

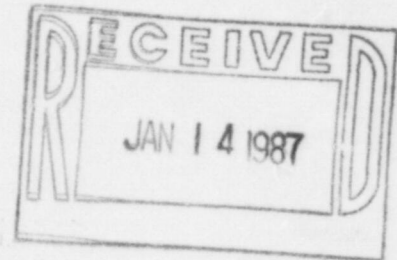
Log # TXX-6089
File # 10130
IR 86-03
86-02

TEXAS UTILITIES GENERATING COMPANY
SKYWAY TOWER - 400 NORTH OLIVE STREET, L.B. 81 - DALLAS, TEXAS 75201

January 12, 1987

WILLIAM G. COUNCIL
EXECUTIVE VICE PRESIDENT

Mr. Eric H. Johnson
Division of Reactor Safety and Projects
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
RESPONSE TO NRC NOTICE OF VIOLATION AND
NOTICE OF DEVIATION INSPECTION REPORT NOS. 50-445/86-03
AND 50-446/86-02

Dear Mr. Johnson:

We have reviewed your letter dated October 17, 1986, concerning the inspection conducted by Mr. I. Barnes and other members of the Region IV Comanche Peak Group during the period December 11, 1985, through March 31, 1986. This inspection covered activities authorized by NRC Construction Permits CPPR-126 and CPPR-127 for Comanche Peak Steam Electric Station Units 1 and 2. Attached to your letter were Notices of Violation and Notices of Deviation.

On November 14, 1986, per a telecon with your Mr. T. Westerman, we requested and received a three week extension. On December 5, 1986, we requested and received a two week extension and on December 19, 1986, we requested and received a three week extension. On January 9, 1987, per a telecon with your Mr. D. Hunnicutt, we requested and received a three day extension.

We hereby respond to the Notices of Violation and Notices of Deviation in the attachments to this letter.

Very truly yours,

W. G. Council

W. G. Council

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PDR ADOCK 05000445
G PDR

By: *G. S. Keeley*
G. S. Keeley
Manager, Nuclear Licensing

GLB/gj
Attachments

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IC-87/016

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TXX-6089
January 9, 1987
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c - Region IV (Original + 1 copy)

Director, Inspection and Enforcement (15 copies)
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. V. S. Noonan
Mr. D. L. Kelley

NOTICE OF VIOLATION
ITEM A (446/8602-V-08)

- A. Criterion V of Appendix B to 10 CFR Part 50, as implemented by Section 5.0, Revision 3, dated July 31, 1984, of the TUGCo Quality Assurance Plan (QAP), requires that activities affecting quality shall be prescribed by and accomplished in accordance with documented instructions, procedures, or drawings.

Paragraph 2.5 of TUGCo Procedure CP-EP-4.6, "Field Design Change Control," Revision 10, dated April 16, 1984, states, in part, "Design changes/deviations to specified engineering documents shall be documented by revision initiated by an Engineering Change Request (ECR), a Design Change Authorization (DCA) or a Component Modification Card (CMC)." DCA 18,016 required removal of wire strands using a wire stripper to reduce wire size from #16AWG to #18AWG.

Contrary to the above, wire size reductions were implemented for Unit 2 termination cabinets, 2-TC22 and 2-TC23, by construction operation travelers in a manner different than specified on DCA 18,016; no revision to the DCA had been initiated, nor were either an ECR or CMC initiated.

RESPONSE TO ITEM A (446/8602-V-08)

1. Reason for the Violation:

We admit to the alleged violation for the reasons that follow.

A DCA is not intended or required to show the specific process for implementing the change. Consequently when the traveler was prepared, no review of the DCA was considered resulting in an alternate method being utilized.

2. Corrective Actions Taken:

The DCA (No. 18,016) was revised to delete the specifics regarding wire size reduction. Also, to ensure the method used was acceptable, an engineering evaluation was performed on the cable in question with no adverse effects regarding resistance, etc. being found.

3. Action to Prevent Recurrence:

The procedure CP-CPM 6.3 defines the traveler program and will be revised to require that a review of the DCA be conducted prior to the traveler being issued to ensure that if the DCA does contain specifics they are incorporated into the traveler.

4. Date of compliance:

The revision to the procedure will be issued by January 9, 1987.

NOTICE OF VIOLATION
ITEM B (446/8602-V-06)

- B. Criterion XVI of Appendix B to 10 CFR Part 50, as implemented by Section 16.0, Revision 0, dated July 1, 1978, of the TUGCO QAP, states, in part, "Measures shall be established to assure that conditions adverse to quality, such as . . . deficiencies, deviations . . . are promptly identified and corrected."

Contrary to the above, the measures established did not assure that the following described condition adverse to quality was promptly identified or promptly corrected. The NRC inspector reviewed a sample of 70 Sample Recheck Request/Report forms, completed by the Inspection Process Control (IPC) group since July 1985, and identified 80 examples where QC inspectors had entered "SAT" inspection attributes in inspection reports where "NA" (i.e., not applicable) was the correct entry. This condition was identified in the monthly IPC reports beginning with the September report dated October 11, 1985. Subsequent IPC reports (October and November) characterized this condition as both "a generic problem" and a significant deficiency and requested that corrective action be taken as early as December 13, 1985. However, no apparent action has been taken to establish how long this condition may have existed before September 1985 nor has corrective action, in a generic sense, been taken.

RESPONSE TO ITEM B (446/8602-V-06)

1. Reason for the Violation

We admit to the alleged violation for the reasons that follow.

The practice of entering "Sat" on Inspection Report (IR) attributes when the attribute has more appropriately "N/A" was implemented due to instructions given to QC Inspectors by a field QC Supervisor. The supervisor instructed his subordinate inspectors to status all IR attributes as "Sat" whenever the attribute was not unsatisfactory. The practice was considered acceptable by the supervisor since it could not lead to describing an unsatisfactory attribute as satisfactory. This action was taken to avoid the incorrect use of "N/A" when "Sat" or "Unsat" was more appropriate. Since the practice was not implemented by all supervisors, inconsistent documentation resulted. For example, when only one hilti bolt was located in a room or area, the minimum spacing to other hilti's was considered "Sat" by some QC Inspectors and "N/A" by other inspectors.

The IPC program identified examples where IPC personnel considered the "Sat" status of these IR attributes to be unacceptable, even though unsatisfactory installations were not identified. These items were reported as unsatisfactory on Surveillance Recheck/Request Report (SRRR). QE reviewed SRRRs on an ongoing basis as surveillances were completed and the reports received. As stated in the details of the NRC IR, QE concluded that the entry of "Sat" when N/A was applicable, did not render the quality of the item unacceptable and, therefore, did not warrant NCR issuance. This practice was, however, considered undesirable from a consistent documentation standpoint. This view was shared by QC Management; however, since nonconforming conditions were not involved, actions to resolve the inconsistency in documentation practices was not promptly initiated.

NOTICE OF VIOLATION
ITEM B (446/8602-V-06) CONT'D

RESPONSE TO ITEM B (446/8602-V-06) CONT'D

2. Corrective Action Taken

Actions taken to resolve inconsistent IR completion involved informal training of QC Inspectors at the request of the Site QC Supervisor (letter TUQ-3511 dated 12/10/85). This request emphasized the need to assure consistent entry of "Sat/Unsat" vs. "N/A" or IRs based on the October 1985 IPC Report. As this instruction was not totally effective in resolving the inconsistencies, formal classroom training was initiated in February 1986 and completed in May 1986. It was not and is not considered necessary to determine the extent or duration this inconsistency existed since the issue involves inconsistent IR completion only, and does not alter the status of QC accepted items.

