

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/84-09(DRS)

Docket No. 50-346

License No. NPF-3

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

Facility Name: Davis-Besse 1

Inspection At: Oak Harbor, OH

Inspection Conducted: Davis-Besse Plant on April 23-27, May 1-4, and  
May 8-11, 1984. Toledo OH on May 8, 1984.

Inspectors: *M.C. Choules*  
N. Choules July 9, 1984  
Date

*T. Vandel*  
T. Vandel July 9, 1984  
Date

*H. Walker for*  
H. Walker 7/10/84  
Date

*H. Sutphin for*  
R. Sutphin 7/10/84  
Date

*M. Moser*  
M. Moser JULY 9, 1984  
Date

Approved By: *F. Hawkins*  
F. Hawkins, Chief 7/10/84  
Quality Assurance Programs Section Date

Inspection Summary

Inspection on April 23-27, May 1-4, and May 8-11, 1984 (Report No. 50-346/84-09(DRS))

Areas Inspected: Routine, announced inspection by regional inspectors of previous inspection findings, maintenance program and implementation, design change program and implementation, test and experiments program, audit program, personnel qualifications, corrective action program, test and measuring equipment control program, surveillance testing and calibration control program.

Licensee Event 83-070, IE Bulletin 83-05 followup, procurement program, licensed and non-licensed training, generic letter 83-28 followup and QA Program changes. The inspection involved 334 inspector-hours onsite by five inspectors and four inspector-hours at corporate headquarters by one inspector. Results: Of the eighteen areas inspected, no item of noncompliance or deviations were identified in eleven areas; seven items of noncompliance were identified in the remaining seven areas (failure to require independent verification of tagging activities - Paragraph 4.a); failure of the Safety Review Board to review temporary modifications - Paragraph 4.d; failure to properly store QA records - Paragraph 4.f); failure to provide timely corrective action - Paragraph 4.h); failure to adequate control test and measuring equipment - Paragraph 4.i; failure to maintain chlorides below Technical Specification limits - Paragraph 4.k; failure to develop adequate training programs - Paragraph 4.n).

## DETAILS

### 1. Persons Contacted

#### Toledo Edison Company

- T. D. Murray, Station Superintendent
- \*J. A. Faris, Administrative Coordinator
- \*S. M. Quennoz, Assistant Station Superintendent
- \*C. T. Daft, Director of Quality Assurance
- \*C. J. Greer, Quality Assurance Supervisor
- \*D. Rhodes, Quality Control Supervisor
- \*D. J. Mominee, Quality Engineering Supervisor
- \*J. K. Wood, Facility Engineering Supervisor
- \*S. G. Wideman, Nuclear Licensing
- \*R. K. Miller, Nuclear Materials Manager
- \*M. L. Stewart, Nuclear Training
- \*C. W. Thayer, Nuclear Training

#### USNRC

- \*W. G. Rogers, Senior Resident Inspector
- D. Kosloff, Resident Inspector
- \*R. D. Walker, Chief, Operations Branch

Other personnel were contacted as a matter of routine during the inspection.

\*Denotes those attending the exit interview on May 11, 1984.

### 2. Licensee Action on Previous Inspection Findings

- a. (Closed) Unresolved Item (346/84-07-07): Concern regarding the procurement and use of the wrong type of demineralizer resin for the reactor coolout purification system. This matter is reported in detail in Section 4.k. of this report and has been upgraded to an item of noncompliance.
- b. (Open) Open Item (346/83-04-01): Format and contents of schedules for licensed personnel training. The licensee's Master Schedule Board and the Operations Section Training Schedule were prepared in an informal handwritten format. Additionally, there was (1) no evidence of management review or approval, (2) no management commitment to the programs or schedules and (3) no guidelines for the preparation of the training programs and schedules.

Subsequent to the inspection in which this open item was identified, the licensee had prepared a type-written 1983 Master Training Schedule (MTS). The MTS included operations personnel training schedules, issue date, and an approval signature of the acting Nuclear Training Manager. As of this date, the licensee had not developed any definitive guideline document for the development of training programs and schedules;

however, licensee personnel stated that there are plans to include provisions to address this item in the new Training System Development program. Pending review of that program, this item will remain open.

- c. (Open) Open Item (346/83-04-03): Format and Contents of schedules for non-licensed personnel training. The licensee's Master Schedule Board and the yearly training program outlines for three maintenance areas (electrical, mechanical, and instrumentation and controls) were (1) not adequately developed or uniform in their contents or format (2) did not have evidence of management review or approval and (3) were incomplete or incorrect in some details.

In general, the current inspection in the area of non-licensed personnel training indicated some improvement. Specifically, the Master Schedule Board was documented in the form of a typewritten Master Training Schedule (MTS). However, no significant improvement in the training programs for the three maintenance areas was evident. Pending further review, this item remains open.

- d. (Closed) Noncompliance (346/83-04-02): Failure to process waivers for personnel missing the annual Radiation Control Training. The licensee revised Administrative Procedure No. AD 1828.03 on April 26, 1984. Section 6.2 of that procedure now states that, "A Personnel Training Waiver Form must be submitted in accordance with AD 1828.00". The inspector also determined that the provisions for waivers in Section 5.2 of AD 1828.00, Revision 5, were acceptable.

### 3. IE Bulletin Review and Followup

IE Bulletin 83-05: "ASME Nuclear Code Pumps and Spare Parts Manufactured by the Hayward Tyler Pump Company" (HTPC). An inspection was conducted and reported in NRC Report No. 99900345/82-04. As a result, the inspection team has recommended (in the Report) that licensees, who either use or plan to use ASME Code pumps manufactured by HTPC during the period 1977 to 1981, conduct certain performance tests to assure that requirements of 10 CFR 50 have been satisfied. The team members stated that satisfactory performance of the pump tests is necessary to verify that they will operate as intended. During the inspection, HTPC proposed certain performance tests (termed "expanded commissioning tests" by HTPC) which, in their view, would provide added assurance of pump reliability. The HTPC response to the team's recommendations did not result in any change to the HTPC recommendations.

The licensee, in conjunction with the NSSS supplier (B&W), is reviewing the list of HTPC spare parts to determine those which are "Commercial Grade" (exact duplicate of the original qualified pump parts) and those manufactured under the HTPC Quality Assurance Program during the questionable period (1977 to 1981). Additionally, the licensee plans to either perform the HTPC recommended tests on the questionable spare parts or have them replaced by the supplier.

To date, only two items have been replaced by spare parts with a resulting satisfactory operating history. The parts replaced were one outboard bearing (SKF 7314) and one mechanical seal (4 $\frac{1}{4}$ "). Pending further review, this item remains open.

#### 4. Program Areas Inspected

##### a. Maintenance Program

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

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

##### (1) Documents Reviewed

- . Administrative Procedure (AD) 1844.00.11, "Maintenance."
- . AD 1844.01.5, "Preventative Maintenance."
- . AD 1844.03.2, "Control of Maintenance Instructions."
- . AD 1844.05.2, "Cleanliness Control."
- . AD 1806.01.6, "Nuclear Plant Reliability Data System."
- . AD 1803.00.11, "Safety Tagging Procedures."
- . AD 1828.11.4, "Maintenance Section Training."
- . Quality Control Instruction (QCI) 3103, "Maintenance,"  
Revision 8.
- . AD 1848.05.3, "Control of Drawings and Instruction Manuals."
- . Nuclear Facility Engineering Procedure, NFE-003.01,  
"Processing of Vendor Instruction Manuals," Revision 1.
- . Toledo Edison Quality Assurance Program, Chapter 17.2,  
Revision 1 of SAR.

