

Inspection Summary

Inspection Conducted: February 3 through March 1, 1988 (Report 50-445/88-12; 50-446/88-10)

Areas Inspected: Unannounced resident safety inspection including (1) Follow-up on violations/deviations, (2) applicant action on IE Bulletins, (3) inspection of masonry walls, (4) general plant inspections and (5) inspection of service water pump motors.

Results: Within the areas inspected, one violation was identified. The violation described in paragraph 4 relates to the failure of an assigned engineer to identify that a design change (concerning masonry walls) conflicted with a statement in the FSAR.

In 1985, the TU Electric IE Bulletin program was considered inadequate and TU Electric committed to forming a task group which would review all IEBs, to assure that corrective action was implemented and documented. The documentation for 119 bulletins issued from the early 1970's until the present has been supplemented and improved. However, out of 20 bulletins presented by TU Electric as ready for NRC closure only 5 were closed by the NRC. Others were left open because of outstanding questions, inadequate documentation of actions, testing to be performed, or because the inspector wanted to look at the hardware in the field. This closure rate combined with the violation described in paragraph 4 indicates a continuing weakness in IEB corrective action implementation.

DETAILS1. Persons Contacted

- *R. P. Baker, EA Regulatory Compliance Manager, TU Electric
- *J. L. Barker, Manager, EA, TU Electric
- *D. N. Bize, EA Regulatory Compliance Supervisor, TU Electric
- *M. R. Blevins, Manager, Technical Support, TU Electric
- *W. G. Council, Executive Vice President, TU Electric
- *G. G. Davis, Nuclear Operations Inspection Report Item Coordinator, TU Electric
- *T. L. Heatherly, EA Regulatory Compliance Engineer, TU Electric
- *L. D. Nace, Vice President, Engineering & Construction, TU Electric
- *D. M. Reynerson, Director of Construction, TU Electric
- *M. J. Riggs, Plant Evaluation Manager, Operations, TU Electric
- *A. B. Scott, Vice President, Nuclear Operations, TU Electric

The NRC inspector also interviewed other applicant employees during this inspection period.

*Denotes personnel present at the March 1, 1988, exit meeting.

2. Follow-up on Violations/Deviations (92702)

(Closed) Violation (445/8434-V-02): Failure to report deficiencies per 10 CFR 50.55(e). The violation contained two parts, B.1 and B.2. Violation B.1 pertained to Nonconformance Report (NCR) M-84-100-108, R2 which documented a single false QC signature and was previously closed out in NRC Inspection Report 50-445/86-01; 50-446/86-01. The second part of this violation pertained to documented design errors in Gibbs & Hill, Inc. (G&H) Letter GTN-55221.

The NRC inspector followed up on the items (B.1 and B.2) which were written by a previously assigned NRC inspector. In both cases, TU Electric presented additional information which shows that no violation occurred. Concerning Violation B.1, TU Electric showed that the single record was an incorrect entry and isolated and, thus, no QA program breakdown occurred. Therefore, the matter was not reportable under 50.55(e) and no violation occurred.

The NRC inspector reviewed the complete file including correspondence which contained information concerning B.2 and found that the design of the flow, pressure, and temperature instruments was not considered finalized when the G&H letter (GTN-5521) was written in September 1981. Recent discussions with TU Electric also revealed that certain design modifications resulted from normally encountered construction changes; for example, interferences causing relocation of

instrument runs. Twelve design change authorizations (DCAs) documented the necessary engineering changes. The NRC inspector concurs with the applicants position. This item is considered closed.

3. Applicant Action on IE Bulletins (92703)

The NRC inspector found that the following IEBs (except for 79-28) required no response to the NRC. The inspector reviewed the TU Electric IEB file (package) for each IEB to determine if action was taken. The NRC required no response because the IEB only required responses from licensees with an operating license. In some cases TU Electric evaluated the IEB and found that action was required even though no response was required. The following IEBs and files were presented to the NRC inspector as complete and ready for inspection.