3. Action to Prevent Recurrence

The training described above should prevent recurrence of this violation. Ongoing Quality surveillances and trending would identify further inconsistencies of this nature. The Surveillance Inspection program in effect since January 1986, has not identified further inconsistencies of this type.

4. Date of Compliance

CPSES is currently in full compliance.

NOTICE OF VIOLATION
ITEM C (446/8602-V-20)

- C. Criterion X of Appendix B to 10 CFR Part 50, as implemented by Section 10.0, Revision 1, dated July 31, 1984, of the TUGCO QAP, states, in part, "A program for inspection of activities affecting quality shall be established and executed . . . to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Contrary to the above, the following conditions which had been inspected and accepted by the applicant's inspection program, were identified as being nonconforming during independent inspection of Unit 2 conduit supports:

1. Section 3.3.1 in Revision 7 of TUGCO Instruction QI-QP-11.10.1A states, in part, "The QC inspector shall inspect the support for the following: Member(s) shape . . . size and dimensions."

Inspection revealed a 1/2" thick shim plate installation on one support and a 5/8" thick shim plate installation on another support for which the applicable drawings required the use of a 5/8" thick and 1" thick shim plate, respectively.

2. Section 3.5.1 in TUGCO Instruction QI-QP-11.10-1A, Revision 7, states, in part, "Conduit spans shall be as indicated on the isometric drawing. Conduit span Tolerance is +/-3 (inches) . . ."

Inspection revealed a measured span length of one conduit run as being 3/4" over the allowable tolerance shown on the isometric drawing.

3. Section 3.4 in Revision 20 of TUGCO Instruction QI-QP-11.2-1 specifies that where embedded plates are occupied by attachments within 12" of a Hilti, the minimum clearance between a 3/8" and 1/2" Hilti bolt and a Nelson stud will be 5-7/8" and 6-1/2", respectively.

Inspection revealed two supports in which the Hilti bolts were within 12" of an attachment but the minimum clearances between a 3/8" and 1/2" Hilti bolt and the Nelson studs were 5-3/8" and 4-3/8", respectively.

4. Section 3.2.3 in Revision 7 of TUGCO Instruction QI-QP-11.10-1A states, in part, "Each support inspected on a raceway system shall be assigned a number shown on the engineering isometric drawing included in the conduit system work packages. . . ."

Inspection revealed one support in which its identification number did not match the applicable isometric drawing support identification number.

NOTICE OF VIOLATION
ITEM C (446/8602-V-20) CONT'D

5. Section 3.9 in Revision 7 of TUGCO Instruction QI-QP-11.10-1A states, in part, "The QC Inspector shall verify the conduit supports have been installed in accordance with the requirements of the isometric drawing" It further requires the use of an inspection report to document inspection results. Step (V) 1.b in the inspection report states, "Verify conduit configuration."

Inspection revealed a conduit span bend opposite to that which was shown on the applicable isometric drawing, and step (V)1.b had been signed off as being acceptable.

RESPONSE TO ITEM C (8602-V-20)

1. Reason for the Violation:

We admit to this alleged violation for the reasons that follow.

This violation is a result of isolated QC Inspector errors. Inaccurate dimensional measurements were made along with the misidentification of a conduit support during the inspection verification process. The deficiencies involved seven separate attributes identified in 234 conduit supports.

2. Corrective Action Taken:

NCRs were initiated for each of the nonconforming conditions identified in this violation.

3. Action to Prevent Recurrence:

Each of the QC Inspectors involved with acceptance of the discrepant installations identified have been made aware of their errors. To determine the need for further corrective action, the performance of these inspectors was evaluated through review of Quality Surveillance reinspection results. Based on this review it has been determined that the involved inspectors have demonstrated a high degree of accuracy in the performance of inspections and that no further corrective action is needed.

4. Date of Compliance:

The compliance will be achieved when the NCRs are closed. It is anticipated that these NCRs will be closed by February 23, 1987.

NOTICE OF VIOLATION
ITEM D (446/8602-V-21)

- D. Criterion V of Appendix B to 10 CFR Part 50, as implemented by Section 5.0, Revision 3, of the Tugco QAP, requires that activities affecting quality shall be prescribed by and accomplished in accordance with documented instructions, procedures, or drawings.

Contrary to the above, the following conditions were identified with respect to Unit 2 conduit supports in which the prescribed activities were not accomplished:

1. Section 2.4 in Tugco Procedure TNL-AB-CS-2, Revision 0, states, in part, "The Field Engineer shall prepare a field isometric indicating the general routing and location of supports, and . . . shall include span lengths and configurations . . . decision points and locations Decision points are considered as places on a typical drawing for which two or more options are acceptable for the same location."

Independent inspection revealed a decision point which had not been included in the isometric drawing by the Field Engineer. One support was observed in which a 3/8" Hilti bolt had been installed. The applicable typical drawing specified a 1/2" Hilti bolt with the option of using a 3/8" Hilti bolt, provided the support capacity was reduced. The absence of this information could possibly preclude the required reduction in support capacity by the Design Engineer.

RESPONSE TO ITEM D.1 (446/8602-V-21)

1. Reason for the Violation

We admit to the alleged violation for the reasons that follow.

Due to an unclear note (No. 4) on drawing 2323-S2-0910, Sh. CSM-2a-II, Rev. 3, engineering walkdown failed to identify the 3/8" Hilti-Kwik Bolt (HKB) on the isometric drawing.

2. Corrective Action Taken

The isometric drawing no. 2323-S2-0910, Sh. 04066, Sk.01 has been revised to show the 3/8" HKB.

3. Action to Prevent Recurrence

Note 4 on drawing 2323-S2-0910, Sh. CSM-2a-II has been rewritten to state, in part, "...3/8" Hilti-Kwik bolt may be used for 2" diameter thru 5" diameter conduit only where specified on the isometric or individual support drawing," (change will be incorporated on Rev. 5) per disposition of NCR #M-85-201023, Rev. 1.

NOTICE OF VIOLATION
ITEM D (446/8602-V-21) CONT'D

RESPONSE TO ITEM D.1 (446/8602-V-21) CONT'D

3. Action to Prevent Recurrence (Cont'd)

NCR #M-86-201023 will specify listing of all CSM-2a-II supports used on 2" thru 5" diameter conduit and reinspection to verify that:

- a. 1/2" HKB are used, or
- b. 3/8" HKB are used and are shown on the isometric or individual support drawing.

No further action is necessary to prevent recurrence.

4. Date of Compliance

Compliance will be achieved when NCR #M-86-201023 is closed. It is anticipated that the NCR will be closed by March 15, 1987.

NOTICE OF VIOLATION
ITEM D (446/8602-V-21) CONT'D

- D. Criterion V of Appendix B to 10 CFR Part 50, as implemented by Section 5.0, Revision 3, of the Tugco QAP, requires that activities affecting quality shall be prescribed by and accomplished in accordance with documented instructions, procedures, or drawings.

Contrary to the above, the following conditions were identified with respect to Unit 2 conduit supports in which the prescribed activities were not accomplished:

2. Section 3.3.1.1 in Revision 14 of Tugco Instruction QI-QP-11.21-1 requires that the welding symbol for an intermittent fillet weld be in accordance with standard welding symbols of AWS 2.4-79.

Inspection revealed the existence of intermittent fillet welds on 11 conduit supports in which the applicable, typical support drawing did not depict an intermittent fillet weld symbol.

RESPONSE TO ITEM D.2 (446/8602-V-21)

1. Reason for the Violation

We admit to the alleged violation for the reasons that follow.

