

UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

IE Inspection Report No. 050-346/77-08

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

Davis-Besse Nuclear Power Station
Unit 1
Oak Harbor, OH

License No. CPPR-80
Category: B

Type of Licensee: B&W PWR 871 MWe

Type of Inspection: Routine, Unannounced

Dates of Inspection: February 9-11, 1977

Principal Inspector: *C. C. Williams*
C. C. Williams

3/22/77
(Date)

Accompanying Inspectors: *K. R. Naidu*
K. R. Naidu

3/22/77
(Date)

F. Jablonski
F. Jablonski

3.22.77
(Date)

Other Accompanying Personnel: D. W. Hayes

Reviewed By: *E. L. Jordan*
E. L. Jordan, Chief
Engineering Support Section

3/22/77
(Date)

8002050720

SUMMARY OF FINDINGS

Inspection Summary

Inspection on February 9-11, 1977, (Unit 1, 77-08): Review of resolution of previously identified noncompliance and other unresolved matters, construction deficiencies reported pursuant to 10 CFR 50.55(e) and action relative to IE Bulletins and Circulars. Review of status of construction punch list items, observation and examination in various areas of the as-built plant and plant housekeeping considerations.

Enforcement Action

None identified.

Licensee Action on Previously Identified Enforcement Items

- A. Sealant Material Specification Requirements (IE Inspection Reports No. 050-346/76-13 through No. 050-346/76-25)

As previously reported an adequate certification for the Portland Cement Association Hose-Stream Test report was not available. During this inspection a revised document adequately certifying the conformance of this testing was reviewed. This matter is resolved.

- B. Inadequate Inspection (IE Inspection Reports No. 050-346/76-18 and No. 050-346/76-25)

Corrective action, as outlined in the Toledo Edison Company (TECO) letter of November 24, 1976, in response to Region III's letter and reported dated October 20, 1976, was determined to be implemented adequately. This matter is closed. (Paragraph 1.a, Section II, Report Details)

- C. Inspection Status (IE Inspection Reports No. 050-346/76-18 and No. 050-346/76-25)

Corrective action, as outlined in TECO's letter of January 12, 1977, in response to Region III's letter of December 15, 1976, was determined to be implemented adequately. This matter is closed. (Paragraph 1.b, Section II, Report Details)

D. Test Program - Battery Chargers (IE Inspection Report No. 050-346/76-25)

Corrective action, as outlined in TECO's letter of February 18, 1977, in response to Region III's letter of February 5, 1977, was determined to be implemented adequately. This matter is closed. (Paragraph 1.c, Section II, Report Details)

E. Review of Corrective Action Taken on Discrepancies in Lum-Irsay QA Requirements (IE Inspection Report No. 050-346/76-25)

This matter as previously reported is considered resolved. However, other documentation which came as a result of this finding will be reviewed during subsequent inspections. (Paragraph 4, Section III, Report Details)

Licensee Action on Previously Identified Deviations

A. Reactor Vessel Particulate Monitors (IE Inspection Reports No. 050-346/76-13 through No. 050-346/76-25)

Examination of the corrective action outlined in the licensee's letter dated August 30, 1976 (sensing line configuration) was completed and no adverse findings were noted. Review of records and observation of work status, established that the modification of the plant vent stack sensing line relative to the particulate monitoring system, is complete. No adverse findings were identified. Construction inspection activity relative to this matter is resolved.

B. Electrical Fire Barriers (IE Inspection Reports No. 050-346/76-02, No. 050-346/76-18 and No. 050-346/76-25)

The matter remains open. (Paragraph 1.d, Section II, Report Details)

C. Inappropriate Specification Change (IE Inspection Reports No. 050-346/76-18 and No. 050-346/76-25)

Based upon resolution by IE headquarters, this matter is closed.

D. Design Controls - Cable Derating (IE Inspection Report No. 050-346/76-25)

Tentative corrective action in regard to this matter did not appear to be adequate, i.e., that approved control methods had been in effect, and based upon these controls, cable derating was accomplished. The licensee was still within the thirty day reporting requirement

of Section 2.201 of the NRC's "Rules of Practices", Part 2, Title 10 CFR. A review will be made in accordance with the licensee's submittal of corrective action. This matter is open.

