CYGNA
ENERGY SERVICES
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May 22, 1984
84042.013

Mrs. Juanita Ellis
President, CASE
1426 S. Polk
Dallas, Texas 75224

Subject: Telecon Transmittal #3
Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3
Job No. 84042

Dear Mrs. Ellis:

Enclosed please find telecons associated with the Phase 3 Independent Assessment Program.

If you have any questions or desire to discuss any of these documents please don't hesitate to call. If you are unable to reach me in the Cygna San Francisco office ask for Ms. Donna Oldag at the same number.

Very truly yours,

DOldag for

N.H. Williams
Project Manager

NHW/dhb

Attachment
cc: Mr. S. Treby (US NRC) w/a
Mr. D. Wade (TUEC) w/a
Mr. G. Grace (TUEC) w/a
Mr. D. Pigott wo/a

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Use Attached DIST.
P&L S. Burwell

CYGNA

Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/19/84

Subject: Pipe Support Questions

Time: 8:00 a.m.

Place: Site

Participants: D. Rencher of TUSI

John Minichiello, C. Wong Cygna

Item	Comments	Required Action By
	Cygna requested response to the following comments:	
1.	In reviewing the calculations for U-bolts used in supports, Cygna has noted instances where a. A 2" diameter U-bolt is called out, with no vendor specified, nor any design calculation supplied (MS-1-003-001-C72S, Rev. 3). b. A PUH-340 (2-1/4" diameter) U-bolt is called out, but this does not appear in the NPSI catalog. The designer then qualifies the bolt based on a pure tensile check (.6 F_y) (MS-1-002-001-S72R, Rev. 3). c. A Figure 137SN (2-3/4" diameter) ITT U-bolt is called out. Since no allowable is supplied, the designer qualifies the bolt based on a combination of tensile and side load (because of swing angle). When the side load causes failure, a memo from ITT Grinnell is used to accept side loads (due to swing angles up to 5°) without tensile load reduction. The designer then qualifies the bolt based on tensile alone (MS-1-002-004-S72R, Rev. 2). d. Again, in MS-1-003-006-S72R, a designer qualifies a Fig. 137N 2-3/4" diameter U-bolt based on tensile stress only, although the designer does use the root area of the bolt (conservative).	

Signed: M. Williams /pm

Distribution: ~~D. Wade, N. Williams, J. Minichiello, R. Hess, G. Grace, S. Treby, J. Ellis,~~ G. Bjorkman, R. Iotti, Project File

1020.01a

In all the cases, except where no check was done, there was no attempt to consider the complex stress pattern of the U-bolt as a bent beam with a distributed load.

To determine what the vendors would use for an allowable load, Cygna has prepared the following table of level A/B allowable vs. rod size.

A comparison of allowable load vs. tensile stress area for the ITT bolts shows the following (up to 650°):

NPSI	Rod Size (in)	Tensile Area (in^2)	Allow. Load (lb)	"Working Stress" (psi)	ITT
PUH-10, 20	.625	.226	3620	8009	Fig. 137SN
-30	.75	.334	5420	8114	Fig. 137SN
-40, 80	.875	.461	7540	8178	Fig. 137SN
-160	1.0	.605	9920	8198	Fig. 137SN
-	1.5	1.404	23260	8283	Fig. 137SN
-	2.0	2.497	41400	8290	Fig. 137SN
-	2.25	3.246	54400	8380	Fig. 137SN
-	2.5	3.998	67000	8380	Fig. 137SN

Notes: Tensile Area from "Mechanical Engineers" Handbook, UNC thread, Allow. load from ITT-Grinnell data sheets

$$\text{"Working Stress"} = \frac{\text{Allow. Load}}{2(\text{TSA})}$$

$$\text{"Working Load"} \sim (8400)(2)(\text{Tensile Area})$$

For A-36 @ 650°F, F_y = 26100 psi, .6 F_y = 15660 psi

The designer's method would give a "working load":

$$\text{"Working Load"} \sim 15660(2)(\text{Tensile Area})$$

That is, the method used by the designers is unconservative by 85%. In particular, for MS-1-003-006-S72R, with a 2-3/4" bolt:

Emergency Load "Designer Method"
= 145711 lb
= 145711/2 x Root Area (used in calc)
= 145711/2 x 4.62
= 15770 psi < .6F_y = 18600 psi

Item	Comments	Required Action By

Extrapolating the vendor "working load" method:

"Working Load" = 8400(2)(4.933)
= 82874 lb (level A/B)

Emergency Load = 1.33(82874) = 110000 lb

∴ This bolt may not be adequate.

Question: Based on the above, have the vendors provided documentation on qualification methods for non-standard U-bolts?

2. Cygna has noted instances in the CCW system (CC-1-028-003-A33R, CC-1-028-001-A33R) where no gap is specified for a pipe within a frame. Has TUSI done a study to show that, below a certain pipe temperature, pipe growth effects are negligible, since it is standard practice to use a 1/16" gap?

3. In reviewing the MS pipe support design calculations, Cygna has seen many instances where components are not checked. In some, there is reference to previous calcs which are not included. In others, there is no reference. As an example, Cygna has chosen MS-1-003-013-C72K. In technical file 84042-4F, Cygna has performed calculations which show most of the items are acceptable. Item 2, 2 PUS-320 U-bolts, does not appear to be acceptable. From the NPSI CDRS,

$$\text{Allow} = 16^k \times 2 = 32^k$$

$$\text{Applied} = 37^k > 32^k$$

It does appear that the drawing calls out a 1-3/4" diameter rod for these "PUS-320" U-bolts, while the "standard" rod that a PUS-320 is based on is 1-1/4" diameter. A 1-3/4" diameter rod would have an allowable (based on ITT-Grinnell, Fig. 1375) of

$$\text{Allow} = 31.4 \frac{\text{kip}}{\text{Bolt}} \times 2 \text{ bolts} = 62.8^k$$

which would be acceptable.

Questions

a. Why are there no calculations or documentation for the standard supports?

b. Who is responsible for insuring that the data on drawings is correct?

c. What size U-bolt is in the field, 1-1/4" diameter or 1-3/4" diameter?

Item	Comments	Required Action By

d. How does NPSI/ITT Grinnell ensure that all parts of a design have been checked, if a package does not contain or reference all the data?

4. In reviewing certain U-bolt and beam combinations, Cygna has noted instances where the local effect of the U-bolt on the beam is not considered. For example, in MS-1-03-001-C72S, the U-bolt has an applied load of 23.7^{K} and is attached to 6x6x1/2" TS. Cygna has performed calculations which show the local bending stress in the top portion of the tubesteel may be high.

How does TUSI/NPSI/ITT Grinnell determine if connections can carry the applied load? Are standard tables available?