The typical support drawing detail CSM-6C-I depicts an intermittent fillet weld utilizing the dimensional/hatching method in lieu of providing the applicable information within the welding symbol. This method of detailing welding requirements is recognized by AWS 2.4-79, paragraph 4.4.1. Although TUGCO Instruction QI-QP-11.21-1, Revision 14 states that the standard welding symbols will be in accordance with AWS 2.4-79, the procedure does not explicitly address the acceptable practice of utilizing the dimensional/hatching method. Only examples of commonly used standard welding symbols from AWS 2.4-79 are referenced. Additionally, weld lengths and locations are as depicted on CSM-6C-I.

2. Corrective Action Taken

It has been the intent of the procedure to include some of the most commonly used weld symbols to facilitate the inspection process, not to include all possible weld symbols from AWS criteria which may be used. TUGCO Instruction QI-QP-11.21-1 will be clarified to state that standard welding symbols as referenced in the procedure are only "typical" as allowed by AWS 2.4-79. Additionally, a subsequent revision of drawing 2323-S2-0910 sheet CSM-6C-I, more clearly depicts the weld location using the dimensional/hatching method described above.

NOTICE OF VIOLATION
ITEM D (446/8602-V-21) CONT'D

RESPONSE TO ITEM D.2 (446/8602-V-21) CONT'D

2. Corrective Action Taken Cont'd

Concurrently, an engineering evaluation was conducted with the following results:

Due to the generic nature of drawing 2323-S2-0910, Sh. CSM-6C-I, Rev. 3, the plate size (at the welds in question) can vary up to 1'-6" max. In order to accurately communicate the welding requirements for this joint design, the engineer utilized the weld symbol to specify the weld size and minimum length. The typical centerline for acceptable weld spacing for this generic application was identified separately on the sheet. This is an acceptable industry practice which meets the intent of AWS 2.4-79.

To assure that the engineering requirements were met during installation, as-built sketches were made of the eleven (11) supports identified in the NRC report. An engineering evaluation of these as-builts has verified that all eleven are in compliance with the welding requirements specified by this typical drawing.

3. Action to Prevent Recurrence

The revision of QI-QP-11.21-1 as addressed in the Corrective Action taken will prevent recurrence of this condition.

4. Date of Compliance

QI-QP-11.21-1, Revision 17 will be revised by January 30, 1987.

NOTICE OF VIOLATION
ITEM E (446/8602-V-17)

- E. Criterion X of Appendix B to 10 CFR Part 50, as implemented by Section 10.0, Revision 1, dated July 31, 1984, of the TUGCO QAP, states, in part, "A program for inspection of activities affecting quality shall be established and executed . . . to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Contrary to the above, the following examples from Unit 2 HVAC duct support inspections were observed where the Bahnson inspection program failed to identify nonconformances with the documented instructions, procedures, and drawings:

1. Section 9.1 in Revision 1 of Bahnson Procedure WP-TUSI-001 states, in part, with respect to intermittent welds, "Weld increments shall begin and terminate within 1/8" of the ends of the joints or length" Seven HVAC duct supports, however, inspected by the NRC had intermittent fillet welds which did not begin or terminate within 1/8" of the ends of the joints.
2. Section 6.5 in Revision 5 of Bahnson Procedure QCI-CPSES-011 states, in part, with respect to welding, "The Quality Representative shall make certain that the size, length, and location of all welds conform to the requirements of QCI-CPSES-014 and DFP-TUSI-003, and to the detailed drawing"

Independent inspection identified the following conditions in three HVAC duct supports:

- a. A 2" long, 1/4" fillet weld required by the drawing was measured as being 1/8" for the full length.
 - b. Two, 2-1/2" long, 1/8" fillet welds required by the drawing between the two lateral braces and the main support were missing.
 - c. Two, 1-1/2" long, 1/8" fillet welds required by the drawing were measured as being 1-1/4" long.
3. Section 6.6 in Revision 5 of Bahnson Procedure QCI-CPSES-011 states, in part, "Weld profiles shall meet the following requirements:

The faces of fillet welds may be slightly convex, flat, or slightly concave . . . Welds shall be visually examined to determine if the following defects are evident: . . . Undercut shall not exceed 1/32" for materials thicker than 1/4"."

One support was identified in which two welds exhibited 1/16" undercut for 50 percent of the weld lengths on members which were 1/2" thick. The support also had a 1/4" and a 3/8" weld in which grinding of the weld produced excess convexity, resulting in an unacceptable weld profile.

NOTICE OF VIOLATION
ITEM E (446/8602-V-17) CONT'D

4. Note 2 in Attachment 4 of Revision 10 to Bahnson DFP-TUSI-004 states, in part, "Where the embedded steel plates are occupied by attachments within the minimum distance shown above (12"), the minimum clearance from 1" Hilti anchors to . . . the edge of the embedded plate and only 3/8" from the edge.

RESPONSE TO ITEM E (446/8602-V-17)

1. Reason for the Violation

We admit to the alleged violation for the reasons that follow.

Our review indicates the violation occurred as a result of inadequate implementation of procedures on the part of the HVAC contractor charged with the responsibility for design, fabrication, and QC activities.

2. Corrective Action Taken

For each specific discrepancy noted in the Violation, a nonconformance report (NCR) or Deficiency and Disposition Report (DDR) has been issued for evaluation and disposition.

Note, as indicated in paragraph 3, the engineering responsibility for this area has been reassigned. DDR's are the technical nonconformance documents used by the current responsible architect/engineering contractor.

3. Action to Prevent Recurrence

In order to correct the conditions noted in this violation the following corrective measures are being implemented:

- a. The project organization and responsibilities for Unit 1 and Common HVAC activities have been realigned. Engineering and QC activities previously performed by Bahnson have been assumed by Ebasco and TUGCO, respectively.
- b. Field verification efforts include all Unit 1 and Common Seismic Category I duct supports.
- c. Engineering evaluations will be performed to ensure compliance with FSAR commitments.
- d. Construction rework will be performed, as deemed necessary, by the engineering evaluations of field verified information to assure compliance with FSAR criteria for the affected supports.
- e. To assure Unit 2 installations comply with prescribed requirements, Unit 2 HVAC supports will be field verified. The as-built effort will be conducted by Bahnson, with QC verification by TUGCO. Ebasco has been given responsibility for the adequacy of the as-built verification effort and design.

All discrepancies will be documented by Nonconformance Reports.

NOTICE OF VIOLATION
ITEM E (446/8602-V-17) CONT'D

RESPONSE TO ITEM E (446/8602-V-17) CONT'D

4. Date of Compliance

The procedure revisions and retraining were completed December 31, 1986.

The balance of preventative actions will be completed by May 1987 for Unit 1 and September 1987 for Unit 2.

NOTICE OF VIOLATION
ITEM F (445/8603-V-04)

- F. Criterion III of Appendix B to 10 CFR Part 50, as implemented by Section 3.0, Revision 4, dated November 20, 1985, of the Tugco QAP, states, in part, "Measures shall be established to . . . include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled . . . The design control measures shall provide for verifying or checking the adequacy of design . . . Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design"

Contrary to the above, verification or checking of a design change, initiated to resolve a deviation from design documents, did not assure the adequacy of either the design change or the disposition of the nonconformance report (NCR) which documented the deviation. NCR M-80-00161, initiated on November 6, 1980, addressed the drilling through of a "probable" template bar, a rebar, and notching another rebar. The disposition was "Use-As-Is" and referenced DCA No. 9091. The solution in the DCA stated that, "The condition as described is acceptable." However, the described condition addressed just one cut bar.

RESPONSE TO ITEM F (445/8603-V-04)

1. Reason for the Violation

We admit the alleged violation for the reasons that follow.

