UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

7c

JUL 25 1985

Mrs. Juanita Ellis
Citizens Association for Sound Energy
1426 South Polk
Dallas, Texas 75224

Re: Transcript of 6/17/85 Feedback Interview

Dear Mrs. Ellis:

Enclosed is one copy each of transcripts of feedback meetings conducted by telephone conference call on May 2, 1985 and June 17, 1985 with [redacted]. We appreciate your participation in such meetings in that they contribute to the resolution and close-out of open licensing issues.

Vincent S. Noonan, Director
Comanche Peak Project

Enclosure: As stated

cc: M. E. Kline

JUL 25 1985

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Citizens Association for Sound Energy
1426 South Polk
Dallas, Texas 75224

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cc: M. E. Kline

OFC	:CPP	:CPP	:	:	:	:
NAME	:CPoslusny	:VSNoonan	:	:	:	:
DATE	: / /85	: 7/25/85	:	:	:	:

7-16-85 MEK
OFFICIAL RECORD COPY

VII. (continued - 16):

In reference to the need for combined tests, Mr. Tapia (Tr. 6508/10-13) states in answer to whether test should have been combined tension and shear:

"Not in my opinion, not in the Richmonds."

Beyond this, the test procedure used by the Applicant used 4 layers of steel reinforcing top and bottom, which does not represent the most adverse condition at Comanche Peak. Mr. Walsh discussed at Tr. 6490/1-10 his concern that the concrete slab used in the test was more heavily reinforced than in the plant. The following discussion took place (Tr. 6490/11-6491/6):

> "JUDGE BLOCH: . . . Is there a panel member who is familiar enough with the concrete and reinforcement to be able to comment on whether the test conditions were unrealistic with respect to the reinforcement of the slab in the test?
>
> "WITNESS TAPIA: I'm somewhat familiar with some of the details in the plant, although they vary, but I would say that the majority of cases, for inside containment, No. 11 bars are used on either phase, two forces on either phase.
>
> "That is typical. There are other orientations. And I would say that the testing of the Richmond inserts with the concrete block would resemble those same assemblies utilized inside containment with respect to the reinforced concrete.
>
> "JUDGE BLOCH: Because there was No. 11 bars used in the test, also?
>
> "WITNESS TAPIA: Not so much that, but because they are similar. It doesn't have to be exactly No. 11 bar. It could have been No. 8. There are many variations." (Emphases added.)

In response to Judge Bloch's question as to what the differences were between the No. 11 bar done in the plant and the sample that was used for the test, Mr. Tapia suggested that they look at CASE Exhibit 834 (the test report on the Richmonds). Mr. Tapia concluded that four layers of steel were used: layer 1, No. 11 is 10 inches; layer 3 are No. 9's at 10 inches. In the other direction, layer 2 is a No. 11 at 10 inches and layer 4 is a

VII. (continued - 17):

No. 9 at 10 inches. Mr. Tapia stated that, with regard to the similarity between what was used in the test and the containment, that "it is typical of the reinforced cross-sections used inside containment." (Tr. 6491/7-6492/15.)

Then Judge Bloch asked (Tr. 6492/16-6494/22):

"JUDGE BLOCH: Are there any sections of the containment that are sufficiently weaker than this, so that the test data should not be considered applicable to those sections of the containment?

"WITNESS TAPIA: Sir, there may be some structural elements that don't have four layers, that actually have two layers, but I don't think that that would greatly influence the test results at all.

"JUDGE BLOCH: And is the composition of the concrete and the method of pour sufficiently similar so that also provides an adequate basis for generalization for this containment?

"WITNESS TAPIA: That is correct.

"MS. ELLIS: Mr. Chairman, I believe there are documents in the record already which indicate that there have been some sections which by engineering judgment, where reinforcing bars were not included, were never included, and we are concerned very much about those particular areas.

"JUDGE BLOCH: Do you know whether those areas have any Richmond inserts?

"MS. ELLIS: We do not, but we think that somebody should find out.

"JUDGE BLOCH: Mr. Tapia, do you know if this is a possible problem; that there are areas of the containment which engineering judgment caused less steel to be inserted in the concrete? . . . No steel.

"WITNESS TAPIA: I don't know of any, but if you didn't have any steel in some of those structural elements and you loaded them, I don't think they would function.

"I'm not aware of any." (Emphases added.)

VII. (continued - 18):

NRC Staff Attorney Scinto suggested that Mr. Taylor might have something to add. From Tr. 6495/5-6500/20:

"WITNESS TAYLOR: In my recollection, the only steel that has been left out, at least documented on the plan, concerns approximately 50 percent of the steel in some columns that were in the auxiliary safeguard building primary wall referred to as the EA wall on the site.

"Now, the particular steel --

"JUDGE BLOCH: Just one second. You said documented in the record.

"WITNESS TAYLOR: Not in this particular record. I don't know that it is here. I don't recollect that it is here.

"JUDGE BLOCH: Just the way you said it, you limited your conclusion.

"Do you know of any place in the plant, whether it is in the record or not, that this is being done?

"WITNESS TAYLOR: Sir, this was the subject of an inspection that I performed approximately four years ago based on a nonconformance report that gave me particular interest. I reviewed the citation in the nonconformance report. I reviewed the engineer's disposition to that nonconformance report for validity, and both were found valid.

"JUDGE BLOCH: Now I have asked a much broader question. It has nothing to do with that nonconformance report. It is whether from any source of information whatsoever do you know of portions of the containment from which steel has been omitted because of engineering judgment?

"WITNESS TAYLOR: No, sir."

. . . "JUDGE BLOCH: What the witness said was that most sections were like that, and that in his opinion the ones where there is somewhat less steel are sufficiently analogous so that the same test data will apply.

"WITNESS TAPIA: Yes, sir.

"JUDGE BLOCH: I guess I do have a question.

"How can that be? If you somewhat reduce the strength of the concrete by taking some of the steel out, how can you use the same allowables from a test that had more steel?

VII. (continued - 19):

"WITNESS TAPIA: Mr. Chairman, the steel in the case of the test block is there to simulate plant conditions. It is not there to provide strength to the Richmond insert per se.

"JUDGE BLOCH: But without any steel, you say there would be no strength?

"WITNESS TAPIA: I didn't say that.

"JUDGE BLOCH: You said you wouldn't count on it holding up?

"WITNESS TAPIA: No, no.

"JUDGE BLOCH: Would you clarify that?

"WITNESS TAPIA: I said I was not aware of any places, any structural elements in the plant where steel has been completely left out. In that case, you wouldn't have reinforced concrete. You would have plain concrete.

"JUDGE BLOCH: Would the test data apply to such a place in the plant with no reinforcement?

"WITNESS TAPIA: The test data on the Richmonds would apply but it would be, I believe, nonconservative, because you would expect that in concrete that is not reinforced, you would expect a slightly different behavior. Not significant.

. . . "JUDGE BLOCH: But the recent tests had steel in it?

"WITNESS TAPIA: Yes, sir.

"JUDGE BLOCH: What value did that establish?

"WITNESS TAPIA: The values that resulted are those that are listed in CASE Exhibit 834 on page 4, listed under maximum applied shear load.

"JUDGE BLOCH: . . . How would those full values apply in concrete that had less reinforcement than the test sample, or would you have to do an analytical adjustment because of there being less steel?

"WITNESS TAPIA: I would say that for plant conditions that I'm familiar with, and I believe you are referring to instances where there are only two layers of steel, versus four, these values would still apply, yes.

VII. (continued - 20):

"JUDGE BLOCH: But because of a notion of an amount of leeway that is in the rest of the analysis, certainly because you could not be confident that the data with four layers of steel would apply to concrete with two layers of steel? Does this have something to do with the design margins that you are not worried? How much difference would it make, percentagewise, in the strength of the concrete, to have two layers instead of four?

"WITNESS TAPIA: I don't believe it would influence it at all. The strength of the concrete that you are relying upon in the Richmond test is in concrete -- the failure mode that you would get would be intention (sic - should be in tension), what is referred to as a shear cone, or the pull-out of a cone of concrete that radiates around the Richmond.

"Now, this is a shear failure of the concrete.

"JUDGE BLOCH: Where is the Richmond embedded? Is it embedded so that it is between steel, or is it on top of the steel?

"WITNESS TAPIA: It is between. It is interlayered.

"JUDGE BLOCH: But the steel has no effect on when it would fail?

"WITNESS TAPIA: It might have a slight effect. I don't believe it will have a large effect at all.

"JUDGE BLOCH: Ten percent, five percent, twenty percent?

"WITNESS TAPIA: Five. I would say five percent.

"And in fact with respect to the strength of the cone failure, it might be less with the steel there because of the discontinuity in the shear cone.

"JUDGE BLOCH: So as a matter of engineering judgment, if you got very close to these allowables with only two layers of steel, you might as a matter of engineering judgment want to analyze a slightly lower allowable for that wall?

"You said it was 5 percent different.

"WITNESS TAPIA: No, sir. If you had four layers, or if you had two layers, it wouldn't matter." (Emphases added.)

VII. (continued - 21):

There are several aspects of the preceding which need to be considered here. Let us consider first the matter of reinforcing steel which has been omitted. Mr. Tapia stated that he didn't know of any. Senior Res dent Inspection - Construction, Mr. Taylor stated that his only recollection was regarding about 50 percent of the steel in some columns that were in the auxiliary safeguard building primary wall, which was the subject of an inspection which he performed about four years ago based on an NCR, that he reviewed the citation in the NCR and the engineer's disposition to that NCR and found both to be valid. When asked the specific question by Judge Bloch "whether from any source of information whatsoever do you know of portions of the containment from which steel has been omitted because of engineering judgment?" Mr. Taylor answered "No, sir."

However, there are instances in the record of these proceedings which indicate that rebar has been left out completely, designated "use-as-is," or embedded to an inadequate depth. We call the Board's attention to CASE's 10/18/82 Response to Board's Directive Regarding CASE Exhibits; in this document, at the direction of then-Board Chairman Marshall Miller, CASE made a detailed analysis of many documents which we had sought to introduce into evidence ("to focus CASE's exhibits, to eliminate repetitiveness, and to get a manageable group of relevant documents into the record which will be of assistance to the Board as a decision-making body "). All but one of the documents which we requested be admitted into evidence in our 10/18/82

VII. (continued - 22):

pleading were subsequently accepted into evidence by Board Order and later officially in the record. Among these documents are the following:

CASE Exhibit 364, NCR C-520
CASE Exhibit 479, NCR C-669
CASE Exhibit 482, NCR C-809
CASE Exhibit 483, NCR C-810
CASE Exhibit 484, NCR C-811

All of these NCR's have to do with reinforcing steel being omitted from placements, bent and mislocated rebar dowels which were never embedded to the required depth, etc. The preceding NCR's were dated prior to Mr. Taylor's becoming the Resident Inspector at Comanche Peak (in 1978); however, there is one other especially striking example of shear tie reinforcing steel being omitted from a concrete placement in the Unit 2 Containment. This item should have been (but was not) reported by Applicants under 10 CFR 50.55(e). It was reported by Mr. Taylor himself in I&E Report 79-18 (NRC Staff Exhibit 70), and appears to have been referred to by Mr. Taylor in a later I&E Report in which he also referenced the steel which was left out in the auxiliary safeguard building primary wall (which he told the Board about at Tr. 6495-6500); see I&E Report 79-26/79-25 (CASE Exhibit 253). The omission in the Unit 2 Containment led to the NRC Region IV office ordering Applicants to issue a stop work order. The ultimate decision was to leave the reinforcing steel out of that placement. See complete discussion regarding this under Section in these findings on CREDIBILITY OF WITNESSES.

With regard to Mr. Tapia's statement that he was not aware of any such areas where reinforcing steel was omitted, there is nothing in the record

VII. (continued - 23):

to indicate that he ever attempted to ascertain whether or not, in fact, there were such areas. Obviously, he might well not be aware of such areas if he had never attempted to investigate whether or not they exist. Equally obvious is that his lack of awareness does not mean that they do not exist.

Another aspect of this which needs to be considered at some point during these hearings is the use of "rebar eaters" out of procedure and without engineering knowledge and/or approval. The improper use of "concrete eaters" and "rebar eaters" has been or will be discussed with NRC investigators by J. R. Dillingham, Robert L. Messerly, and Howard J. "Robbie" Robinson (see CASE's 8/3/83 letter to the Licensing Board under Subject of: Record Regarding Discouragement from Reporting Nonconforming Conditions at Comanche Peak Nuclear Plant). Obviously, if there are areas where the rebar has been "eaten" out by the improper use of these "rebar eaters" without proper notification and approval of engineering at Comanche Peak, this could have a direct bearing on the issue at hand, just as could the omission of reinforcing steel.

It is our understanding that there will shortly be a report on this issued by the NRC Region IV office, following the investigation which was recently completed; it is CASE's understanding that the NRC investigators investigated the allegations, then turned any technical matters over to NRC Region IV inspectors to pursue. At this point in time, CASE has no idea what the investigation/inspection report will contain; however, we do have reservations regarding NRC Region IV's involvement (see CASE's 8/3/83 letter, especially at pages 4-5, 16-18, and 24-30, and attached affidavits and deposition).

P/M

QA RECORD

Brown & Root, Inc.

QUALITY ASSURANCE DEPARTMENT
NONCONFORMANCE REPORT (NCR)

(1) NCR No M-1802

PROJECT CPSES JOB NO. 35-1195 PAGE 1 OF

(2) UNIT	STRUCTURE/SYSTEM	COMPONENT	TAG/ID NUMBER	LOCATION OR ELEVATION	AIR NO
1	Service Water	Component	SW-1-010-004-A33R		
	Aux. Feedwater	Support	AF-1-001-007-Y33R	N/A	N/A

(3) NONCONFORMING CONDITION (4) TREND CATEGORY G-3

(3) DOCUMENT VIOLATED: 10CFR50 App. B Pt. V & VIII REV _____ PARA _____

See attached sheet.