5. In reviewing installations with 0" gap around U-bolts, Cygna has the following questions:

a. On Page 11 of CP-CPM 9.10, Rev. 11, snug tight is defined twice:

> "Note: Snug tight is defined as the tightness attained by a few impacts on an impact wrench or the full effort of a man using an ordinary spud wrench:
>
> "When U-bolts are specified on the design document as not having any clearances, the U-bolt shall be snug tight so that the U-bolt cannot be moved by hand. The nuts on the U-bolt shall be installed on the side of the plate as shown on the design drawing."

Which is used for installation of U-bolts?

b. In support CC-1-028-007-S33R, a PUS-240 U-bolt is used to provide support stability. If "snug tight" is taken as the first definition, this could mean ~ 80 ft-lb of torque. Since,

$T \sim .2FD$
$T = 80$ ft-lb $= 960$ in-lb
$D = 1$" for a PUS-240
$\therefore F = 4800$ lb/leg

For piece 15 (1/4 x 4 x 4 angle)

$$\sigma \cong \frac{\frac{4800\ (2)}{4\ (.25)^2}}{6} \gg F_y$$

Item	Comments	Required Action By
	How does the installation procedure insure that the angle will not be deformed?	
c.	In reviewing support MS-1-004-003-S72R, Cygna has noted no gap shown on the drawing and both nuts on the same side of the beam, implying the U-bolt is "snug tight." Have the local pipe stress and increased U-bolt load due to 500°F thermal expansion been considered?	

Communications Report

Company: Texas Utilities ☒ Telecon ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 5/22/84

Subject: Pipe Support Review

Time: 10:45 am

Place: San Francisco

Participants: D. Rencher of TUEC

J. Minichiello Cygna

Item	Comments	Required Action By
	Cygna called to determine if it would be worthwhile to send a support reviewer to the site to review previous revisions of calculations (reference, telecon 5/16/84, item 4). Dave said that TUEC had prepared their formal response, which stated that previous revisions of vendor calculations are kept with the vendors (NPSI and ITT). Dave did suggest that Nancy Williams may be able to contact the vendors and have a copy of the calculations sent to the site.	

Signed: N A Williams /lrs Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 5/9/84

Subject: Calculation Package Request

Time: 11:45 a.m.

Place: CPSES Site

Participants: Dave Rencher of TUGCO

John Russ CES

Item	Comments	Required Action By
	I requested a copy of Calculation Package FW-1-18-006-C72S from Mr. Rencher.	

Signed: Rolf Williams /eam

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3

Job No.: 84042

Date: 3/26/84

Subject: Mechanical Review Document Request

Time: 9:30 am

Place: Comanche Peak

Participants: D. Rencher of TUGCO

J. Russ Cygna

Item	Comments	Required Action By
	Reference: Conference Report dated 23 March 1984, "Open Items," D. Rencher, J. Minichiello, C.K. Wong, and J. Russ participating	
	Dave delivered to Cygna the following:	
1.	Output for Load Case 4 in STRUDL run for CC-1-028-026-S33R	
2.	Output for change sign of X coordinate in Node 24 for CC-1-028-026-S33R	
3.	Two runs to(determine what was used in design: (i.e., Node 24 with Run 1 --> Y =.5 x = .374 Run 2 --> Y =.5 x = -.374)	
4.	The STRUDL output for support MS-1-004-005-C72K as requested in the referenced conference report.	

Signed: N H Williams /pm

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Communications Report

Company:	Texas Utilities	☐ Telecon	☒ Conference Report
Project:	Comanche Peak Steam Electric Station	Job No.	84042
	Independent Assessment Program - Phase 3	Date:	5/2/84
Subject:	Initial Meeting with R. Baker to Locate	Time:	9:30 a.m.
	Historical Organization Documentation	Place:	CPSES

Participants:	of
R. Baker	TUSI
D. Smedley	Cygna

Item	Comments	Required Action By
1)	Asked R. Baker to respond specifically to where we could obtain organization charts and job descriptions generated and used prior to 1982. He indicated that retaining outdated organization charts was not a CPSES requirement but that some might be obtained from personal files.	
2)	At 10:40 a.m. this date R. Baker provided me with numerous historical organization charts.	

Signed: N. H. Williams /eam Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 5/10/84

Subject: Calculation Package Request

Time: 9:00 a.m.

Place: CPSES Site

Participants: Dave Rencher of TUGCO

John Russ CES

Item	Comments	Required Action By
	I received a copy of Calculation Package FW-1-18-006-C72S from Mr. Rencher.	

Signed: N. H. Williams /eam

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Communications Report

Company:	Texas Utilities	☒ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/15/84
Subject:	IUGCO Audits of TUSI	Time:	3:15 PM
		Place:	Boston
Participants:	S. Bibo	of	Cygna
	D. Anderson		TUSI (Dallas)

Item	Comments	Required Action By
	Debra Anderson called at the request of Tony Vega to provide me with information requested from Tony Vega on 5/10/84 (refer to Cygna Conference Report between Bibo and Vega at CPSES, dated 5/10/84). Debra stated that there was a status log that showed the status of the following findings: TCP-18 - Findings 2, 3, 4 TCP-32 - Findings 1, 2, 3, 4 TCP-43 - Findings 1, 3, 4, 5 TCP-49 - Findings 2, 3, 4 TCP-70 - Findings 1, 2 Debra stated that the status log may indicate the specific information I am looking for.	D. Anderson
	I asked Debra to send me a copy of the status log for the above referenced audits/findings and stated that additional information may be requested upon review of the status log.	

Signed: N. H. Williams /dhb Page 1 of 1

Distribution: N. Williams, D. Wade, G. Grace, D. Smedley, S. Bibo, S. Treby, J. Ellis, Project file

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Communications Report

Company:	Texas Utilites	☒ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/15/84
Subject:	TUGCO Audits of TUSI	Time:	3:00 PM
		Place:	Boston
Participants:	S. Bibo	of	Cygna
	D. Anderson		TUSI (Dallas)

Item	Comments	Required Action By
	Debra Anderson called at the request of Tony Vega to provide me with information requested from Tony Vega on 5/10/84 (refer to Cygna Conference Report between Bibo and Vega at CPSES, dated 5/10/84). Debra stated that for findings 2 and 3 of Audit TCP-47, there was a status log that indicated that both findings were responded to (via CPPA #23573 9/29/82) and closed by QA. I asked Debra to send the following information to my attention ASAP: 1. Status Log for findings 2 and 3 of Audit TCP-47 2. Letter #CPPA 23573 (9/29/82) 3. Letter from QA to TUSI discussing response/close-out of findings 2 and 3	D. Anderson

Signed: N A Williams /dhb Page 1 of 1

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Communications Report

Company: Texas Utilities ☒ Telecon ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 5/15/84