(2) Results of Inspection

(a) The licensee's procedure for the control of corrective maintenance activities is AD 1844.00.11 (Maintenance). The inspector's review of AD 1844.00.11 and the associated Maintenance Work Order (MWO) form identified the following items of concern:

- . There was no requirement for cognizant maintenance supervision or maintenance support personnel to review the completed MWO and assure that the root cause of equipment failure was determined and documented.
- . Interviews revealed that MWOs and associated procedures may or may not be at the work site when repairs were in progress. There were no requirements in the procedure requiring MWO packages to be at the work site. Licensee personnel agreed to make this a requirement in the procedure.
- . There was no requirement to review the maintenance activity specifically for fire hazards. There was a block on the MWO for indicating the need for a burn permit but there was no instruction regarding this item.
- . Interviews revealed that the Maintenance Planning Group of the Maintenance Department was involved in the planning, accountability and status for MWOs. Their function as it related to MWOs was not described in the procedure nor was their overall function documented.
- . There was no requirement for the cognizant maintenance planner to evaluate if the MWO was a design change and document this decision on the MWO form.
- . The MWO form contained a block for priority of the work; however, there was no guidance concerning the completion of this block in the procedure.
- . Section 6.2.2 of the procedure specified the concurrence required for emergency maintenance in addition to the Shift Supervisor's approval. The wording was somewhat ambiguous and could be interpreted to require the concurrence of six individuals instead of one as intended.
- . There was no requirement to record the equipment tagout number on the MWO form to provide traceability from the MWO to the tagout.

The licensee agreed to revise the procedure as indicated and review and evaluate the other concerns for incorporation into the procedure. These items are considered to be open pending further review during a subsequent inspection (346/84-09-01).

- (b) Personnel interviews and review of the licensee's equipment tagout procedure AD 1803.00.11 ("Safety Tagging Procedure") revealed there was no requirement for independent verification of tagging equipment out of service. Independent verification of equipment status following tag removal was limited to instances when surveillance testing was required to declare the system operable. NUREG-0737, Section I.C.6; ANSI 18.7-1972, Section 5.1.5 and the Quality Assurance Program, Section 17.2.1.4.1.1.2 require independent verification of tagging.

The failure to provide for independent verification of tagging activities relative to removal from and return to service of plant equipment is considered to be an item of noncompliance with 10 CFR 50 Appendix B, Criterion V (346/84-09-02).

The inspector's interviews and review of the tagging procedure also identified the following concerns:

- . Licensee personnel assumed that when tags were applied that valves are closed and electrical breakers are open. If the position was different from that assumed, it would be noted on the tag. Additionally, there was no requirement to identify the equipment position for a tagout on either the tagging log or the tag. No procedural guidance relating to equipment positions has been provided.
- . The manner in which the procedure was written made it difficult to understand and follow. Interviews confirmed that operators found the procedure difficult to understand.

The licensee agreed to consider the inspector's comments. These items are considered open pending further review during a subsequent inspection (346/84-09-03).

- (c) The licensee had recently implemented the Davis-Besse Maintenance Management System (DBMMS). This system utilizes the computer in preparing and statusing MWOs. Maintenance and support engineers prepare the MWO and provide detailed instructions for the crafts to follow. The DBMMS provide an effective system for the control of MWOs.
- (d) The following general concerns were identified:
- . There were three lead management positions with acting personnel (Maintenance Engineer, Electrical Lead Engineer and the I&C Lead Engineer). Failure to fill these positions could have an adverse effect on employee morale. The licensee indicated that they are actively trying to fill these positions.

With the exception of the I&C department, maintenance machinery history cards had not been maintained. The licensee indicated they plan to utilize the DBMMS to provide machinery histories and trend equipment failures.

These items are considered open pending further review during a subsequent inspection (346/84-09-04).

b. Maintenance Program Implementation

Maintenance activities of safety-related systems and components were reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides, industry codes or standards, and in conformance with Technical Specifications. The following items were considered during this review: limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials were properly certified; radiological controls were implemented; and fire prevention controls were implemented.

(1) Documents Reviewed

(a) The following completed Maintenance Work Orders (MWOs) were reviewed:

<u>MWO No.</u>	<u>Maintenance Activity</u>
083-2164	Diesel Generator Breaker AC101 Repair
083-2329	Repair Leak on Valve DH-21
083-2416-01	Replacement of Reactor Pump 1-1 Seals
083-2949	Replace the 1-1 Auxiliary Feed Pump Turbine Governor
083-3722-00	Adjust Emergency Diesel Generator Governor
083-3738-00	Linear Bridge for Reactor Protection System Channel 4 Out of Tolerance
083-3900-00	Cooling Tower Makeup Pump 1-2 Breaker Inspection
083-4103-00	Repair of Containment Spray Pumps Flange Leaks
083-4064-00	Remove, Repair and Replace 1-2 Auxiliary Feedwater Pump Turbine Governor
083-4496-00	Replace RTD in Reactor Coolant Loop 1
083-4503-00	Reset No. 1 Emergency Diesel Generator Breaker
083-4537-00	Inspect Breaker for Correct Installation of Moveable Contacts
083-5253-00	Repair the 1-2 Auxiliary Feed Pump Turbine Overspeed Trip Linkage



083-5286-00,01,02	Emergency Diesel Generator Air Start Motor Repairs
083-5564-00	Repair of Main Feed Pump Integrated Control Circuit
084-0096-01	Repair of Ground on DC Motor Control Center 1
084-0255-00	CRDM A Breaker Testing
084-0439-00	Replacement of the Levering Device for Emergency Diesel Generator #2 Feed to D1.

- (b) Selected completed Preventative Maintenance Tasks were reviewed.
- (c) The following routine corrective maintenance procedures were reviewed to verify that they were technically adequate and in conformance with the applicable standards and Technical Specifications:

<u>No.</u>	<u>Title</u>
MP1401.17.10	"RCP Seal Removal and Replacement"
MP1401.32.2	"Reactor Coolant Pump Seals"
MP1401.33.1	"Auxiliary Fired Pump Turbine Radial Bearing Removal and Replacement"
MP1402.08.2	"Bench Testing Safety/Relief Valves"
MP1402.17.3	"Waste Polishing Demineralizer 1-1 Resin Removal and Replacement"
SP1504.01.7	"Reactor Vessel Closure Head Removal and Replacement"

(2) Results of Inspection

- (a) The review of the completed MWO's identified the following:

- . The description of the initial failure or problem was often very brief and uninformative. For example, MWO 84-0255-00 stated that, "Breaker Needs Testing". There was no explanation why the breaker needed testing.
- . The instructions on the MWO's for the crafts to perform the maintenance activities were generally detailed and referenced applicable procedures.
- . The description of work performed was often brief and did not fully describe why and how the corrective action was performed. For example, MWO 83-3738-00 specified that, "RPS CH.4 linear bridge found out of tolerance during performance of ST 5030.2. Repair/Replace/Recalibrate as required." The description of work performed stated, "Installed linear bridge with new from stock and calibrated bridge in place per

MI-1616." There was no description of tests or checks that lead to the decision to replace the bridge.

The licensee stated they were aware of the lack of details, especially in the "description of work performed" section of the MWOs and indicated that one of their goals was to improve the quality of MWOs. The inspector has no further questions on these matters at this time.

- (b) The status of outstanding corrective MWOs, as of May 5, 1984, according to a computer printout from the DBMMS, was as follows:

Backlogged	1104
Open (Scheduled)	159
Suspended	41
In Closeout	<u>15</u>
Total	1319

At the time of this inspection, the computer program was not set up to identify MWOs scheduled for refueling outages and those awaiting parts. Estimates of MWOs in these categories was about 300. The licensee indicated that they planned to identify MWOs which could only be worked on during refueling and those which were awaiting parts. It appears that the backlog of MWOs is significant. Pending further review, this item is considered open (346/84-09-05).

- (c) Interviews with maintenance personnel indicated that it takes extensive time to procure spare parts. Licensee personnel stated they were aware of this and the issue was under review by the Materials Management Department.
- (d) Review of Procedure SP 1504.01.7 revealed there were no requirements and hold points to perform a visual inspection of the reactor vessel for foreign material prior to installing the upper reactor internals and the reactor head. This is considered to be an open item pending further review during a subsequent inspection (346/84-09-06).