The disposition of NCR M-80-00161 addressed authorization to cut a single layer of concrete reinforcing steel. The disposition inadvertently failed to address the remaining conditions due to the nature of the deviations described as follows:

The bar cut at 2-1/2" depth is authorized by DCA 9091. The bar cut at 5-1/2" depth is a template bar requiring no authorization for its cutting. It has no structural significance and is used only for facilitating installation. The template bar is a construction aide which does not (and is not required to) appear on design drawings. Therefore, the cutting of this bar is not a nonconforming condition. The bar notched at 7" depth is the end of the tail of a bent bar. The cutting of such bars is generically approved by DCA 243; no additional authorization is required and hence this is not addressed in DCA 9091.

2. Corrective Action Taken

NCR M-80-00161 was revised in April 1986 in order to reference the information noted above.

NOTICE OF VIOLATION
ITEM F (445/8603-V-04) CONT'D

RESPONSE TO ITEM F (445/8603-V-04) CONT'D

3. Action to Prevent Recurrence

The adequacy of nonconformance dispositions has been the issue of a site initiated Corrective Action Request (CAR-062 dated March 4, 1986) and a deficiency considered to be potentially reportable under the provisions of 10CFR50.55(e) (SDAR CP-86-48 dated June 16, 1986).

The evaluation of these issues include, 1) an assessment of the adequacy of NCR dispositions, and 2) programmatic problems with revising NCRs.

A review of a random sample of NCRs has been conducted to determine the safety significance of actions resulting from completed dispositions. This review has provided a high degree of assurance of the adequacy of the dispositions of NCRs at CPSES. To further ensure that safety concerns do not exist, a review program encompassing technical review of all previously closed NCRs with "void," "repair" or "use-as-is" dispositions is planned.

In order to maintain a high degree of confidence that NCR dispositions will not result in safety concerns, an interdiscipline review effort has resulted in new corporate procedures for controlling nonconformances and deficiencies.

4. Date of Compliance

The implementing procedures and the training of personnel on the new procedures were completed December 22, 1986. The NCR review program will be completed by June 30, 1987.

NOTICE OF VIOLATION
ITEM G (446/8602-V-14)

- G. Criterion X of Appendix B to 10 CFR Part 50, as implemented by Section 10.0, Revision 1, dated July 31, 1984, of the Tugco QAP, states, in part, "A Program for inspection of activities affecting quality shall be established and executed . . . to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Paragraph 2.0 in Revision 0 to Tugco Procedure TNE-AB-CS-3 requires walkdown drawings to reflect history and methodology to produce as-built drawings. It further requires the walkdown drawings to depict all the necessary information required for subsequent QC verifications; i.e., support configuration dimensions and material sizes.

Paragraph 3.2.3 in Revision 5 to Tugco Instruction QI-QP-11.10-2A requires the QC inspector to verify that the completed support is in accordance with the as-built drawing.

Contrary to the above, the following conditions were identified with respect to seven Unit 2 cable tray support drawings:

1. Walkdown drawings neither depicted all required information nor included correct dimensional information necessary for subsequent QC verification.

RESPONSE TO ITEM G.1 (446/8602-V-14)

1. Reason For the Violation

We admit to the alleged violation for the reasons that follow.

Review of the specific cable tray support installations noted in the finding has indicated this condition is the result of errors in field measurements obtained during the preparation of as-built drawings. In one instance (CTH-2-9774), the finding resulted from a weakness in the inspection procedure.

2. Corrective Action Taken

The following nonconformance reports were issued as a result of the conditions noted in this violation:

NOTICE OF VIOLATION
ITEM G (446/8602-V-14) CONT'D

RESPONSE TO ITEM G.1 (446/8602-V-14) CONT'D

<u>Support</u>	<u>NCR No.</u>	<u>Disposition</u>	<u>Closure</u>
CTH-2-9774	M-85-201794 (12/17/85)	Revise procedure QI-QP-11.10-2A, Rev. 5	08-01-86
CTH-2-10264	M-85-201804 (12/17/85)	Revise drawing, reinspect	03-04-86
CTH-2-10420	M-85-201805 (12/17/85)	Revise drawing, reinspect	03-24-86
CTH-2-9850	M-85-201820 (12/18/85)	Revise drawing, reinspect	02-07-86
CTH-2-11570	M-85-201802 (12/17/85)	Revise drawing,	05-08-86
CTH-2-10119	M-85-201795 (12/17/85)	Revise drawing,	03-08-86
CTH-2-9825	M-85-201819 (12/18/85)	Revise drawing, reinspect	Superce- ded by Rev. 1.
CTH-2-9825	M-85-201819 (02/14/86) Rev. 1	Revised drawing, reinspect	02-28-86

Each specific finding (cable tray installation) has been documented by nonconformance report (NCR). Except for CTH-2-9774, disposition of the NCRs resulted in revision to the drawing and re-inspection of the support. For CTH-2-9774 (the support affected by the procedural weakness), disposition of the nonconformance resulted in revision of the procedure and re-inspection.

Additionally, since the preparation of the drawings noted in the findings, classroom instruction and the application of proper measurement techniques has been established as a prerequisite for engineering personnel involved in the preparation of CTH drawings.

3. Action to Prevent Recurrence

The only item of a recurring nature was as listed on NCR #M-85-201794 (CTH-2-9774). Revision 06 of Procedure QI-QP-11.10-2A was issued on 2/24/86 and QC personnel were trained to this procedure revision.

4. Date of Compliance

Compliance has been achieved, as described above.

NOTICE OF VIOLATION
ITEM G (446/8602-V-14) CONT'D

- G. Criterion X of Appendix B to 10 CFR Part 50, as implemented by Section 10.0, Revision 1, dated July 31, 1984, of the TUGCO QAP, states, in part, " A Program for inspection of activities affecting quality shall be established and executed . . . to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Paragraph 2.0 in Revision 0 to TUGCO Procedure TNE-AB-CS-3 requires walkdown drawings to reflect history and methodology to produce as-built drawings. It further requires for subsequent QC verifications; i.e., support configuration dimensions and material sizes.

Paragraph 3.2.3 in Revision 5 to TUGCO Instruction QI-QP-11.10-2A requires the QC inspector to verify that the completed support is in accordance with the as-built drawing.

Contrary to the above, the following conditions were identified with respect to seven Unit 2 cable tray support drawings:

2. QC inspectors accepted support dimensions which were different from those specified on the walkdown drawings.

RESPONSE TO ITEM G.2 (446/8602-V-14)

1. Reason for Violation

We admit to the alleged violation for the reasons that follow.

With the exception of those discrepancies which pertain to supports CTH-2-9774 and CTH-2-10420, the dimension verification discrepancies described in this violation are the result of isolated QC Inspector errors. The reason for the violations associated with supports CTH-2-9774 and CTH-2-10420 are as follows:

For CTH-2-9774, the QC inspector was required by Quality Instructions to verify that dimensions shown on "As-built" drawings were within the tolerances specified in QI-QP-11.10-2a. QC inspection has not been required to assure that all dimensions are included on the drawing. Since the dimensional information referenced in the finding was not on the "As-built" drawing, those dimensional verifications were not performed by the QC inspector.

For CTH-2-10420, the inspection method used by the inspector to measure the distance between the welded attachments involved measuring the distance from the toe of the weld on the C-6 channel to the toe of the weld attaching the conduit support to the embedded plate. This inspection method was considered acceptable practice from approximately June 1985 to April 1986 due to the perceived conservatism achieved (i.e., greater separation). However, this measuring method resulted in the plus side of the 1" tolerance allowed by QI-QP-11.10-2a being exceeded on CTH-2-1042- when measured from the face of the attached member to the face of the other welded attachment.