Subject: Inspection Reports

Time: 2:30 PM

Place: Boston

Participants: Steve Bibo of Cygna

Tony Vega TUSI

Item	Comments	Required Action By
	I called Tony to get an idea of how many Inspection Reports (IR) were issued at CPSES. He said that he would get back to me with the number of IRs issued. I also asked for an explanation of the IR numbering system and filing system. He stated that IRs were sequentially numbered with a discipline prefix. He stated that they were filed with the corresponding component package. He also stated that there was a computerized printout available of IRs which would indicate the discipline location and status. In addition, I told Tony that I had requested a copy of CPSES Procedure CP-QP-18.00, Revisions 0 thru 10 from Richard Baker.	T. Vega

Signed: N. Williams /dhb Page 1 of 1

Distribution: ~~N. Williams, D. Wade, G. Grace, D. Smedley, S. Bibo, S. Treby, J. Ellis, Project~~ File

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Communications Report

Company:	Texas Utilities	☒ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/16/84
Subject:	Pipe Supports and Pipe Stress Open Items	Time:	10:00 AM
		Place:	San Francisco
Participants:	G. Grace	of	TUEC (Ebasco)
	N. Williams		Cygna

Item	Comments	Required Action By
1	Cygna is still waiting for copies of the following pipe support calculations: MS-1-001-004-S72R MS-1-003-004-S72R These were identified as open items between Cygna and Texas Utilities (reference D. Rencher telecon to C. Wong on 4/10/84) over a month ago.	
2.	As a result of Cygna Project Reviews of Gibbs & Hill response to Pipe Stress questions (reference Gibbs & Hill letter to J. B. George, GTN-68852, April 25, 1984) the following information is necessary for Cygna to complete its reviews: a. An index of the Gibbs & Hill Engineering Guides (AEGs) b. Referring to items 1a and b of the letter, what is the G&H procedure for evaluating valves where restraints are added after initial pipe stress analysis results indicate excessive accelerations (i.e. the original valve qualification report does not consider the restraints)? c. Referring to item 1a and b, please supply a copy of Seismic Qualification Report FOP-5A-1 and related correspondence for the main steam relief valve. d. Referring to item 5a, please supply a copy of Memo SAT-426.	

Signed: N. Williams /dhb Page 1 of 1

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1020.01a

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Communications Report

Company:	Texas Utilities	☐ Telecon	☒ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/10/84
Subject:	Corrective Action Systems	Time:	12:50 p.m.
		Place:	CPSES
Participants:	S. Bibo , N. Williams	of	CES
	D. Wade, R. Tolson		TUSI

Item	Comments	Required Action By
	We asked to meet with D. Wade to clarify in our minds exactly what "vehicles" were used at CPSES to document design deficiencies. Dave asked that R. Tolson be brought into the discussion. Tolson and Wade explained that in addition to such documents as Nonconformance Reports (NCR's), Deficiency Review Reports (DRR's), Corrective Action Requests (CAR's), Significant Deficiency Analysis Reports (SDAR's), etc., other documents could be used to document design deficiencies. These documents are Computer Modification Cards (CMC's), Design Change Authorizations (DCA's), and Inspection Reports (IR's). Tolson explained that he didn't feel it was important relative to what you called the piece of paper, as long as the deficiency was documented.	

Signed: N A Williams /rg Page 1 of 1

Distribution: N. Williams, D. Wade, G. Grace, S. Bibo, S. Treby, J. Ellis, Project File

1020.01a

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station — Job No. 84042

Independent Assessment Program - Phase 3 — Date: 3:00 - 3:30

Subject: Request for Verbal Information — Time: 3/21/84

Re: Corrective Action & Audits — Place:

Participants:		of
	Richard Baker	TUSI
	D. Smedley	Cygna
	B. Good	

Item	Comments	Required Action By
1)	Met with Mr. Baker at 3:00 to discuss subject. Clearly stated that this meeting was being held so that he could provide us with information and that we would not discuss anything that we had done up to this point or any remaining activities.	
2)	Asked Mr. Baker where we could find program requirements for: a) Follow-up of deficiencies identified as design related. b) Modifying design process to correct recurring design deficiencies. c) Necessary training.	
3)	Through discussion Mr. Baker cited procedures and cases where they were used. He went on to state that in his opinion TUSI does not need a corrective action program since all design changes are ultimately approved by Gibbs & Hill. We made no comment on this and left further action pending discussion.	

Signed: N H Williams /cdm Page 1 of 1

Distribution: N. Williams, D. Wade, G. Grace, S. Bibo, D. Smedley, S. Treby, J. Ellis, Project File

1030 016

Communications Report

Company: Texas Utilities ☒ Telecon ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No.: 84042

Date: 3/21/84

Subject: TUGCO/TUSI QA Plan

Time: 3:18 P.M.

Place: Cygna Trailer

Participants: Susan Spencer of TUSI
D. Smedley Cygna

Item	Comments	Required Action By
1)	I (D. Smedley) received a telephone call from Susan Spencer at 3:18 p.m. today. She said that she had been instructed to copy the historical contents of the TUSI QA Plan and ship it to the site. She stated that she was calling to find out specifically what we wanted to look at because the volume of documents she had to reproduce was enormous. (She later stated that the historical file for the QA plan was at least one full filing cabinet.) I told her that it was not possible for me to discuss any portion of what I wanted to look at without getting approval from our project management first. She then asked if there was any way we could come to Dallas and review whatever we wanted to, so that she would not be copying materials that were not even relative to whatever we needed. I told her to expect me on Friday morning, tentatively and that I would clear this through project.	

Signed: N. Williams /cdm

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Communications Report

Company: Texas Utilities ☒ Telecon ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/21/84

Subject: TUGCO/TUSI QA Plan

Time: 11:32 am

Place: CPSES

Participants:

	of
Bob Scott	TUSI
Dave Smedley	Cygna

Item	Comments	Required Action By
1)	Engineering Procedure a) TUGCO/TUSI QA Plan and b) TUGCO Corporate QA Plan. Mr. Smedley was phoned by Mr. Scott to address this issue. Mr. Smedley was advised by Scott that there are in fact two separate QA plans on site and that the TUGCO Corporate QA Plan would be made available for us to review.	
2)	Mr. Scott also stated that the historical elements of the TUGCO/TUSI QA Plan was being mailed by courier from Dallas and would arrive tomorrow (3/22/84) morning from the TUGCO offices.	
3)	Mr. Scott advised that any questions or clarification that we required should be obtained by contacting Susan Spencer at 979-8871 in Dallas.	

Signed: N. H. Williams /cdm

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1020.91a

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Communications Report

Company: Texas Utilities ☒ Telecon ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 5/1/84

Subject:

Time: 4:00 PM

Place: Boston

Participants:		of
	Jeff Waal	Cygna
	Borys Czarnogorski	G&H

Item	Comments	Required Action By
	I called Borys to inform him that I would be at G&H in New York next week.	