No items of noncompliance or deviations were identified.

c. Design Change and Modification Program

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

(1) Documents Reviewed

- . Administrative Procedure (AD) 1845.00.5, "Changes, Tests, and Experiments"
- . AD 1845.00.6, "Changes, Tests, and Experiments". Draft.
- . AD 1843.02.0, "Facility Change Request Initiation and Development". Draft.
- . AD 1845.03.0, "Facility Change Request Implementation". Draft.
- . AD 1845.04.0, "Facility Change Request Closeout". Draft.
- . AD 1823.00.12, "Jumper and Lined Wire Control Procedure". Draft.
- . AD 1848.05.3, "Control of Drawings and Instruction Manuals".
- . Nuclear Facility Engineering Procedure (NFEP)-010, "Processing Facility Change Request," Revision 0.
- . NFEP-011, "Conceptual Designs," Revision 0.
- . NFEP-012, "Written Safety Evaluations," Revision 0.
- . NFEP-020, "Design Work Packages," Revision 0.
- . NFEP-030, "Drawings and Sketches," Revision 0.
- . NFEP-090, "Design Verification," Revision 0.
- . NFE-003.02, "Drawing Control," Revision 1.
- . NFE-012.03, "Vendor Document Processing and Control," Revision 0
- . NFE-012.04, "Specifications," Revision 0.
- . NFE-012.05, "Performance of Calculations," Revision 0.
- . Facility Modification Department Procedure (FMPD) 6050.01, "Preparation and Implementation of an MWD Work Package," Revision 4.
- . FMPD 6060.01, "Drawing, Specification, Procedure and Document Control," Revision 4.
- . FMPD 6060.03, "FCR Modification Flowpath," Revision 0.
- . FMPD 6070.04, "Safety Tagging," Revision 1.

- . FMPD 6140.01, "Test and Startup Interface Between Nuclear Construction and Davis-Besse Station," Revision 1.
- . FMPD 6170.01, "MWD Work Package Completion Sign-off and Turnover to Operations," Revision 1.
- . Quality Control Instruction (QCI) 3144, "FCE/MWD Package Maintenance, Inspection and Turnover," Revision 1.
- . QCI 3191, "Control of Nuclear Facility Engineering Controlled Drawings," Revision 0.

(2) Results of Inspection

- (a) The station procedure established for the control of design changes was AD1845.00.5 ("Changes, Tests, and Experiments"). This procedure was under revision and four procedures were in draft form to replace it. The four procedures were designated as AD 1845.00.6 ("Changes to Test and Experiment"); AD 1845.02.0 ("Facility Change Request Implementation"); AD 1845.03.0 ("Facility Change Request Implementation"); AD 1845.04.0 ("Facility Change Request Closeout"). The Nuclear Facility Engineering Division procedure established for the control of design changes was NFEP-010, Revision 0 ("Processing Facility Change Request"). The inspector's review of the draft AD 1845 series identified the following concerns:

- . AD 1845.04.0 contained the details for turnover to operation and closeout of Facility Change Requests (design changes). The procedure addressed the requirements for training, procedure revision, and drawing update as a result of a Facility Change Request (FCR). However, neither the procedure nor the associated FCR form emphasized that certain requirements such as training, drawing update, procedure revision, and review of testing as applicable must be completed prior to turnover of the modified system to Operations.
- . AD 1845.04.0 required the preparation of Maintenance Work Orders to implement the installation of FCRs. However, there was no guidance to require a detailed installation and work sequence procedure for FCRs that involved more than simple modifications.
- . Enclosure 4 to AD 1845.05.0 ("FCR/MWD Work Verification Checklist"), specified items which are required to close out an FCR. One requirement was the conduct of appropriate training. The enclosure did not recognize that under certain circumstances, training must be accomplished prior to turnover to Operations. There were no instructions in the 1845 series procedures or in the

training department procedure which detailed the training requirements and responsibilities relative to FCRs. Audit Finding Report (AFR) 1162-2 identified the need for a training procedure which addresses the incorporation of plant modifications into applicable training programs. This AFR remains open and licensee actions are pending.

Licensee personnel agreed they would review the inspector's comments and consider making the appropriate procedural changes. These items are considered to be open pending further review during a subsequent inspection. (346/84-09-07)

- (b) Interviews and review of procedures revealed that Nuclear Engineering procedures were undergoing revision and consolidation. This was because the Nuclear Facility Engineering Department (NFED) and the Facility Engineering Department (FED) were recently combined into one organization. Completion of the procedure revisions is considered to be an open item pending further review. (346/84-09-08).

With one exception, as described below, it appeared that the completed and proposed procedures would meet the requirements of ANSI N45.2.11. Specifically, review of the design change program revealed that existing procedures did not adequately address internal and external design interfaces as required by ANSI N45.2.11. The licensee's QA organization had identified this in AFR-1147.1. NFED made a commitment to develop a procedure to address design interfaces. This item is considered to be unresolved pending further review during a subsequent inspection (346/84-09-09).

- (c) Procedure AD 1823.00.11 (Draft) specified the means in which the licensee intended to control jumpers, lifted leads and bypasses in the future. Review of this procedure indicated that items within its purview required 10 CFR 50.59 review. However, the procedure did not require the Safety Review Board (SRB) to review and recommend approval of nuclear safety-related jumpers, lifted leads and bypasses to the Station Superintendent.

The inspector discussed revising the procedure with the licensee to include SRB review and approval by the Station Superintendent prior to installation of jumpers, lifted leads and bypasses with the exception of backshift emergencies where SRB review could be accomplished after the installation. The inspector also informed the licensee that for backshift emergencies, jumpers, lifted leads, and bypasses should be approved by the shift supervisor and another qualified person.

The licensee agreed to review this item and make revisions to the procedures as required. This is considered to be an open item pending further review. (346/84-09-10)

- (d) The licensee's drawing control program did not require that control room drawings, revised by "Drawing Change Notices" (DCNs), be marked up to indicate the change. Drawings were updated by attaching the DCNs to the drawings. The inspector's review of this system indicated it would be difficult to fit the DCN into the drawing in an emergency. The inspector stated that drawings essential to the day-to-day operation and maintenance of plant should be identified and if DCNs affect these drawings, the drawing should be marked up. This is considered to be an open item pending further review during a subsequent inspection (346/84-09-11).
- (e) The licensee's drawing control and DCN program involved several departments and was quite complicated. To understand the program required reading several procedures from the different departments. There was no single procedure which described the program. A "nuclear mission wide" drawing control procedure which crosses all interfaces could enhance the program.

No items of noncompliance or deviation were identified.

d. Design Change and Modification Program Implementation

The inspector reviewed the implementation of the licensee's design change and modification program to verify compliance with the Quality Assurance Program; 10 CFR 50.59; 10 CFR 50, Appendix B and the Technical Specifications. Several completed modifications were reviewed.