FOR INFORMATION ONLY

CASE EXHIBIT 498

(5) REPORTED BY	(6) DATE	(9) REVIEW/APPROVAL	(10) DATE
J. Patton	11/5/79	D Blackburn	11/5/79
(7) PREPARED BY	(8) DATE	(11) ISSUED BY	(12) DATE
R. Michels	11/5/79	Claire Halliday	11/5/79

(13) DISPOSITION ASSIGNED TO	(14) DUE DATE	(15) CORRECTIVE ACTION REQUEST CAR NO.	(16) ASME CODE	CLASS
D. Frankum	11/19/79	~~X~~ Required X Not Required ~~S40~~ CH 11-8-79	X Yes _No CH 11-8-79	

(17) DISPOSITION:

REWORK _____ REPAIR _____ USE AS IS _____ SCRAP _____

(18) CONSTRUCTION REVIEW/APPROVAL	(19) DATE	(20) QA/QC REVIEW APPROVAL	(21) DATE
	/ /		/ /
(22) ENG. REVIEW/APPROVAL	(23) DATE	(24) ANI REVIEW APPROVAL	(25) DATE
	/ /		/ /

(26) VERIFICATION
☐ Satisfactory ☐ Unsatisfactory ☐ Not Req'd

(27) QA/QC ENGR/INSPR VERIFICATION (28) DATE / /

(29) ANI CONCURRENCE (30) DATE / /

(31) QA REVIEW/CLOSURE (32) DATE

(33) REMARKS

FOIA-85-59

Bechtel Form 8R1-4

R146

NCR No. M-1802
ATTACHMENT

FOR INVESTIGATION ONLY

I. DRAWING AF-1-001-007-Y33R

A. Revision 4 of support traveler required WARC 1930 to be incorporated. This WARC was issued to replace FW-2 with FW-2A. The original plate per ABRF 00073 should have been used; it was not . ABRF 00073 is now missing from the traveler package.

B. Item #11 has been added on the bill of materials per ABRF 000315. ABRFs cannot be used to add or delete item numbers.

C. CMC 8417 R2, 10-3-79, Instruction 5, removed item 7 and added items 9 & 10. Item 7 was QC verified on 9-26-79 per ABRF 00072 and 73. Weld 2 & 3 were made on 10-18-79 using plates called out on ABRFs 00072 & 73. CMC 8417 required removal of item 7 and replaced with items 9 & 10. This was not accomplished and items 9 & 10 were not fabricated. Craft personnel failed to follow design changes as per CMC 8417.

D. Sheet one of drawing AF-1-001-007-Y33R lists welds 3 thru 9. Welds are not numbered and there is one more number assigned than needed. The drawing is unclear as to whether the welds are vendor or B&R welds.

E. WMF Log has line drawn through entry indicating rod was not consumed, however, entry shows 2 rods consumed. Line entry is not initialed and dated.

F. CMC 17671 is unclear; does not define reasons for change or clarify.

G. CMC 17678 dated 10-18-79 calls for shims to be installed between support and wall. CPP 1993, dated 10-11-79 deleted shiming and specified grout instead.

II. DRAWING SW-1-010-004-A33R

A. Item 6 fabricated and verified on 9-25-79 per ABRF 00062. CMC 7401, R1, 9-26-79, deleted item 6 and added item 8. Construction personnel lined through item 6 and changed it to item 8. Item 6 is being used; it is different than item 8 and not per CMC-7401.

B. Hole spacing has been changed on the ABRF.

C. Entry on ABRF by craft person indicates ABRF is void.

SUMMARY:

Exhibits I & II attached show loss of control and failure to conform to sections V and VIII of 10CFR50, Appendix B by both craft and Engineering personnel. The drawing control and design change controls as specified in site Procedures has been neglected such that both these documentation packages cannot support these applicable regulatory requirements.

CONSTRUCTION OPERATION TRAVELER 35-1195

(1) TRAVELER NO.	(2) EQUIPMENT NO.	(3) UNIT NO.	(4) QUANTITY	(5) PAGE / OF
AF-FCOI-07T-V33R	SEE above	[illegible]	[illegible]	/ 1

(6) ACTIVITY DESCRIPTION	(7) REFERENCE DRAWINGS
PIPE SUPPORT FABRICATION AND INSTALLATION	SEE REV 0 CMC 3745

(8) SPEC./PROC./ENG. INSTR.	(9) LOCATION	(10) SYSTEM
	800'-6"	AF

PREPARED BY [signature] DATE 7-26-79 DEPT Mech. Engr.

REVIEWED BY SJK DATE 8-7-79 QA/QC ENG ANI

ANI REVIEW SRT DATE 8-9-79

OP. NO.	DEPT.	OPERATION	QA/QC ENG	ANI
1	IW	Verify material		
2	IW	Fabricate and/or install the pipe support assembly in accordance with the latest pipe support drawing, applicable CMC's, attached WOC's and TIA IWE C2M6		
3	PD	Prepare surface, prime, and coat support assembly in accordance with CCP-30 in Containment Building and AS-30 for B.O.P.		
4	IW	Install Hilti-Kwik Bolts in accordance with CEI-20		
5	SD	Install grout in accordance with CCP-16 and CCP-12.		
		OBSERVE ALL QC/ANI HOLD POINTS ON REVERSE SIDE		
		REVISION RECORD		
1	8-24-79	Incorporate ABRF 00072 & 00073		
2	BM 10-2	~~Incorporate CMC 8417 R1~~ VOID BM 10-2-79		
2	BM 10-2-79	INCORPORATE CMC 8417 ~~R1~~ R2	SJK 10-16-79	SRT 10-16-79
3	LOT 10-18-79	Incorporate CMC 17678 £ 10-16-79	DJK 10-29-79	SRT 10-25-79
4	JP 10-24-79	INCORPORATE WARC 1936	DJK 10-29-79	SRT 10-25-79
5	£ 11-1-79	Refab Due to ~~misfabrication~~ Lost Material ABRF 00315 £ 10-31-79		

CONTROLLED COPY

COMPONENT SUPPORT MECHANICAL INSPECTIONS

③ Rework Record

No.	DESCRIPTION	QC ①			QC INSPECTION ② Initial & Date	ANI ①			ANI INSPECTION ② Initial & Date	Rework ③ QC	Rework ③ ANI	QC ④	ANI ④	QC ⑤	ANI ⑤	QC ⑤	ANI ⑤
			S ④	U ⑤			S ④	U ⑤									
1.	Verify received material	✓	✓			NC											
	A. Transfer Hatl. ID Marks	✓				NC											
	B. Transfer Component Support Mark No. on Support Assembly	✓	✓			NC											
2.	Verify tolerances of cut material	✓				NC											
3.	Verify column line location plumbness and levelness	✓				NC											
4.	Verify elevation	✓				NC											
5.	Verify size and configuration	✓				NC											
6.	Verify clearance between pipe (or insulation & structural member)	✓				NC											
7.	Verify travel stop position (in cold position)	N/A				N/A											
8.	Verify fasteners (size, thread engagement, surface contact lubricant)	✓	✓			NC											
9.	Verify Hilti Bolt installation	✓				NC											
	A. Installation in concrete	✓	✓			NC											
	B. Torque wrench cal. date	✓				NC											
10.	Perform final visual Inspection	✓				✓											
11.	Perform final review and certify to code.	✓				✓											

NOTES:
① Check marks (✓) entered by QC and ANI to indicate hold points (X) ANI inspection points indicated by (X). Hold/inspection points not required indicated by N/A.
② QC and ANI initials and dates entered after inspection is completed.
③ The applicable date of revision is entered at top of column. Rework hold/inspection points are established by check marks (✓), (X)'s and N/A as in note ①. Rework inspections are initialed and dated in the column ②.
④ Check marks (✓) entered to indicate satisfactory inspections.
⑤ Check marks (✓) entered to indicate unsatisfactory inspections.

DRAW. AF-1-001-007-Y33R - Unit 1+2 REV

CMC-3795 R1

CMC-5091

FOR INFORMATION ONLY

ISSUED BY HANGER ENGINEERING

	SEISMIC PIPE RESTRAINT CONSISTING OF:	ONE								
1	10 3/4" O.D. Pipe Clamp Assembly/SK. # AF-1-01-007 -Y33 Sht. 2 of 2./Detail "A", TW= 136#.	1				X		X		
2	3/4"x6"x6" (SA-36) Angle, 0'-9" Long/ Detail B. TW=43# Shop Weld to Item #3 As Shown	2	[illegible]	10/18/79		X		X		
3	Carbon Steel (SA515 GR.65 or SA-36) Plate /Section B-B. TW=20# Shop Weld to Item #4 As Shown	1	[illegible]	10/18/79	X			X		
4	W6x15.5 (SA-36) 2'-11 1/2" Long. TW=46# Shop CENTER AND WELD TO ONE OF ITEM # 7	1	[illegible]	10/18/79		X		X		
5	W6x15.5 (SA-36) 3'-5" Long. TW= 53# As Shown	1	[illegible]	10/18/79						
6	3/4"x10" Hilti Kwik Bolt Concrete Anchors TW=11#	8						X		
~~8~~	~~Carbon Steel (SA515 GR.65 or SA-36) Plate~~ ~~/Section A-A. TW= 82# Shop Center & Weld to Items # 5 & 8 As Shown~~ Per CMC 8417 R.2	~~2~~				X		X		
8	1/2"x10" Carbon Steel (SA515 GR.65 or SA-36) Plate, 0'-10" Long. TW=14# SHOP WELD AS SHOWN TO ITEMS #4 AND 5	1	[illegible]	10/18/79	X			X		
7	PER ABRE-00072 & 00073	2	LWM	9-X-77						
	SEISMIC ASSEMBLY SKETCH & ENGINEERING	1								
	BUNDLE & TAG	1								
	MARK# AF-1-001-007-Y33R									
9	PER CMC 8417 R.2									
10	PER CMC 8417 R.2									
11	PER ABRE-00315									
	Apply one coat of Carbo Zinc #11 to above mat'l									

ISSUED BY DCC

Approved by: DCC
Date: 2/21/78

INSPECTION REQUIRED

FOR MATERIALS AND OPERATIONS SEE SKETCH NO. SHEET OF

ITT GRINNELL PIPING
PIPE HANGER DIVISION

REF. DRAWING NUMBERS

PIPE: [illegible] IS FOR IN-
STEEL: [illegible] H.V.A.C. [illegible]

CONDITIONS	Fx	Fy	Fz	Mx	My	Mz
DESIGN						
NORMAL OPERATING UPSET		-1041 -1542				
EMERGENCY		[illegible]				
FAULTED						

REV	DATE	DWN	APP	DESCRIPTION
0	4/78	RB	DH	ISSUED FOR CONSTRUCTION

FOR INFORMATION ONLY

CUSTOMER Texas Utilities Service, Inc.
ORDER OR CONT. NO. CP-0046
JOB NAME Comanche Peak 1 & 2
MARK NO. AF-1-001-007-Y33R
SKETCH NO.
SHEET 1 OF 2 REV. 0

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. № 5091

(1) APPLICATION PIPE HANGER WELD MOD. ☒ Q ☒ NON-Q ☐ DESIGN CHANGE YES X NO

(2) DWG. NO. SEE LIST

(3) LINE NO./COMPONENT NO. NA

(4) REASON FOR CHANGE: AS DIRECTED BY TWX-10813 (ALSO REF CMC-3795)

(7) REQUESTED/PREPARED BY: NPSI INC. NAME FABRICATOR DEPT.

(8) APPROVED BY: [signature] 3-6-79 DATE

ITT [signature] 3-8-79 DATE

DH [signature] 3/9/79 DATE

DATE

DATE

COMPLETED DATE

DATE

(5) INSTRUCTIONS:

REMOVE [N.A.]

ADD [✓]

CHANGE THE WELD ATTACHING THE CLAMP TO THE STANCHION FROM A SHOP WELD TO A FIELD WELD.

(6) SKETCH

AF-1-001-007-Y33R | ITT REV 0 | BRH REV 0

AF-1-001-010-Y33R | " " 0 | " " 0

AF-1-001-011-Y33R | " " 0 | " " 0

ATTACHMENT NO. 1

PHD ISO AF-1-YD-02 REV. 7

(9) DISTRIBUTION

	DCC CNTL NO.	QTY
PME	INFO	1
ITT GRINNEL SITE		2
CHAMBERLAIN		1
DOUG HORNE	X	1
NPSI (SITE)	INFO	1

ISSUED BY HANGER ENGINEERING

ISSUED BY DCC

FOR INFORMATION ONLY

ARMS INDEXED

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. № 3795 REV. 1

(1) APPLICATION: PIPE HANGERS / SHIELD MOD ☐ Q ☒ NON-Q ☐ DESIGN CHANGE YES X NO

(2) DWG. NO.: SEE LIST - TYPICAL REV. O

(3) LINE NO./COMPONENT NO.: NA

(4) REASON FOR CHANGE: CAN NOT BE FABRICATED AS DETAILED

(5) INSTRUCTIONS:

REMOVE: NA

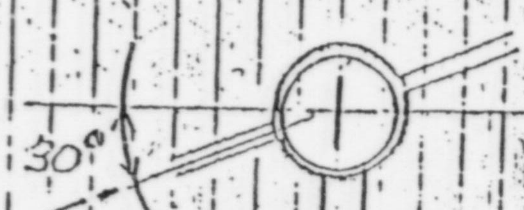
CHANGE ANGLE OF PIPE CLAMP AS SHOWN

ADD: NA

(6) SKETCH

DRAWING	LINE	ISO
AF-1-001-006-Y33R	10"AF-1-01-152-3	AF-1-YR-02
AF-1-001-008-Y33R	SAME	SAME
AF-1-001-009-Y33R	SAME	SAME
AF-1-001-007-Y33R	SAME	SAME
AF-1-001-010-Y33R	SAME	SAME
AF-1-001-011-Y33R	SAME	SAME

△1 HMC 2-16-79



THIS REVISION VOIDS & SUPERSEDES DOCUMENT SERIAL NO. 3795, REV. O

(7) REQUESTED/PREPARED BY: HAL GOODSON (NAME), HANGERS (DEPT.)