- a. (Open) IEB-75-04, "Cable Fire at Browns Ferry Nuclear Power Station": This IEB resulted from the fire that occurred during construction of a third unit and resulted in the shutdown of two operating plants. The IEB required (1) control of construction during operations, (2) review of floor/wall penetration seals with respect to flammability of materials, and (3) control of ignition sources. Revision A also required: (1) a review of policies and procedures relating to construction, maintenance, and modification work related to shutdown and cooling; (2) procedures addressing nearby cabling/piping, control of combustibles/ignition sources, assignment of plant knowledgeable personnel to monitor work, personnel to control communication, fire prevention suppression equipment, and recognition of type of fire (electrical, chemical, etc.); and (3) emergency procedures for safe shutdown.

The NRC inspector reviewed this file and found that it only contained copies of the IEB. Since TU Electric intended to load fuel in 1984, actions concerning this IEB should have been addressed prior to this time. The inspector was informed that TU Electric addressed these issues when 10 CFR Part 50, Appendix R, was considered; however, the inspector also noted that TU Electric was not committed to Appendix R. This item remains open pending the receipt and review of evidence that the TU Electric program addressed all issues in this IEB.

- b. (Closed) IEB 75-08, "PWR Pressure Instrumentation": This IEB resulted when it was determined that plant heat up and cool down records at an operating plant did not include continuously recorded data to show compliance to temperature/pressure limitations in the technical

specification. This IEB required action to assure that instrumentation and recording devices showed compliance.

The NRC inspector reviewed TU Electric's Surveillance Test Procedure OPT-407A, Revision 1, dated November 17, 1984. This procedure also referenced other procedural controls relative to plant startup to hot shutdown and shutdown from hot standby to cold shutdown. OPT-407A required verification that reactor coolant system/pressurizer heatup/cooldown rates were within pressure temperature limits during primary system heatup, cooldown, and hydrostatic testing to satisfy Technical Specification 4.4.9.

The NRC inspector verified that continuous recording instruments were ordered (TBX-320, Revision 15) in April 1983 and are installed in the control room.

- c. (Open) IEB 76-06, "Diaphragm Failures in Air Operated Auxiliary Actuators for Safety Relief Valves": This IEB resulted when Taget Rock valves were found inoperable during a surveillance test. An investigation revealed that diaphragms made from dacron reinforced with silicon rubber degraded when exposed to excessive heat. Licensees were required to: (1) verify that valves were installed per the vendors recommendation, (2) assure that technical specifications require inspection, (3) ensure that service life is not exceeded, (4) report plans/schedules for (1)-(3), (5) promptly report adverse conditions, and (6) make a final report.

The NRC inspector found that the file only contained the IEB and a Stone and Webster Engineering Company (SWEC) review dated June 12, 1987. This review stated that many diaphragm activated valves are installed at Comanche Peak and the potential exists for damage to nonmetallic parts. This was caused by the valves being covered with insulation, and the resultant overheating. The review concluded that action was required; i.e., walkdown all piping systems with thermal insulation. It appears that action was not taken on this IEB prior to the 1987 SWEC review. This IEB remains open until necessary action are taken and documented.

- d. (Closed) IEB 77-06, "Potential Problems with Containment Electrical Penetration Assemblies": This IEB was issued after electrical shorts between conductors within a low voltage electrical penetration assembly (EPA) caused a safety injection line to open when it was normally closed. These General Electric (GE) EPAs require an inert atmosphere of 15 pounds/square inch gauge (psig) for low voltage units and 30 psig for high voltage units.

This IEB required several actions of operating plants relative to GE EPA.

The NRC inspector reviewed the IEB file and found that a SWEC review dated April 2, 1987, was marked not applicable because GE EPAs were not used. The NRC inspector discussed this issue with the NRC electrical inspector and confirmed that GE penetrations were not used.

- e. (Open) IEB 78-07, "Protection Afforded by Airline Respirators and Supplied-Air Hoods". This IEB was issued after air flow to respirators was found to be significantly less than previously estimated when NRC guidance (Regulatory Guide 8.15, Table 1) was published. The IEB required: (1) a factor no greater than 5 for half mask and demand mode airlines for full mask, (2) protection factor of 1000 for hoods with 5 cubic feet/minute (cfm) and a calibrated gauge, and (3) protection factor of 2000 for air hoods (when airflow is per manufacturer's recommendations) with greater than 6 cfm on a calibrated gauge.