(1) Review of Facility Change Requests (FCRs) and Logs

- . FCR 77-448, Enclosure of Startup Cables In Conduit
- . FCR 79-397, Removal and Replacement of Spent Resin Pump
- . FCR 81-306, Change in the Automatic Transfer Circuit for Control of Steam Pressure
- . FCR 84-074, Relocation of Pressurizer Safety Valve
- . FCR 82-089, Raising of Controller Setpoints on Freeze Protection Circuits
- . FCR 82-174, Temporary Removal of Control Power Auxiliary Feedwater Valve FW 768
- . FCR 83-017, Installation of Post-Accident Hydrogen Recombiner

- . FCR 83-021, Modification of Support 3EBD-19-H65
- . FCR 83-125, Reconnection of Cables in a Containment Ventilation System Penetration
- . FCR 84-001, Change in Reactor Power Run Back Rate Below 60% Power
- . FCR 84-039, Change in Torque Switch Settings on Auxiliary Feedwater Valves MVO 5990 and MVO 6080
- . Jumper and Lifted Wire Tag Log
- . FCR Computer Printout Status Reports
- . Nonconformance Reports (NCRs) 232-81, 392-82, and 83-01
- . Toledo Edison Audit Nos. 1109, 1125, and 1158

(2) Results of Inspection

- (a) Interviews and reviews of Nonconformance Reports (NCRs) revealed that NCRs involving temporary modifications to plant systems are not routinely reviewed by the SRB. The following three NCRs, involving temporary modifications, were not reviewed by the SRB:

- . NCR 232-81: This NCR involved the repairs to a Limitorque valve assembly using parts from other Limitorque valves operators. This resulted in a temporary modification to Steam Generator Valve MS-611. This valve is a containment isolation valve.

Review of documents associated with this NCR showed it was originated on November 23, 1981, and the modified valve operator installed at about that time. The documented safety evaluation was not prepared until May 27, 1982.

- . NCR 392-82: This NCR involved the deterioration of service water valve SW-44. The stud threads associated with the valve disk had deteriorated and resulted in poor engagement of the disc nut to the stud. A temporary modification to the valve was made by tack welding the nut to the disc stud.

- . NCR 83-01: This NCR involved an auxiliary feedwater pump steam line restraint base plate that was pulled away from the wall. This condition was evaluated by Bechtel and it was indicated that the stress levels on the piping were within short term allowable limits.

The failure of the SRB to review the above temporary changes and to recommend approval to the Station Superintendent as required by Technical Specification, Sections 6.5.1.6.d and 6.5.1.7.a, is considered to be an item of noncompliance (346/84-09-12).

(b) Completed FCRs listed in Paragraph 4.d(1) were reviewed with the following results:

. For FCRs which were originated after 1981, implementation procedures were being used. In general, the work steps specified in the procedures were broad. Improvement could be made by including more detail.

. The safety evaluations generally provided a good basis for the conclusion. An exception was noted in FCR 84-039. The torque switch setting on valves MVO 5990 and 6080 was lowered to improve their reliability. There was no explanation regarding how reliability was improved by lowering the switch setting. Discussions with the licensee indicated that resetting the switch prevented driving the valve into the seat too hard; thereby, improving reliability.

. FCR 84-001 changed the runback rate for the asymmetric control rod pattern from 30% per minute to 3% per minute from 60% power. The only details of the change sent to maintenance were setpoint changes on drawings. No instructions were provided to the implementor (Maintenance) on how to make the change. The details for making the change were quite complicated and were specified in an implementation procedure prepared by the I&C Supervisor. This type information should be prepared prior to sending the FCR for implementation.

In general, information for FCRs provided by Bechtel was on drawings and included very little guidance for installation. Providing better guidance for the implementation of FCRs would aid the implementor and provide the SRB with a more complete package to review. The licensee acknowledged the comments. The inspector has no further questions regarding these matters at this time.

(c) The inspector interviewed five Reactor Operators (RO) and Senior Reactor Operators (SRO) regarding the adequacy of training relative to FCRs. The general opinion was that training was adequate but improvement could be made. Specifically, FCR summary sheets are provided for this purpose and the operators indicated that generally they do not provide enough information regarding an FCR. The licensee acknowledged the inspector's comments regarding FCR training. The inspector has no further questions regarding this matter at this time.



(d) The backlog of FCRs and drawings requiring revision was also reviewed. The status of outstanding jumpers, lifted leads, and bypasses was also reviewed. The following were noted:

. There were 207 FCRs in the implementation phase, 224 in the closeout phase, and 400 in various phases of development. These numbers represent a significant backlog. Interviews indicated that improvements were being made in tracking and closeout of FCRs.

. There were 448 DCNs, affecting 294 drawings, which were outstanding at the time of this inspection. The time required to closeout DCNs varied from three to ten months. This also represents a significant backlog. Interviews indicated the condition was improving.

. The jumper and lifted wire tag log indicate that 21 jumpers had been installed on safety-related systems for a period of 6 months to 3 years. Twenty-four jumpers installed since January were still installed. Of the 21, seven were planned to be removed by FCRs. The number of jumpers installed is considered to be significant and should be reduced. Interviews indicated that the number of jumpers outstanding was decreasing.

These three items are considered open pending further review during a subsequent inspection (346/84-09-13).

e. Tests and Experiments Program

The licensee's test and experiment program was included in the design change program and required the same review and approval as an FCR. Handling of test and experiments as part of the design change program meets the requirements of Technical Specifications and 10 CFR 50.59.

No items of noncompliance or deviations were identified.

f. Audit Program

The Davis-Besse QA audit program was reviewed to verify compliance with regulatory requirements and operational QA program commitments. The inspection was performed by reviewing applicable procedures and records and conducting personnel interviews.

(1) Documents Reviewed

(a) Procedures

. QAI 4180, "External Audit Scheduling," Revision 4

- . QAI 4181, "Audits," Revision 7
  - . QAI 4182, "Audit Activity Log/AFR Tracking Log,"  
Revision 4
  - . QAI 4184, "Audit Activities," Revision 3
  - . QAI 4186, "Internal Audit Scheduling," Revision 9
  - . QAI 4187, "Audit Checklists," Revision 2
- (b) Audit Schedules for 1983 and 1984
- (c) Selected Audit Reports and Files
- (d) Audit Activity Log/AFR Tracking Log
- (e) Maintenance Management System Open Documents List

(2) Results of Inspection

- (a) The inspector reviewed audit schedules for 1983 and 1984 and the QA records for 14 audits. This review included audit planning, audit checklists, audit methods (through review of completed checklists), audit reporting, audit findings and responses, and audit finding tracking and closeout. The review identified the following items of concern:

- . The completion and closeout of a number of Audit Finding Reports (AFRs) appear to be untimely. For examples, AFRs 706-1, 706-3, 755-2, and 853-1 have been open for more than 18 months. A number of AFRs were noted with excessively long estimated completion dates. For example, AFR 1126-1 has an estimated completion date of January 24, 1989.
- . A number of discrepancies were noted between the "Audit Activity Log/AFR Tracking Log" and the AFR listing in the "Maintenance Management System Open Documents."

These two items were discussed with Toledo Edison personnel. Pending further review, these two concerns regarding the AFR system are considered unresolved (346/84-09-14).

- (b) During the inspection, the inspector noted that a number of quality related records were not being provided the protection required for quality assurance records. These records were as follows:

Audit records (i.e., reports, findings and associate correspondence) were stored in Quality Assurance files in the Administration Building in standard filing cabinets.

Auditor qualification/certification records were stored in Quality Assurance files in the Administration Building and Quality Control inspector qualification/certification records were stored in standard filing cabinets in the QC trailer.

Calibration records for test and measuring equipment assigned to and used by Quality Control were kept in a loose leaf binder and were stored on a bookshelf in the QC trailer. Calibration records for Plant Instrumentation and Control, Mechanical and Electrical Groups were stored in one hour fire rated filing cabinets.

The Toledo Edison Quality Assurance Program (revision 1, July 1983) contains the following statements in Table 17.2-1.

"Quality Assurance Records - A document is considered complete when all applicable information has been reviewed and approved by the applicable individuals."

"Section 5.6 of ANSI N45.2.9 requires the record storage facility to maintain a four-hour fire rating. In lieu of this requirement, Toledo Edison considers the minimum two-hour fire rating as specified in ANSI N45.2.9-1979 as an acceptable alternative."

In the application of the QA Program, based on the above definition, Toledo Edison does not consider a document to be a quality assurance record until the file containing it is closed. For example, only one Auditor Qualification Record was in the Davie-Besse Records Management System. This record was for an auditor who had terminated from Toledo Edison. This file had been closed and submitted to the Records Management System.

