifications, that coatings were applied in accordance with recommended manufacturer's techniques, that edge feathering was completed in accordance with manufacturer's recommendations and that appropriate adherence testing was performed.