The NRC inspector found that TU Electric's FSAR, page 12.5-11, states that they will follow Regulatory Guide 8.15 and 10 CFR Part 20, Section 20.103.

The NRC inspector reviewed TU Electric's Respiratory Protection Program described in Procedure No. HPA-102. The selection of equipment is governed by HPI-905, "Selection of Respiratory Protection Equipment." HPI-908, "Maintenance/Calibration of Fit Test Equipment," which addresses fit and calibration. These documents did not address factors of safety. This IEB remains open pending receiving information on factors of safety.

- f. (Open) IEB 79-01, "Environmental Qualification of 1E Equipment": This IEB was issued after IE Circular 78-08 identified environmental qualification (EQ) deficiencies. It required that (1) unqualified stem mounted switches be identified, (2) evidence of electrical equipment qualification testing, and (3) report of items that do not meet qualification requirements for service. Revision 79-01A identified ASCO solenoid valve parts made of acetal plastic that had a service life of 400,000 Rad integrated dose and 200 degrees F temperature. Similarly, a Buna "N" elastomer material had a limit of 7,000,000 Rad/180 degrees F (maximum service limit). Finally, the appropriate solenoid coil class was not used. Revision 79-01B reported information received concerning earlier revisions did not include all necessary information and asked for: (1) a master list

of all equipment necessary to function during an accident) including cables, EPA, and terminal blocks; (2) evidence of EQ; (3) service profiles; (4) evaluation of equipment verses guidelines enclosed in the IEB; and (5) maximum flood level. Supplements 2 and 3 of Revision 79-01B provide additional information and clarification concerning previous IEBs and revisions.

The NRC inspector reviewed this IEB file and found that TU Electric letter (TXX-2960 dated February 19, 1979) to NRC Region IV stated that they interpreted this IEB to mean that no action was required at this time. Despite this statement, in 1979 a number of letters were sent out by the TU Electric Manager, QA, asking about NAMCO switches and ASCO solenoid valves. G&H, the architect-engineer, provided responses. No Westinghouse (W) response was found in the file. In 1984, TU Electric memoranda documented engineering reviews and the statement was made that the IEB should not be closed until further research was done. A SWEC review dated July 24, 1987, stated that Impell will be responsible for any open items concerning the IEB. SWEC letter dated July 8, 1987, stated that the item fell under the SWEC Corrective Action Program.

TU Electric personnel stated that these issues were addressed as a result of 10 CFR Part 50.49. This item remains open pending the completion of the NRC's review of the SWEC CAP and a future NRC audit of the EQ area.

- g. (Open) IEB 79-10, "Requalification Training Program Statistics": This IEB resulted after Three Mile Island operators failed to recognize certain plant conditions and take appropriate action. Operating licensees were asked to provide information about requalification examination failures. The inspector found that this file contained only the IEB. TU Electric stated that these issues were addressed in the FSAR in response to NUREG 0737 issues. This IEB will be closed when the NRC Resident, Operations, completes the review of TU Electric's implementation of NUREG 0737.
- h. (Open) IEB 79-13, "Cracking in Feedwater System Piping": This IEB followed the discovery of pipe cracks after shutdown to investigate leakage inside containment. The cracking occurred at the feedwater nozzle to piping welds on the steam generators at different plants. This IEB required radiographic and ultrasonic examination of steam generators fabricated by W or Combustion Engineering. Visual inspection of supports/snubbers that were not volumetrically examined since 1979, and others were to be examined during the next fuel outage. Revision 1 of the IEB revealed failure by fatigue, assisted by corrosion.

Certain applicants for a license were required to perform NDE of the subject nozzle-pipe welds and visual inspection after hot functional testing and were to perform inspections after the first refueling outage. Revision 2 refined the required inspections and required the applicant to perform inspections after hot functional testing, but before fuel loading. (This IEB should have applied to Comanche Peak Unit 1 as hot functional testing was done.)