This failure to properly protect all quality assurance records as required by Section 5.6 of ANSI N45.2.9 is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion XVII (346/84-09-15).

g. Personnel Qualification

The inspector reviewed the personnel qualification/certification records for Quality Assurance lead auditors and Quality Control inspectors. The inspection was performed by reviewing applicable procedures and records and interviewing responsible supervisory personnel.

(1) Documents Reviewed

(a) Procedures

- . QAI 4185 Quality Assurance Audit Personnel Qualifications, Revision 7
- . QCI 3020 Qualification and Certification, Revision 9

(b) Selected Lead Auditor Certification Records

(c) Selected Quality Control Inspection Certification Records

(2) Results of Inspection

Lead auditor qualification/certification records were reviewed for personnel from both the Operations Quality Assurance (internal auditors) and Quality Engineering (supplier/contractor auditors) departments. Inspector qualification/certification records were reviewed for five receiving inspectors and for selected Quality Control inspectors from each functional discipline. Qualifications of inspectors selected were adequate, although some minor record problems were noted. The following specific records were reviewed:

- . Lead Auditor Qualification forms in the packages indicated that the certification was based on passage of a written examination. Other than the statement on this form there was no objective evidence of the individuals satisfactorily passing a written examination. This information was obtained prior to completion of the inspection and the inspector had no further concerns in this area.
- . Three auditors had not received their annual recertification which was due on or before April 1, 1984. Audit records indicated that these three auditors had been active in the audit program during the year and met the requirements for recertification. This problem was corrected prior to the end of the inspection and the inspector has no further concerns in this area.
- . The qualifying experience of three auditors was not substantiated by resumes included in the certification file. One resume was missing, one resume did not include time periods for experience, and one resume did not show experience prior to 1976 even though experience from 1974 was used in certifying the auditor. Other documents in the file substantiated that the auditors met the minimum experience requirements for certification as lead auditors. The inspector was told the resumes would be corrected and there are no further concerns in this area.

The QC inspector certification files were reviewed. These files did not contain a copy of the certification test as required by paragraph 6.6.2.3 of QCI 3023. The inspector was told that these tests were kept by the Quality Assurance Manager to prevent the contents from being compromised. Pending review of the certification test results, this matter is unresolved (346/84-09-16).

The resume included in one QC inspector's certification file listed equipment operator experience as qualifying experience. When this experience was questioned the inspector was told that the listed experience involved testing and check-out of components rather than just operation of equipment. Licensee personnel stated that the resume would be updated to include the applicable experience. The inspector has no further questions regarding this matter at this time.

h. Corrective Action Program

The inspector reviewed the corrective action program and its implementation to verify conformance with regulatory requirements and quality program commitments. The review included the quality trending program, action taken as the result of audit findings and non-conformance reports, and the use of the Corrective Action Request.

(1) Documents Reviewed

(a) Procedures

- . Administrative Procedure, "AD 1807.00; 08 Control of Conditions Adverse to Quality"
- . QAI 4150, "QA Review of Nonconformance Reports," Revision 7
- . QAI 4151, "NRC Trend Analysis," Revision 7
- . QAI 4160, "Corrective Action Requests," Revision 5
- . QCI 3150, "Control of Nonconformance Reports and Supplier Deviation Reports," Revision 9
- . QCI 3160, "Corrective Action Requests," Revision 5
- . NFE-007, "Processing of Nonconformance Reports (NCRs) Supplier Deviation Reports (SDRs) and Supplier Deviation Disposition Requests," Revision 2

(b) Monthly Trend Report

(c) Selected Audit Finding Reports (AFRs)

(d) Open Corrective Action Request

(e) Selected Nonconformance Reports (NCRs)

(2) Results of Inspection

Four quality trend reports, eight closed audit finding reports, fourteen closed nonconformance reports, and seven open nonconformance reports were reviewed to verify prompt and effective corrective action.

(a) NCR Reviews

Review of open NCRs indicated that in a number of cases the NCRs called for temporary fixes (i.e., "use to the next scheduled outage" or "use for short term" duration). The following NCR's were reviewed:

- . Nonconformance Report 316-77 was written on August 17, 1977. The disposition, dated September 13, 1977, contained the following statement: "The present piping is qualified for 2 cycles of safety valve discharge with no preheat, which is sufficient to enable operation to the first scheduled outage." Page 15 of this NCR indicates that work correcting the problem was not complete until July of 1982.
- . Nonconformance Report 126-17 was written on May 12, 1978, on the installation of temporary cables. The disposition requires removal of the temporary cables or documentation on design documents if they are to remain permanently installed. The NCR had not been closed on the last day of this inspection and there were no indications that the required work had been completed.
- . Nonconformance Report 232-81 was written on November 22, 1981. The disposition written on November 27, 1981, contained the statement "is acceptable on a temporary basis." At the time of this inspection, the NCR was still open and there was no other evidence to indicate that the problem has been resolved.
- . Nonconformance Report 392-82 was written on June 14, 1982. The disposition states "use-as-is and replace the disc and disc nut during the first refueling outage after receipt of parts." At the time of this inspection, the NCR was still open and there was no other documentation to indicate that the work had been completed.

(b) CAR Review

The Corrective Action Request (CAR) Log was reviewed. It indicated that the last CAR was issued August 17, 1982. The two CARs that are currently open both have a 1983 scheduled completion date listed in the CAR log.

These failures, as noted in (a) and (b) above, to assure that conditions adverse to quality are promptly identified and corrected, are considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion XVI (346/84-09-17).

i. Control of Test and Measuring Equipment

The inspector reviewed the test and measuring equipment calibration control program to verify conformance with regulatory requirements and quality program commitments. The review included calibration and control responsibilities of the Instrument and Control, Mechanical, Electrical and Quality Control Organizations. Specifically, the inspection consisted of a review of the calibration recall system and examination of a selected sample of seven to eight items from each area (four for Quality Control) to verify unique identification, calibration labeling and adequate calibration records.

(1) Documents Reviewed

(a) Procedures

- . QCI 3120, "Control and Calibration of QC Measuring Equipment."
- . Administrative Procedure AD 1844.00-10, "Maintenance"
- . Administrative Procedure, AD 1849.00;03, "Measuring and Testing Equipment Control and Calibration"
- . Maintenance Procedure MP 1410.03.9, "Maintenance Test Equipment Calibration"
- . Instrument Calibration and Testing Procedure IC 2100.00.11, "Test Equipment Calibration"

(b) Selected Calibration Records

(2) Results of Inspection

- (a) Review of the Davis-Besse calibration system identified that calibration procedures do not require that calibration standards, used to calibrate test and measuring equipment, have a greater accuracy than the device being calibrated. It should be noted that normal nuclear industry practice requires that standards have at least four times the accuracy

of the devices being calibrated. This is based on paragraph 4.1 of ANSI N45.2.16 ("IEEE Standard Requirements for the Calibration and Control of Measuring and Test Equipment used During the Construction and Maintenance of Nuclear Power Generating Stations"). Davis-Besse was not committed to this standard; however, the failure to specify the accuracy of calibration standards can lead to a substandard calibration system. Pending further review, this matter is unresolved (346/84-09-18).

- (b) A review of Quality Control Instruction 3120 ("Calibration and Control of QC Measuring Equipment"), Revision 3, indicated that the procedure contained no requirement for recording the identification of the test or measuring instrument used on an inspection or test. Without this identification, an evaluation of items tested with equipment later found to be out of calibration cannot be conducted. Paragraph 5.3 of the procedure requires this evaluation.