Other Significant Findings

A. Systems and Components

10 CFR 50.55(e) Reports (Review of Corrective Action)

Relative to performance of "BY" instrument mounting bracket seismic calculations, Bechtel letter No. 6691 was reviewed and determined to be in conformance with corrective action as stated in TECO's letter No. 142, dated November 1, 1976. This matter is resolved.

B. Facility Items (Plans and Procedures)

None.

C. Managerial Items

1. TECO management personnel committed to increase surveillance of the BISCO company relative to the control of damming materials used during the installation of fire barrier sealant. While no noncompliance was perceived, a potential housekeeping problem and fire hazard was identified. Immediate and comprehensive remedial action was taken by the licensee based on these observations.
2. The inspector and the licensee's representatives reviewed construction items remaining to be completed prior to fuel load and other designated milestones. Each item or categories of items was examined and the expected completion dates established. In several instances the required completion and the associated plant operation mode, is yet to be defined by the licensee. It appears, that the licensee's estimated construction completion times are optimistic. It does not appear at this time that: (1) piping hanger and anchor items (2) Engineering Inspection Reports, series 5000 and 8000 and (3) Electrical Fire Barrier and associated concerns will be completed in the licensee's estimated time. (Paragraph 1, Section I, Report Details)

D. Deviations

None identified.

E. Status of Previously Reported Unresolved Items

1. Unclear QA Program Requirements (IE Inspection Reports No. 050-346/76-13 through No. 050-346/76-25)

During this inspection the licensee produced documentation showing that the BISCO QA program clearly commits to the requirements of 10 CFR Part 50, Appendix B, including a provision which requires the use of adequately trained and indoctrinated QA/QC and production personnel. This matter is resolved.

2. Reactor Protection and Safeguard System Cabinets (IE Inspection Reports No. 050-346/75-23, No. 050-346/75-24, No. 050-346/76-02, No. 050-346/75-13, No. 050-346/76-18 and No. 050-346/76-25)

Region III notified IE headquarters of this matter on December 15, 1975. No resolution has been received, however, this matter is considered to be an unresolved outstanding item by NRC's office of Nuclear Reactor Regulation (NRR) and is documented as Item 7.2 of draft Safety Evaluation Report Supplement (SERS). This item remains open.

3. Documentation on Gasket Material - Closed-Cell Neoprene
(IE Inspection Report No. 050-346/76-25)

Documentation assuring that this material met the specification requirements for radiation and temperature endurance is now available at the site. This matter is resolved.

Management Interview

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

Toledo Edison Company (TECO)

L. E. Roe, Vice President, Facilities Development
J. D. Lenardson, Quality Assurance Management
C. T. Daft, Field Quality Assurance Specialist

M. D. Calcumuggio, Plant Electrical Systems
D. A. Poage, Assistant Engineer
E. M. Wilcox, Field Quality Assurance Specialist

Bechtel Corporation (Bechtel)

P. R. Britnell, Project Quality Assurance Engineer
J. D. Heaton, Project Fuel Quality Control Engineer
H. H. Webber, Startup Engineer
W. C. Lowery, Quality Assurance Engineer

B. Matters discussed during the interview were as follows:

1. Status of previously identified items of noncompliance. (Licensee Action, Enforcement Items, and Deviations, Report Summary)
2. Previously identified unresolved matters. (Report Summary)
3. The inspector stated that he had reviewed the list of in-completed construction items with the licensee's representatives. Further, the licensee's goals for the completion of the items, commensurate with NRC requirements for licensing in several significant instances, is very optimistic.

The licensee's representative acknowledged these remarks.

4. The inspector stated that all previously opened issues relative to the BISCO fire barrier sealant installation and QC considerations were resolved during this inspection.

The licensee acknowledged these remarks.

5. The inspector reiterated the need for more specific designation of the significance of open EIR's, incomplete piping hanger and anchor work relative to their impact on fuel load and other modes of operation.

The licensee acknowledged these remarks and stated that such definitions are in process of development.

6. The inspector stated that his review of final 50.55(e) reports and associated corrective action documents for: (1) Dragon valves and (2) Diesel Generator Heat Exchangers, showed that these matters have been adequately resolved. (Paragraph 2, Section I, Report Details)

7. Status of corrective action relative to 10 CFR 50.55(e) reports and unresolved items. (Other Significant Findings "A: and "E", Report Summary)
8. Status of NRR (licensing) concerns. (Paragraph 2, Section II, Report Details)
9. Certain incompletd items may effect fuel loading: installation of fire barriers and derating of installed electrical cable.

