

TEXAS UTILITIES GENERATING COMPANY

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

Log # TXX-6075

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November 4, 1986

WILLIAM G. COUNSIL  
EXECUTIVE VICE PRESIDENT

Director of Nuclear Reactor Regulation  
Attention: Mr. Vince S. Noonan, Director  
Comanche Peak Project  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

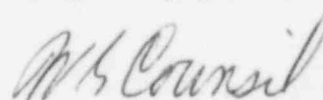
SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
DOCKET NOS. 50-445 AND 50-446  
TRANSMITTAL OF DOCUMENTS FOR EVALUATION AND  
RESOLUTION OF CYGNA TRAIN A AND B ISSUES  
AS APPLICABLE TO TRAIN C CONDUIT SUPPORTS

Dear Mr. Noonan:

Enclosed are 15 copies of the documents for "Evaluation and Resolution of CYGNA Train A and B Issues as Applicable to Train C Conduit Supports" prepared by Impell Services Incorporated for Texas Utilities Generating Company. These documents are part of the Comanche Peak Response Team Cable Tray and Conduit Support Program initiated by Texas Utilities. A list of enclosures is attached for your convenience.

Should you have any questions, please do not hesitate to call John Beck or myself.

Very truly yours,



W. G. Council

JDS/grr  
Attachment  
Enclosures

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ATTACHMENT 1  
LIST OF ENCLOSURES

Enclosure A: Texas Utilities Generating Company  
Comanche Peak Steam Electric Station, Generic Technical  
Issues Report - Evaluation and Resolution of CYGNA Train A  
and B Conduit Issues as Applicable to Train C Conduit  
Supports

Enclosure B: Texas Utilities Generating Company  
Comanche Peak Steam Electric Station, Evaluation and  
Resolution of CYGNA Train A and B Conduit Issues as  
Applicable to Train C Conduit Supports, Impell Summary  
Matrix.

Enclosure C: Impell Reference Documents, 4 volumes as follows

Enclosure C1: Volume I

Letter No. 84056-095 from N. H. Williams (Cygna) to W. G.  
Council (TUGCO) dated November 26, 1985, Subject: Review  
Issues List (RIL), Texas Utilities Generating Company,  
Comanche Peak Steam Electric Station, Independent Assessment  
Program - All Phases.

Impell Project Instruction "Seismic Evaluation of Train C  
Supports", Project Instruction No. 0210-052-003, Revision 1,  
Job No. 0210-052-1355, Impell Corporation, Walnut Creek, CA,  
1986.

Impell Calculation No. ROTC-6, "Multi-Mode Factor Evaluation  
- Train C Conduit", Revision 1, Job No. 0210-052-1355.

Enclosure C2: Volume II

Impell Project Instruction "Multi-Level Screening Criteria  
for Train C Conduit (Two Inch and Under) at Comanche Peak  
Steam Electric Station", Project Instruction No. 0210-053-  
001, Revision 5, Job No. 0210-053-1355, Impell Corporation,  
Walnut Creek, CA, 1986.

Enclosure C3: Volume III

"Test Report for Static Testing of Train C Beam Clamps and  
Unistrut Hangers for CPSES", CCL Report No. A-720-86, July  
10, 1986.

Impell Calculation No. ROTC-02, "Prying Factors," Revision 0,  
Job No. 0210-052-1355.

Impell Project Instruction "Rigorous Analysis of Train C  
Conduit", Project Instruction No. 0210-052-006, Revision 1,  
Job No. 0210-052-1355.

ATTACHMENT 1  
LIST OF ENCLOSURES (CONT'D)

Enclosure C4: Volume IV

Impell Report No. 01-0210-1479, Rev. 1, "Comanche Peak Steam Electric Station, Train C Conduit Two Inch and Under Criteria Document", June, 1986.

Impell Project Instruction, "Dynamic Analysis of Cable Tray Systems", Project Instruction No. P1-02, Revision 4, Job No. 0210-040.

"Test Plan - Dynamic Testing of Typical Cable Tray Support Configurations", Document No. A-000150 Rev. 1, December, 1986 by ANCO Testing Laboratory.

Impell Special Study No. 5.9, "Oversize Bolt Holes", Preliminary Issue.