(8) APPROVED BY: [signature] DATE

(ITT) [signature] DATE

[signature] 1/31/7_ DATE

COMPLETE

DATE | BY

(9) DISTRIBUTION

DISTRIBUTION	DOC CNTL NO.	QTY
PME	INFO	1
GRINNEL (SITE)	INFO	2
CHAMBERLAIN	INFO	1
NPSI (AUSTIN)	INFO	2

ISSUED BY DCC

ISSUED BY DCC

(2-96) **INFORMATION ONLY**

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) OCT 8-1979

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. No 8417 Δ1

(1) APPLICATION: PIPE SUPPORT WELD MOD. [✓]; Q [✓]; NON-Q [ ]; DESIGN CHANGE: YES [✓] NO [ ]

(2) DWG. NO. ITT 2590 BRH REV 0
AF-1-001-007-Y33R1

(3) LINE NO./COMPONENT NO.

(4) REASON FOR CHANGE:
AVOID REBAR
Δ2 INCORRECT FW #

(1) REQUESTED/PREPARED BY: Jack
HAL GOODSON
NAME
HANGER ENG.
DEPT.

(5) INSTRUCTIONS:

REMOVE [✓]

ITEM 7 2 REQ'D.

DELETE SW.#9 & #10 Δ1

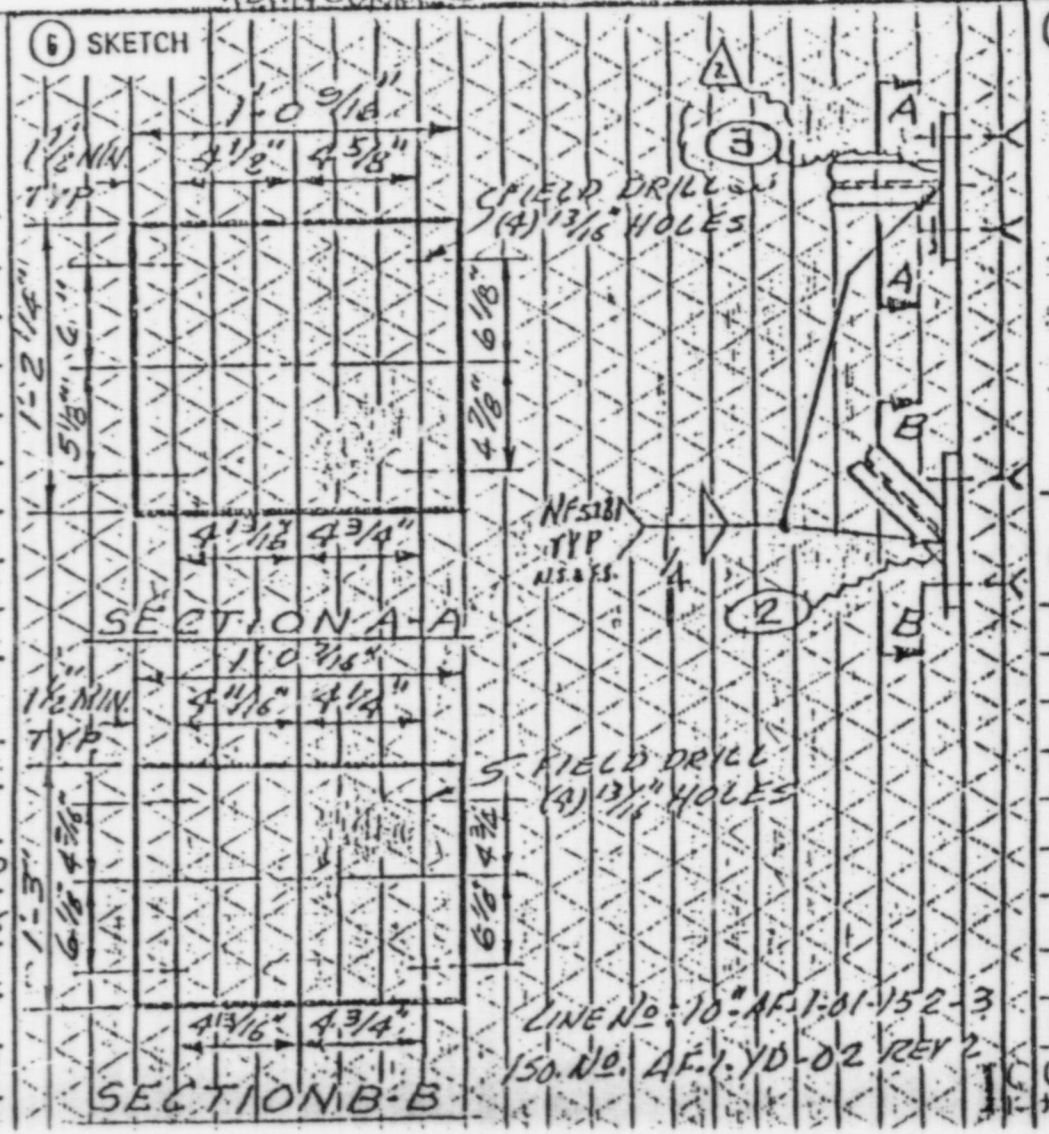
Add F.W. 2 & 3 Δ1

ADD [✓]

ITEM 9 (1 REQ'D.)
1"x 1-0 3/16 C.S. PL
1-2 1/4 LONG BY FIELD
SA515 GR.65 OR SA36

ITEM 10 1 REQ'D.
1"x 1-0 7/16 C.S. PL
1-3" LONG BY FIELD

(6) SKETCH



LINE No. 10"-AF-1-01-152-3
ISO. No. AF-1-YD-02 REV 2

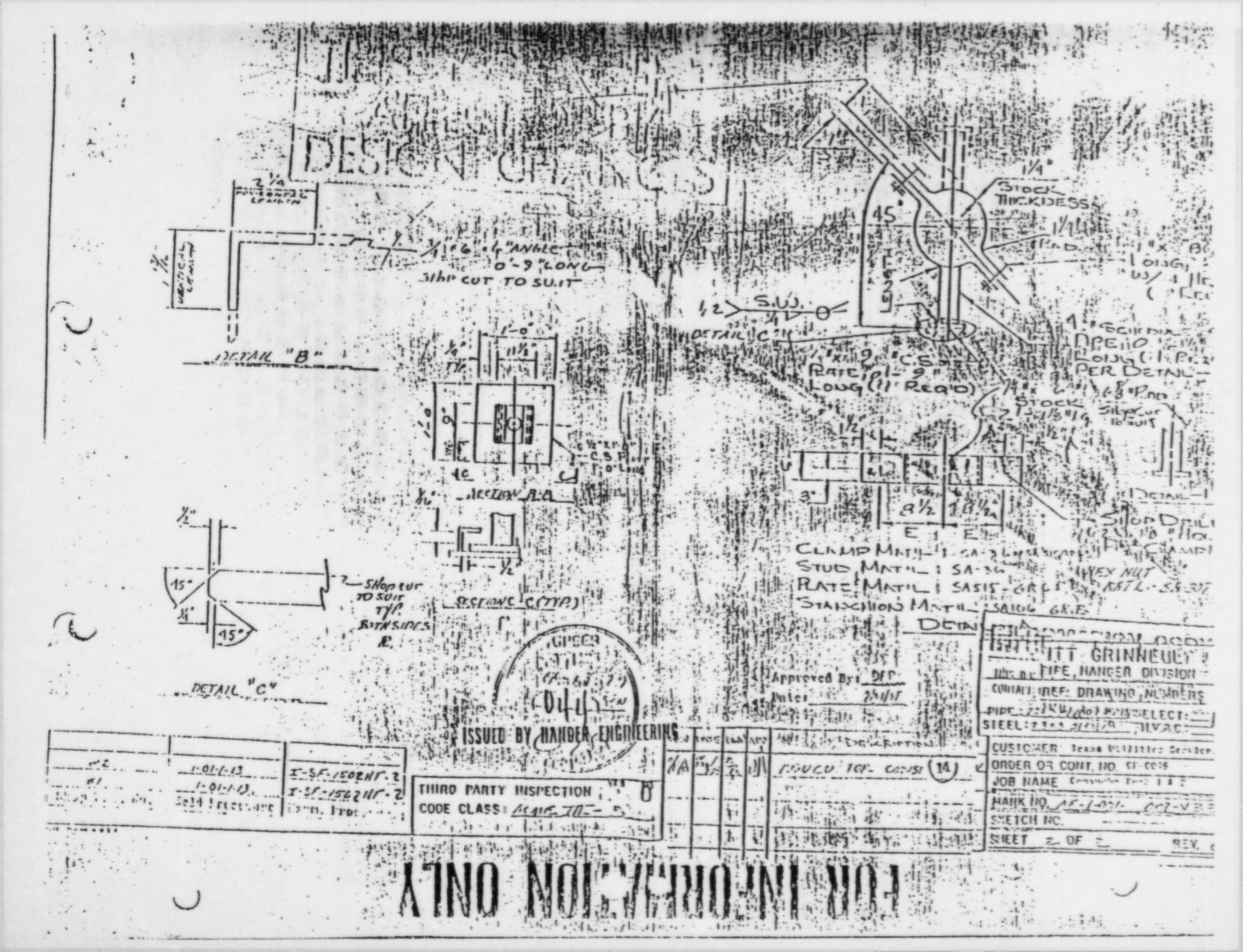
(1) APPROVED BY:
J Champlin 8/11/79
DATE
ITT
DATE
Δ2 KLM 10-3-79
DATE
DATE
DATE
DATE
DATE

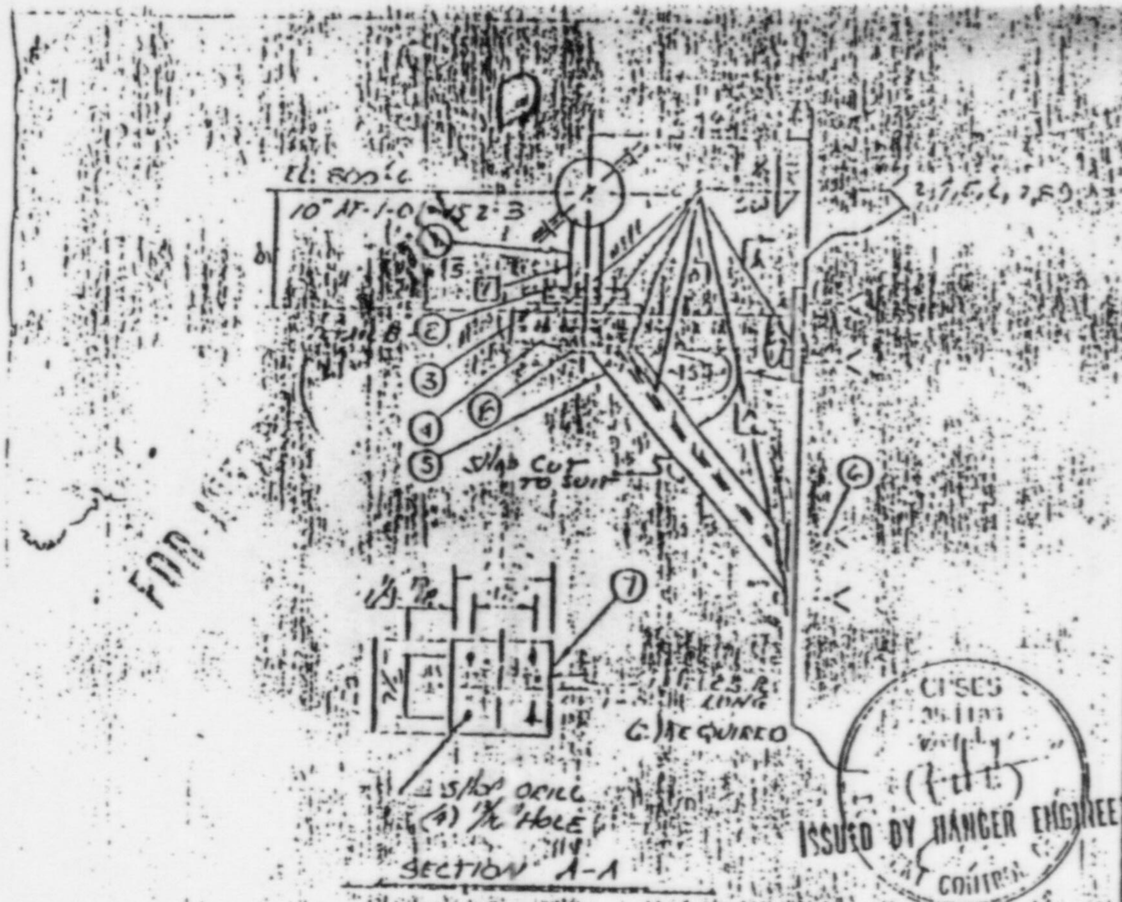
(9) DISTRIBUTION

DCC CNTL NO.	QTY

THIS REVISION VOIDS AND SUPERSEDES DOCUMENT SERIAL NO.
8417 REV 1
TRAVELER DEPARTMENT

ISUED BY DCC


DETAIL "B"
DETAIL "C"
SECTION A-A
DETAIL "C"
SHOP CUT TO SUIT TYP BOTH SIDES
CLAMP MATL: SA-36
STUD MATL: SA-36
PLATE MATL: SA515-GR 70
STANCHION MATL: SA106 GR.B
Approved By: DFP
Date: 2/11/11
ISSUED BY HANGER ENGINEERING
THIRD PARTY INSPECTION
CODE CLASS: ASME III-3
ITT GRINNELL
PIPE HANGER DIVISION
CUSTOMER
ORDER OR CONT. NO.
JOB NAME
MARK NO.
SKETCH NO.
SHEET 2 OF 2
FOR INFORMATION ONLY



ITEM NO.	MATERIALS & OPERATIONS	QUAN	SHIP
	SEISMIC PIPE RESTRAINT CONSISTING OF		
1	10 3/4" O.D. Pipe Clamp Assembly (SK # AF-1-01-007-Y33 Sht. 2 of 2,/Detail "A", IW-1360	1	
2	3/4"x6"x6" (SA-36) Angle, 0'-6" Long/ Detail B, IW-43# Shop Weld to Item #1 As Shown	2	
3	Carbon Steel (SA515 GR.65 or SA-36) Plate /Section B-B, IW-30# Shop Weld to Item #4 As Shown	1	
4	W6x15.5 (SA-36) 2'-11 1/2" Long, IW-46# Shop [illegible]	1	
5	W6x15.5 (SA-36) 3'-5" Long, IW-53# As Shown		
6	3/4"x10" Hilti Kwik Bolt Concrete Anchors IW-11#	5	
7	Carbon Steel (SA515 GR.65 or SA-36) Plate /Section A-A, IW-87# Shop Center & Weld to Items # 5 & 8 As Shown	2	
8	1/2"x10" Carbon Steel (SA515 GR.65 or SA-36) Plate, 0'-10" Long, IW 16# [illegible]	1	
	SEISMIC ASSEMBLY SKETCH & ENGINEERING BUNDLE & TAG	1	
	MARKED AF-1-01-007-Y33B	1	
	Apply one coat of Carbo Zinc #11 to above mat'l		
	Approved By: [illegible] Date: 2/11/85		