NOTICE OF VIOLATION
ITEM G (446/8602-V-14) CONT'D

RESPONSE TO ITEM G.2 (446/8602-V-14) CONT'D

2. Corrective Action Taken

Nonconformance Reports were initiated to address the dimensional discrepancies. The dispositions required the drawings to be revised to show the "As-built" conditions with the exception of the following NCRs:

- 0 NCR M-86-201794 addressing CTH-2-9774 was dispositioned "Use-as-is." The disposition does not require the location of the 3/8"x4"x5" plate with respect to the C-6 channel to be on the drawing, only that the weld requirement of the plate to channel is per design drawing. This weld dimensional requirement was verified by QC at the time of the original QC inspection.
- 0 Also, per the NCR disposition, DCA 24400 was issued April 2, 1986, to provide verification criteria when the dimensional location of the tray clamp in relation to the C-6 channel is not shown on the drawing. QI-QP-11.10-2A has been revised to include this criteria.
- 0 NCR M-86-202657 was initiated to address the previous use of the toe-to-toe method to measure the separation distance between welded attachments to embedded plates. CTH-2-10420 is addressed in the NCR since it was inspected using this method. Further action will be taken as required by the NCR disposition. Subsequent clarification was received by Engineering whereby the separation measurements were to be verified using face-to-face, unless otherwise detailed on the design drawing. The clarified method for measuring has been applied since April 1986.

3. Action to Prevent Recurrence

Each of the QC Inspectors involved with acceptance of the discrepant installations identified have been made aware of their errors. To determine the need for further corrective action, the performance of these inspectors was evaluated through review of Quality Surveillance reinspection results. Based on this review it has been determined that the involved inspectors have demonstrated a high degree of accuracy in the performance of inspections and no further corrective action is needed.

Per the disposition of NCR N-86-201794, no further action is required for the dimensional 3/8"x4"x5" plate-to-channel finding. However, the revision of QI-QP-11.10-2a should prevent recurrence of the erroneous dimensional location of the tray clamp plate-to-the channel finding.

The clarification of attachment separation inspection methods used should prevent recurrence of this finding.

4. Date of Compliance

CPSES is presently in compliance, with the exception of NCR M-86-202657 which will be dispositioned by February 27, 1987.

NOTICE OF VIOLATION
ITEM H (446/8602-V-10)

- H. Criterion IX of Appendix B to 10 CFR Part 50 states, in part, "Measures shall be established to assure that special processes, including welding . . . and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements."

Section CC-5521.1.1 of Code ACI-359, states, in part, "If the 12-in. Radiograph in the 50-ft-long increment of weld does not meet the acceptance standards, two 12-in. Films shall be taken at other locations within the 50-ft-long increment If either of the second radiographs does not meet the acceptance standards . . . the remaining portion of the 50-foot increment of this weld shall be radiographed."

Contrary to the above, the required radiography of the remaining portion of a 50' increment of weld was not performed even though one of the two second 12" radiographs (No. 146T2) at seam P84 in the Unit 2 containment liner did not meet the acceptance standards.

RESPONSE TO ITEM H (446/8602-V-10)

This alleged violation is under evaluation. We expect to send a report by February 20, 1987.

NOTICE OF VIOLATION
ITEM I (445/8603-V-02)

- I. Criterion V of Appendix B to 10 CFR Part 50, as implemented by TUGCo's Final Safety Analysis Report (FSAR) Section 17.2, "Quality Assurance During the Operations Phase," dated July 19, 1985, requires that activities affecting quality be prescribed by and accomplished in accordance with documented instructions, procedures, or drawings of a type appropriate to the circumstances.

Operations Administrative Control and Quality Assurance Plan Section 3.9 states that, "Deficiency Reports (DRs) and nonconformance reports (NCRs) shall be reviewed periodically for adverse trends . . . Results of trend analysis shall be reported to the Manager, Nuclear Operations, Manager, Plant Operations, and Manager, Quality Assurance."

Contrary to the above, site operations trend analyses were performed on DRs only for 1984 and 1985. Consequently, trend analyses for problems identified on NCRs were not performed and thus not reported to the required levels of management. Further, site procedures do not clearly describe the conditions under which a DR or an NCR is to be written, nor were DRs reviewed for potential conditions requiring an NCR prior to a June 1985 revision to the deficiency reporting procedure STA-404.

RESPONSE TO ITEM I (445/8603-V-02)

We admit to the alleged violation for the reasons that follow.

Note: This violation consists of three discrete parts that are addressed separately in this response.

Part 1

". . . site operations trend analyses were performed on DRs only for 1984 and 1985. Consequently, trend analyses for problems identified on NCRs were not performed and thus not reported to the required levels of management."

1. Reason for the Violation

NCR dispositions (except use-as-is) are accomplished through the work control program and become part of equipment maintenance history. The violation was caused by a misunderstanding of the requirement to trend NCRs directly and not as part of the Equipment Maintenance history trending program.

2. Corrective Action Taken

As corrective action, all TUGCO Operations NCRs have been reviewed and no significant adverse trends were identified. Trend analysis performed on 1985 NCRs was reported to the appropriate levels of management by the 1985 Quality Assurance Annual Report.

NOTICE OF VIOLATION
ITEM I (445/8603-V-02) CONT'D

RESPONSE TO ITEM I (445/8603-V-02) CONT'D

Part 1 cont'd

3. Action to Prevent Recurrence

NCR trend analysis is now being conducted on a quarterly basis to prevent further violations of this nature.

4. Date of Compliance

Full compliance has been achieved.

Part 2

"... site procedures do not clearly describe the conditions under which a DR or an NCR is to be written ..."

1. Reason for the Violation

At the time of inspection, procedures failed to clearly describe the conditions for initiating a DR or NCR.

2. Corrective Action Taken

Recently issued Nuclear Engineering and Operations (NEO) procedures clearly define the site guidelines for deficiency and nonconformance reporting. Implementing procedures will be revised to include requirements of the appropriate NEO procedures.

3. Action to Prevent Recurrence

The corrective action should prevent recurrence of this part of the Violation.

4. Date of Compliance

The procedures will be revised by January 15, 1987.

Part 3

"... nor were DRs reviewed for potential conditions requiring an NCR prior to a June 1985 revision to the deficiency reporting procedure STA-404."

1. Reason for the Violation

All prior revisions of STA-404, "Control of Deficiencies", have required Quality Assurance to determine if the deficiency "may cause or has caused a nonconformance." This part of the violation occurred because STA-404 did not require clear documentation of the review for nonconforming conditions.

NOTICE OF VIOLATION
ITEM I (445/8603-V-02) CONT'D

RESPONSE TO ITEM I (445/8603-V-02) CONT'D

Part 3 cont'd

2. Corrective Action Taken

STA-404 was revised in June 1985 to document the review for nonconforming conditions by providing a "Yes/No NCR required" block on the DR form.

3. Action to Prevent Recurrence

To provide further assurance that a nonconforming condition did not go undetected, all Deficiency Reports issued prior to June 1985 will be reviewed.

4. Date of Compliance

The review will be complete by January 15, 1987.

NOTICE OF DEVIATION
ITEM A (445/8603-D-14)

- A. Paragraph 5.3.5(A) of Evaluation Research Corporation (ERC) QI-019, Revision 3, states, in part, "Verify that the clearance meets the following criteria: . . . Where design shows 0-inch on one side and 1/16-inch on the other side, the sum of both gaps may not exceed 1/8-inch or be less than 1/32".*

*Where design shows 0" on bottom (in the gravity direction) then it shall be such with no allowable variation."

Section II of ERC Description Memorandum QA/QC-RT-1436 addresses changes, reasons, and effects incorporated in Revision 3 of ERC QI-019 and states, in part, regarding paragraph 5.3.5(A), "Added clarifying information on allowable clearances for dead weight and 0" clearance supports"

Attachment A to the above ERC Description Memorandum lists previously issued reinspection packages and states that package I-S-SBPS-051 is not affected by changes incorporated in Revision 3 of ERC QI-019.