The NRC inspector found that NRC Region IV letters dated June 25, August 30, and October 17, 1979, required no response. TU Electric IEB file contained 20 documents, most of which concluded no action was necessary. No action was taken until Westinghouse Technical Bulletin 80-7, dated May 14, 1980, was received and recommended action on IEB 79-13. On June 23, 1980, TU Electric requested radiographic examination.

A SWEC review dated June 8, 1987, concluded that TU Electric had complied with the IEB and attached Radiographic Requests 30173, 52564, 57846, 57814, 63626, 63629, 63755, 63627, 63756, 63596 and 63759 and applicable reports to support this conclusion. The NRC inspector considers this IEB open pending the receipt of answers to questions: (1) were all nozzle-pipe welds radiographed for both units, (2) was ultrasonic testing done, (3) what were the technical conclusions, and (4) should TU Electric make a report on an IEB such as this when action is required.

- i. (Closed) IEB 79-16, "Vital Area Access Controls": This IEB was issued after an attempt was made to damage new fuel assemblies at another nuclear plant. The IEB required criteria for unescorted access, an access list and updating access during emergencies, management oversight, and routine checks of security equipment.

The NRC inspector reviewed the IEB file which contained the IEB and two revisions. TU Electric Procedures STA-902, Revision 4, and SEC-302, Revision 2, were in the file and address personnel identification, key card badge issuance and access control. These procedures adequately address the issues in the IEB. In addition, NRC inspectors have routinely observed access control of the new fuel storage area and found it to be satisfactory.

- j. (Open) IEB 79-24, "Frozen Lines": This IEB was issued after frozen lines were discovered in safety-related systems at an operating plant. Specifically, there was no flow through the recirculation line from the pump discharge to the borated water storage tank because a

line was exposed to outside weather and froze. Even though redundant heat tracing was on the line, the freezing occurred because of prolonged subfreezing temperatures and a defect in the insulation.

The NRC inspector reviewed this IEB file and found a 1981 evaluation of heat tracing and insulation that was required in certain areas. In response to the Institute of Nuclear Power Operations Letter (82-15), this IEB was reevaluated and the results were documented in Report SOER 82-15 dated August 1, 1983. Documents in the file stated that instrument lines had already frozen at Comanche Peak. Increased surveillance was recommended. A TU Electric response to inquiry six of SOER 82-15 stated that despite precautions instrument and fluid lines will freeze over the 40 year life of the plant. As a result of this internal review, heat trace Procedure EMI-802 was issued June 19, 1986. Procedure ODA-302, Revision 4, requires the checking of heat traces.

A SWEC review dated June 5, 1987, was in the file. It states that lines from the refueling water storage tank (RWST) to pump suction and recirculation lines run through an underground pipe tunnel to the RWST (which is enclosed inside a concrete structure). Piping and instrumentation in these areas are heated by space heaters which replaced heat trace circuitry per DCA 10497, Revision 0, dated June 23, 1983. This same design is used for the condensate and reactor-make-up-water storage tanks and associated lines that run through the pipe tunnel. Only the demineralized water tank uses insulation and heat tracing to prevent freezing and this is not a safety-related tank. The IEB remains open pending the receipt of information as follows: (1) Is distribution of heat in tunnels uniform and effective? (2) Did the DCA require a FSAR change? and (3) Should a 50.55e evaluation be made?

- k. (Open) IEB 79-28, "Possible Malfunction of NAMCO Model EA 180 Limit Switches at Elevated Temperatures": (This item is also identified as ID Recommendations 49 and 59 in enclosure to Stello Memorandum, "Implementation of Recommendations of Comanche Peak Report Review Group," dated April 14, 1987). This IEB resulted from an operating plant switch failure. The failure was caused by uncured residues of "Loctite" in the gasket that vaporized at temperatures above 175 degrees fahrenheit (°F) and were deposited on switch contacts. The NRC inspector reviewed this IEB file and determined that the faulty switches were limited to those received after March 1, 1979, and that the switches can be identified by a four digit number (02-79 through 08-79) stamped on the switch housing. TU Electric letter (TXX-3112) stated