The inspector reviewed the list of calibrated test and measuring instruments maintained by Davis-Besse Quality Control. Approximately fifteen to twenty items were included on the list. Four pieces of measuring equipment, item numbers QC-3 (surface thermometer), QCT-5 (concrete thermometer), QCT-6 (concrete thermometer) and QC-21 (coating thickness gauge) were selected for review. The following specifics were noted:

- . Calibration labels attached to QCI-5 and QCT-6 indicated the "date calibrated" rather than the "calibration due" date as required by paragraph 6.3 of procedure QCI 3120.
- . QC-3 did not have a calibration label attached as required by paragraph 6.3 of procedure QCI 3120.
- . QCI-5 and QCI-6 were not included in the action card tracking system used to ensure periodic re-calibration. This tracking and recall system is required by paragraphs 5.1 and 6.1 of procedure QCI 3120.
- . No calibration records were available in the QC files for test and measuring equipment designated on the list of equipment to be calibrated prior to use. There was no evidence this equipment had ever been calibrated or used; however, the equipment was in the QC storage cabinet available for use. Paragraph 6.4 of procedure QCI 3120 requires that calibration records for test and measuring equipment assigned to QC be maintained in the QC files.

This failure to provide adequate control of measuring and test equipment is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion XII (346/84-09-19).



j. Surveillance Testing and Calibration Program

The inspector reviewed the program for surveillance testing, calibration and inspection required by the technical specifications. The Davis-Besse Surveillance and Periodic Test Schedule was reviewed. The inspector verified that schedule dates and responsibilities for tests were assigned, the schedule was updated and issued periodically, and tests were performed as scheduled.

(1) Documents Reviewed

(a) Procedures

- . QCI 3101, "QC Surveillance," Revision 5
- . QCI 3111, "QC Verification of Station Surveillance and Periodic Tests," Revision 2
- . Administrative Procedure AD 1838.00.10, "Surveillance and Periodic Test Scheduling"
- . Administrative Procedure AD 1838.02.11, "Performance of Surveillance and Periodic Tests"

(b) Selected Surveillance and Periodic Test Schedules

(c) Selected Surveillance and Periodic Test Records

(2) Results of Inspection

The computerized weekly surveillance and test schedules which had been issued during the past six weeks were reviewed. The records of twelve selected tests and calibrations were reviewed to verify that the scheduled activities had been performed and records were available.

No items of noncompliance or deviations were identified.

k. Licensee Event Report (LER) Review and Followup

LER 83-070 dated January 10, 1984, was reviewed. This report relates to a chloride concentration in the reactor coolant system in excess of steady-state technical specification limit caused by prematurely depleted resin.

(1) Documents Reviewed

- . LER Report No. 83-070
- . Laboratory Instrument Procedure LI 4782.00, "Laboratory Instrument and Reagent Calibration", Revision 6

- . Technical Specification, Section 3.4.7, "Reactor Coolant Chemistry, Limiting Condition for Operation"
- . TECo purchase order 023-T-74692A-AQ, dated February 8, 1983, to Wolcott Chemical Company
- . Invoice from Wolcott Water Softeners, Inc. to TECo, number 1143, dated March 7, 1983

(2) Results of Review

(a) Problem Identification

The reactor coolant system purification demineralizer 1-1, charged with a recently installed resin bed of Diamond Shamrock Mixed Bed H/OH Resin ARM-9390, was exhausted of chlorides prematurely. The resin, installed during the last refueling outage, was placed into service on November 8, 1983, using demineralizer 1-1. The same resin was also placed in demineralizer 1-2.

A test conducted at 0845 hours on December 10, 1983, indicated that the coolant system chloride exceeded the 0.15 ppm limit specified in Technical Specification, Section 3.4.7.

The chloride reached a maximum of 0.26 ppm in the reactor coolant at 1430 hours. Switching to demineralizer 1-2, containing unused like resin, brought the coolant system chlorides within limit by 0700 hours on December 11, 1983. According to the shift supervisor's unit log, the chlorides exceeded the technical specification steady state limit for approximately 22 hours before returning to within specified limits.

(b) Resin Procurement

Interviews and review of documents established that the resin installed in the reactor coolant demineralizer had been procured as one item of a non-Q bulk quantity order. The purchase order specified that, "Diamond Shamrock ARM 9390 (H/OH) resin must meet spec. of less than 0.1 MG/L Leachable Chloride." The supplier, however, disregarded the leachable chloride limitation because the Diamond Shamrock ARM 9390 resin did not meet the requirement.

Laboratory Instrument procedure LI 4782.00, Revision 6 contains a specification for chemicals and resins. Paragraph 6.2 states that, "Since chemicals and resins listed in this section come in contact with the reactor coolant system, specific criteria is required for their use." Specifically, paragraph 6.2.2, "Nuclear Grade Ion Exchange Resins", includes specific chemical and physical specifications for (1) particle size, (2) cation capacity, (3) anion

capacity, (4) mixed bed capacity, and (5) impurities. Although adequate resin specifications were procedurally provided and controlled, the requirements were not included in the purchase of the resin because it was classified as a nonsafety-related item.

(c) Receipt and Handling

The non-stock resins were part of the non-Q purchase order issued to Wolcott Chemical Company and were delivered to Toledo Edison's Bay Shore Station, a non-nuclear power plant located nearby. Later, the resins for the reactor coolant system demineralizers were moved to the Davis-Besse site.

Interviews revealed that neither receipt inspection nor sampling testing was performed on the resin material upon arrival at the station. The NRC inspector was informed that a capacity check would have detected the difference between the weak base and strong base resins and prevented installation of incorrect resin into the demineralizers.

(d) Corrective Action

The LER outlined corrective actions, including the following immediate actions: (1) place Purification Demineralizer 1-2 in service, (2) reduce the chlorides to technical specification limit of 0.15 ppm chlorides, and (3) replace the resin in purification demineralizer 1-1 with Rohm & Haas resin IRN-150LC (a stock item). Other corrective action designated included the following: "to prevent the weak-base resin from being purchased, personnel selecting resin have been instructed by the Chemist and Health Physicist to ensure it meets the criteria given in LI 4782.00 Laboratories Instrument and Reagent calibration."

(e) Findings

In summary, review of the preceding circumstances indicated that (1) the resin was procured as a nonsafety-related item without the benefit of receipt inspection or testing and (2) the requirements of procedure LI 4782.00 were not met with regard to resin chemical and physical properties. These actions led to procurement of unacceptable resin which resulted in the reactor coolant system chloride exceeding Technical Specification limits. This failure to maintain the coolant system chlorides within the limit specified is considered to be an item of noncompliance with the Davis-Besse Technical Specification, Section 3.4.7. (346/84-09-20).

1. Procurement Program

A review was conducted of the licensee's procurement program and of selected samples of purchasing, receiving, handling and inspection activities. An evaluation with regard to the maintenance of the licensee's Q-list procedure was also conducted.

(1) Documents Reviewed

(a) Procurement QA Instructions

- . Section 1, "Organization"
- . Section 2, "Procurement Document Control"
- . Section 3, "Instructions and Procedures"
- . Section 4, "Document Control"
- . Section 5, "Supplier Deviation Report Disposition"
- . Section 6, "Quality Records"

(b) Nuclear Material Management Procedures

- . Section 2, "Requesting Material/Service from Outside Resources for Nuclear Safety-Related Activity"
- . Section 3, "Administrative Receipt and Receipt Inspection"
- . Section 4, "Material Handling and Storage Requirements"

(c) Administrative Procedure AD 1846, "Requisition of Material and Services," Revision 4.

(d) Facility Modification Department (FMD) Procedures

- . FMDP 6080.01, "Control of Materials and Equipment," Revision 6.
- . FMDP 6070.03, "Receiving Inspection of Materials and Equipment", Revision 4.
- . FMDP 6040.03, "Evaluation of Bid Proposals," Revision 1.
- . FMDP 6040.02, "Preparation, Approval, and Issuance of Purchase Requisitions," Revision 2.
- . FMDP 6040.01, "Preparation, Approval, and Issuance of Inquiries for Procurement," Revision 1.

(e) Nuclear Facility Engineering (NFE) Procedures

- . NFE-006, "Processing and Approval of Purchase Requests for Space and Replacement Parts," Revision 0.