In deviation from the above, independent inspection identified that clearances which had been correctly accepted by ERC for Verification Package No. I-S-SBPS-051, when inspected to Revision 1 of QI-019, were no longer acceptable to the requirements of Revision 3 of QI-019. Drawing CP-AA-040, Revision 0, shows clearance in the gravity direction of zero. Independent inspection measured a gap of 1/16" in the gravity direction, and thus determined that the changes in Revision 3 did, in fact, affect the previous inspection of Verification Package No. I-S-SBPS-051.

RESPONSE TO ITEM A (445/8603-D-14)

1. Reason For Deviation

We admit to the alleged deviation for the reasons that follow.

The primary reasons for the deviation are imprecise guidance in QI-019 and inspector misinterpretation of that guidance. Prior to Revision 3, QI-019 did not specifically address allowable clearances in the gravity direction for dead weight, box frame supports. Although these clearance requirements were covered in ERC Inspector training, some confusion existed over eleven inspection packages in which the box frame support drawings showed the pipe in contact with the support but specified no allowable clearance value. ERC decided to revise QI-019 to reflect clearance requirements as taught in inspector training, and to reinspect those eleven packages. As a result, ERC Description Memorandum QA/QC-RT-1436 (dated 2/10/86) was issued to describe the Revision 3 changes to section 5.3.5(A) of QI-019. (The memo erroneously stated that no previously issued packages were affected by the changes, when in fact Attachment A to the memo listed the eleven (11) packages requiring reinspection. Recognizing the error in the memo, ERC issued Revision 1 to QA/QC-RT-1436 the same day, stating that the change to QI-019 did affect the eleven (11) previously issued packages.)

NOTICE OF DEVIATION
ITEM A (445/8603-D-14) CONT'D

1. Reason for Deviation (cont'd)

Subsequent to the issuance of QA/QC-RT-1436, listing the eleven (11) packages to be reinspected, ERC became aware of past inspector confusion over allowable clearances even when zero inches (0") clearance in the gravity direction was specified on the drawing. ERC then issued Supplemental Inspection Instructions requiring reinspection of all box frame, dead weight supports in the small bore population. In total, 32 packages were reinspected resulting in 9 Deviation Reports regarding zero clearance in the gravity direction. Package No. I-S-SBPS-051 was among those reinspected, and a clearance violation in the gravity direction was noted on Deviation Report No. I-S-SBPS-051-DR3 and subsequently on NCR M-23400N R-1. Attachment A to memo QA/QC-RT-1436 was not revised to reflect these reinspections.

2. Corrective Action Taken

Corrective Action has been completed with the issuance of Rev. 3 to QI-019 and with the reinspection of all affected packages as of May 30, 1986.

Revision 2 to QA/QC-RT-1436 was issued on November 11, 1986, and contains a note referring to the reissuance of all affected packages.

3. Action to Prevent Recurrence

No action to prevent recurrence is contemplated for the Small Bore population as reinspection efforts are complete and Rev. 3 to QI-019 has been issued. As a result of CAR-16, ERC QI procedures were reviewed in meetings between engineers and inspectors to ensure clarity and consistency of the procedures. The need to clarify box frame support clearance criteria in QI-019 was identified in a January 11, 1986, CAR-16 meeting.

4. Date of Compliance

Compliance has been achieved, as described above.

NOTICE OF DEVIATION
ITEM B (445/8603-D-18)

- B. Paragraph 5.1 of ERC Procedure CPP-007, Revision 2 states, in part, "Responsible QA/QC discipline engineers review the latest . . . Brown & Root . . . documents relating to the population. Subsequently, the engineer develops a list of safety significant attributes that are common to the population and which can be reinspected "

Paragraph 3.4.4.3 in Brown & Root, Inc. Instruction QI-QAP-11.1-28, Revision 31, identifies requirements for base material inspection and states, in part, "The depression depth produced by grinding shall not exceed . . . 1/32" for material less than 3/8" thick (structural shapes)."

In deviation from the above, the responsible QA/QC discipline engineer failed to identify and incorporate into ERC QI-029 this base material inspection attribute. As a result, ERC inspection of Verification Package No. I-S-LBSN-065 failed to identify that grinding on base material in excess of 1/32" existed on item 3 of pipe support MK No. CT-1-008-001-S22S.

RESPONSE TO ITEM B (445/8603-D-18)

We deny the alleged deviation for the reasons that follow.

Section 5.1 of CPP-007 states in part, "Responsible QA/QC Discipline Engineers review the latest Gibbs and Hill, Brown and Root, and subcontractor design documents relating to the population. As applicable, the latest installation procedures, construction drawings (including as-builts), and manufacturer's prints and manuals are also reviewed." Section 5.2 of CPP-007 states in part, "Subsequently, the engineer develops a list of safety-significant attributes that are common to the population and which can be reinspected..."

The ERC QA/QC Discipline Engineer did in fact review QI-QAP-11.1-28 Revision 3) for applicability in developing the QI-029 inspection checklist. Inspection for excessive grinding due to welding defects on base materials was not included on the checklist for the following reasons. While excessive grinding may be readily detected after initial installation is complete, it cannot be accurately reinspected following application of coatings. In most cases, the grinding performed to remove weld defects would not be detectable through paint at all. Further, while the ASME Code Subsection NF stipulates that grinding to remove weld defects may not encroach on minimum base metal thickness, there is no code requirement to inspect for other types of defects in base metal as a result of the welding process. Once coatings have been applied, it is difficult to distinguish between markings due to grinding versus other potential causes. Paint removal to inspect for potential excess grinding is impractical. In addition, paint removal methods also remove some base metal in the process, making an accurate determination of the depression depth impossible. For these reasons, the ERC QA/QC discipline

NOTICE OF DEVIATION
ITEM B (445/8603-D-18) CONT'D

RESPONSE TO ITEM B (445/8603-D-18) CONT'D

engineer concluded that inspection for excessive grinding of base metal through paint is not a recreatable characteristic of the welding attribute. In accordance with ISAP VII.c, attributes or subattributes which are deemed not recreatable are not included on inspection checklists.

However, due to NRC inspector concerns, the ERC inspector wrote an Out-of-Scope observation for Verification Package No. I-S-LBSN-065 noting potential excess grinding on the pipe support base metal. A Nonconformance Report was subsequently issued and is currently being evaluated to disposition the Out-of-Scope observation.

It should also be noted that the nominal flange thickness for this pipe support (a W4 x 13 structural shape) is 3/8 inch. In accordance with QI-QAP-11.1-28, a depression depth of 1/16 inch (the observed condition) is thus acceptable.

NOTICE OF DEVIATION
ITEM C (445/8603-D-17)

- C. Section 5.2 of ERC Procedure CPP-022, Revision 0, states, in part, "Paint shall be removed from the weld connections which have been inspected through paint Results of these visual inspections shall be documented and include, as a minimum, criteria utilized, (and) any discrepancies." Section 5.2.D of ERC QI-062, Revision 0, states, "Verify surface of welds are sufficiently free of overlap, abrupt ridges and ripples so proper interpretation of radiographic and/or other required NDE could be accomplished."

In deviation from the above, ERC quality inspection documented in Verification Package No. I-S-NPBW-014 that the surface of welding which attached item 1 to support steel identified on Drawing FW-1-019-901A-C57W was acceptable. Independent inspection identified, however, that after removal of coatings the weld surface was unacceptable. Subsequent to the NRC inspection, ERC personnel issued a deficiency report documenting the rejectable weld condition.

RESPONSE TO ITEM C (445/8603-D-17)

We deny the alleged deviation for the reasons that follow.