that G&H identified 14 EA 180 switches that would require rework. TXX-3375 dated July 30, 1981, stated that the subject switches could not be corrected because of difficulty experienced with environmental qualification of these switches. TU Electric memorandum (CPP-2513) dated January 27, 1980, discussed IEB 79-28 and the fact that, while reviewing IEEE-323-1974, NAMCO limit switches surfaced as an item not having a qualified life. TU Electric memorandum (CPPA-9697) dated April 23, 1981, stated that the corrective action would be to replace all NAMCO switches previously installed with EA 180 switches manufactured later than February 1980. This corrective action was to be tracked on NCRs E81-107S and E81-113S. This item remains open pending additional review of travelers and other documentation and field verification of hardware correction.

1. (Open) IEB 80-04, "Analysis of PWR Main Steam Line Break with Continued Feedwater Addition": This IEB was issued after a deficiency was found in the original analysis of containment pressurization that resulted from a postulated steam line break. The reanalysis of a main steam line break determined that containment design pressure would be exceeded in ten minutes if the auxiliary feedwater system continued to supply feedwater at runout conditions to the steam generator that had experienced the steam line break. This IEB required operating licensees and certain applicants for a license to: (1) review analysis for potential overpressure caused by a steam line break, and (2) reactivity increase and corrective action for the potential overpressure and a return to power response.

The NRC inspector reviewed the IEB file which contained the IEB and NRC transmittal letter dated February 8, 1980, which indicated no response was required. Five documents were in the file, most of which contain no conclusion other than no action required. W letter dated March 28, 1980, stated that they performed two different steam line break analyses. One analysis for potential fuel failure makes conservative assumptions regarding feedwater additions, and the other analysis for mass/energy release after a steam line break makes another assumption. This letter further states that they do not typically analyze the containment response; however, if W Standard 12.2, Revision 0 or 1, is followed then the NRC (IEB) concerns are addressed. The file does not show that all scenarios were appropriately considered and where this is documented in this FSAR. This item remains open pending receipt of this information.

- m. (Open) IEB 80-11, "Masonry Wall Design": This IEB was issued after problems were found concerning the

structural integrity of concrete masonry walls with seismic Category I piping attached to them. See paragraph 4 and the Notice of Violation.

- n. (Open) IEB 80-12, "Decay Heat Removal System Operability": This IEB was issued after an operating plant lost all decay heat removal (DHR) capability. The IEB requires operating plants to: (1) identify DHR events experienced, hardware and procedures to prevent DHR loss; (2) implement controls pending Technical Specification revision; and (3) report to the NRC.

The NRC inspector reviewed this IEB file which contained the IEB and the NRC transmittal letter dated May 9, 1980, which required no response. The file contains nine documents most of which concluded that no action was required. Document CR-4005 dated August 2, 1985, was routed to file and addressed the closeout of IEB 80-12 and Information Notice 81-09. Draft Technical Specification 3/4.9.8 requires at least one residual heat removal loop to be in operation and provide: (1) cooling capacity to maintain the water in the vessel below 140 °F during refueling, and (2) coolant circulation to minimize boron dilution/stratification. TU Electric Procedure OPT-203A, Revision 0, requires surveillance testing to show that technical specification requirements are satisfied. This testing includes verifying valve position/RHR system venting each 31 days, valve stroking per the pressure vessel code (ASME, Section XI) each 92 days, starting RHR pumps per ASME XI each 92 days, and consider realignment if safety injection occurs while testing. TU Electric SOP-102A, R3, provides steps to safely operate RHR during startup, operation, shutdown and refueling. This item remains open pending the review of testing results.

- o. (Closed) IEB 80-22, "Automation Industries, Model 200-520-008 Sealed Source Connectors": The IEB was issued to materials licensees authorized to use sources under 10 CFR Part 34. The same information was provided in NRC Circular 79-16.

The NRC inspector reviewed this IEB file which contained both the IEB and circular. This IEB does not directly pertain to TU Electric; however, radiographers that do work on site are responsible for adhering to this IEB. No TU Electric action is necessary.