Signed: N. H. Williams /dhb Page 1 of 1

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1020 01a

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/28/84

Subject: TUGCO Request for Calculation Packages

Time: 2:00 pm

Place: CPSES Site

Participants: Terry Kerlin of TUGCO

John Russ Cygna

Item	Comments	Required Action By
	Terry requested that Cygna deliver the following packages to him:	
1.	MS-1-004-006-S72R	
2.	MS-1-002-006-S72R	
3.	SI-1-031-700-S32R	
	I gave Terry both Main Steam Support packages and told him the remaining package would be delivered as soon as our analysis was completed.	
	Terry also delivered the PSE Guideline Book previously requested.	

Signed: N. W. Williams /pm Page 1 of 1

Distribution: D. Wade, N. Williams. G. Grace, J. Minichiello, C. Wong, S. Treby, J. Ellis, Project File

1020.01a

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Communications Report

Company:	Texas Utilities	☒ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station	Job No.	84042
	Independent Assessment Program - Phase 3	Date:	5/23/84
Subject:	Request for Additional Information	Time:	11:00 a.m.
		Place:	San Francisco
Participants:	N. Williams	of	Cygna
	G. Grace		TUEC (Ebasco)

Item	Comments	Required Action By
	The following items are necessary in order that Cygna can complete the review of the listed support: 1. CC-1-087-004-A33A a. Analysis/calculation for 2"ϕ thru-bolt. (Item 46, Drawing, Section B-B). b. Computer analysis and calculation for the west side base plate. (Detail 14, Items 71 and 74, etc.).	

Signed: N. Williams /eam Page 1 of 1

Distribution: N. Williams, D. Wade, G. Grace, J .Minichiello, C. Wong, R. Iotti, S. Treby, J. Ellis, Project File

1020.01a

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Communications Report

Company: Texas Utilities ☐ Telecon X ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 4/23/84

Subject: Pipe Stress Questions

Time: 12:01 p.m.

Place: SF/SITE

Participants: Harvey Harrison of TUSI

J. Minichiello of Cygna

Item	Comments	Required Action By
	Reference: TUSI Letter CPPA-25,234 to Herman d'Errico/NPSI, dated 12/1/82. The referenced letter indicates that the Stress Analysis Group would consider local stress effects resulting from welded attachment and from contact line loads. Cygna could find no evidence that checks were being performed for contact line loads. For example, a local stress calculation was performed for Support MS-1-002-004-C72K which was welded to the pipe; however, there was no such calculation for MS-1-002-005-C72K which was a very similar configuration, but was not welded to the pipe. Please provide the documentation to show where the referenced commitment was satisfied.	

Signed: NHWilliams /rg

Distribution: D. Wade, N. Williams, G. Grace, J. Minichiello, S. Treby, J. Ellis, H. Mentel, Project File

CYGNA

Communications Report

Company:	Texas Utilities	☐ Telecon	☒ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	3/27/84
Subject:	Pipe Support Calculation Document Request	Time:	4:40 p.m.
		Place:	CPSES Site
Participants:	D. Rencher	of	TUGCO
	John Russ		Cygna

Item	Comments	Required Action By
	Cygna requested the following:	
1.	NPSI baseplate analysis for baseplates shown in Sections "B-B" and "D-D" OF MS-1-003-002-S72R dated 4/13/83	
2.	TSBR 102	
3.	CMC 95129, Rev. 0	
4.	CMC 95148	
5.	TF/RB-1333	
6.	PSE Sections 5 and 7 (CC-1-028-713-S33K)	

Signed: W. A. Williams /rg Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/21/84

Subject: Load Combinations for Anchors CC-1-087-004-A33A and CC-1-009-016-A43A

Time: 3:30 pm

Place: CPSES site

Participants: Terry Kerlin of TUGCO

John Russ Cygna

Item	Comments	Required Action By
	I asked Terry to explain how the anchor load summaries for anchors CC-1-087-004-A33A and CC-1-009-016-A43A were determined. The load summary for the anchors references GTNs 64417 and 62995. Terry stated that the loads for the summary for anchor CC-1-009-016-A43A were taken directly from the analysis output for problems AB-1-61A, Rev. 2 and AB-1-62B, Rev. 1 using the computer combined load files for normal, upset and emergency conditions. Anchor CC-1-087-004-A33A load summaries were taken from the individual loading cases for problems AB-1-61A, Rev. 2 and AB-1-61B, Rev. 1. The loads from the individual load were then combined.	

Signed: M A Williams /pm

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/30/84

Subject: Conference at G&H NYC at
Conclusion of Independent Assessment Program (IAP)

Time: 1:45 PM

Place: New York

Participants	of
J. P. Toner	Cygna
J. C. Waal	Cygna
Paul P. DeRienzo (VP Consulting Eng., QA & New Tech)	G&H
Michael A. Vivirito (VP Power Eng.)	G&H
Robert E. Ballard (SRPM CPSES)	G&H
Nabil H. Keddis (QA Manager)	G&H
Borys Czarnogorski (Proj. QA Eng. CPSES)	G&H

Item	Comments	Required Action By
	Paul DeRienzo called the meeting to ascertain the status of the Cygna IAP for CPSES. He discussed the QA program and asked me to explain the IAP process which I did for QA on the activities to date. I told him I was not familiar with "Phase 4". They wished to know the timetable for the project. I replied that I did not know. He and Nabil asked what we had found. I explained to him that Borys was quite familiar with the open items most of which were items that were not located. Nabil stated that Borys would look in Hoboken, N.J., for them. They were told that any action they take was at their risk. We next had a general philosophical discussion on the other two open areas of design change trending and QA sign-off verification for corrective action of items not corrected and the necessity of having objective evidence to verify close-out.	

Signed: N H Williams /dhb

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/2/84

Subject:

Time: 6:45 pm

Place: Comanche Peak

Participants: DCC of Texas Utilities

J. Minichiello Cygna

Item	Comments	Required Action By
	Please provide a copy of the following drawings with all DCA's and CMC's: BRP-MS-1-SB-024 through BRP-MS-1-SB-047 BRHL-MS-1-RB-001 BRHL-MS-1-RB-002 BRHL-MS-1-RB-003 BRHL-MS-1-RB-004 BRHL-MS-1-SB-016 BRHL-MS-1-SB-017 BRHL-MS-1-SB-018 BRHL-MS-1-SB-019 BRHL-CC-1-AB-007 BRHL-CC-1-AB-013 BRHL-CC-1-AB-049 BRHL-CC-1-SB-001 BRHL-CC-1-SB-002 BRHL-CC-1-SB-003	

Signed: N. H. Williams /pm Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program- Phase 3

Job No: 84042

Date: 3/22/84

Subject: Document Request -- NPSI Criterion I and XCI Review

Time:

Place: NPSI

Participants: H. McGrane of CES

P. Mottola NPSI

Item	Comments	Required Action By
	I requested and received the following documents from P. Mottola on 3/22/84: 1. Nonconformance Report Log 2. Nonconformance Report Files 3. Potential defect and noncompliance log	

Signed: N. H. Williams /rg

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No.: 84042

Date: 3/19/84

Subject: Engineering Procedures

Time: 1:30 P.M.