TEXAS UTILITIES GENERATING COMPANY  
COMANCHE PEAK STEAM ELECTRIC STATION  
IMPELL EVALUATION AND RESOLUTION OF  
CYGNA TRAIN A AND B CONDUIT ISSUES  
AS APPLICABLE TO TRAIN C CONDUIT SUPPORTS  
SUMMARY MATRIX

Page 1 of 4  
10/23/86  
Rev. 0

APPENDIX NUMBER	GENERIC TECHNICAL ISSUE TITLE	SUB-ISSUE DESIGNATION	GENERAL ISSUE CATEGORY	IMPELL ISSUE RESOLUTION	
				REFERENCE*	SECTION
01	Governing Load Case for Design	-	AMA	2	4.2.1
				9	4.3
02	Dynamic Amplification Factors	-	AMA	2	4.1.3
03	Combination of Deadweight and Seismic Responses	-	AMA	2	4.2.2
04	Measurement of Embedment from Top of Topping	-	DC	2	4.3.5
				4	Part II
05	Bolt Hole Tolerance and Edge Distance Violation	A	DC	14	-
				15	-
				16	-
		B	DC	**	-
06	FSAR Load Combinations	-	DC	8	4.6.2
				9	4.3
07	Support Self Weight	-	AMA	2	4.2.1
				4	Part II
08	Torsion of Unistrut Members	-	AMA	6	-

ISSUE CATEGORY LEGEND

AMA - Analysis Methods & Assumptions  
DC - Design Criteria  
DOCC - Design Document Control  
AB - As-Built vs. As-Designed

\*Reference numbers refer to Section V of the Impell Train C  
Cygna Issue report

\*\*Reference under development

TEXAS UTILITIES GENERATING COMPANY  
COMANCHE PEAK STEAM ELECTRIC STATION  
IMPELL EVALUATION AND RESOLUTION OF  
CYGNA TRAIN A AND B CONDUIT ISSUES  
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SUMMARY MATRIX

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10/23/86  
Rev. 0

APPENDIX NUMBER	GENERIC TECHNICAL ISSUE TITLE	SUB-ISSUE DESIGNATION	GENERAL ISSUE CATEGORY	IMPELL ISSUE RESOLUTION	
				REFERENCE*	SECTION
09	Improper Use of Catalog Components	A	DC	2	4.3.2
		B	AB	4	Part II
10	Anchor Bolts	A	AMA	7	-
		B	AMA	11*	-
		C	AMA,DC	4	Part II
		D	AB	4	Part II
11	Longitudinal Loads on Transverse Supports	-	AMA	2	App.A
				6	-
12	Hilti-Kwik Bolt Substitutions	-	AB	4	Part II
13	Substitution of Smaller Conduits on CA-Type Supports	-	AB,AMA	4	Part II
14	Use of CA-Type Supports in LS Spans	-	AB,AMA	4	Part II
15	Stresses in Cable Trays Due to Attached Conduit Supports	-	AMA	2	4.1.1
				10	3.2.3e
16	Increases in Allowable Span Lengths	-	AMA	-	-

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Cygnia Issue report

\*\*Reference under development

TEXAS UTILITIES GENERATING COMPANY  
COMANCHE PEAK STEAM ELECTRIC STATION  
IMPELL EVALUATION AND RESOLUTION OF  
CYGNA TRAIN A AND B CONDUIT ISSUES  
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SUMMARY MATRIX

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10/23/86  
Rev. 0

APPENDIX NUMBER	GENERIC TECHNICAL ISSUE TITLE	SUB-ISSUE DESIGNATION	GENERAL ISSUE CATEGORY	IMPELL ISSUE RESOLUTION	
				REFERENCE*	SECTION
17	Substitution of Next Heavier Structural Member	-	AMA, AB	4	Part II
18	Clamp Usage	A	AB	12	-
				13	-
		B	AB	4	Part II
		C	AB	4	Part II
19	Documentation Deviations Between Inspection Reports, CMC's and IN-FP Drawings	A	DOCC	-	-
		B	DOCC	-	-
20	Nelson Studs	-	DC, AMA	**	-
21	Conduit Fire Protection Calculations	A	AB	4	Part II
		B	AB	4	Part II
		C	DC, AMA	4	Part II
		D	AB	4	Part II
22	Span Increase for Fire Protected Spans	-	DC	-	-
23	Grouted Penetrations	-	DC, AMA	2	App. F