- p. (Open) IEB 80-24, "Prevention of Damage due to Water Leakage Inside Containment": This IEB was issued after IE Information Notice 80-37 described a leak into containment which flooded the reactor vessel cavity and wetted the lower nine feet of the vessel during

operation. This was caused by service water leaks, inoperable sump pumps, operators who failed to note the significance of indicator lights, no high water alarm, moisture level indicators that did not work, and other failures to detect the condition. The IEB required operating plants to describe where open cooling water systems exist inside containment and methods for detection and isolation of water leakage, and experience with a closed system.

The NRC inspector reviewed this IEB file which contained the IEB and NRC transmittal which required no response/action. Five documents addressed this IEB. In 1981, W Letter TBX-460 and G&H Letter GIN-51461 addressed the implications of fan cooler leakage inside containment. In a SWEC review dated May 30, 1987, they concluded that this IEB was not applicable and required no further action. The NRC inspector did not find the actions relative to inoperable sumps, indicators, and alarms. This item is open pending the receipt of this information.

- q. (Open) IEB 81-01, "Surveillance of Mechanical Snubbers": This IEB was issued after 11 of 14 International Nuclear Safeguards Corporation (Inc) Model MSUA-1A snubbers were found to be inoperable at five operating plants (including inoperable snubbers [Model PSA-3] manufactured by Pacific Scientific Company). This IEB and Revision 1 required: (1) visual inspection for damage/free movement, (2) operability testing, and (3) an inspection program for mechanical snubbers for operating plants and similar actions for certain plants prior to fuel loading.

The NRC inspector reviewed this IEB file which contained the IEB and Revision 1 transmitted by NRC Region IV letters which required no response. The file contained documents including SWEC review dated July 29, 1987, which concluded that no response was required. It appears that this does not address the need for action prior to fuel load. The specific make and model of the snubbers described in the IEB were placed on a defective items list to prohibit the purchase of such snubbers. This item remains open pending the receipt of information to show that no action is required.

- r. (Open) IEB 83-01, "Failure of Reactor Trip Breakers (Westinghouse DB-50) to Open on Automatic Trip Signal": This IEB was issued after both DB-50 reactor protection system breakers at another nuclear plant failed to open automatically upon receipt of a valid trip signal on low-low steam generator level. This was caused by relay sticking.

The NRC inspector reviewed this IEB file which contained the IEB and 26 documents including letter, memoranda, contact/inquiry records, travelers, material requisitions, W field change notices (FCNs), and design change authorizations (DCNs) which show review, evaluation, and action. The W FCNs (TBXM-10621 and 10627) recommended the modification of the reactor trip switchgear; i.e., add an automatic shunt trip feature and time response test points to the main trip breakers. TU Electric DCA 20,542 and construction travelers provided evidence that the recommended modification was implemented under the direction of the W site representative or the TU Electric Startup Group for Unit 1 and 2. The craftsmen and quality control inspectors signed the traveler indicating the work and inspections were completed. TU Electric's Procedure EGT-706A, Revision 0, requires the demonstration of operability of the trip actuating device and where appropriate verify the automatic actuation of engineered safety features (ESF) components. Pages 29 and 31 of EGT-706A address such demonstrations, utilizing the shunt and undervoltage. This item remains open pending the field verification by the NRC inspector.

- s. (Closed) IEB 83-03, "Check Valve Failures in Raw Water Cooling Systems of Diesel Generators": This IEB was issued after numerous licensee event reports (LERs) documented check valve failures. This IEB required operating licensees to review their plant pump and valve in-service test program per Section XI of ASME and modify, if necessary, to include check valves in cooling water flow paths. They should include them in the test program procedures and test to verify valve integrity.

The NRC inspector reviewed the IEB file which included the IEB and seven other documents. The contact/inquiry record forms in the file documented evaluations of this issue. TU Electric concluded that Crane valve bodies were made from cast iron; however, stainless steel bodies were used at Comanche Peak. In addition, valves (ISW-016 and 017) in the service water system must be tested quarterly per Procedure OPT-207A, Revision 1.

- t. (Open) IEB 83-04, "Failure of Undervoltage Trip Function of Reactor Trip Breakers": This IEB was issued after General Electric (AK-2) circuit breakers failed to trip open during testing on the reactor protection system (RPS). This IEB required actions of PWR licensees with other than W DB type breakers in the RPS.