REPORT DETAILS

Section I

Prepared by C. C. Willams

Persons Contacted

The following persons in addition to those listed in the management interview section of this report were contacted.

Toledo Edison Company (TECO)

L. D. Jensen, Instrument Engineer
J. P. Tapley, CHP Foreman
R. Shearer, Instrument Engineer

ITT Grinnell Company (Grinnell)

D. R. Gugere, Quality Control Manager
J. M. Pomrunk, Quality Control Engineer

Inspection Results

1. Significant Construction Items Remaining to be Completed

The licensee and the NRC inspector reviewed the open items remaining to be completed. The licensee indicated when each of these items must be completed to meet facility startup milestones. (i.e., items which must be completed prior to fuel load, prior to initial criticality, etc.) Among others, the following significant areas were discussed:

- a. Corrective action and QA documentation relative to the valve yoke failure of the reactor coolant pump seal injection isolation valves. (MU-HV66B)
- b. Large and small pipe hangers and anchors relative to Bechtel, B&W and Grinnell responsibilities at the site.
- c. Electrical - Fire barriers and separation between redundant Class 1E and non Class 1E circuits.
- d. Mixing of protective and control circuits within RPS and SFAS cabinets.
- e. Reactor vessel internals. (Interim information only)

- f. High pressure injection pump modifications. (Bearing temperature problems)
- g. Raceway overflow limits. (Provisions of publication IPCEA-P-46-426)
- h. Electrical reinspection - System interactions. (EIR 5000 and 8000 series engineering inspection reports.
- i. Component surge tank instrument interchanges.
- j. Makeup pump letdown orifice erosion problem.
- l. Diesel generator sequencer (SFAS wiring).
- m. Diesel generator sequencer (anti pump relay).
- n. Component cooling water pump bearing problem.
- o. Polar crane gear teeth problem.
- p. The Westinghouse BF (AC) and BFD (DC) relay issue (IE Circular No. 76-02).
- q. Weld inspection relative to the HVAC system.

The licensee indicated that they would keep RIII informed relative to the progress of resolution of these items.

2. Review of 10 CFR Part 50.55(e) Reports

a. Dragon Instrument Valve Manifold Problem

As previously reported by the licensee and as documented in final report dated October 13, 1976, deficiencies in these valves have been identified and corrected. Review of the rework documentation during this inspection showed that the corrective action met the requirements of the licensee's commitments. This matter is resolved.

b. Diesel Generator Heat Exchanger Tube Contamination

The inspector reviewed and examined the corrective action and associated Quality Assurance documentation relative to the commitments established in the licensee's final report dated October 26, 1976. There were no adverse findings. This matter is closed.

REPORT DETAILS

Section II

Prepared By: F. J. Jablonski 2/15/77
F. J. Jablonski (Date)

Reviewed By: E. L. Jordan 3/22/77
E. L. Jordan, Chief (Date)
Engineering Support Section

Persons Contacted

Only persons listed in the Management Interview section of this report were contacted during this inspection.

Inspection Results

1. Enforcement (Status)

- a. Inadequate Inspection - The inspector reviewed a document (identified below) which indicated that six Engineering Inspection Reports (EIR's) had been re-evaluated. Analysis and corrective action had been provided by Bechtel in letter No. BT 6792, dated December 22, 1976. The inspector observed work performed relative to two EIR's, No. 2152 and No. 2338, and determined that corrective action had been accomplished appropriately. This matter is closed.
- b. Inspection Status - The inspector determined that the electrical contractor took appropriate action relative to Bechtel letter FL 23-3417. Information regarding inspection tags was on display at the eastern entrance to the auxiliary building. This matter is closed.
- c. Battery Chargers - The licensee supplied documentation indicating that battery charger tests had been performed and results reviewed appropriately by the architect engineer. The tests included verification that none of the problems, as originally reported to the NRC, manifested themselves after repairs had been made. The documentation included: Bechtel QC Program and Procedures Transmittal Form No. 1535, E-20E; Field Electrical Performance Tests for Modified Battery

Chargers, identified as 7749-E-20Q-56-1 and 7749-E-20Q-57-1; and Cyberex Inc. letter Tornberg to Anas dated February 11, 1977. This matter is closed.