- . NFE-008, "Processing and Approval of Purchase Requests for Engineered Items," Revision 0.
- . NFE-020, "Design Work Package," Revision 0.
- . NFE-130, "Q-List Procedure," Revision 0.

(f) Quality Assurance Instructions (QAI)

- . QAI-4030, "Design Specification Review," Revision 5.
- . QAI-4031, "QA Program Specification," Revision 4.
- . QAI-4040, "QA Review of Purchase Requisitions and Orders," Revision 4.
- . QAI-4041, "QA Program Program Reviews," Revision 6.
- . QAI-4042, "Evaluated Vendors List," Revision 2.

(g) Quality Control Instructions (QCI)

- . QCI-3070, "Receipt Inspection," Revision 9.
- . QCI-3150, "Control of Nonconformance Reports and Supplier Deviation Reports," Revision 8.
- . QCI-3160, "Corrective Action Reports," Revision 4.

(h) Audit Reports

- . Six audit reports (numbers 758, 970, 993, 995, 1015, and 1074) conducted of purchasing department activities.
- . Four audit reports (numbers 1030, 1042, 1054, and 1121) conducted of Quality Engineering activities

(i) Bechtel Power Division Project Procedure, Procedure No. EDPI 4.28-11, "Q-List"

(2) Results of Review

(a) Procurement Department

- . A training program was provided for purchasing personnel which included training lectures by QA-QE supervisors. QA Program Procedures and Instructions were available to the personnel to assure proper control of purchase orders for safety-related material.
- . Purchase Order Q6C1-219275, dated May 8, 1984, was reviewed and had the required approvals and the necessary specification attachments included.

- . Seven completed purchase orders contained in the purchase order file were reviewed.
- . Blanket purchase order No. Q744259-RH, issued to Consumer Power Company for calibration and test services, was reviewed.

No items of concern were identified during the review.

(b) Stock Material Upgrade

Nuclear Facility Engineering Procedure NFES-072, Revision 0, provides a means by which the cognizant engineer can upgrade stock material for safety-related applications by issuing form ED 7171-A (General Material Inspection Checklist). The form allows the cognizant engineer to specify the testing and qualification necessary to accomplish the upgrade. One example of an Upgrade material file (P. O. #T693849) was selected and reviewed. Pending review of additional selected upgraded items, this item is considered open (346/84-09-21).

(c) Vendors List

The Quality Engineering Evaluated Vendors List was reviewed by the NRC inspector. Audit report 1042 had identified an audit finding (1042-3) which stated that five unsatisfactory vendors were listed on the Approved Vendors List (AVL) issued April 12, 1983. Unsatisfactory vendors had been allowed to be left on the AVL with a status designation of "U" (unsatisfactory). The AVL is no longer used and has been replaced by the Quality Engineering Evaluated Vendors List (EVL).

The corrective action in response to the audit finding stated that, "QAI 4042 will be revised to allow various vendor status levels within the Evaluated Vendors List. This revision was to be completed and issued by July 9, 1983. The NRC inspector observed, during review of the April 4, 1984, EVL that numerous status changes were in progress and that unapproved vendors were included on the list. In response to questioning, licensee personnel stated that it was considered desirable for historical purposes, to leave unapproved vendors on the list. The inspector has no further questions on this matter at this time.

(d) Q List Procedure

Review of procedures and discussions with licensee personnel identified that maintenance of the "Q-List" is performed by Bechtel Corporation in Gathersburg. The original Q-List was prepared by Bechtel during the design and construction

phase of Davis-Besse. Revisions to the Q-List are initiated by Toledo Edison or by the NSSS supplier. Toledo Edison Nuclear Facility Engineering maintains the original design documents and makes the necessary modifications to the nuclear safety-related structures systems and components. No concerns were identified during this review.

m. Requalification and Training for Licensed Personnel

The requalification training program was reviewed to verify compliance with 10 CFR 55, Appendix A; NUREG-0737; ANSI N18.1-1971; and the Technical Specifications.

(1) Documents Reviewed

(a) Administrative Procedures

- . AD 1828.00.5, "Personnel Training Program"
- . AD 1828.06.5, "Required Reading List Preparation, Retention and Audits"
- . AD 1828.07.4, "System Walk-throughs and Oral Examinations"
- . AD 1828.09.3, "Senior Reactor Operator Training"
- . AD 1828.15.4, "Requalification"

(b) Training Schedules

- . 1983 Master Training Schedule (11-11-83)
- . 1984 Master Training Schedule (4-18-84)

(c) Training System

- . July 1963 Training System Development (TSD) System

(2) Results of Inspection

(a) Procedure Reviews

Administrative Procedure AD 1828.00.05 ("Personnel Training Program") included changes relative to the use of training waivers. This change was made as a corrective action on a previously identified item of noncompliance (346/83-04-02) closed in Section 2 of this report.

Other changes in the Administrative Procedures (AD) were reviewed to verify conformance with requirements and commitments, and were found to be acceptable.

(b) Training Classes

The inspector attended the Accelerated Requalification class for licensed personnel. The lesson plan was in an informal handwritten format; however, the contents related to the objectives of the class and were followed effectively by the instructor. The Training Department is presently developing a new procedure to control lesson plans and expects to issue it as part of their Training System Development (TSD) program.

No concerns were identified during this portion of the review.

(c) Training Records

The training records for selected licensed operators were reviewed. The inspector reviewed the training files of active Reactor Operators (RO) and Senior Reactor Operators (SRO) and training records for their General Orientation and Radiological Controls Training.

The review indicated that, as of May 7, 1984, all of the records for the 1983 and 1984 training requirements were complete and up to date and management review for acceptability was in process. Results of the most recent annual examinations had been evaluated and deficient areas identified for coverage in future lecture series. Interviews with RO and SRO personnel verified the current status of the training records and the training program to be acceptable.

(d) Training Schedule

The Master Training Schedule for 1984 was reviewed. It included the required technical training lectures (six per year) specified in Section 6.1.1 of AD 1828.15.2 for the Licensed Personnel Requalification Programs. The schedule included classes for 1984 Licensed Operator Candidate Training, 1984 Licensed (SRO) Operator Candidate Training, and 1985 Licensed Operator Candidate Training.

The schedule included one new program which was scheduled for July and August 1984, entitled "Abnormal Transient Operating Guidelines (ATOG)." This program will address, in part, the requirements of operator action during Anticipated Transient Without Scram (ATWS) events. This is part of the licensee's response to NRC Bulletins on the Salem and other similar ATWS events.

The Master Training Schedule (MTS) for 1984 in the new typewritten format is an improvement over the chalk board "Master Training Board" concept that was in use at the time



of the previous NRC inspection in March, 1983. Review of the 1984 MTS indicated that the schedule was neither identified as a Davis-Besse document nor approved by the Nuclear Training Manager. The licensee indicated that they would address these concerns in future issues of the MTS. The inspector has no further questions regarding these matters at this time.

No items of noncompliance or deviations were identified.

n. Training for Non-Licensed Personnel

The training program for non-licensed personnel was reviewed to verify compliance with the Technical Specifications, Updated Safety Analysis Report (USAR) and Quality Assurance Program requirements.