The NRC inspector reviewed this IEB file which included the IEB and 24 documents. This IEB was not applicable because W Model DS-416 are used as reactor trip breakers,

bypass breakers, and motors/generators set output breakers. In addition, the corrective action regarding W breakers was previously addressed in response to IEBs 83-01 and 83-08. This item is open pending field verification of the type breakers that are used.

The present system for handling and documenting TU Electric action relative to IEBs is a vast improvement over what was in existence during the NRC inspection of November 1985. However, the fact that 20 were presented to the NRC for inspection and only 5 of these could be closed shows a continuing weakness.

4. Inspection of Masonry Walls Per IEB 80-11 (92703)

This IEB was issued after problems were identified relative to Seismic Category I piping attached to concrete masonry walls. IEB 80-11 was preceded by IE Information Notice 79-28 which was sent to all construction permit and operating license holders. This IEB required the licensee to: (1) identify all masonry walls close to or having attachments from safety-related piping, or where equipment wall failure could affect a safety-related system; (2) provide a reevaluation of design adequacy if such walls are identified; and (3) use existing data/conservative assumptions in re-evaluation or if acceptance criteria was unavailable a wall test program was required.

The NRC inspector reviewed IEB 80-11 (issued May 8, 1980) and the NRC Region IV transmittal letter (issued May 8, 1980) which stated that this IEB was forwarded for information and no response was required. This NRC letter (without further discussions) may have given the impression that no action was required in the near term as TU Electric Memorandum QNB-61 dated May 15, 1980, stated that no response was required but action may be requested in the future. In addition to these two documents several memos were in the file which dealt with control room habitability and masonry walls. Based on the documentation in file, it appeared that all of the walls had been removed, replaced, or modified. The NRC inspector was prepared to close this IEB after a field walkdown.

On February 4, 1988, the NRC inspector field inspected the masonry walls in the service water intake structure which were stated to have no interaction with safety-related equipment or components and the conditions were consistent with statements in the FSAR.

On the same day the NRC inspector observed the walls in the electrical control building at the 807', 830' and 854' elevation. Drawing 2323-A1-0509 (for 830') was reviewed against the as-built condition described on page 130-50 of FSAR Amendment 64 dated July 31, 1987, which stated, in

response to question Q130.36, in part, "Elevation 830' -0" - seven block walls were evaluated. Two were removed and replaced with seismic Category II Gypsum walls; two were modified to prevent a seismic interaction with ductwork; and, three were found to be acceptable based on no seismic interaction with safety-related equipment." The inspector noted that the two walls had not been modified as stated in Amendment 59 of the FSAR that was distributed June 17, 1986. A memorandum (TSG-14891) dated January 14, 1986, also stated these two walls were modified to prevent seismic interaction with control room heating ventilation and air conditioning ductwork (emphasis added).

The NRC inspector reviewed DCA 23040 Revision 0, dated December 3, 1985, which described the walls located between Rooms 136 and 137 and the west wall of Room 139 which are the two walls described in the FSAR. This change was approved on December 18, 1985. The latest DCA revision (No. 3) was initiated on May 14, 1987, and was approved on May 18, 1987. This revision stated, in part, "No modification required to masonry wall between Room 136 and 137; except for west wall of Room 139, for technical justification see pages 3, 4, and 5." The inspector found that no FSAR change request had been processed because Block 15, "Does Design Change Affect a Licensing Document?", was marked "no" on the DCA. TU Electric Procedure ECE 5.01-03, Revision 1, requires the responsible engineer to review and ensure that the proposed change does not conflict with licensing documents. This failure to identify the conflict between the licensing documents and the DCA is a violation of Criteria V of Appendix B to 10 CFR Part 50 (445/8812-V-01; 446/8810-V-01).

This violation is not highly safety significant in this particular case because the DCA controlled the change. However, it is very important that all engineering changes be reviewed for conflicts with licensing documents and that the FSAR reflects the as-built condition. After this violation was identified, TU Electric initiated immediate corrective action by: (1) writing a deficiency report, and (2) processing a FSAR change request to reflect the current status of masonry walls.