The surface of the subject weld (with paint on) was inspected per packages I-S-PWRE-006 and I-S-NPBW-014. Weld surface irregularities were noted by the inspectors and the attribute rejected in each package. The rejection was documented on DR No. I-S-PWRE-006 DR2. (No DR was written for the NPBW package, as the second part of the inspection called for weld surface examination with the paint removed.)

Following paint removal, the weld surface could be more easily examined. The weld surface attribute was accepted in I-S-NPBW-014 and later in Overview Inspection Report No. 24-008 (I-S-PWRE-006). Due to NRC concerns about the weld surface, however, an independent Level III inspector was brought to CPSES to examine the weld. The report by this Level III inspector stated, "This writer found this weld to be acceptable except in some cases where abrupt ridges and valleys were pronounced due in part to limited grinding of the surface. It should be noted that this is a judgement interpretation that would vary from weld to weld and in some cases the final magnetic particle test may require additional surface preparation influenced by the specific MT method used." The independent Level III inspector concluded: "It is evident that the magnetic particle examination would be the last determining factor as to the adequacy of the weld."

A review of the original magnetic particle examination of the weld performed by Chicago Bridge and Iron indicated the acceptability of the weld and weld surface. Based on the judgement of the ERC inspectors, the independent Level III inspector report, and the acceptance of the weld in the original NDE report, ERC concluded the weld surface was acceptable. However, due to continuing NRC concerns regarding the interpretation of the independent Level III inspector's report, Deviation Report No. I-S-NPBW-014 DRI was generated.

NOTICE OF DEVIATION
ITEM C (445/8603-D-17) CONT'D

RESPONSE TO ITEM C (445/8603-D-17) CONT'D

To resolve the issues, a Brown and Root Level III inspector performed a Magnetic Partical Test on the weld. On the basis of the test report (MT/PT Report #29023) the weld and weld surface were acceptable. Therefore, no deviation exists. DRs No. I-S-NPBW-014 DR1 and No. I-S-PWRE-006 DR2 will be invalidated.

NOTICE OF DEVIATION
ITEM D (446/8602-D-13)

- D. Section 5.1.1 of Revision 2 to ERC Procedure CPP-008 states, in part, ". . . should an attribute appear on the generic checklist and not be applicable to the specific item, the engineer indicates 'N/A' and provides reasonable justification for the entry."

In deviation from the above, an independent inspection of Verification Package No. I-S-HVDS-075, support DG-844-2K-1J, revealed that Sections 2F.1, 2F.2, and 2F.3 in the checklist for QI-035, dealing with embed plates and spacing violations, had been "N/A'd" by the engineer.

Further, the noted justification for this entry was "No Embedded PLs." However, independent inspection identified the existence of an embed plate with dimensions of approximately 20' X 8".

RESPONSE TO ITEM D (446/8602-D-13)

We deny the alleged deviation for the reasons that follow.

Sections 2F.1, 2F.2, and 2F.3 for Verification Package No. I-S-HVDS-075 had been "N/A'd" by the ERC engineer. The justification for this entry was "No Embedded PLs". A subsequent review of this package by ERC has revealed that a deviation does not exist. The ERC Engineer correctly N/A'd these attributes.

Quality Instruction (QI) 035, "Reinspection of HVAC Duct Supports" delineates the inspection requirements to be performed for this population (HVDS). Section 5.2.2F of this QI addresses Welded Attachments to Embedded Plates. For the 2F. attributes to be inspected, the duct support has to be attached (welded) to the embedded plates. Verification Package No. I-S-HVDS-075 contains support DG-844-2K-1J for inspection. Support DG-844-2K-1J is not welded to an embed plate, therefore these attributes (2F.1, 2F.2, and 2F.3) cannot be reinspected. Therefore, the ERC engineer correctly N/A'd these inspection attributes.

During the course of this review and subsequent discussions with the NRC it was brought to the attention of ERC that NRC had a concern with Attribute 4C.3, "Hilti to Embedded Plate Edges". The ERC inspector had originally accepted this attribute. QI-035, Section 4C.3 requires the ERC inspector to "verify that the minimum distance of each Hilti anchor to any adjacent embedded plate (or Nelson stud, if available) meets the requirements of Attachment 6.17..." The required minimum for a 1-inch Hilti to the edge of an embedded plate is 7-1/2 inches. Subsequent inspection of attribute 4C.3 revealed a 1 inch Hilti installation 7/8-inch from an embedded plate.

Verification Package No. I-S-HVDS-075, was reissued and a deviation report I-S-HVDS-075-DR4 issued by the ERC inspector on July 31, 1986, identifying the discrepant condition. In addition, Nonconformance Report No. M-86-202172X was issued on September 2, 1986 and has not yet been dispositioned.

NOTICE OF DEVIATION
ITEM E.1 (446/8602-D-12)

- E. Section 4 of Revision 3 to ERC Procedure CPP-009 states, in part, "Qualified QA/QC Review Team personnel perform field reinspections of specific hardware items and reviews of appropriate documents in accordance with approved instructions"

In deviation from the above, the following examples were noted where field reinspections of hardware items were not performed in accordance with approved instructions:

- E.1. Attribute 2D. in Section 5.0 of Revision 0 to QI-035 states, "Verify member lengths and all other dimensions that describe the lengths and positions of members on the support frame (+/- 1/2")." For Verification Package No. I-S-HVDS-075, Support D6-844-2K-IJ, the ERC inspector signed the checklist that this attribute (2D.) was acceptable. An independent inspection revealed, however, that there were several members for which no dimensional information was provided in the drawing thus making it impossible to verify required member lengths and all other dimensions that describe the lengths and positions of those members.

RESPONSE TO ITEM E.1 (446/8602-D-12)

1. Reason for Deviation

We admit to the alleged deviation for the reasons that follow.

The ERC inspector accepted attribute 2D for Verification Package No. I-S-HVDS-075. Therefore, a deviation does exist. During the course of this inspection, discussions were held between the ERC inspector and the HVDS population engineer as to the acceptability of the dimensions for this duct support (DG-844-2K-IJ). The ERC inspector was instructed by the population engineer to verify only those dimensions and lengths available on the drawing. The member whose lengths were not shown, spanned two members. These members were verified, under the configuration attribute, to ensure that they spanned the two members. However, a tolerance was not applied to the member length, because it was not considered safety significant.

Therefore, attribute 2D. was accepted for the aforementioned members. The acceptance was based on engineering judgement that the member length attribute was not safety significant in those cases.

2. Corrective Action Taken

The ERC population engineer has written a letter to the Design Adequacy Program (DAP) outlining that duct support detail drawings, in general, lack sufficient information concerning member lengths. Based on the finding, the ERC engineer is reviewing the HVDS Verification Packages to determine the validity of previous deviation reports written against

NOTICE OF DEVIATION
ITEM E.1 (446/8602-D-12) CONT'D

RESPONSE TO ITEM E.1 (446/8602-D-12) CONT'D

2. Corrective Action Taken Cont'd

attribute 2D. Additionally, TUGCO has undertaken a complete HVAC support reverification program for Unit 1 and common.

3. Action to Prevent Recurrence

The DAP employs a systematic process for identifying and evaluating trends and generic implications. This systematic process implements the CPRT commitment to investigate the generic implications of deficiencies in the area of design. The process is intended to:

- Identify and evaluate any trends in observations, or in deviations from design criteria, or commitments that indicate a possibility of adverse impacts on the design of safety related systems, structures and components.
- Determine whether identified deficiencies in design have generic implications and effects and, if so, the extent of these effects.
- Ensure that adverse impacts on hardware that result from generic effects are evaluated and resolved.
- Identify corrective action necessary to preclude recurrence of each deficiency.