FOR MATERIALS AND OPERATIONS SEE SKETCH NO. SHEET

C.B.I. Item 2323-P1-320-C3
I.F.D. Item AF-1-20-02 Rev 1
Data Point [illegible]
Pipe Mat'l C.S.
Ins 1/2" [illegible]

NOTES
1) All tolerances in accordance with QCP [illegible] U.N.O.
2) Fab. Procedure is FP-101 [illegible]
3) All products designed in accordance with EFL File No. 1 [illegible] Rev. 8

FIELD STRIP INS TO SUIT
FIELD TORQUE BOLTS TO 150 FOOT POUNDS

ISSUED BY HANGER ENGINEERING
CPSES [illegible] DOCUMENT CONTROL

ITT GRINNELL CORPORATION
PIPE HANGER DIVISION

REF. DRAWING NUMBERS
PIPE: [illegible]
STEEL: [illegible]

CONDITIONS	Fx	Fy	Fz	Mx
DESIGN				
NORMAL & UPSET				
EMERGENCY				
FAULTED				

THIRD PARTY INSPECTION
CODE CLASS [illegible]

Shop Detail No.	Weld Procedure	[illegible]
3 THRU 9	[illegible]	BONNEL

CUSTOMER Texas Utilities Serv.
ORDER OR CONT. NO. CP 0016
JOB NAME Comanche Peak 1 & 2
MARK NO [illegible]
SKETCH NO
SHEET 1 OF 2 REV

FOR INFORMATION ONLY
DOCUMENT [illegible] TED BY DESIGN CHANGES

WDC Serial # 16266

Drawing # AF-1001-007-Y33R

Line # N/A

MULTIPLE WELD DATA CARD

S#7 MR # 527 HT # V Lwm 9-25-79

ITEM NO.	WPS NO.	REV.	ICN	WELD FILLER MATERIAL	WELD NOS.	P.NO.	FABRICATION CODE & CLASS/AEC STD.
NA	11032	6	0	E7018	1	1-1	ASME III 3

NOTES: 1) Applicable QC/ANI hold points shall be indicated by checkmark ✓.
2) ANI inspection points indicated by (X).
3) Denote Satisfactory inspections by an "S"; Unsatisfactory inspections by a "U".

OPERATION #	OPERATIONS		
1	CLEANED	7	
2	ALIGNMENT	8	
3	FINAL VT	9	
4		10	
5		11	
6		12	

PRODUCTION RELEASE

WELD NO.	OPERATION	HOLDPOINTS WT	HOLDPOINTS QC	HOLDPOINTS ANI	CONST.	SAT. or UNSAT.	INSPECTION RESULTS (SIGN & DATE) QC or WT	NDE CERT. LEVEL	ANI	NDEP/REV.	MT&E # / CALIB. DUE DATE
1	1	NA	✓	NC		S	[illegible] 10/18/79	II		200 10/9/79	
	2	|	✓	↓		S	[illegible] 10/18/79	II		↓	
	3	|	✓	↓						↓	
Reviewed	B.P. [illegible] 8-7-79					AJK	8-7-79	[illegible]	(AN) 8-9-79		

FOR INFORMATION ONLY

WE QC ANI

Approval signatures shall be affixed on the line immediately below the last step in each sequence

WDC Serial No. 10-26? 35017
Drawing No. AF-L-001-007-Y30R

WELD FILLER MATERIAL LOG

Weld No. 1-2, 3

WELD NO.	DATE	SIZE/CLASS	WELDER SYMBOL	WPS/ICN #	HEAT/LOT # or CODE #	AMT. ISS.	AMT. RT'D.	ISSUANCE APPROVAL
~~1~~	~~10-17-79~~	~~E-7018 1/8~~	~~ATU~~	~~11032 6-0~~	~~A80964 026B203~~	~~19 rds~~	19	~~Larry Tawaley~~
~~2~~	↓	↓	↓	↓	↓	~~1 rd.~~	1	~~Larry Tawaley~~
~~3~~	↓	↓	↓	↓	↓	~~2 rds.~~	2	~~Larry Tawaley~~ P130
1	10-18-79	E-7018 1/8	ATU	11032 6-0	A80964 026B203	15 rds.	0	Larry Tawaley
2	↓	↓	↓	↓	↓	3 rds.	0	Larry Tawaley
3	↓	↓	↓	↓	↓	2 rds.	0	Larry Tawaley P124
~~1~~	~~10-22-79~~	~~E-7018 1/8~~	~~ATU~~	~~11032 6-0~~	~~A80964 026B203~~	~~5 rds.~~	3	~~Larry Tawaley~~ P143
1	10-22-79	E-7018 1/8	ATU	11032 6-0	A80964 026B203	5 rds.	0	Larry Tawaley P.01

FOR INFORMATION ONLY

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. № 17671

(1) APPLICATION HFE SUPPORTS — Q [✓] NON-Q [ ] DESIGN CHANGE/DEVIATION [✓]

(2) DWG. NO. [illegible] AF-1-001-007-Y33R

(3) LINE NO./COMPONENT NO. AF-1-001-007 /B3R

(4) REASON FOR CHANGE REVISE TO SHOW [illegible] MISFABRICATION BY NPS 130 AF-1-YD 07

(7) REQUESTED/PREPARED BY: LARRY TOWNLEY /LAS

NAME

HANGER

DEPT.

(8) APPROVED BY: A. Phillips 10-17-7[illegible]

DATE

DATE

DATE

DATE

DATE

DATE

(5) INSTRUCTIONS

REMOVE N/A

REVISE AS SHOWN

ADD N/A

(6) SKETCH

FOR INFORMATION ONLY

(9) DISTRIBUTION	DCC CNTL NO.
NPS (SITE)	INFO

FOR INFO

00672

"AS BUILT" RECORD FORM

1. Hanger Number AF-1-001-007-V33R Rev. 0
2. Indicate Plate Orientation on above sketch
3. Plate Material Carbon Steel (SA515 Gr 65 or SA 36)
4. Plate Thickness 1"
5. Hilti Bolt Size 3/4" x 10"
6. If hanger has more than one plate, indicate which plate is covered. Attach additional forms for other plates as required.

Pipe Support Foreman	Date
QC Inspector	Date 10/23/79
Field Mechanical Originator	Date

Revision 0
September, 1979

FOR INFORMATION ONLY

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. № 17678

(1) APPLICATION: PIPE SUPPORTS Q. [✓] NON Q [ ] DESIGN CHANGE/DEVIATION [✓]

(2) DWG. NO. [illegible]

(3) LINE NO./COMPONENT NO. [illegible]

(4) REASON FOR CHANGE: WALL NOT PLUMB [illegible]

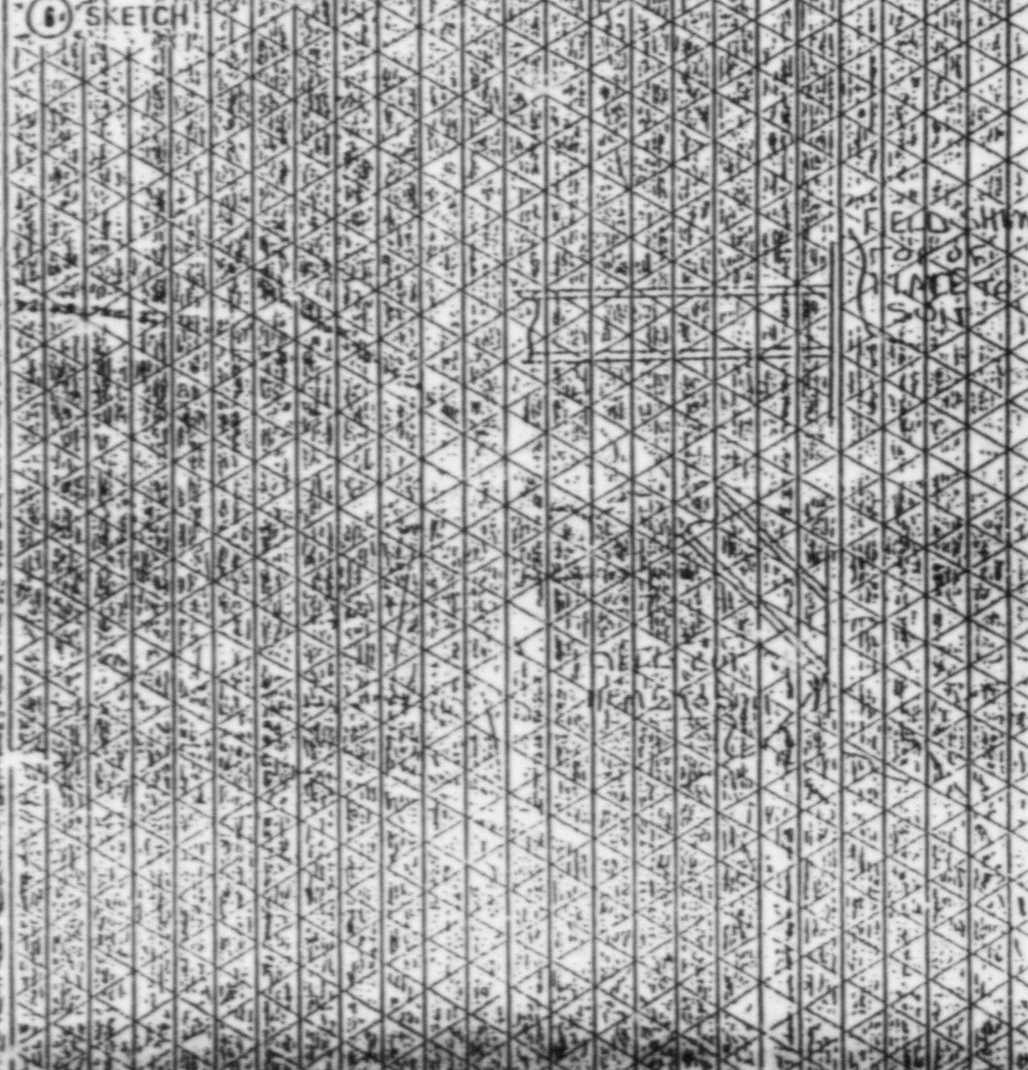
(5) INSTRUCTIONS:

REMOVE N/A

REVISE AS SHOWN

ADD N/A

(6) SKETCH



(7) REQUESTED/PREPARED BY: LARRY TOWNLEY / [illegible]

NAME

[illegible]

DEPT.

(8) APPROVED BY: A. Phillips 10-18

DATE

DATE

DATE

DATE

DATE

DATE

(9) DISTRIBUTION

DCC CNTL NO.

FOR INFORMATION ONLY

WDC Serial # 33012

Drawing # AF-1-001-007-Y33R

Line # NA

MULTIPLE WELD DATA CARD

ITEM NO.	WPS NO.	REV.	ICN	WELD FILLER MATERIAL	WELD NOS.	P.NO.	FABRICATION CODE & CLASS/ACC STD.
NA	11032	6	c	E7018	2-3	1-1	3 ASME III

NOTES: 1) Applicable QC/ANI hold points shall be indicated by checkmark ✓.
2) ANI inspection points indicated by (X).
3) Denote Satisfactory inspections by an "S"; Unsatisfactory inspections by a "U".

OPERATION #	OPERATIONS		
1	CLEANED	7	
2	ALIGNMENT	8	
3	FINAL VT	9	
4		10	
5		11	
6		12	

PRODUCTION RELEASE

WELD NO.	OPER-ATION	HOLDPOINTS WT	QC	ANI	CONST.	SAT. or UNSAT.	INSPECTION RESULTS (SIGN & DATE) QC or WT	NDE CERT. LEVEL	ANI	NDEP/REV	MT&E #/CALIB. DUE DATE
2	1	NA	✓	NC		S	10/18/79	II		10/8/79	
	2	|	✓	|		S	10/18/79	II		|	
	3	|	✓	↓		S	10/18/79	II		↓	
Reviewed: [illegible] 10-12-79							10-3-79		SRT 10-16-79		
3	1	NA	✓	NC		S	10/18/79	II		10/8/79	
	2	|	✓	|		S	10/18/79	II		|	
	3	|	✓	↓		S	10/18/79	→		↓	
Reviewed: [illegible] 10-16-79							SJK 10-16-79		SRT 10-16-79		

FOR INFORMATION ONLY

WE QC ANI

Approval signatures shall be affixed on the line immediately below the last step in each sequence.

* Cut verified on FW2, WARC 1936

WDC Serial # 43339

Drawing # AE-1-001-007-Y33R

Line # NA

MULTIPLE WELD DATA CARD

FOR INFORMATION ONLY

ITEM NO.	WPS NO.	REV.	ICN	WELD FILLER MATERIAL	WELD NOS.	P NOS.	FABRICATION CODE & CLASS/ACC STD.
NA	11032	6		E701A	2A	1-1	ASME III - 3

NOTES: 1) Applicable QC/ANI hold points shall be indicated by checkmark ✓.
2) ANI inspection points indicated by (X).
3) Denote Satisfactory inspections by an "S"; Unsatisfactory inspections by a "U".

OPERATION #	OPERATIONS		
1	CLEANED	7	
2	ALIGNMENT	8	
3	FINAL VT	9	
4		10	
5		11	
6		12	

PRODUCTION RELEASE

WELD NO.	OPERATION	HOLDPOINTS WT	HOLDPOINTS QC	HOLDPOINTS ANI	CONST.	SAT. or UNSAT.	INSPECTION RESULTS (SIGN & DATE) QC or WT	NCE CERT. LEVEL	ANI	NDEP/REV	MT&E #/CALIB. DUE DATE
2A	1	NA	✓	NC							
	2		✓								
	3		✓	NC							
Reviewed: BPaD 10-26-79						SJK	10-24-79		SRT 10-25-79		

FOR INFORMATION ONLY

WE QC ANI

Approval signatures shall be affixed on the line immediately below the last step in each sequence.