Place: QA Vault

Participants: Charles Osborne — of: TUSI

D. Smedley — CPSES

Item	Comments	Required Action By
1)	In order to perform an assessment of the volume or quantity of historical CCP-EP and CP-EI, a request was made of Mr. Osborne to be allowed to look at the contents of these file drawers. Mr. Osborne stated that access to the files is limited to vault personnel and that in order to review the historical procedures files a sign out card must be issued for each. At this point in time the project team is signing out a few procedures at a time for the matrix review.	

Signed: N.A. Williams /cdm

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station — Job No: 84042

Independent Assessment Program - Phase 3 — Date: 3/19/84

Subject: Access to Historical Copies — Time: 11:00 - 3:00

Place: CPSES

Participants:		of
	Richard Baker	TUSI Engineering
	S. Bibo	CPSES
	D. Smedley	
	B. Good	

Item	Comments	Required Action By
	We met with Richard to request that we have access to historical copies of engineering procedures/instructions for the purpose of performing our review at CPSES. Richard explained that all copies of engineering procedures/instructions were in the QA records vault (Charles Osborne), and that he would clear it up with Mr. Osborne for us to have access to engineering procedures/instructions. We also requested that Richard spend some time with D. Smedley and B. Good to explain the CPSES procedural system. I asked Richard if we could (if necessary) get copies of engineering procedures (historical) for use in our trailer next week. He stated that he had no problem with it, but it would be up to Charles Osborne (QA records vault) to follow his normal procedures for issuing documents. Richard Baker authorized Mr. Osborne to issue copies of all engineering procedures/instructions requested by Cygna.	

Signed: N. A. Williams /cdm Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/19/84

Subject: Historical Copies of QP's and QI's

Time: 10:45 AM

Place: CPSES

Participants: Tony Vega of TUSI Site QA

Steve Bibo

D. Smedley

B. Good

Item	Comments	Required Action By
	We met with Tony Vega to request that we have access to historical copies of quality procedures (QP's) and Quality Instructions (QI's) for the purpose of performing our review at CPSES. Tony brought us to the QA records vault and introduced us to Charles Osborne. Mr. Osborne stated that he would set up a work location within the vault and bring us any procedures we requested. In addition, I asked Tony Vega if Cygna could get "copies" of selected QP/QI procedures for use in our trailer. Tony stated that he had no problem and that I should request these procedures from C. Osborne. Tony Vega authorized C. Osborne to issue copies of all QA procedures requested by 4/5 - 4/9.	

Signed: N. H. Williams /cdm Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/28/84

Subject: Management Assessment of Design Program

Time: 4:39 PM

Place: Mr. Merritt's Office

Participants: Mr. Merritt of TUSI

Dave Smedley Cygna

Item	Comments	Required Action By
1.	As a result of my conversation with Tony Vega at 11:00 AM today Mr. Merritt called Dave Wade who in turn called Bob Hess of Cygna asking for the issue of Management Assessment of Design Program to be related directly to Cygna by Mr. Merritt.	
2.	I received approval from Bob Hess to meet with Mr. Merritt.	
3.	Met with Mr. Merritt at 4:39 and explained that all we were asking Tony Vega for was information relative to Management Assessment of the Program. I also explained that at this point I did not want to know any information other than where other management controls were prescribed by procedure. This issue was further clarified by stating that we just want to be sure that we look at all procedures relative to this issue and that's all we wanted to know. Mr. Merritt then said that he had misunderstood what we were looking for and said he would find out if any other procedures existed.	

Signed: N A Williams /dhb Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/28/84

Subject: Management Review of Program

Time: 11:00

Place: T. Vega's Office

Participants: Tony Vega of TUSI

Dave Smedley Cygna

Item	Comments	Required Action By
1)	I asked Tony Vega if he was aware of any procedures or programs that required management on site to review the adequacy or effectiveness of the design program. He stated that he was not aware of any prescribed requirements other than audits. He suggested that I talk to Mr. Merritt or Mr. Tolson for further input. I told Mr. Vega that if he could not identify any more information for us then I would call my management before talking to Merritt or Tolson. He said he would try to answer this and get back to me.	

Signed: N. H. Williams /dhb Page 1 of 1

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Communications Report

Company:	Texas Utilities	☐ Telecon	☒ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.:	84042
		Date:	3/20/84
Subject:	Procedures	Time:	1:45 p.m.
		Place:	CPSES
Participants:	S. Bibo	of	CYGNA
	D. Smedley		
	Bob Scott		TUSI Site QA
	C. Osborne		TUSI QA Records

Item	Comments	Required Action By
	S. Bibo and D. Smedley requested to review the historical files of the TUGCO CPSES QA Plan. We were given the latest copy and informed that the historical files were maintained by TUGCO in Dallas, Texas. In addition, we requested to have access to the CPSES PSAR. This request was granted by C. Osborne.	

Signed: N.A. Williams /cdm Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3

Job No. 84042

Date: 3/28/84

Subject: Pipe Support Drawing Request

Time: 9:00 am

Place: CPSES Site

Participants: D. Bleeker of Brown & Root (DCC)

John Russ Cygna

Item	Comments	Required Action By
	Cygna requested copies of the following: 1. Drawings: FP-1-201-700-S35R (latest revision) CT-1-017-700-S35R (latest revision) 2. Computer Model STRUDL computer model for drawing SI-1-029-700-S32R	

Signed: N H Williams /pm Page 1 of 1

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Communications Report

Company:	Texas Utilities	☒ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	4/12/84
Subject:	ITT Grinnell Additional Audit Information	Time:	1:30 PM
		Place:	Boston
Participants:	S.Bibo	of	CYGNA
	P. Salcone		ITT - Grinnell-QA

Item	Comments	Required Action By
1)	I called Pete Salcone to request the closeout date of corrective action report #3010. Pete stated it was closed on 8/20/82.	
2)	I asked Pete the issue date of audit reports #7 and #8. Pete stated 9/26/79 and 10/6/81 respectively.	
3)	I asked Pete to explain the 2 year gap with no project audits. Pete stated that they had a turnover in personnel, and that in late 1979, Grinnell (Providence) activities for TUSI (CPSES) were winding down. It wasn't until early 1981 that TUSI work picked up in Grinnell.	