- d. Fire Barriers - As stated in Paragraph 6.d, Section III, Report Details of IE Inspection Report No. 050-346/76-25, the above subject, fire barriers, is relative to items 6 and 15 of the minutes of NRR's October 6-8, 1976 visit: (1) Item 6 concerns separation between redundant Class 1E and non Class 1E circuits within enclosures; (2) Item 15 concerns separation criteria for cable tray, wireway and metal conduit.

In order to verify item 6 of minutes NRR site visit (see item 1.d above) pages 8-22a.(2) and 8-22a.(3), of the Final Safety Analysis Report (FSAR) were used as reference. The following list indicates status.

- (1) None of the vertical panels had the cable runs in the base enveloped with silicone rubber foam up to a height level with the base of the panel.
- (2) None of the control consoles had the cable runs in the base of the consoles enveloped with silicone rubber foam up to the top of the cable tray in the base of the consoles.
- (3) None of the essential cable conduits in the base of cabinets and consoles had been sealed with silicone rubber foam.
- (4) None of the essential cable runs had been coated with silicone rubber foam up to eight inches above the base of panel. This eight inches provides the necessary fire stops for cable crossover between essential channels and between control panels.

All of the above items (1) - (4) must be completed prior to fuel load.

e. Panel C5716

- (1) A horizontal barrier is installed to completely close the top of the vertical panel.
- (2) The center barrier extends up to the additional horizontal barrier at the top of the panel.
- (3) The center barrier is extended and completed down to the cable in the base of the panel.

- (4) A vertical barrier is not installed to complete the sides of this panel and C5716 is not isolated from C5715 and the void between C5716 and C5717.
- (5) All joints in barriers and voids around cables penetrating the center barriers are not sealed with silicone rubber.

Items (4) and (5) above must be completed prior to fuel load.

f. Panel C5717

- (1) A horizontal barrier is installed to completely close the top of the vertical panel.
- (2) Vertical barriers are installed to completely close the top of the vertical panel.
- (3) A readily removable barrier is installed to extend the center barrier to complete isolation between Channels 1 and 2.

Barriers completed in this panel.

g. Panel C5718

- (1) A horizontal barrier is installed to completely close the top of the vertical panel.
- (2) A vertical barrier is installed to complete panel isolation at the bottom of the vertical panel between C5717 and C5716.

Barriers completed in this panel.

- h. In Panels C5715, C5716, C5717, and C5718, smoke detectors are not installed to maintain fire detection now that these panels are completely isolated.

Must be completed prior to fuel load.

- i. Barriers required by the above are not all made from 1/2-inch-thick Marinite.

Note: Bechtel Audit Finding Report (AFR) No. 541 is relative to fire barrier installations and will be used as reference by R:III inspectors.

In order to verify item 15 of minutes NRR site visit (see item 1.d above) the following information will be used as reference.

- (1) Cable tray and wireway - Figures 8-18A (notes 6, 7 and 8); 8-18B; 8-18C; of the latest approved revision to the FSAR.
- (2) Conduit - TECO letter No. 205, dated January 31, 1977, provided that this criteria has been approved by NRR.

Note: Kawool was being installed in the cable spreading room. Items 6 and 15 from minutes of NRR site visit (see 1.d above) are identified in the Safety Evaluation Report (SER) as 7.9.3, 7.9.1, and 7.9.2 respectively. Revision 26, to the FSAR had not been reviewed by NRR as of February 9, 1977.

Inspection relative to matters identified under 1.i above, have not been completed.

2. Licensing Concerns (Status)

Meeting Minutes of NRR Site Visit, October 6, 7, and 8, 1976

- a. Item No. 11 - Bechtel drawing 7749 309, Revision 6, removed the requirement for installation of Marinite fire barriers in manhole 3001. The inspector observed that wireways, not conduit, had been installed around the redundant channel cable in the southern half of manhole 3001. Wireways were in the process of being installed in the northern half of the manhole. (See TECO letter serial No. 197, item 3). No water was present; a sump pump has been installed. Both halves of the manhole are now covered by hinged, solid metal covers and tornado proof gratings. This matter is closed.
- b. Item No. 14 - The licensee has provided a drawing, No. B-FV-100-R, indicating the physical installation of barriers for solenoid control valves relative to the Main Steam Isolation Valves No. FV100 and No. FV101. (Figure 3.9.9-1, FSAR, Rev. 24). The inspector observed that the barriers had been installed in accordance with the above drawing. This matter is closed.
- c. Item No. 16 - Drawing No. P&ID M012, Rev. 17 and system Revision Notice No. 203J documents changes to be made in order to provide redundant level instrumentation for the

service water intake canal. The drawing, above, indicated that the following instrumentation would be provided for the three bays.