WDC Serial No. 43339

Drawing No. AF1-001-007-Y33R

WELD FILLER MATERIAL LOG

Weld No. 2A

WELD NO.	DATE	SIZE/CLASS	WELDER SYMBOL	WPS/ICN #	HEAT/LOT # or CODE #	AMT. ISS.	AMT. RT'D.	ISSUANCE APPROVAL

FOR INFORMATION ONLY

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

WELD ADDITION / REMOVAL CARD

SERIAL NO. 1936

(1) APPLICATION: PIPE SUPPORT QA ☒ NON-QA ☐

(2) DWG. NO. AF-1-001-007-Y33R

(3) WELDS ADDED/REMOVED

REMOVE FW #2

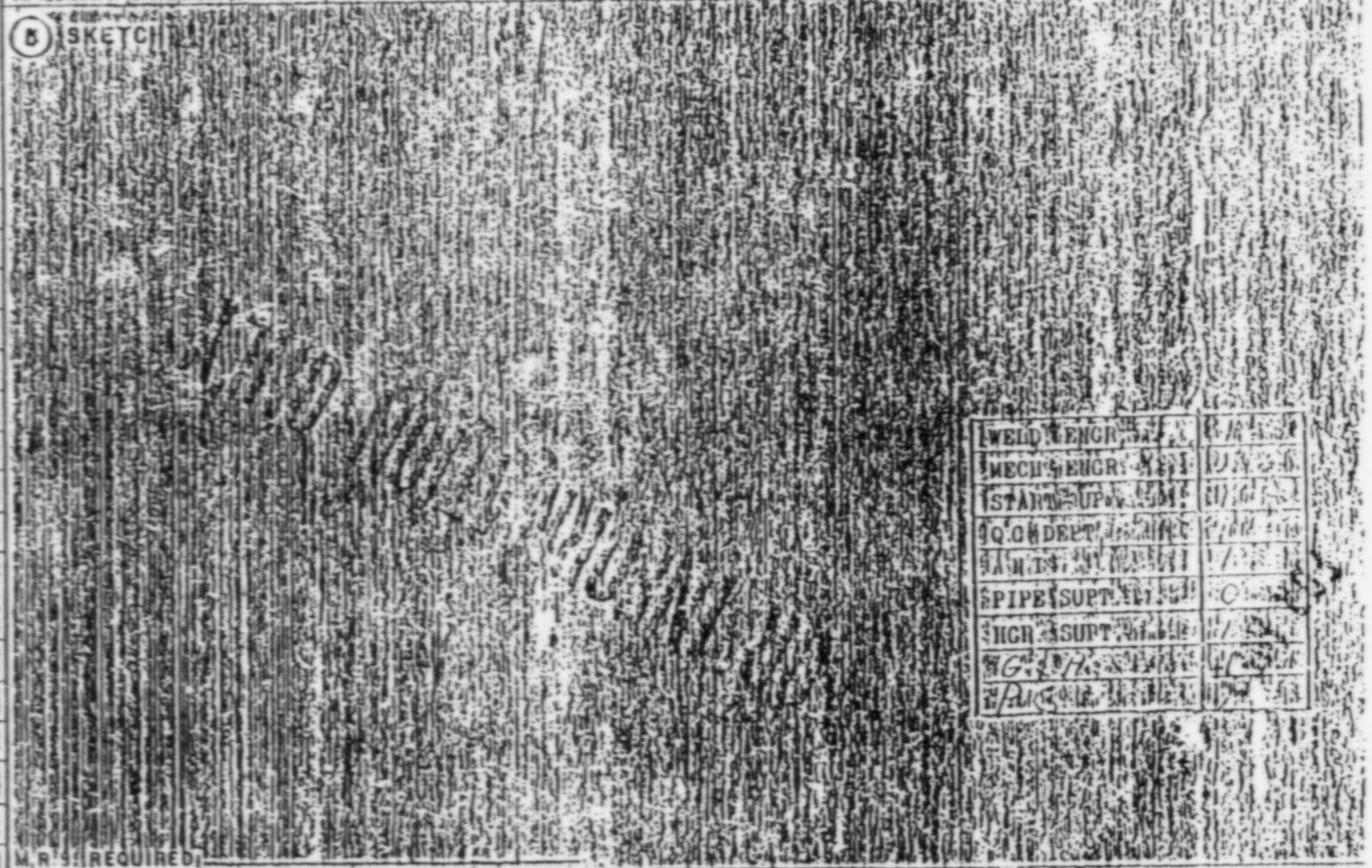
CUT FW 2

ADD FW 2-A

REPLACE BOLT AND REWELD FW#2PA

(4) REASON FOR CHANGE: BOLT BROKEN

(5) SKETCH



M.R. REQUIRED

(6) REQUESTED BY: LARRY TOWNLEY

NAME

PIPE SUPORT

DEP

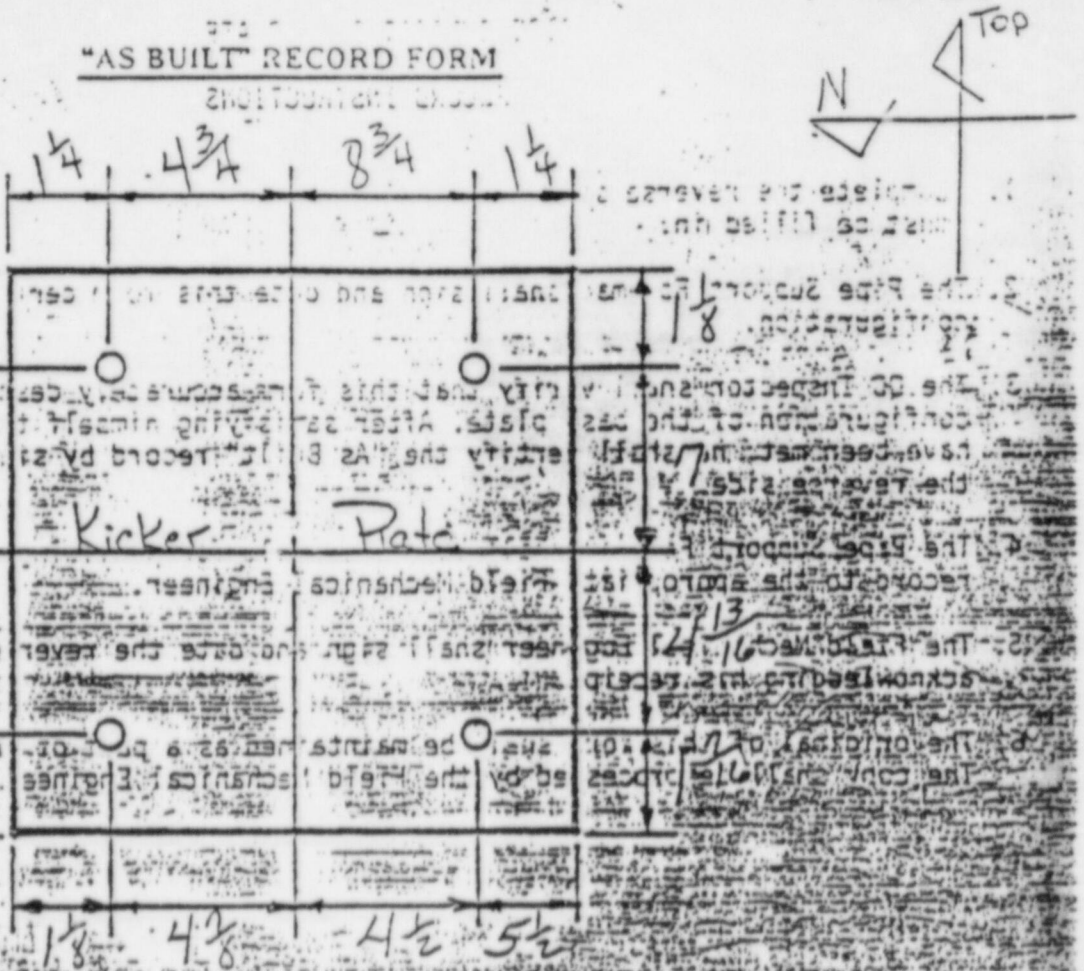
WELD ENGR	
MECH ENGR	
START UP	
Q.C. DEPT	
A.N.I.	
PIPE SUPT.	C
HGR SUPT.	
G.F.	
P.E.	

APPROVAL NAME [illegible] DATE 10-26-89

NAME DATE

00315

"AS BUILT" RECORD FORM



1. Hanger Number AF-1-001-007-1/33R Rev. 1

2. Indicate Plate Orientation on above sketch

3. Plate Material C.S. SA515 GR 65 or SA36

4. Plate Thickness 3/4"

5. Hilti Bolt Size 3/4"x10"

6. If hanger has more than one plate, indicate which plate is covered. Attach additional forms for other plates as required.

Pipe Support Foreman Date

QC Inspector Date

Field Mechanical Originator Date

Revision 0
September, 1979

ENCLOSURE 1

d by (x)
established
d in the

FOR INFORMATION

Record

~~1~~	~~1 1/2" x 1' 7" Carbon Steel Plate (SA 515 GR 65 or SA 36) 1' 7" Long. TW=307#~~ CMC 7401 R.1	~~2~~			x			x		
2	6"x6"x1/2" Structural Tubing (A-500 GR B) 3'-6" Long. TW=241#	2	LWM	10/1/79	x			x		
3	M4x13 (SA-36) 2'-0 1/8" Long. TW=52#	2	LWM	11/1/79	x			x		
~~4~~	~~1 1/4" x 18" Super Hilti Kwik Concrete Anchors (1144)~~ CMC 7401	~~8~~						x		
*	ALL MATERIAL BY FIELD									
	SEISMIC ASSEMBLY SKETCH AND ENGINEERING	1								
	BUNDLE AND TAG	1								
	MARK # SW-1-010-004-A33R									
	Apply one coat of Carbo Zinc #11 to above mat'l except th'ds which shall be coated w/a rust preventative.									
5	1½" x 12" HILTI BOLTS	4								
~~6~~	~~1" x 1' 7" x 3'-8" C.S. PL (SA 515 GR 65 OR SA36)~~ per CMC	~~1~~								
7	3/4" x 3" x 3' GUSSET PLATES (SA 515 GR 65 OR SA 36)	2	LWM	10/21/79						
~~8~~	~~per CMC 7401 R.1 Rev~~ per ABRF #00062									
8	Per ABRF 00062	1	LWM	9-25-79						
	item 8 per CMC 7401 R1 is same spacing as ABRF 00062									
	ISSUED									
	FOR INFORMATION ONLY									
	INSPECTION REPORT									
	Approved By: DCP Date: 1/11/79	QUAN	SHIP		FOS	L	CSS	FRIM	SEC	

FOR MATERIALS AND OPERATIONS SEE SKETCH NO. SHEET __ OF __

Brown & Root, Inc.

ENGINEERS AND CONSTRUCTORS

CONDITIONS	Fx	Fy	Fz	Mx	My	Mz
DESIGN	—					
NORMAL & UPSET	±4743					
EMERGENCY	±5799					
FAULTED	—					

REF. DRAWING NUMBERS

PIPE: M1-0704 REV. 11 ELECT: [illegible]

STEEL: S1-0700 REV. 11 H.V.A.C.: M1-0352 R.-15

REV	DATE	DWN	CHK	APP	DESCRIPTION
5	[illegible]	[illegible]	LGJ	DM	ISSUE FOR CONST FIELD FAB FW/1-6

CUSTOMER Texas Utilities Service, Inc.

ORDER OR CONT. NO. CP-0046

JOB NAME Comanche Peak 1 & 2

MARK NO. SW-1-010-004-A33R

SKETCH NO.

STEAM
STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

No 7401 Rev 2

SERIAL NO.

APPLICATION: PIPE SUPPORT WELD MOD. ☑ Q ☑ NON-Q ☐ DESIGN CHANGE: YES ✓ NO__

DWG. NO. ITT REV. 0 / BRH REV. 0
1-1-010-004-A33R

LINE NO./COMPONENT NO.
N/A

(4) REASON FOR CHANGE: INTERFERENCE BETWEEN PIPE AND HILTI BOLTS, HILTI BOLTS CANNOT BE INSTALLED AS DESIGN UNDER 24" PIPE.
△ ADDED WELD NO'S AND REVISED BASE PL

(7) REQUESTED/PREPARED BY:
PETE MASON
NAME
PIPE SUPPORT CONST.
DEPT.