ISSUE CATEGORY LEGEND

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Cygna Issue report

\*\*Reference under development

TEXAS UTILITIES GENERATING COMPANY  
 COMANCHE PEAK STEAM ELECTRIC STATION  
 IMPELL EVALUATION AND RESOLUTION OF  
 CYGNA TRAIN A AND B CONDUIT ISSUES  
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SUMMARY MATRIX

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 10/23/86  
 Rev. 0

APPENDIX NUMBER	GENERIC TECHNICAL ISSUE TITLE	SUB-ISSUE DESIGNATION	GENERAL ISSUE CATEGORY	IMPELL ISSUE RESOLUTION	
				REFERENCE*	SECTION
24	Rigidity of CA-Type Supports	-	AMA	2	App. D
25	Enveloping Configurations for Design	-	AMA, AB	4	Part II
26	Design Drawing Discrepancies	-	DOCC	-	-
27	Walkdown Discrepancies	A	AB	4	Part II
		B	AB	4	Part I
		C	AB	4	Part I
		D	AB	4	Part I
		E	AB	4	Part I
		F	AB	4	Part I
28	Systems Concept	-	AMA	8	-
				6	-
				2	App. B
29	Cumulative Effect of Review Issues	-	AMA, DC, DOCC, AB	-	-

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\*\*Reference under development



October 22, 1986  
IM-T-0210-052-148

Texas Utilities Generating Company  
Skyway Tower, L. B. 81  
400 North Olive Street  
Dallas, Texas 75201

ATTENTION: Mr. William G. Council

SUBJECT: Texas Utilities Generating Company  
Comanche Peak Steam Electric Station  
"Generic Technical Issues Report-  
Evaluation and Resolution of CYGNA Train A and B  
Issues as applicable to Train C Conduit  
Supports", Impell Report No. 01-0210-1523

Gentlemen:

Per Mr. Scott Harrison's request, we are enclosing fifty (50) separately packaged copies of the subject report and other documents referenced in the subject report. These documents include the following:

- 1 Letter No. 84056-095 from N. H. Williams (Cygna) to W. G. Council (TUGCo) dated November 26, 1985, Subject: Review Issues List (RIL), Texas Utilities Generating Company, Comanche Peak Steam Electric Station, Independent Assessment Program - All Phases.
- 2 Impell Project Instruction "Seismic Evaluation of Train C Supports", Project Instruction No. 0210-052-003, Revision 1, Job No. 0210-052-1355, Impell Corporation, Walnut Creek, CA 1986.
- 3 Impell Calculation No. ROTC-06, "Multi-Mode Factor Evaluation - Train C Conduit", Revision 1, Job No. 0210-052-1355.
- 4 Impell Project Instruction "Multi-Level Screening Criteria for Train C Conduit (Two Inch and Under) at Comanche Peak Steam Electric Station", Project Instruction No. 0210-053-001, Revision 5, Job No. 0210-053-1355, Impell Corporation, Walnut Creek, CA, 1986.

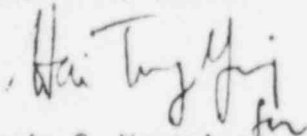


Mr. W. G. Council  
October 22, 1986  
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- 5 "Test Report for Static Testing of Train C Beam Clamps and Unistrut Hangers for CPSES", CCL Report No. A-720-86, July 10, 1986.
- 6 Impell Calculation No. ROTC-02, "Prying Factors," Revision 0, Job No. 0210-052-1355.
- 7 Impell Project Instruction "Rigorous Analysis of Train C Conduit", Project Instruction No. 0210-052-006, Revision 1, Job No. 0210-052-1355.
- 8 Impell Report No. 01-0210-1479, Rev. 1, "Comanche Peak Steam Electric Station, Train C Conduit Two Inch and Under Criteria Document, "June, 1986.
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- 11 Impell Special Study No. 5.9, "Oversize Bolt Holes", Preliminary Issue.

If you have any questions, please call me.

Very truly yours,



Kevin C. Warapius  
Project Manager

KCW/MSS/sp

Enclosure

cc: Mr. J. E. Krechting  
Mr. O. W. Lowe  
Mr. L. D. Nace  
Mr. H. A. Harrison  
Mr. S. Harrison  
ARMS, TUGCo

Repost