Signed: N.H. Williams /rg Page 1 of 1

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Communications Report

Company: Texas Utilities ☒ Telecon ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 5/15/84

Subject: Inspection Reports

Time: 4:40 PM

Place: Boston

Participants: S. Bibo of Cygna

Donna Lewellen TUSI

Item	Comments	Required Action By
	Donna called me per request of Tony Vega to supply me with requested information relative to the number of Inspection Reports (IRs) issued at CPSES. Donna stated that between the "old" IR system and the "new" IR system there are in excess of 150,000 IRs. She stated that the new system has a computerized log but that the old IRs were manually logged. The old system contains about 100,000 IRs. Donna explained that the number of IRs given is her "best estimate". We also discussed procedure CP-QP-18.00. Donna informed me that this procedure was up to revision 17. I asked her to send me revisions 12 thru 17.	D. Lewellen

Signed: ~NWilliams /dhb

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Communications Report

Company: Texas Utilties ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No: 84042

Date: 3/19/84

Subject: Review of P.O.

Time: ----

Place: G&H, New York

Participants:

	of
Jeff Waal	Cygna
Borys Czargonoski	G&H

Item	Comments	Required Action By
	I observed the contract between Gibbs & Hill and Dallas Power & Light Co.. Texas Electric Service Company and Texas Power & Light Company. The date of the contract is August 15, 1972.	

Signed: N A Williams /dhb

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Communications Report

Company:	Texas Utilities	☒ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/16
Subject:	Valve Accelerations	Time:	1:45 PM/2:15 PM
		Place:	SF
Participants:	G. Grace	of	TUEC
	J. Minichiello		CYGNA

Item	Comments	Required Action By
1.	George requested clarification on question 2. I responded that Cygna's question concerned supports added to a valve to reduce operator accelerations. Does Gibbs and Hill have a procedure to address this? George also noted he would express mail by tomorrow the data we requested earlier today.	
2.	In a later call, George asked if Cygna also wanted a list of the Gibbs and Hill AEPs (Analytical Engineering Procedure). I said that the list would be useful.	

Signed: N. Williams /dhb Page 1 of 1

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Communications Report

Company: Texas Utilities ☒ Telecon ☐ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No: 84042

Date: 5/17/84

Subject: Pipe Stress Questions

Time: 10:30 AM

Place: SF

Participants: H. Mentel of G&H

L. J. Weingart CES

Item	Comments	Required Action By
	Henry and I discussed the pipe stress question identified in the telecon of 3/19/84 8 AM, Item 1 (welded attachment stresses in break exclusion zones). Henry informed me that G&H has received authorization from TUEC to perform an evaluation which will consist of the following: 1) Identification of <u>all</u> welded attachments for <u>all</u> break exclusion zones. 2) A numerical evaluation of the identified points per the requirements of MEB 3-1. 3) Where this evaluation indicates an overstressed situation, G&H will perform a more refined analysis in order to reduce the local stress. 4) G&H will check with Westinghouse to determine their procedures in break exclusion zones which are under Westinghouse jurisdiction. Henry expects to have this task completed next week. Cygna will receive a copy of this report.	

Signed: N. H. Williams /dhb Page 1 of 1

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Communications Report

Company:	Texas Utilities	☐ Telecon	☒ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	3/23/84
Subject:	Document Request -- NPSI Criteria I and XVI Review	Time:	--
		Place:	NPSI

Participants:	of
H. McGrane	CES
P. Mottola	NPSI

Item	Comments	Required Action By
	I requested and received the following documents from P. Mottola on 3/23/84: 1. Corrective Action Request Log 2. Corrective Action Requests (1978-1984) 3. Corrective Action Request Progress Reports 4. Internal Audit Reports (1978-1984)	

Signed: N. H. Williams /rg Page 1 of 1

Distribution: N. Williams, D. Wade, G. Grace, S. Bibo, S. Treby, J. Ellis, Project File

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Communications Report

Company:	Texas Utilities	☐ Telecon	☒ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/14/84
Subject:	Request for Documentation	Time:	11:00 AM
		Place:	Boston
Participants:	S. Bibo	of	Cygna
	R. Baker		TUSI

Item	Comments	Required Action By
	I called Richard Baker because I couldn't get through to Tony Vega to request copies of the following documents: CPSES Procedure #CP-OP-18.00 Revisions 1 through 10 I requested that they be sent to my attention ASAP. Richard Baker said he would do what he could to get me the information.	R. Baker TUSI

Signed: N. D. Williams /dhb Page 1 of 1

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent Assessment Program

Job No. 84042

Date: 4/2/84

Subject: QA Vault Access

Time: 1:10 PM

Place:

Participants		of
	C. H. Welch	TUGCO
	R. Baker	TUGCO
	D. Smedley	Cygna

Item	Comments	Required Action By
1)	As per telecon with Nancy Williams today a list of Cygna personnel requiring vault access was submitted to C. H. Welch (attached). Mr. Welch then authorized Cygna personnel limited access with the stipulation that out cards be given to vault clerks to pull required documentation.	
2)	This transpired after I refused to issue a letter identifying the scope and duration of our review as pertained to the QA vault. Richard Baker met with Mr. Welch and substantiated that no scope letter would be issued and to take appropriate action to allow Cygna access to the vault.	

Signed: N. H. Williams /dhb

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CYGNA

Memorandum

To: C. H. Welch, TUGCO, QA Supervisor

Date: April 2, 1984

From: D. L. Smedley, Cygna, Project Engineer

Job No: 84042

Subject: Vault Access for Cygna Personnel

Copies:

This is a list of Cygna personnel who require access to the Comanche Peak QA vault:

F.A. Morlino
M.S. Maire
J.D. Laurie
J.P. Toner
D.L. Smedley
H.E. McGrane
P.D. DiNonato
S.L. Bibo
J.P. Russ
N. Williams
E.C. Kuo

CYGNA

Communications Report

Company:	Texas Utilities	☒ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/22/84
Subject:	Pipe Support Questions	Time:	8:00 a.m.
		Place:	San Francisco
Participants:	G. Grace	of	TUEC (Ebasco)
	J. Minichiello		Cygna

Item	Comments	Required Action By
	Cygna requested response to the following generic and specific questions.	
	GENERIC COMMENTS:	
1.	In some instances where non-symmetric weld pattern is used (e.g., 3-sided weld for T.S. member), the additional moment due to the eccentric location of the weld center of gravity is not considered in the weld stress calculation.	
	Some examples found during the review were:	
	CC-1-028-004-A33K, Rev. 4, Calc. Rev. 0 MS-1-004-006-C72K, Rev. 3, Calc. Rev. 2 MS-1-001-002-C72S, Rev. 5, Calc. Rev. 2 MS-1-001-003-S72R, Rev. 2, Calc. Rev. 2	
	What project procedure provides guidance in evaluating non-symmetric weld patterns?	
2.	In reviewing supports by NPSI, Cygna has noted instances of washer plates used with tube steel and inserts.	
	a) What is the basis for the standard NPSI washer plate design (i.e., criteria, etc.)	
	b) If a designer deviates from the standard design, what documentation is required to justify this?	