(8) APPROVED BY: △1 EGT 9-26-78
5-17-78
DATE
GUS ABELE 6-22-79
DATE
△2 ITT
DATE
OCT 31 1978
DATE
DATE
DATE

INSTRUCTIONS:

OVE N/A

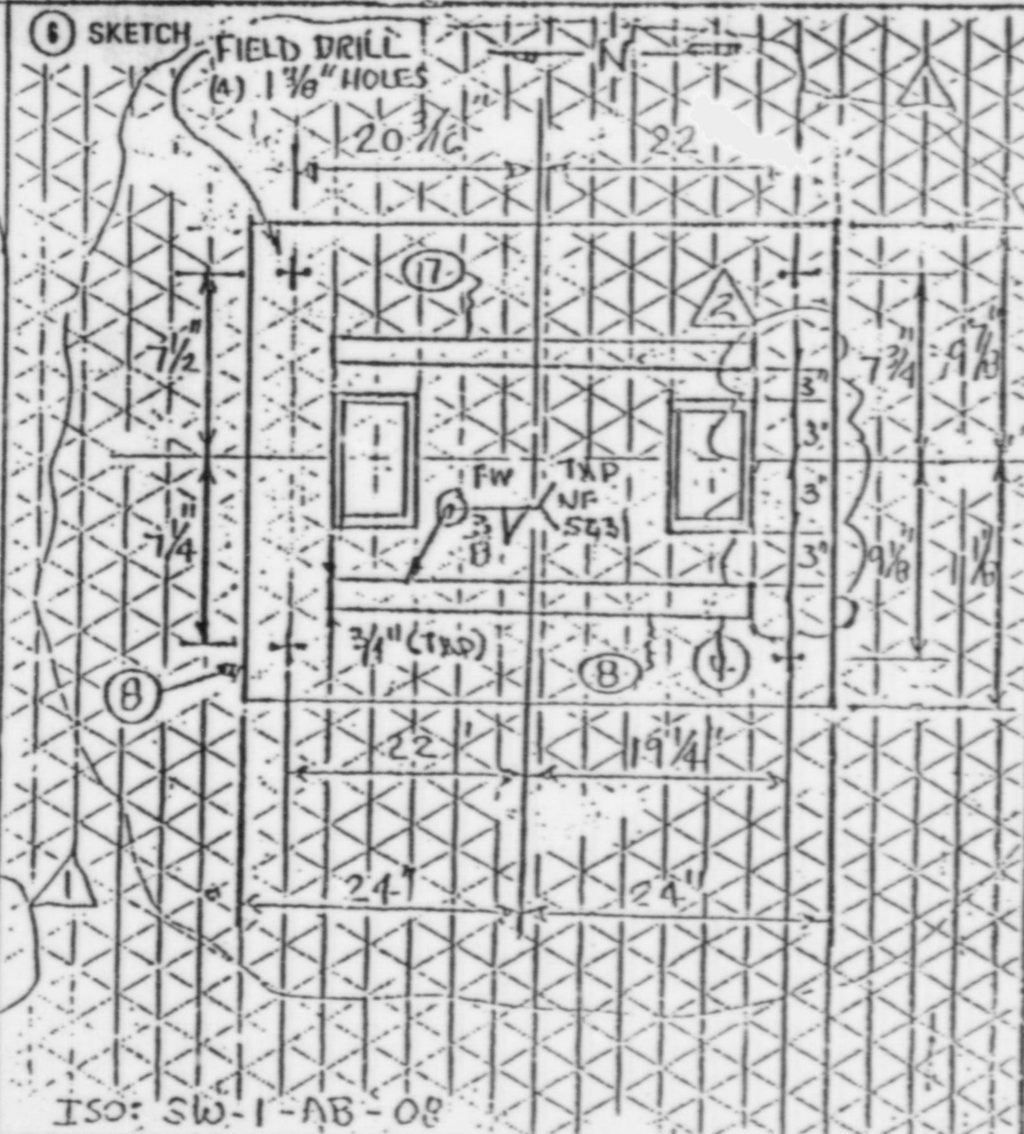
M 4 DELETE
E ITEM #1 (SCRAP
E ITEM #6) △

FW 78 △1

5: 1¼" HILTI BOLTS X 12
AN REQ. (4)

#8 1"X1'-7"X4'-0" Lg
PL (SA-515 GR65 OR
6) QTY (1)
7: ¾"X5"X3'-0" Lg
T PLATE QUAN (3)
SA-515 GR. FOR SA-36.)

(6) SKETCH



(9) DISTRIBUTION | DCC CNTL NO. | QTY

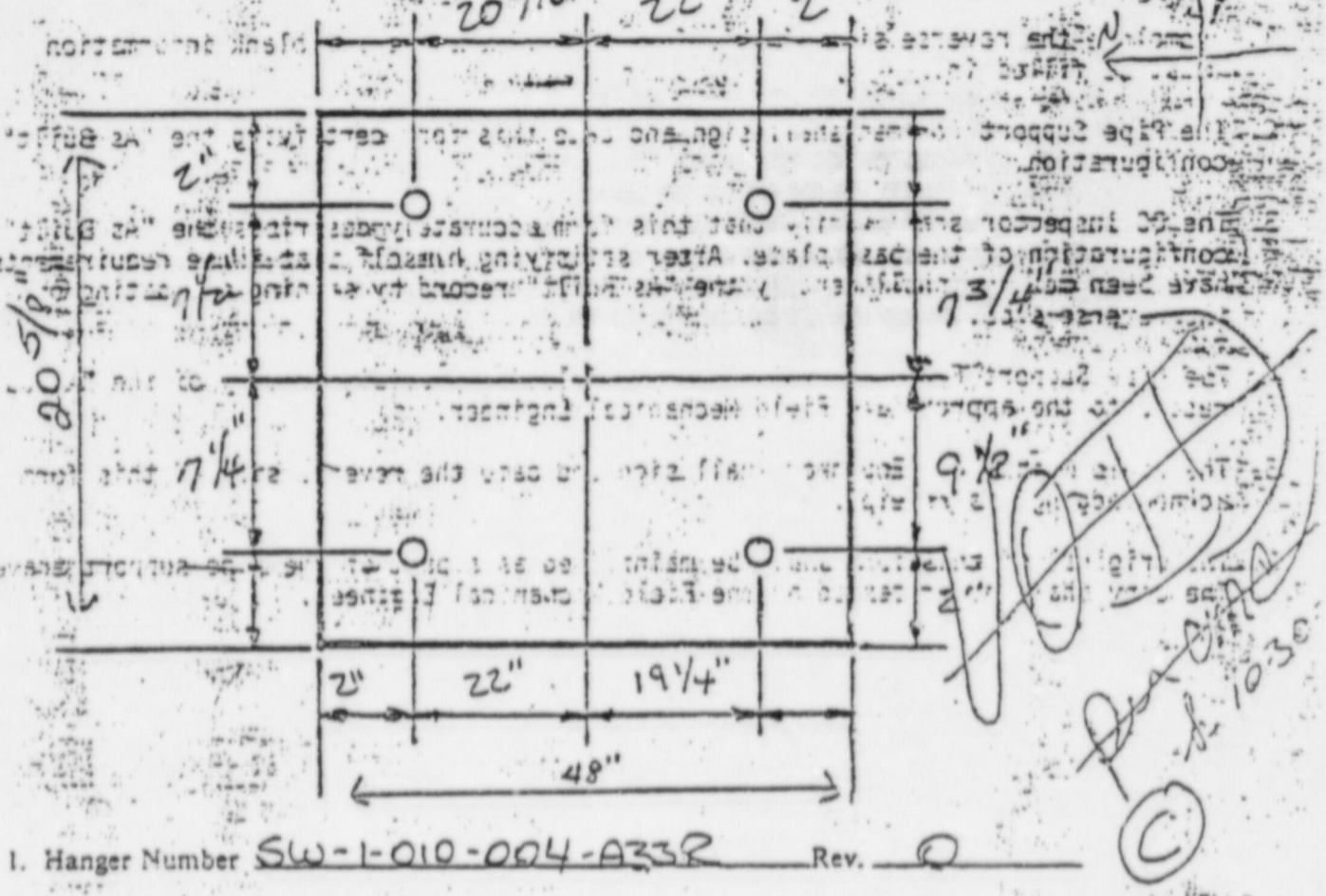
ISSUED BY DCC
THIS REVISION VOIDS
AND SUPERSEDES
DOCUMENT SERIAL NO.
CMC 7401 Rev 1

FOR INFORMATION ONLY

00352

FOR INFORMATION ONLY

"AS BUILT" RECORD FORM



1. Hanger Number SW-1-010-004-A338 Rev. 0
2. Indicate Plate Orientation on above sketch
3. Plate Material Carbon Steel (SA515 GR65 or SA36)
4. Plate Thickness 1"
5. Hilti Bolt Size ~~1"~~ 1 1/4" x 12" (B)
6. If hanger has more than one plate, indicate which plate is covered. Attach additional forms for other plates as required.

Pipe Support Foreman	Date
QC Inspector	Date
Field Mechanical Originator	Date

Vision 0
ember, 1979

FOR INFORMATION ONLY

CASE EXHIBIT 497

QA RECORD

Brown & Root, Inc.

QUALITY ASSURANCE DEPARTMENT
NONCONFORMANCE REPORT (NCR)

(1) NCR No. M-1802 R1

PROJECT CPSES JOB NO. 35-1195 PAGE 1 OF 28

(2) UNIT	STRUCTURE/SYSTEM	COMPONENT	TAG/ID NUMBER	LOCATION OR ELEVATION	RIR NO.
1	Service Water Aux. Feedwater	Component Support	SW-1-010-004-A33R AF-1-001-007-Y33R	N/A	N/A

(3) NONCONFORMING CONDITION
(3) DOCUMENT VIOLATED: ASME Section III REV N/A PARA 4451 4452 (4) TREND CATEGORY G-3

See attached sheet.

FOR INFOR[illegible]

Rev. 1 Changed document violated and delete summary.

(5) REPORTED BY:	(6) DATE	(9) REVIEW/APPROVAL	(10) DATE
J. Patton	11 / 5 /79	[signature]	11/14/79
(7) PREPARED BY:	(8) DATE:	(11) ISSUED BY:	(12) DATE:
R. Michels	11 / 5 /79	[signature]	11/14/79

(13) DISPOSITION ASSIGNED TO:	(14) DUE DATE:	(15) CORRECTIVE ACTION REQUEST CAR NO.	(16) ASME CODE	CLASS
D. C. Frankum	11/ 19/79	~~X~~ Required ~~X~~ Not Required	X Yes _No	

(17) DISPOSITION:
REWORK _____ REPAIR _____ USE AS [illegible] SCRAP _____

See Attached

SEE CPPA-3572 (ATTACHED)

(18) CONSTRUCTION REVIEW/APPROVAL	(19) DATE:	(20) QA/QC REVIEW APPROVAL	(21) DATE:
[signature]	11/20/79	[signature]	12/10/79
(22) ENG. REVIEW/APPROVAL	(23) DATE:	(24) ANI REVIEW APPROVAL	(25) DATE:
[signature]	12/11/79	[signature]	12/11/79

(29) VERIFICATION: X Satisfactory ☐ Unsatisfactory ☐ Not Req'd

(27) QA/QC ENGR/INSPR VERIFICATION	(28) DATE:
[signature]	12/11/79
(29) ANI CONCURRENCE	(30) DATE
[signature]	12/11/79
(31) QA REVIEW/CLOSURE	(32) DATE
[signature]	12/13/79

(33) REMARKS

QA RECORD

RTN	QA REVIEW
	[signature] 12/14/79
SUBFILE NO.	
M-1802R1	

FOIA-85-59

R147

NCR No. M-1802 R 1
ATTACHMENT
pg. 2 of 28

I. DRAWING AF-1-001-007-Y33R

A. Revision 4 of support traveler required WARC 1936 to be incorporated. This WARC was issued to replace FW-2 with FW-2A. The original plate per ABRF 00073 should have been used; it was not. ABRF 0073 is now missing from the traveler package.

B. Item #11 has been added on the bill of materials per ABRF 000315. ABRF's cannot be used to add or delete item numbers.

C. CMC 8417 R2, 10-3-79, Instruction 5, removed item 7 and added items 9 & 10. Item 7 was QC verified on 9-26-79 per ABRF 00072 and 73. Weld 2 & 3 were made on 10-18-79 using plates called out on ABRF's 00072 & 73. CMC 8417 required removal of item 7 and replaced with items 9 & 10. This was not accomplished and items 9 & 10 were not fabricated. Craft personnel failed to follow design changes as per CMC 8417.

D. Sheet one of drawing AF-1-001-007-Y33R lists welds 3 thru 9. Welds are not numbered and there is one more number assigned than needed. The drawing is unclear as to whether the welds are vendor or B&R welds.

E. WMF Log has line drawn through entry indicating rod was not consumed, however, entry shows 2 rods consumed. Line entry is not initialed and dated.

F. CMC 17671 is unclear; does not define reasons for change or clarify.

G. CMC 17678 dated 10-18-79 calls for shims to be installed between support and wall. CPP 1993, dated 10-11-79 deleted shiming and specified grout instead.

II. Drawing SW-1-010-004-A33R

A. Item 6 fabricated and verified on 9-25-79 per ABRF 00062. CMC 7401, R1, 9-26-79, deleted item 6 and added item 8. Construction personnel lined through item 6 and change it to item 8. Item 6 is being used; it is different than item 8 and not per CMC-7401.

B. Hilti bolt size has been changed on the ABRF.

C. Entry on ABRF by craft person indicates ABRF is void.

FOR INFORMATION ONLY

NCR m 1802 R1
pg 3 of 28

DISPOSITION

IA. ABRF 0073 was voided by craft traveler dept. as the result of a hilti bolt being broken during plate installation. ABRF 00315 was issued to refabricate the plate (item 11). The plate, item 11, and the FW 2A, have not been made. ABRF 00073 was removed by the craft traveler dept. and is being held in the traveler dept. files.

IB. Item 11 was added to the bill of material by the craft traveler dept. via an ABRF; this is not per procedure; personnel have been instructed to discontinue this practice and follow procedure.

IC. Items 9 & 10 were incorrectly listed as item 7 on the bill of material and accepted by QC. They were listed as items 9 & 10 per CMC 8417 R2. Craft personnel have been instructed (See IB above) to follow procedures.

ID. Drawing No. AF-1-001-007-Y33R indicates that welds No. 3 thru 9 are vendor shop welds. This item is not a field nonconformance as these weld numbers were not generated on site.

IE. Field personnel crossed out the second to last entry on the WFML by mistake. This is to be considered a valid entry except that the 10/22/79 date was entered on the wrong line. FW No. 1 was tacked welded on 10/19/79 with (2) rods consumed and (3) rods returned the last entry is correct in that (5) rods were with drawn on 10/22/79 and consumed in the completion of FW No. 1.

Responsible individuals have been instructed as to the proper method of document correction.

IF. CMC No. 1761 shows the reorientation of item No. 4 which was misfabricated by the vendor. This CMC was generated to approve vendors misfabrication.

IG. It is the discipline engineers prerogative to generate a CMC design change in variance from engineering guidelines.

However in this specific instance grout will be used as per CPP-1993.

FOR INFORMATION ONLY

NCR M-1802 R1
Pg. 4 of 28

II. DRAWING SW-1-010-004-A33R

II.A Item No. 6 and No. 8 are identical plates. ABRF 0062 was voided because it matched CMC #7401. The QC inspector requested that ABRF 0062 not be voided since he had already signed off item no. 8 on the Bill of Material (Per ABRF 00062).

