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Texas Utilities Generating Company
Comanche Peak Steam Electric Station
Independent Assessment Program

DCTG Data Base Review

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Table of Contents

	Page
Purpose and Scope	1
Methodology	1
Results	5
Conclusions	8



Purpose and Scope:

The purpose of the Design Change Tracking Group (DCTG) Data Base Validation Review was to verify the accuracy of the computerized design change log used at CPSES after modification by the DCTG. The review scope consisted of verifying the data associated with a random sample of 507 of the 108,000 design changes contained in the data base.

This review was performed in response to concerns raised by the NRC staff in a meeting with Cygna on April 13, 1984.

Methodology:

The total number of design changes issued to date at CPSES was determined to be approximately 108,000. Based on the requirements of ANSI/ASQC Z1.4-1981, Table 1 - "Sample Size Code Letter," (General Inspection Level II) and Table IIA - "Single Sampling Plans for Normal Inspection," a minimum sample lot of 500 design changes was selected for review. The required sample lot was selected from 14 of the 66 drawings used during the technical reviews to assure a multi-discipline review. As a result of using these 14 drawings, the actual number of design changes reviewed was 507. The drawings and their associated number of design changes are listed below.

<u>Drawing No.</u>	<u>Associated Design Changes Sample</u>
2323-E1-601-01-S, Rev. 4	90
2323-E1-700-01-S, Rev. 3	110
2323-E1-601-02, Rev. 15	13
2323-S1-614, Rev. 4	42
2323-E1-716-01-S, Rev. 1	45
2323-E1-716-11, Rev. 2	2
2323-E1-713-11, Rev. 5	34



<u>Drawing No.</u>	<u>Associated Design Changes Sample</u>
2323-E1-605, Rev. 10	8
2323-E1-701-3, Rev. 9	18
2323-M1-609, Rev. 11	20
2323-M1-508, Rev. 11	35
2323-M1-307, Rev. CP-4	20
2323-M1-261, Rev. CP-4	13
2323-M1-202, Rev. CP-4	57

A copy of the "Field Design Change and Review Status Log - Affected Document Update Report" was requested from DCTG for each of the 14 drawings selected. A review of the 14 drawings and 507 associated design changes was performed in accordance with Cygna Instruction entitled "TUSI IAP-DCTG Review Instruction" to verify that:

1. All design changes were accounted for by being listed on the DCTG printout.
2. The design change documents contained the correct affected document reference or that a "Change Verification Checklist (CVC)" documented a change to the affected document listed on the design change document.
3. The status identified on the design change document was consistent with the status listed on the DCTG printout (i.e., "NI" - not to be incorporated, "NA" - not applicable, "VNI" - void not incorporated, or "2" - which indicates that the design change was incorporated into revision "2" - of the affected document).
4. The design change documents identified as being incorporated into a particular revision of a given document on the DCTG printout had in fact been incorporated on that revision of the document.



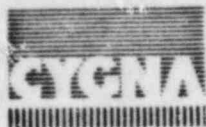
5. The DCC "Open Design Change Log - Affected Document Update Report" lists all design changes identified as open on the DCTG "Field Design Change and Review Status Log - Affected Document Update Report."

Results

The following summary list of discrepancies, along with their associated impact on the accuracy of the computerized design change log in use at CPSES, documents the results of the Cygna review.

1. All 13 revisions of DCA 11863 were not accounted for on the DCTG printout. Revisions 1 and 3 were not listed relative to drawing 2323-S1-0614, rev. 4.
2. CMC 79265, rev. 4 and DCA 12190, rev. 1 were apparently incorrectly listed on the DCTG printout against drawing 2323-M1-202, rev. CP-4, since neither of these design changes made reference to this drawing. In addition, the DCTG printout listed a total of 18 design changes against drawing 2323-E1-701, sheet 003, rev. 9. However, some of the design changes made reference to 2323-E1-701, sheet 002.
3. DCA 11713, rev. 1 and CMC 61012, rev. 0 were identified on the DCTG printout as "NI" relative to drawing 2323-E1-0713, sheet 011, rev. 5 and 2323-M1-0202, rev. CP-4, respectively. A review of both design changes (and their corresponding CVC) indicated that the design changes are open and should be so identified on the DCTG printout.