<u>Bay 1</u> <u>Annunciator</u>	<u>Bay 2</u> <u>Indication</u>	<u>Bay 3</u> <u>Computer</u>
1. LAL (Lev Al Lo)*	Visual Indicator	1. LAL
2. LAF (Lev Al Hi)*		2. LAH
3. LALL (Lev Al Lo/Lo)		3. LALL*

*To be added

Note: The licensee and NRR do not consider this installation to be safety related. Components have been purchased, work is yet to be done.

Note: See item 1.d, above for items 6 and 15.

3. Miscellaneous

Relative to IE Circular No. 76-02, no work has been accomplished. (See paragraph 7.b, Section III, of IE Inspection Report No. 050-346/76-25).

REPORT DETAILS

Section III

Prepared By:

K. R. Naidu
K. R. Naidu

2/23/77
(Date)

Reviewed By:

E. L. Jordan
E. L. Jordan

3/22/77
(Date)

Persons Contacted

The following persons in addition to those listed in the Management Interview section of this report, were contacted during this inspection.

Bechtel Corporation (Bechtel)

Engineering Inspection Team, Gaithersburg Power Division (EIT)

J. R. DeVoge, Civil Engineer
J. Guss, Civil Engineer
R. E. McDonald, Civil Engineering

Bechtel Site

W. B. Daley, Welding QC Engineer
R. Kies, Mechanical Engineer

Lum-Irsay (LI)

J. Robertson, QC Technician
D. M. Steindam, QC Technician

Results of Inspection

1. Review of System Developed by Mechanical Contractor to Close EIRs

During a previous inspection (IE Inspection Report No. 050-346/76-25) it was reported that a system was not established to identify and document rework performed in accordance with recommendations of Engineering Inspection Reports relative to upgrading piping installations. During the current inspection, the RIII inspector reviewed the status of the corrective action taken and established that a

system had not been developed. In the absence of such a system, the outstanding amount of rework cannot be established. This item continues to be unresolved.

2. Review of Status of EIR Items

a. General

The inspector reviewed the progress on 46 EIRs (5000 Series) which were reported not closed in a sample of 87 EIR selected during a previous inspection (IE Report No. 050-346/76-25). The design work for the following 23 EIRs has been accomplished.

5025	5182	5451
5032	5190	5447
5045	5224	
5048	5234	
5051	5267	
5066	5298	
5102	5311	
5103	5349	
5111	5376	
	5404	
5177	5424	

b. Electrical Items

Resolutions, on EIRs involving electrical conduit supports, were reported complete. The RIII inspector verified that work on EIRs 5045 (Room 109), 5102 (Room 324), 5111 (Room 5000) was completed and inspected. The following is the status of the EIRs currently open, pending work to be accomplished by the electrical contractor.

Work in process	68
QC Inspection Pending	49
Upgrading Work to be Performed	70
Work Placed on "Hold"	54

c. Mechanical Items

The inspector reviewed the status of EIRs which required solutions from Bechtel Gaithersburg Power Division (GPD) and determined that to date the following resolutions were received on site. Rework and inspections are to be initiated.

(1) EIR 5062

A total of 28 pipes, sizes 2", 3" and 4", have been identified to cause potential hazards in Room 105, due to water environment on safety related electrical motors and junction boxes. The Bechtel GPD provided solution, identified as Problem 102K issue 02, addresses only one 3" HCC-50 pipe. As a result of the partial resolution, ITT Grinnell (Grinnell) proposed the installation of 21 pipe hangers. Of these 21 hangers, Grinnell reported that 18 have been installed but not QC inspected and accepted. Solutions to the remaining 27 pipes are outstanding.

(2) EIR 5072

Six pipes, sizes 2", 2 1/2", 3" and 6", have been identified to cause potential hazards, in room 115, due to water environment on various safety related electrical equipment. The Bechtel GPD provided solution identified as Problem 58D, addressed only one 3" HSC19 pipe. Grinnell proposes the installation of ten hangers of which seven hangers have been installed, inspected and accepted, two installed but not accepted and one to be installed. Solutions to the remaining five pipes are outstanding.