4. Date of Compliance

The DAP analysis is currently in process and is expected to be completed by June 1987. The TUGCO HVAC support reverification program is expected to be completed by May 1987.

NOTICE OF DEVIATION
ITEM E.2 (446/8602-D-11)

- E. Section 4 of Revision 3 to ERC Procedure CPP-009 states, in part, "Qualified QA/QC Review Team personnel perform field reinspections of specific hardware items and reviews of appropriate documents in accordance with approved instructions"

In deviation from the above, the following examples were noted where field reinspections of hardware items were not performed in accordance with approved instructions:

- E.2. Attribute 3B. in Section 5.0 of Revision 0 to QI-035 states, "Verify that weld sizes meet the requirements of the duct support detail drawings." For Verification Package No. I-S-HVDS-037, the ERC inspector signed attribute 3B. as being acceptable and noted that all welds had been measured with a Fiber Metal Fillet Gauge. During an independent inspection, it was noted that there were two skewed fillet welds on this support in which one leg of the fillet on each weld could not be measured with a Fiber Metal Fillet Gauge or any other conventional method.

RESPONSE TO ITEM E.2 (446/8602-D-11)

1. Reason for Deviation

We admit to the alleged deviation for the reasons that follow.

Appendix B of the NRC Inspection Report 445/86-03 and 446/86-02 incorrectly identifies this deviation against Verification Package No. I-S-HVDS-037. However, in Appendix C of the NRC Inspection Report, Verification Package No. I-S-HVDS-075 is correctly identified for which the aforementioned deviation exists. Therefore, this response addresses the deviation as identified by the NRC in Inspection Report 445/86-03 and 446/86-02 for Verification Package No. I-S-HVDS-075.

The ERC inspector accepted attribute 3B., Weld Size, for Verification Package No. I-S-HVDS-075, and noted on Attachment 6.2 that the welds had been measured using Fibre Metal Gages, a flashlight, and visual inspection. This inspection was performed November 7, 1985. On July 31, 1986, Verification Package No. I-S-HVDS-075 was reissued with a supplemental instruction to reverify attribute 3B. The ERC inspector again accepted attribute 3B and noted on Attachment 6.2 to the supplemental instruction that the welds had been measured with a flashlight, Fibre Metal Fillet Gages, visual inspection, and skewed gages.

NOTICE OF DEVIATION
ITEM E.2 (446/8602-D-11) CONT'D

RESPONSE TO ITEM E.2 (446/8602-D-11) CONT'D

1. Reason for Deviation (cont'd)

Subsequent discussions with the ERC inspector revealed that a six inch rule had also been used to verify the skewed weld leg size. The six inch rule was used to measure the leg that had the member "end prepped." The inspector apparently accepted the attribute on that basis. Based on further discussions with the ERC inspector, NRC inspector, and TUGCO QA/QC personnel it was determined that the ERC Level III should verify attribute 3B. The Level III inspector successfully measured one leg of the skewed fillet weld using a skewed weld gage. The Level III inspector determined that the second leg of the weld could not be measured in the manner demonstrated by the ERC inspector. The measured leg size was 3/8-inch. Measurement of the second leg was found to be indeterminate. Therefore, a deviation does exist for Verification Package No. I-S-HVDS-075 attribute 3B.

2. Corrective Action Taken

ERC Deviation Report (DR) number I-S-HVDS-075-DR5 was prepared to document the undersized weld.

3. Action to Prevent Recurrence

For Verification Package No. I-S-HVDS-075, where inspector error was evident, the inspector and the lead inspector and population (ERC) engineer discussed specifics to determine why the error occurred.

Documented evidence of these discussions is available in the file for NRC review.

At the discretion of the lead inspector, formal and informal group meetings were held to discuss inspector error on a generic basis. These discussions allowed appropriate information to be disseminated to various cognizant ERC inspectors.

An Overview Inspection Program was implemented to reinspect a sample of each inspectors work. Results of the Overview Inspection Program are complete and are available for NRC review. The inspector for Verification Package No. I-S-HVDS-075 had an overall error rate of 0.18% or 0.0018. This number is significantly less than one percent and is based on 3279 decision points reviewed by Overview Inspection with 6 in disagreement. Based on these Overview results, we believe that no further action to prevent recurrence is required.

4. Date of Compliance

Compliance will be achieved with the resolution of DR I-S-HVDS-075-DR5 by February 20, 1987.

NOTICE OF DEVIATION
ITEM E.3 (445/8603-D-13)

- E. Section 4 of Revision 3 to ERC Procedure CPP-009 states, in part, "Qualified QA/QC Review Team personnel perform field reinspections of specific hardware items and reviews of appropriate documents in accordance with approved instructions"

In deviation from the above, the following examples were noted where field reinspections of hardware items were not performed in accordance with approved instructions:

- E.3. Attribute 1.f in Section 5.2.6.2 of QI-025, Revision 2, states, in part, "Ensure that a minimum of 2 inches clearance is maintained, including pipe insulation, with respect to other piping when one or both lines have an operating temperature of 200^o F or greater" For Verification Package No. I-M-LBCO-148, the ERC inspector signed off this attribute as acceptable, even though there were three cases where the minimum separation criteria were not met and no documentation existed justifying this condition. The three instances were as follows:

- a. Line 2-CC-1-060-152-3 was in contact with the inspected line at a location 6' 6" north of wall 7-S and 10' west of wall D-S. The two lines were parallel and were in contact for about 4'.
- b. Line 2-CC-1-061-152-3 was in contact with the inspected line at a location 12'6" north of wall 7-S and about 8' west of wall D-S.
- c. Line 1-CC-1-062-152-3 was closer to the inspected line than the allowable 2" at a location 6' 6" north of wall 7-S and 7' 6" west of wall D-S.

RESPONSE TO ITEM E.3 (445/8603-D-13)

1. Reason for Deviation

We admit to the alleged deviation for the reasons that follow.

Investigation by ERC confirmed the above findings identified by the NRC. Therefore, a deviation does exist for Verification Package No. I-M-LBCO-148, attribute 1.f, which was incorrectly accepted by the ERC inspector.

2. Corrective Action Taken

Deviation Report (DR) number I-M-LBCO-148-DR-3 was prepared on August 28, 1986, to document the existence where the minimum separation criteria was not met. Nonconformance Report (NCR) number M-25340N was generated as a result of the DR to disposition the above conditions.

NOTICE OF DEVIATION
ITEM E.3 (445/8603-D-13) CONT'D

RESPONSE TO ITEM E.3 (445/8603-D-13) CONT'D

3. Action to Prevent Recurrence

In cases where inspector error was evident, the inspector and the lead inspector or population engineer discussed specifics to determine why the error occurred.

Documented evidence of these discussions is available in the file for NRC review.

At the discretion of the lead inspector, formal and informal group meetings were held to discuss inspector errors on a generic basis. These discussions allowed appropriate information to be disseminated to various cognizant ERC inspectors. Additionally, this finding was discussed and documented with all overview inspectors on June 10, 1986. The overview inspectors were instructed to review in detail all NCRs in each overview inspection package.

An Overview Inspection Program was implemented to reinspect a sample of each inspectors work. Results of the Overview Inspection Program are complete and are available for NRC review. The inspector for Verification Package No. I-M-LBCO-148 had an overall error rate of 1.12% or 0.0112. This number of errors is slightly more than one percent and is based on 2675 decision points reviewed by Overview Inspection with 30 disagreements. Based on the Overview Inspection, we believe that no further action to prevent recurrence is required.

4. Date of Compliance

Corrective action will be completed commensurate with the final disposition of nonconformance report M-25340N which is expected by May 1, 1987.

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