Cygna does not believe that three of the six discrepancies identified in items 1, 2, and 3 would have any significant impact on the accuracy of the DCTG data base due to our understanding of the DCTG Data Base validation process. This finding is based on the following:



- Although revisions 1 and 3 of DCA 11863 were not listed on the DCTG printout, revision 13 was accurately listed against Drawing 2323-S1-0614, rev. 4. Because all previous revisions of this DCA are superseded, the fact that revisions 1 and 3 were not listed would have no significant impact on the DCTG data base accuracy.
- The fact that CMC 79265, rev. 4 was listed against Drawing 2323-M1-202, rev. CP-4 and DCA 12190, rev. 1 was also listed against Drawing 2323-M1-201, rev. CP-4 without actually making reference to the drawing, it will not have any significant impact on the DCTG data base accuracies. A decision was made during the DCTG data base validation process that when the G&H data base was merged with the DCTG data base, the G&H data would not be arbitrarily deleted.

The three remaining discrepancies identified in items 2 and 3 can have an impact on the data base accuracy if they remain uncorrected. The basis for this finding is as follows:

- If DCA 11713, rev. 1 and CMC 61012, rev. 0 remains statused on the DCTG printout as "NI" they would not be carried by DCC as open and therefore would not be issued by DCC with Drawings 2323-E1-713, sheet 11, rev. 5 and 2323-M1-202, rev. CP-4, respectively.
- If the DCTG printout identifies a design change against the incorrect sheet number of Drawing 2323-E1-701, DCC will not carry the open design change against the correct drawing sheet.



4. The DCTG printout shows that CMC 79265, rev. 4 was incorporated into revision 11 of drawing 2323-M1-0202. A review of the revision 11 title block on drawing 2323-M1-0202 did not list the CMC as incorporated. In addition, the DCTG printout shows that CMC 55605, rev. 2 and rev. 3 were incorporated into revision 8 of Drawing 2323-M1-0261. Again, a review of the revision 8 title block of drawing 2323-M1-0261 did not list the CMC as incorporated.

The two discrepancies identified in item 4 would have no significant impact if CMC 79265, rev. 4 and CMC 55605, rev. 2 and 3 were in fact incorporated into Drawings 2323-M1-202, rev. 11 and 2323-M1-261, rev. 8, respectively. However, if these changes were not incorporated and continued to be listed by DCTG as incorporated, they would not be carried by DCC as open.

5. Two apparent discrepancies between the DCC printout and the DCTG printout were discovered. CMC 58241, rev. 9 and DCA 12653, rev. 13 were listed as open on the DCC printout against drawings 2323-E1-700-01S, rev. 3 and 2323-E1-713-11, rev. 5, respectively. However, the DCTG printout listed these design changes as "NI." In addition, revision 14 of DCA 12653 does not appear on the DCC printout but is listed on the DCTG printout as open.

The three discrepancies identified in item 5 can be attributed to the difference in dates between the DCC printout (6/11/84) and the DCTG printout (6/13/84) that were used for the open design change comparison. The DCC printout of 6/11/84 shows CMC 58241 and DCA 12653 as open, but if DCTG had changed the status to "NI" after 6/11/84, they would not be reflected on the DCC printout used for our comparison. For example, since revision 14 of DCA 12653 was input by DCC on 6/11/84, it did not appear on the DCC printout used for our comparison.



Conclusions

Based on the review performed at CPSES and the ongoing efforts identified in the August 10, 1984 letter from J. T. Merritt to N. H. Williams, the DCTG Data Base Validation Process appears to have brought the DCTG Data Base to an acceptable level of accuracy.

Of the 507 design changes reviewed for accountability, correct references, and correct status, only six discrepancies were noted. Three of these discrepancies were determined not to have any significant impact on the accuracy of the DCTG Data Base. The three remaining discrepancies should be corrected by the continuing DCTG Data Based Validation program.

Of the 59 design changes reviewed for incorporation into affected documents only two discrepancies were noted. These discrepancies will not affect the data base accuracy if the design changes are actually incorporated into their respective design documents.

Of the 428 open changes reviewed for comparison between the DCTG printout and the DCC printout, only three discrepancies were noted. These three discrepancies can be attributed to the two day difference in issue dates between the DCTG and DCC printouts and do not necessarily represent an accuracy problem with the DCTG computerized data base.

In summary, of the 14 drawings and 507 design changes included in this review, only 11 data discrepancies were found and only 5 of these were determined to have any possible impact on the accuracy of the DCTG Data Base. All of the noted discrepancies should be corrected by the CPSES DCTG Data Base Validation Program which will be completed by November, 1984.