Signed: N. Williams /jw Page 1 of 4

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Item	Comments	Required Action By
	SPECIFIC COMMENTS: These supports require reanalysis or further detailed calculations to determine the impact on design of the items noted. Cygna requests that TUEC address each item with either documentation showing whether or not the discrepancy has any design impact.	
1.	CC-1-028-720-S33R, Drawing Rev. 5, Calc. Rev. 4 The STRUDL model at joints 1 and 2 assumes a torsional restraint. If the torsional load at joint 1 is used to check the rotation this load would cause, the resulting rotation is insufficient to close the gap in the outer box beam ($\approx$ .003 rad vs. $\approx$ .01 rad). Since the maximum bolt interaction is 0.92, releasing the torsional restraint may impact design. Note: see CC-1-028-721-S33R for a similar design deficiency.	
2.	CC-1-031-001-S43K, Drawing Rev. 5 The initial swing angle of one snubber is approximately 17 degrees, which may have an effect on snubber operation. Has the vendor accepted this? Where is this documented?	
3.	CC-1-028-024-S33R, Drawing Rev. 11, Calc. Rev. 5 The final design calculation did not consider the effect of the bolt out-of-plumb at joint 10 of the model (Section B-B of drawing). The original calculation (Sheet 23) did evaluate this effect. The load increase may impact this bolt design.	
4.	MS-1-002-006-S72R, Drawing Rev. 4, Calc. Rev. 3 The calculations for the input to the NPSI baseplate analysis of items 31, 32, 44 and 45 were not provided. It is not clear how the input loads were derived. Further, the sides of the welded attachments for plates 31 and 32 are not parallel to the plate side (attachment is rotated on the plate). Since the interactions are as high as 0.93, please show how the input was derived and what the effect of the rotated brackets would be.	
5.	MS-1-002-005-C72K, Drawing Rev. 7, Calc. Rev. 5 In the analysis for the baseplate shown in Section A-A, detail 3, the bolt interaction equation reached 1.0. The stiffener plates were not modelled, but only accounted for by thickening the baseplate to 2-1/2" (vs. 2" actual). In addition, there are small changes between the modelled and as-built dimensions.	

Item	Comments	Required Action By
	Please provide calculations showing the bolts are acceptable when the stiffeners are properly modelled and as-built dimensions are used.	
6.	MS-1-002-008-C72K, Drawing Rev. 7, Calc. Rev. 5 a) No design calculations were provided for Section F-F (baseplate, stiffener, and welds). While this may have been done in a previous revision, there is no reference. Please provide this calculation. b) On Detail 28, there is a note "Bolt cut off 1/2" ± 1/8" projecting out from face of plate." While the interaction on this plate is low (0.28), and this bolt may not be necessary, please provide verification concerning whether there is a nut on this bolt (with adequate engagement) or not.	
7.	MS-1-002-004-C72K, Drawing Rev. 9, Calc. Rev. 5 The weld lengths and section properties for checking joint 1 (TS 6 x 6 to baseplate, sheet 15) do not appear correct. Specifically, it is unclear from detail 26 that the 12" weld length is appropriate. In addition, the loads were not transferred from the modelled location to the weld center of gravity. Please provide clarification concerning the correct weld length and appropriate weld calculations.	
8.	MS-1-003-007-C72K, Drawing Rev. 5, Calc. Rev. 4 a) No weld stress calculation was provided for the attachment of the rear bracket to items 35 and 46 (detail 46, drawing sheet 5 of 8; also Section J-J). It is not clear that the 1/4" welds are sufficient. b) The inclination of the thru-bolt at joint 20 (plate item 49) was not considered in the design.	
9.	MS-1-003-011-C72K, Drawing Rev. 2, Calc. Rev. 1 a) Please provide clarification of the dimension between the centerline of the E-W tube (Item 1) and the South insert bolt. 8-3/8" is shown on the latest revision, but 18-3/8" is used in the STRUDL model and is also shown in Rev. 1 of the drawing. If the 8-3/8" is correct, this may impact the STRUDL results.	
10.	MS-1-004-003-C72S, Drawing Rev. 7, Calc. Rev. 3 The stress in the 1/2" x 8" x 20" plate (item 24) was not checked. Simple calculations indicate the stress may be quite high. Please provide calculations for this member.	

CYGNA

Communications Report

Item	Comments	Required Action By
11.	MS-1-001-006-C72K, Rev. 5, Calc. Rev. 3 The input data calculations for the STRUDL model were not checked or approved. There are errors in the moments of inertia (and section modulus) for beams 5 - 6 (I_y = 681 in.^{4}, should be 359 in.^{4}) and 8 - 11 (I_y = 1213 in.^{4}, should be 642 in.^{4}). Also, the assumption of a fixed support at joints 4, 8, 14 and 17 does not seem appropriate, especially for rotation about global Y. Since the errors in inertia and the use of "fixed" supports have a significant impact on design stresses, please provide calculations to correct or justify the data and assumptions in the calculation.	

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Communications Report

Company:	Texas Utilities	☐ Telecon	☐ Conference Report
Project:	Comanche Peak Steam Electric Station Independent Assessment Program - Phase 3	Job No.	84042
		Date:	5/16/84
Subject:	Pipe Support Questions	Time:	2:30 PM
		Place:	SF/Site
Participants:	D. Rencher	of	TUEC
	J. Minichiello		CYGNA

Item	Comments	Required Action By
	Cygna requested response to the following 5 questions:	
1.	In reviewing certain supports, Cygna has noted instances where either cover plates are not used on connections near tube ends or stiffener plates are not used at wide flange connections. In addition, Cygna has also noted instances where stiffeners are provided, but no calculations are performed. Good design practice dictates that a connection should be checked to ensure proper load transfer. For example, if no stiffeners are provided the wide flange web or flange will be forced to carry much of the local loading and may not be adequate. If the stiffeners provided are not sized properly, the same effect can occur. In certain other supports, Cygna has noted instances where a plate is welded to a tube member to form a composite section. The design of the weld attaching the plate to the tube has accounted for the shear transfer (VQ/It) term, but not the locally high weld stress at the point of load application. Cygna did note instances where this was accounted for. What guidance do the CPSES design organizations give to the engineers to ensure that connections are adequate? Please provide the appropriate documents which give this guidance.	
2.	In their support review, Cygna has noted instances where different assumptions were used by different organizations. For example, in the TUGCO letter of 6 April 1984 (TXX-4145), item 19, TUGCO notes that PSE and ITTG do not consider friction if the thermal movement is less than 1/16", implying NPSI may consider friction for any thermal movement. Yet, in calculation	