It is more significant that TU Electric's IEB system considered this item closed based on the statements in the FSAR. Also, TU Electric's letter dated July 29, 1980, responded to the NRC and stated, in part, ". . . several masonry walls located within Category I structures, however, none of these walls are being used to support any safety grade components." This response to the NRC staff apparently did not adequately address the NRC staff's question Q130.36 in their letter dated April 21, 1980 which addressed the above quote and requested further information, or the IEB relative

to seismic interaction with nearby safety-related equipment or components.

5. General Plant Inspections (50073, 50090, 51053, 51063, 52053.)

At various times during the inspection period, the NRC inspector conducted general inspections of the Unit 1 and 2 reactor containment (RCB), Safeguards (SGB), auxiliary (AB), electrical control (ECB), and diesel generator (DGB) buildings. All accessible rooms in these buildings were inspected to observe current work activities with respect to major safety-related equipment, electrical cable/trays, mechanical components, piping, welding, coatings, Hilti bolts, and removal of debris from seismic gap between buildings. The housekeeping, storage and handling conditions inside these buildings and various outside storage areas were also inspected (paragraph 6). Two backshift and two weekend inspections were performed during this inspection period.

Work activities that were selected for more detailed inspections are described in paragraph 6.

No violations or deviations were identified.

6. Inspection of Service Water Pump Motors (51053)

On February 4, 1988, the NRC inspector noticed that a Unit 2 motor was removed and found that deficiencies had been identified in NCR E 85-102029 dated December 13, 1985. The Train "B" motor was sent to Siemens Service Shop in Houston, Texas, for repair. It was returned after repair and, because the noise recurred, it was sent back for repair a second time. During disassembly, the first stator winding was damaged and was replaced. After repair and replacement of the first stator, the motor was returned to site and was run and found to be free of the noise.

The NRC inspector noted that the block on the NCR and subsequent revisions was marked not reportable under 10 CFR Part 50.55(e) and dated December 13, 1985. The deficiency originally appeared to be serious and it took an extensive amount of time to identify and evaluate the deficiency. As late as October 15, 1987, Siemens' Letter CQI-6728 stated that they thought the problem was caused by the fit between the thrust block and the shaft. They proposed a nickel-plating to give an interference fit. This operation was apparently authorized by the Siemens Material Review Board at Norwood, Ohio, and was plated. It was December 1987 before Siemens Norwood concluded that the motor met design. The noise was concluded to be caused by a magnetic flux that was not present in Unit 1 pump motors. It appears that no real problem ever existed.

The NRC inspector questioned why the block was marked not reportable on the NCR. Because of the apparent seriousness of the defect and extensive evaluation time, it appears that this block should have been marked potentially reportable or justification given for marking not reportable. Typically, no justification for marking not reportable is written on the NCR at Comanche Peak. In discussions with Engineering Assurance personnel, they stated that the 10 CFR Part 50.55(e) regulation does not specifically require a justification, but only requires that the criteria be considered as described in TU Electric Procedure ECE 9.01, paragraphs 4.3 and 6.1.2. The NRC inspector recognized that this is a gray area; however, a system that does not require an engineer to justify the technical conclusion contains a weakness. There is no way to audit the basis of the engineers decision. Also, there is no TU Electric requirement to document or show that the engineer considered the general criteria in paragraph 4.3 of ECE 9.01. Although, the NRC inspector considers this a system weakness, the practice meets NRC requirements as 10 CFR Part 50.55(e) does not contain words that require the justification of not reportable on an NCR.

7. Exit Meeting (30703)

On February 29, 1988, R. F. Warnick, H. H. Livermore, and J. S. Wiehe met with L. D. Nace and A. B. Scott to discuss February inspection findings and other matters of interest.

An exit meeting was conducted on March 1, 1988, with the applicant's representatives identified in paragraph 1 of this report. No written material was provided to the applicant by the inspectors during this reporting period. The applicant did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection. During this meeting the NRC inspectors summarized the scope and findings of the inspection.