(3) EIR 5359

Twenty nine pipes, sizes 1" to 4" have been identified to cause potential hazards in room 227 due to water environment on various safety related electrical equipment. The Bechtel GPD provided solution, identified as Problem 125M, addresses three of the 29 pipes, 2 1/2" HCC-27, 4" HCD-4 and 2 1/2" HCC 10 pipes. Grinnell has been notified to review the hanger requirements. Solutions to the remaining 26 pipes are outstanding.

(4) Review of GPD Letter No. 6719

The inspector reviewed GPD letter BBC 6719 dated February 10, 1977, to the Bechtel Construction Manager. The letter provided partial resolutions to the following EIRs and requested installation of pipe restraints.

Inside Containment

Outside Containment

5429	5514	5528	5585
5489		5359	5636
5440		5536	5636
5452		5573	5665
5496		5658	
5477			

3. Review of Hi-Pot Test Documentation

The inspector reviewed the documented test results of the Hi-Pot tests witnessed during a previous inspection. (IE Inspection Report No. 050-346/77-02) Records included schematic diagrams to show how the conductors were tested and indicated the following.

- a. That the conductors in the cables were meggered at 1000V and that the insulation resistance was acceptable.
- b. The continuity of individual conductors was acceptable.
- c. The conductors withstood 10 KV DC for ten minutes without indications of damage. Based on these results the inspector determined that the cables in conduits 27708A and 36919B were not damaged.

4. Review of Corrective Action Taken on Discrepancies in Lum-Irsay QA Requirements

a. Additional Welding Inspection Requirements Specified

The licensee initiated independent QC Welding inspections to be performed on the ongoing welding activities being performed by LI. These inspections are being performed by the Bechtel QC Welding engineer, include verification of size, length, location and slag and are in addition to those being performed by the LI QC Technician. In addition, the Bechtel QC welding engineer, inspected a sample of 30 weldments performed prior to December 1976 and identified ten discrepancies. As a result, the Bechtel Construction Manager (BCM), in a letter FL 11-688 dated February 3, 1977 directed LI to perform a complete reinspection of welding on seismic supports performed prior to December 20, 1976 whenever accessible.

b. Compliance to Indoctrination of QC Technicians

The QC Technician with inadequate indoctrination has been reassigned and relieved of QC welding inspection assignments. An individual with previous experience from Enrico Fermi Unit 2 is on site as QC Technician. The licensee informed the RIII inspector that the LI Corporate Vice President assigned an instructor to provide the LI QC Technicians additional training in welding requirements.

c. Review of Control of Welding Process

The inspector reviewed documentation indicating that the LI welding machines have been suitably tested. Measurements have been made by the site electrical contractor with calibrated equipment to verify that the welding machines were delivering the output as indicated on the dial setting. In addition, the electrical output nearest to the stick was measured with a calibrated tong type ammeter and the current was verified to be within the parameters of the welding Procedure 8.3003. The RIII inspector inspected the weld rod storage area and determined that weldrod type E-7018 was stored in an oven maintained at 350^oF as indicated by a calibrated thermometer. Weldrods type E-6010 were being stored in a box kept dry with an electrical lamp. The inspector reviewed the weld rod control and determined it acceptable. The inspector reviewed the qualifications of all the 12 weldors on site and determined them acceptable.

d. Review of QA Documentation

The inspector reviewed Report No. NQ/410-02 dated December 20, 1976, Project 10-0374/Davis Besse. The report contained the records for Seismic Supports No. 8A, 8B, 8C, 9, 10, 11, 12, and 13 which were installed as indicated in the Auxiliary Building Equipment Room Plant and Details (elevation 623'-0") drawings LI-V-410-1, V-410-2. The actual design of supports was performed by Flour Pioneer, Inc., Chicago and was approved by Bechtel GPD Power Division as indicated by a stamp "Analytical Test Status Approval" dated January 3, 1977.

These supports were added to prevent the Fuel Handling Area Exhaust ductwork from accidentally falling on safety related electrical conduits installed directly below the duct work and causing damage during a seismic event. Documentation on the materials used for the fabrication and installation of the

supports was included in the report and consisted of delivery tickets, certificates of conformance by vendors with heat numbers, and material certifications from steel mills. QC surveillance reports and in process inspection reports indicated that the installation of the supports was being inspected. The inspector determined the documentation acceptable.