Signed: J C Minichiello /dhb Page 1 of 2

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Item	Comments	Required Action By
	CC-1-028-721-S33R, revision 2, no frictional load is considered for a movement of .1". Cygna has also noted instances where a designer will use the steel section properties from the AISC 8th edition, rather than the 7th edition called out in specification 2323-MS-46A ("Code in effect" on date of specification). a) How does TUEC control the design process to ensure consistency in design across the plant? Please provide the appropriate documents. b) What documents provide guidance to the designer concerning the appropriate standards for use on CPSES? c) What checks does TUEC perform to ensure that the appropriate procedures are followed? d) What is the basis for neglecting friction if the thermal movement is less than 1/16"?	
3.	The rear bracket dimension of ITT Grinnell strut given in the LCDS are different from those given in ITT Grinnell Catalog PH-81. Since the discrepancies in dimensions may affect weld stresses in the design, it is necessary to ensure that the correct size of bracket (i.e. consistent dimensions) are used in both design and construction. a) Which bracket is supplied (LCDS or catalog)? b) Is there a procedure to ensure the conformance of the above item between that used by the designer and that installed?	
4.	In responding to question 2 of the 3/19/84 telecon, TUEC has noted (4/19/84 letter, item 3) that the standard support items are verified in the original calculation. If the as-built load decreases, they are not rechecked. a) Where are the previous revisions of the calculations filed for record, since they were not in the package reviewed by Cygna to date? b) If the as-built load increases but is still within the standard component limits, what documentation does TUEC require to address this?	
5.	In some cases, the fillet welds called out on a drawing are smaller than the minimum required by Code (for example, CC-1-031-011-S43R, revision 5, rear bracket to baseplate). What construction procedure automatically upgrades the weld size to the code minimum?	

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station
Independent Assessment Program - Phase 3

Job No. 84042

Date: 4/6/84

Subject: Open Items

Time: 9:15 am

Place: CPSES Site

Participants: B. Wood of TUGCO

J. Russ of Cygna

Item	Comments	Required Action By
	Cygna requested the following:	
1.	The items on the attached action items summary list.	
2.	Copies of the following calculation packages: CC-1-028-007-S33R MS-1-001-004-S72R MS-1-003-004-S72R MS-1-003-009-C72K MS-1-004-004-C72K	

Signed: W. H. Williams /pm

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Action Items Summary

Prepared By JOHN PETER RUSS Date 4 APRIL 1984

Description	Reference	By	To	Date Due	Date Close-out	Notes
1. DOCUMENTATION PROBLEMS 003, 012 FOR "BCLTLD" PROGRAM INCLUDING DRAWINGS AND ALL APPROPRIATE CALCULATIONS AND COMPUTER OUTPUT	SA-4426 FOR MS-1-003-002-372R	J. RUSS	D. RENCHER	4/2/84		CALCULATION PACKAGE MS-1-003-002-572R RETURNED TO D. RENCHER ON 2 APRIL 1984
2. CALCULATION PACKAGE 995 (FROM NPS), DATED JULY, 1980.	MS-1-004-004-C72R	J. RUSS	B. WOOD	4/3/84		CALCULATION PACKAGE MS-1-004-004-C72R RETURNED TO B. WOOD ON 3 APRIL 1984
3. CALCULATION PACKAGE CC-1-028-007-533R		C. WONG	D. RENCHER	3/23/84		PACKAGE BEING RECERTIFIED; MAY NEED RE-REVIEW
4. CALCULATION PACKAGES MS-1-001-004-572R MS-1-003-004-372R		C. WONG	D. RENCHER	3/23/84		PACKAGES HAVE NOT BEEN RECEIVED BY CYGNA; PACKAGES REQUIRE REVIEW

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Action Items
SUMMARY

Prepared By JOHN PETER RUSS Date 6 APRIL 1984

Description	Reference	By	To	Date Due	Date Close-out	Notes
5. A. STRUDL OUTPUT LISTING MEMBER FORCES, STRESSES, REACTIONS B. NPSE BASEPLATE OUTPUT	MS-1-004-007-CTLR	R. BALIGA	D. ROLLHOR	3/16/84		REQUESTED 15 MARCH '84
6. A. STRUDL OUTPUT B. SA 4013 C. SA 4016	MS-1-002-005-S72R	C. WONG	D. ROLLHOR	3/14/84		REQUESTED 14 MARCH '84
7. A. SA 4232 B. SA 4233	MS-1-004-005-S72R	C. WONG	D. ROLLHOR	3/14/84		REQUESTED 14 MARCH '84
8. A. LOAD SUMMARY FOR 4"-VD-1-013-152-S AT SUPPORT VD-1-013-711-S35R B. CMC 53854, REV. 4	CC-1-028-725-S33R	J. RUSS	D. ROLLHOR	3/17/84		REQUESTED 16 MARCH '84
9. STRUDL OUTPUT CORRESPONDING TO INPUT SHOWN ON SHT 17/17	CC-1-077-008-S33R	J. RUSS	D. ROLLHOR	3/17/84		REQUESTED 17 MARCH '84

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Communications Report

Company: Texas Utilities ☐ Telecon ☒ Conference Report

Project: Comanche Peak Steam Electric Station Independent-Assessment Program - Phase 3

Job No. 84042

Date: 3/21/84

Subject: Additional Pipe Stress Questions

Time: 8:30 am

Place: Comanche Peak

Participants: G. Krishnan of Gibbs & Hill

J. Minichiello Cygna

Item	Comments	Required Action By

Cygna requested the following be sent to H. Mentel for review. In addition, Lee Weingart of Cygna will meet with Steve Lim of Gibbs & Hill (in Fort Worth) to discuss these and other open questions.

1. Does Gibbs & Hill have any analytical substantiation for not taking into consideration the eccentricity of the masses for the "trunnion" type supports on the Main Steam inside containment?

For example,

Loop #3

Support No.	Weight (lbs)	Offset from Pipe Centerline
MS-1-003-007-C72K	415	2'-3"
MS-1-003-009-C72K	1800	3'-2"
MS-1-003-010-C72K	415	2'-5"
MS-1-003-014-C72K	260	2'-3"

2. Does Gibbs & Hill have any analytical substantiation for neglecting the weight of support no. MS-1-03-010-C72K (1681 lb) in the pipe stress analysis?

Signed: N. H. Williams /pm

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Item	Comments	Required Action By
3.	Steam Hammer Analyses Additional questions based on review of forcing functions: a. Loop #1 Z-load at containment penetration Peak Input Force = 43.6 K Max. Output Load = 4.9 K b. Loop #4 Load on axial snubber MS-1-004-007-C72K Peak Input Force = 18.5 K Max. Output Load = 15 K Has Gibbs & Hill evaluated the discrepancies noted above?	