The "VOID" note on the ABRF was lined thru and initialed per the requirements of CPM 6.9.

II.B Prior to QC Field verification, 1"x12" Hilti's were shown on ABRF 0062 in error. The correct size Hilti's as shown on CMC #7401 Rev. 2, was shown on the ARBF (0062).

II.C See II.A (Above)

FOR INFORMATION ONLY

JOB NO. 35-1195

RECEIVED
DEC 04 1979
RECEIVED

ARMS
INDEXED
DATE

Gibbs & Hill, Inc. Interoffice Memorandum

CPPA-3572

NCR M-1802 R1
Dg. 5 of 28

TO: J. T. Merritt, Jr. DATE: December 3, 1979

FROM: R. E. Heim JOB NO:

SUBJECT: NCR- M-1802 R1 REF. NO:

COMANCHE PEAK STEAM ELECTRIC STATION
1981-83 2300 MW INSTALLATION
NCR- M-1802 R1

By copy of this letter we are advising Brown & Root that the "Use As Is" disposition on NCR No. M-1802 R1 is acceptable.

R. E. Heim
Resident Engineer

DRH
REH/DRH/DHW/jg
cc: ARMS

B & R DCC DIST.

PROJECT MGR.	
PROJECT ENGR.	
QA MGR.	1
PROJECT CONT. ENGR.	1
TUSCO [illegible]	
PROJECT GEN. MGR.	
ARMS	1
CPPA	1

F-168, 8-78

BROWN & ROOT, INC.

P.O. BOX 1001 GLEN ROSE, TEXAS 76043

Pg. 6 of 28

MESSAGE

To TRAVELER DEPT.
ATTN: ALL PERSONNEL

DATE 12-11-79

This is to advise you of the requirements for posting B.O.M on travelers, and the proper use of ABRF's, IAD MEI 12 and Engineering guidelines, ~~Please~~ PAY close attention to the proper posting of B.O.M and

BY _____

INSTRUCTIONS TO SENDER:
1. SEND TO JOB. FILE 2. SEND WHITE AND PINK COPIES WITH CARBON INTACT.

REPLY

DATE _____

Do not assign item # to ~~ABRF~~'s and insure that all entries corrected have been properly initialed and dated.

SIGNED Robert Garrett, Traveler Supervisor

INSTRUCTIONS TO RECEIVER:
1. WRITE REPLY. 2. DETACH STUB, KEEP PINK COPY, RETURN WHITE COPY TO SENDER

FOR INFOR

NCR 79-178 pg 9 of 28

CONSTRUCTION OPERATION TRAVELER 35-1195

(1) TRAVELER NO.	(2) EQUIPMENT NO.	(3) UNIT NO.	(4) QUANTITY	(5) PAGE/OF
ABRF001-001-V33R	SEE above			

(6) ACTIVITY DESCRIPTION	(7) REFERENCE DRAWINGS
PIPE SUPPORT FABRICATION AND INSTALLATION	SEE ABOVE

(8) SPEC./PROC./ENG. INSTR.	(9) LOCATION	(10) SYSTEM
	800'-6"	AF

PREPARED BY [illegible] DATE 7-26-79 DEPT. Mech. Engr.

REVIEWED BY [illegible] DATE 8-7-79 QA/QC ENG ANI

ANI REVIEW [illegible] DATE 8-9-79

OP. NO.	DEPT.	OPERATION	QA/QC ENG	ANI
1	IW	Verify material		
2	IW	Fabricate and/or install the pipe support assembly in accordance with the latest pipe support drawing, applicable CMC's, attached WDC's and [illegible]		
3	PD	Prepare surface, prime, and coat support assembly in accordance with CCP-30 in Containment Building and AS-30 for S.Q.B.		
4	IW	Install Hilti-Kwik Bolts in accordance with CEI-20		
5	SD	Install grout in accordance with CCP-16 and CCP-12		
		OBSERVE ALL QC/ANI HOLD POINTS ON REVERSE SIDE		
		REVISION RECORD		
1	[illegible] 8-7-79	Incorporate ABRF 00072 & 00073		
~~2~~	BM 10-2	~~Incorporate CMC 8417R1~~ VOID BM 10-2-79		
2	BM 10-2-79	INCORPORATE CMC 8417 R1 R2	[illegible] 10-12-79	SRT 10-12-79
3	LOT 10-18-79	Incorporate CMC 17678 & 10-16-79	[illegible] 10-29-79	SRT 10-25-79
4	BJP 10-5-79	INCORPORATE WARC 1936	[illegible] 10-29-79	SRT 10-29-79
5	[illegible] 11-1-79	Refab Due to ~~misfabrication~~ Lost Material ABRF 00315 [illegible] 10-31-79		

NCR M-1802[illegible] pg 8 of 21

COMPONENT SUPPORT MECHANICAL INSPECTIONS

③ Rework Record

No.	DESCRIPTION	QC INSPECTION ①	QC ④ S	QC ⑤ U	QC ② Initial & Date	ANI ①	ANI ④ S	ANI ⑤ U	ANI ② Initial & Date	QC	ANI	QC	ANI	QC	ANI	QC	ANI
1.	Verify received material	✓	✓		[illegible]	NC			[illegible]								
	A. Transfer Mat'l. ID Marks	✓			[illegible]	NC			[illegible]								
	B. Transfer Component Support Mark No. on Support Assembly	✓			[illegible]	NC			[illegible]								
2.	Verify tolerances of cut material	✓			[illegible]	NC			[illegible]								
3.	Verify column line location plumbness and levelness	✓			[illegible]	NC			[illegible]								
4.	Verify elevation	✓			[illegible]	NC			[illegible]								
5.	Verify size and configuration	✓			[illegible]	NC			[illegible]								
6.	Verify clearance between pipe (or insulation & structural member)	✓			[illegible]	NC			[illegible]								
7.	Verify travel stop position (in cold position)	N/A			[illegible]	N/A			[illegible]								
8.	Verify fasteners (size, thread engagement, surface contact lubricant)	✓			[illegible]	NC			[illegible]								
9.	Verify Hilti Bolt installation	✓			[illegible]	NC			[illegible]								
	A. Installation in concrete	✓			[illegible]	NC			[illegible]								
	B. Torque wrench cal. date	✓			[illegible]	NC			[illegible]								
10.	Perform final visual Inspection	✓			[illegible]	[illegible]			[illegible]								
11.	Perform final review and certify to code.	✓			[illegible]	✓			[illegible]								

NOTES:
① Check marks (✓) entered by QC and ANI to indicate hold points. ANI inspection points indicated by (X). Hold/inspection points not required indicated by N/A.
② QC and ANI initials and dates entered after inspection is completed.
③ The applicable date of revision is entered at top of column. Rework hold/inspection points are established by check marks (✓), (X)'s and N/A as in note ①. Rework inspections are initialed and dated in the column ②.
④ Check marks (✓) entered to indicate satisfactory inspections.
⑤ Check marks (✓) entered to indicate unsatisfactory inspections.

DRAW AF-1-001-007-Y33R Unit 1+2 REV 0

NCR M-1802 pl pg. 9 of 28

CMC-3795 R:1

CMC-5091

FOR INFO ONLY

ISSUED BY HANGER ENGINEERING

NCR-M-1802
pg. 10 of 22

Item	Description	Qty					
	SEISMIC PIPE RESTRAINT CONSISTING OF:	ONE					
1	10 3/4" O.D. Pipe Clamp Assembly/SK.# AF-1-01-007 -Y33 Sht. 2 of 2./Detail "A", TW=136#.	1			X		X
2	3/4"x6"x6" (SA-36) Angle, 0'-9" Long/ Detail B. TW=43# Shop Weld to Item #3 As Shown	2		10/18/79	X		X
3	Carbon Steel (SA515 GR.65 or SA-36) Plate /Section B-B. TW=20# Shop Weld to Item #4 As Shown	1		10/18/79	X		X
4	W6x15.5 (SA-36) 2'-11 1/2" Long, TW=46# Shop CENTER AND WELD TO ONE OF ITEM # 7	1		10/18/79	X		X
5	W6x15.5 (SA-36) 3'-5" Long, TW= 53# As Shown	1		10/18/79			
6	3/4"x10" Hilti Kwik Bolt Concrete Anchors TW=11#	8				X	
~~7~~	~~Carbon Steel (SA515 GR.65 or SA-36) Plate /Section A-A. TW= 82# Shop Center & Weld to Items # 5 & 8 As Shown~~ Per CMC 84178 R2	~~2~~			X		X
8	1/2"x10" Carbon Steel (SA515 GR.65 or SA-36) Plate, 0'-10" Long, TW=14# SHOP WELD AS SHOWN TO ITEMS #4 AND 5	1		10/18/79	X		X
7	Per ABRF 00072, 00075	2	LWM	9-26-79			
	SEISMIC ASSEMBLY SKETCH & ENGINEERING	1					
	BUNDLE & TAG	1					
	MARK# AF-1-001-007-Y33R						
9	PER CMC 84178 R2						
10	PER CMC 84178 R2						
11	Per ABRF 00315						

FOR INFORMATION ONLY

Apply one coat of Carbo Zinc #11 to above mat'l

ISSUED BY DCC

Approved By: DSP
Date: 2/21/78

INSPECTION RECORD

FOR MATERIALS AND OPERATIONS SEE SKETCH NO. SHEET OF

ITT GRINNELL
PIPE HANGER DIVISION

INFORMATION

CONDITIONS	Fx	Fy	Fz	Mx	My	Mz
DESIGN						
NORMAL & UPSET	—	1041 / 1542				
EMERGENCY	—	1758				
FAULTED	—					

REF. DRAWING NUMBERS
PIPE:
STEEL:

THIS DOCUMENT IS FOR INFORMATION ONLY. CHECK WITH DOCUMENT CONTROL FOR CURRENT STATUS AND REVISION

REV	DATE	DWN	APP	DESCRIPTION
0	1/4/78	PB		ISSUED FOR CONST.

CUSTOMER Texas Utilities Service, Inc.
ORDER OR CONT. NO. CP-0046
JOB NAME Comanche Peak 1 & 2
MARK NO. AF-1-001-007-Y33R
SKETCH NO.
SHEET 1 OF 2 REV. 0/F

FOR INFORMATION ONLY

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. Nº 5091

(1) APPLICATION: PIPE HANGER WELD MOD. ☒ Q ☒ NON-Q ☐ DESIGN CHANGE: YES X NO

(2) DWG. NO. SEE LIST

(3) LINE NO./COMPONENT NO. NA

(4) REASON FOR CHANGE: AS DIRECTED BY TWX-10813 (ALSO REF CMC-3795)

(5) INSTRUCTIONS:

REMOVE: NA

CMC M-1928 Pg 11 of 28

FOR INFORMATION ONLY

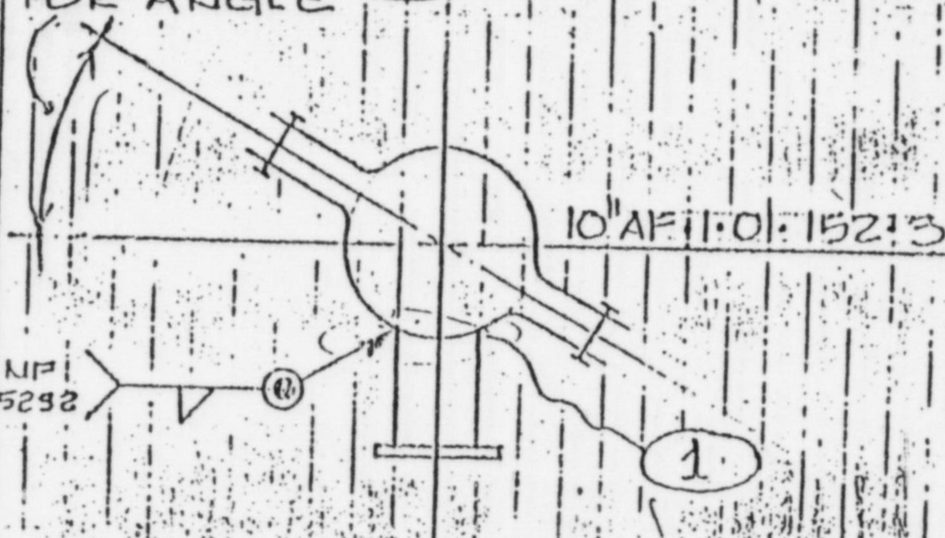
ADD: ✓

CHANGE THE WELD ATTACHING THE CLAMP TO THE STANCHION FROM A SHOP WELD TO A FIELD WELD.

(6) SKETCH

AF-1-001-007-Y33R	ITT REV 0	B&H REV 0
AF-1-001-010-Y33R	" " 0	" " 0
AF-1-001-011-Y33R	" " 0	" " 0

SEE CMC-3795 FOR ANGLE



FOR INFORMATION ONLY

PHD ISO AF-1-YD-02 REV. 4

(7) REQUESTED/PREPARED BY: NPSI INC. (NAME)

FABRICATOR (DEPT.)

(8) APPROVED BY:

[signature] 3-6-79 DATE

ITT [signature] 3-8 DATE

DH Douglas Horne 3/9/7 DATE

DATE

COMPLETED DATE

(9) DISTRIBUTION

	DCC CNTL NO.	O
PME	INFO	1
ITT Gunnel site	↓	6
Chamberlain		1
DOUG HORNE	✓	1
NPSI (SITE)	INFO	1

ISSUED BY HANGER ENGINEERING

ISSUED BY DCC

INDEXED

FOR INFO

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. Nº 3795

(1) APPLICATION: PIPE HANGERS / FIELD MOD ☐ Q ☒ NON-Q ☐ DESIGN CHANGE, YES X NO

(2) DWG. NO. SEE LIST - TYPICAL REV. 0

(3) LINE NO./COMPONENT NO. NA

(4) REASON FOR CHANGE: CAN NOT BE FABRICATED AS DETAILED

(5) INSTRUCTIONS:

REMOVE NA

CHANGE ANGLE OF PIPE CLAMP AS SHOWN

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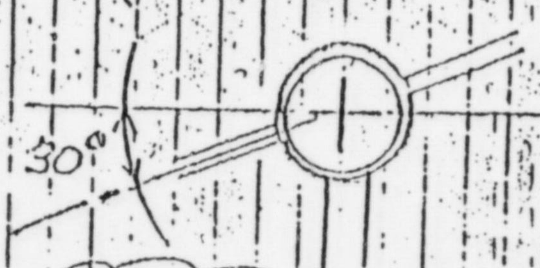
ADD NA

(6) SKETCH

DRAWING	LINE	ISO
AF-1-001-006-Y33R	10"AF-1-01-52-3	AF-1-YR-02
AF-1-001-008-Y33R	SAME	SAME
AF-1-001-009-Y33R	SAME	SAME
AF-1-001-007-Y33R	SAME	SAME
AF-1-001-010-Y33R	SAME	SAME
AF-1-001-011-Y33R	SAME	SAME

△1 HMC 2-16-79



THIS REVISION VOIDS & SUPERSEDES DOCUMENT SERIAL NO. 3195, REV. 0.