(1) Documents Reviewed

- . AD 1828.00.5, "Personnel Training Program"
- . AD 1828.03.7, "General Employee Training"
- . AD 1828.04.4, "Personnel Training Records"
- . AD 1828.10.3, "Davis-Besse Operator Training Program"
- . AD 1828.11.4, "Maintenance Section Training"
- . AD 1828.12.5, "Chemistry and Health Physics Training"
- . AD 1828.16.0, "Non-Licensed Operator Proficiency Training"
- . AD 1828.21.0, "Shift Technical Advisor Training Program (STA)"
- . NFES-060, Nuclear Facility Engineering Division Procedure, "Training and Qualification of Personnel," Revision 0
- . 1983 Master Training Schedule (11-11-83)
- . 1984 Master Training Schedule (4-18-84)

(2) Result of Inspection

(a) Maintenance Training

Administrative Procedure AD 1828.11, Revision 4, approved March 22, 1984, (Maintenance Section Training) was reviewed to verify compliance with commitments made in Section 13.2.2.3 of the USAR regarding initial training and continued training for all maintenance personnel. Part 5.1 of AD 1828.11 states that, the training program is intended to accomplish

maintenance skill training and training in special features of maintenance at a nuclear power plant. Training is also required to assure a high level of capability and a familiarity with changes to equipment or procedures. Part 5.1.5 provided for continuing training consisting of scheduled training sessions designed to:

- "1. Present revised information concerning pertinent station equipment, systems and procedures as designated by the Maintenance Engineer.
2. Review important topics for the Maintenance section on a regular basis.
3. Cover Health Physics and Quality Assurance Training to ensure an up-to-date working knowledge."

A review of the Master Training Schedule (MTS) for 1984 identified that no training for Electrical Maintenance personnel was scheduled for 1984 as was done on the 1983 MTS. The inspector also attempted to review the individual Electrical Maintenance Department schedule for training in 1984. The schedule had not been fully developed and did not provide assurance that electrical maintenance personnel training would be conducted.

This failure to provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained is considered an item of noncompliance with Criterion II of 10 CFR 50, Appendix B (346/84-09-22A).

(b) Chemistry and Health Physics Training

Administrative Procedure AD 1828.12 (Chemistry and Health Physics Training) approved April 6, 1984, was reviewed to verify compliance with commitments made in section 13.2.2.3 of the USAR regarding initial training and continued training for Chemistry and Health Physics (C&HP) personnel. Part 4.2 of AD 1828.12 states that, "The Chemist and Health Physicist is responsible for ensuring the Chemistry and Health Physics personnel are properly trained and that they maintain proficiency in their required job skills. His functional responsibility includes the establishment and implementation of a Chemistry and Health Physics Program to provide adequate training of Chemistry and Health Physics personnel." Part 4.3 states that, "The Training Staff is responsible for coordinating Chemistry and Health Physics training with other training programs at the station. They schedule and assist in the conduct of various phases of the training and monitor

the progress of trainees." Part 6.2 addresses commitments for continuing training, refresher training, general orientation training, emergency plan training, and proficiency tests.

A review of the MTS for 1984 identified that no training for C&HP personnel was scheduled as was done on the 1983 MTS. This failure to provide for indoctrination and training of personnel to assure that suitable proficiency is achieved and maintained is considered another example of noncompliance as cited in Section n.(2)(a) of this report. (346/84-09-22B)

(c) Training Classes

The inspector attended four training classes for non-licensed personnel as follows:

- . General Orientation Training (GOT)
- . Maintenance Training in AD 1844.00
- . STA Reactor Theory
- . C&HP Training - Kaman Monitoring System

Attendees at the classes were interviewed, class lesson plans were checked, handout material reviewed, and adequacy of the technical and quality contents judged. The Quality Assurance portion of GOT Training provided essentially only a brief introduction to the purpose of Quality Assurance and Quality Control. It is the least effective of the six modules of training presented by GOT.

Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure" and Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure" were covered adequately during the General Employee Training (GET) program, and copies of the Regulatory Guides were given to those in attendance.

The licensee is developing a procedure to control the preparation and issuance of lesson plans. The new procedure should improve the quality of lessons plans currently in use. Pending review of the approved procedure and a sample of lesson plans, this item is considered open (346/84-09-23).

(d) Training Records

Training records for General Employee Training (GET) and non-licensed activities were reviewed. The information was retrieved from the Davis-Besse computer controlled

"Information and Records Management System (IRMS)." The inspector found that an alpha-numeric records identifier had been assigned for most of the training class records, but not all. Some identifiers covered more than a single class or instruction/training activity and some activities had no assigned identifier in the IRMS.

Record retrieval and management use of the system was somewhat cumbersome, partly because of this lack of uniform record identity. In addition, there did not appear to be any coordinated use of the IRMS identifiers in the other training activities (i.e., class materials, lesson plans, individual training schedules, master training schedules, hard copy records, and files). The licensee agreed that they would consider development of a procedure to look into the coordinated use of Training Program and Records Identifiers as part of their current Training System Development (TSD) program. This is considered an open item (346/84-09-24).

(e) Engineering Training

Nuclear Facility Engineering Division Procedure No. NFES-060, Revision 0, was reviewed. It is a relatively new procedure and is in the process of implementation. The procedure appeared weak, in that, no mandatory training was specified. Instead, the emphasis was on a sample "Document Reading List" attached as Exhibit 1 to the procedure.

Discussions with the Nuclear Training Department indicated that they had three programs available for use by engineering personnel for training and that some engineers had used the training. The training consisted of (1) a two week B & W Simulator Program for engineers, (2) Plato Computer Base training (three sessions scheduled in 1984), and (3) monitoring of the STA training programs. The majority of this training was optional.

Interviews revealed that the Nuclear Engineering Department personnel had received various kinds of training; however, there had been very little nuclear program specific Quality Assurance training and engineers were generally not familiar with ANSI N45.2-11, 1974 ("Quality Assurance Requirements for the Design of Nuclear Power Plants").

Additionally, maintenance support engineers were interviewed. They indicated that they had received various kinds of training; however, there was no procedure or instruction which outlined general training requirements for support engineers who prepare Maintenance Work Orders.

The licensee has a Training System Development Program (TSD) under way which is planned to address engineering training. Pending review of the engineering training program, this matter is considered open (346/84-09-25).

(f) Quality Assurance Training for Non-Quality Assurance/  
Quality Control (QA/QC) Department Personnel

A review of the status of QA training for non-QA/QC personnel revealed that very little progress had been made in the development and implementation of an appropriate program to accomplish this objective. The licensee had identified this deficiency in their program during an audit in May, 1982, and it was documented in Audit Finding Report No. AFR 865-3. The audit was conducted on May 17-21, 1982. The proposed corrective action required the conduct of a "Needs Analysis" to determine the training needed and to establish the procedure and program elements required to accomplish the correction of the deficiency.

The licensee is continuing to develop a program for the QA Training of non-QA/QC personnel and expects to complete it as part of their current TSD program. This is considered an open item (346/84-09-26).

o. Generic Letter 83-28 Followup

The inspectors reviewed the licensee's actions in response to Generic Letter 83-28 regarding followup action based on generic implications of the Salem ATWS event. Selected procedures and test records were reviewed.

The licensee has established a program of preventative maintenance and surveillance of control rod drive (CRD) trip breakers including inspection, cleaning, adjusting, testing and lubrication. Procedures MP 1405.05, ST 5030.12, ST 5030.19, and ST 5030.20, have been established for maintenance and surveillance testing of CRD breaker testing. Trending of CRD trip breaker response times was being performed.

The licensee has also established a program to assure that (1) post-maintenance testing is accomplished, (2) equipment is designated as safety-related and (3) administrative controls require approval of maintenance work requests, identification of personnel performing the maintenance, and inspection of maintenance work. The procedure which addresses the above activities is AD 1844.00.11, "Maintenance".

No items of noncompliance or deviations were identified.

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during the inspection are discussed in Paragraphs 4.c.(2).(b), 4.f.(2).(a), and 4.g.(2), and 4.i.(2).(a).

5. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Section 4, Paragraphs a.(2)(a), a.(2)(b), a.(2)(d), b.(2)(b), b.(2)(d), c.(2)(a), c.(2)(b), c.(2)(c), c.(2)(d), d.(2)(d), l.(2)(b), n.(2)(c), n.(2)(d), n.(2)(e), and n.(2)(f).

7. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on May 11, 1983, and summarized the purpose, scope, and findings of the inspection.