(7) REQUESTED/PREPARED BY: HAL GOODSON
NAME
HANGERS
DEPT.

(8) APPROVED BY: [signature] DATE
(ITT) [signature] DATE
[signature] 1/31 DATE

COMPLETE

DATE BY

(9) DISTRIBUTION	DOC CNTL NO.
PME	INFO
GRINNEL (SITE)	INFO
CHAMBERLAIN	INFO
NPSI (AUSTIN)	INFO

ISSUED BY DI...

ISSUED ...

FOR INFORMATION ONLY

OMANCHE PEAK STEAM ELECTRIC STATION (CPSES) OCT 8 1979

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. № 8417 △

APPLICATION: PIPE SUPPORT WELD MOD. [✓] Q [✓] NON-Q [ ] DESIGN CHANGE: YES ✓ NO ___

DWG. NO. ITT 2510 BRH REV 0
AF-1-001-007-Y33R

LINE NO./COMPONENT NO.

(4) REASON FOR CHANGE:
AVOID REBAR
△2 INCORRECT FW #

(1) REQUESTED/PREPARED BY: HAL GOODSON
NAME
HANGER ENG.
DEPT.

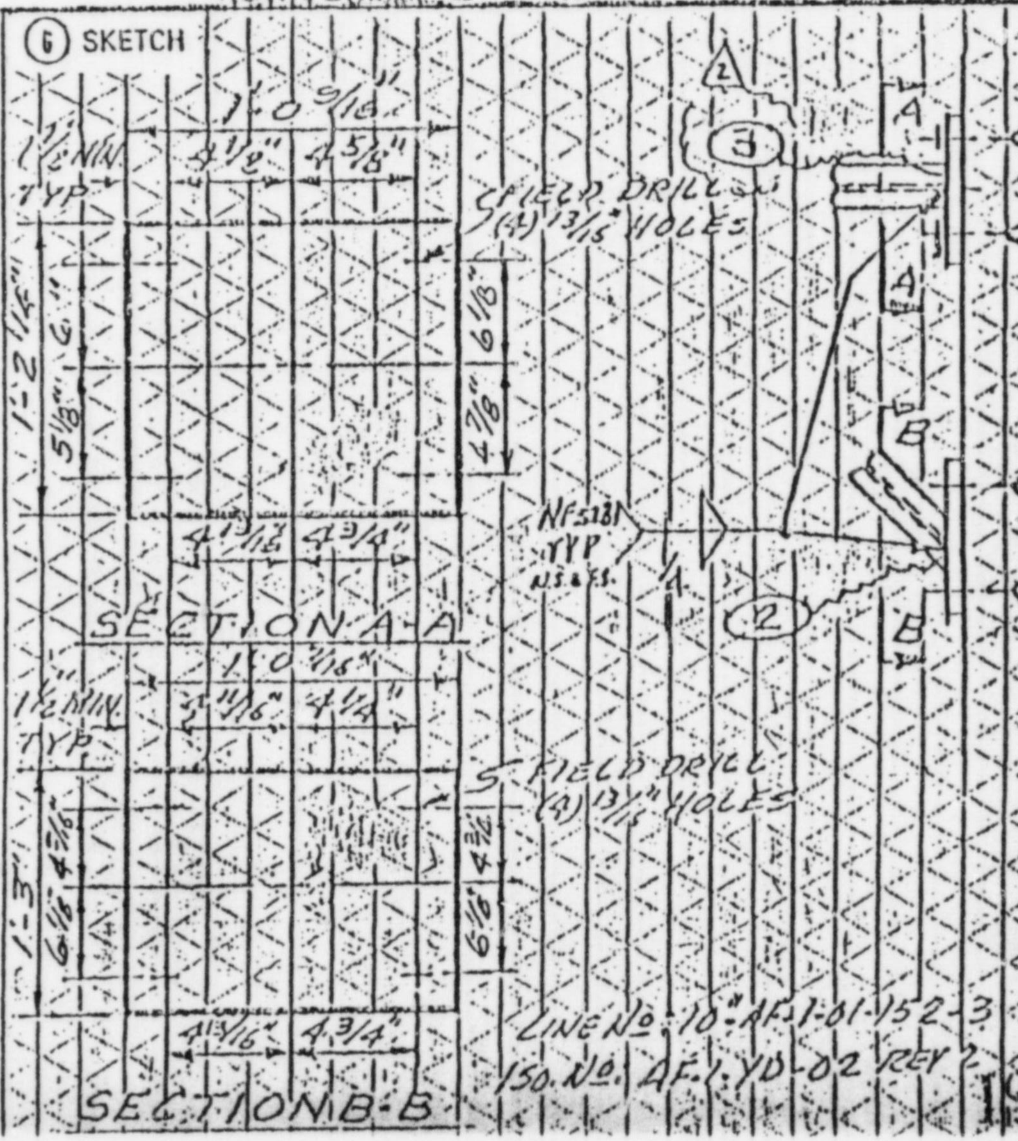
(8) APPROVED BY: J Champlin 8/11/79 DATE
ITT DATE
△2 KLM 10-3-79 DATE
DATE
DATE
DATE

NCR M-1802 Pg. 13 of 28

(9) DISTRIBUTION | DCC CNTL NO. | QTY

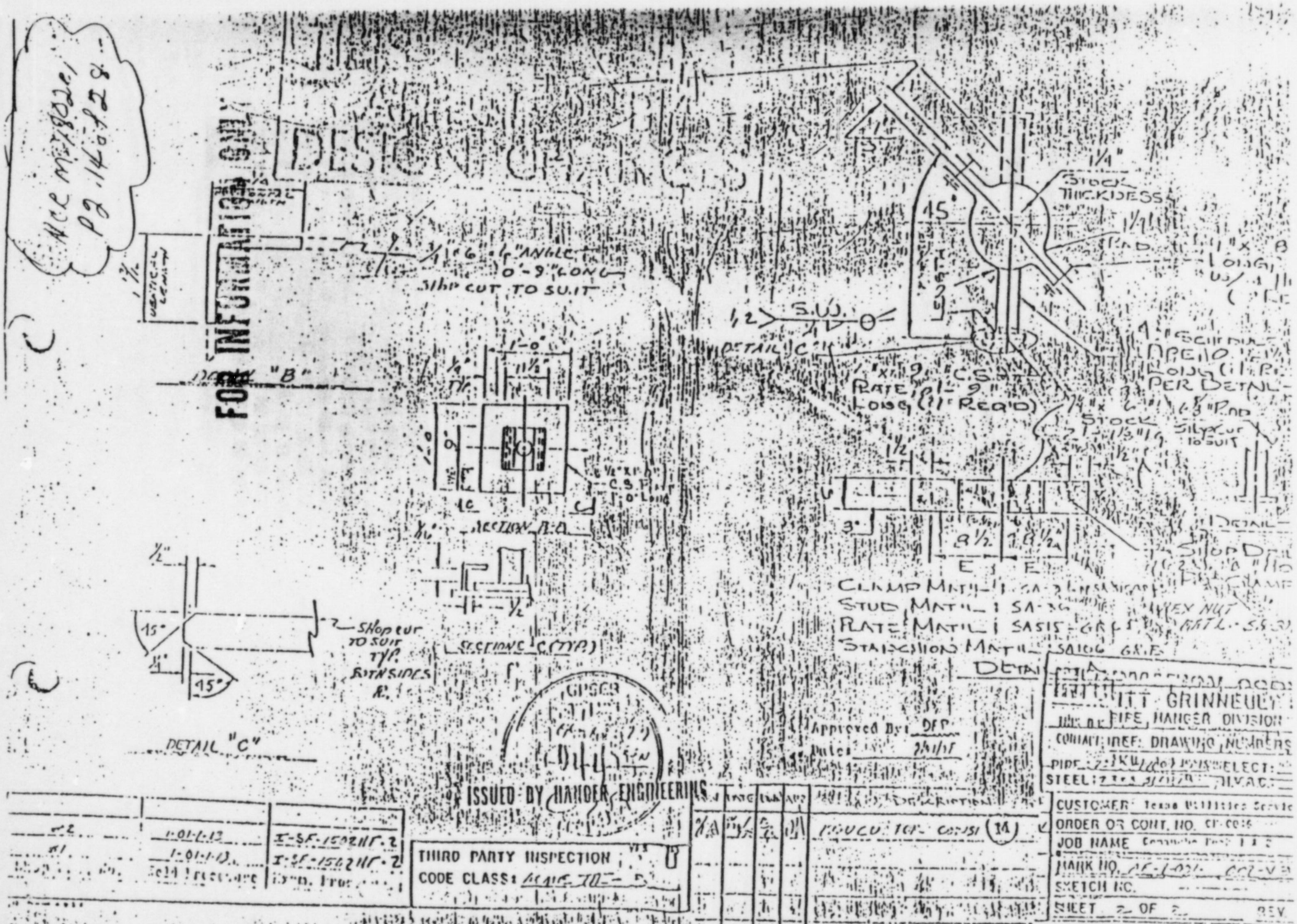
INSTRUCTIONS:
MOVE [✓]
ITEM 7 2 REQ'D.
DELETE SW 9 & 10 △
Add FW. 2 & 3 △2
ADD [✓]
ITEM 9 (1 REQ'D.)
" x 1-0 9/16 C.S. PL
- 2 1/4 LONG BY FIELD
A 515 GR.65 OR SA36
ITEM 10 1 REQ'D.
" x 1-0 7/16 C.S. PL
3" LONG BY FIELD

(6) SKETCH

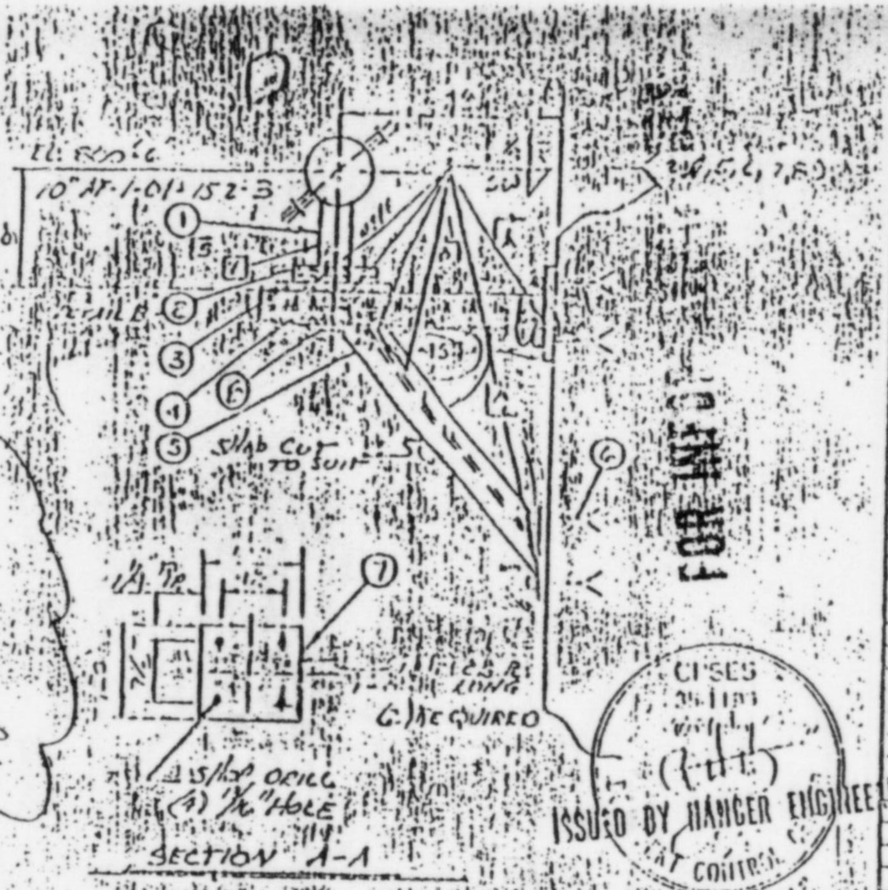


THIS REVISION VOIDS AND SUPERSEDES DOCUMENT SERIAL NO. 8417 REV. 1
TRAVELER DEPARTMENT

ISSUED BY, DCC


NCR M-7802 01
Pg. 14 of 28
FOR INFORMATION ONLY
DESIGN CHANGES
STOCK THICKNESS
S.W.
DETAIL "C"
SHOP CUT TO SUIT
DETAIL "B"
SECTION A-A
SECTIONS C (TYP.)
SHOP CUT TO SUIT TYP. BOTH SIDES
CLAMP MAT'L
STUD MAT'L SA-36
PLATE MAT'L SA515 GR.
STANCHION MAT'L SA106 GR.B
HEX NUT
Approved By: DFP
ISSUED BY HANGER ENGINEERING
THIRD PARTY INSPECTION
CODE CLASS:
DESCRIPTION
ITT GRINNELL
PIPE HANGER DIVISION
CONT. INEF. DRAWING NUMBERS
PIPE:
ELECT:
STEEL:
HVAC:
CUSTOMER Texas Utilities Service
ORDER OR CONT. NO.
JOB NAME
MARK NO.
SKETCH NO.
SHEET 2 OF 2
REV.

NCR M-1802C1
Pg. 15 of 28



ITEM NO.	MATERIALS & OPERATIONS	QUAN	SHIP
	SEISMIC PIPE RESTRAINT CONSISTING OF:		
1	10 3/4" O.D. Pipe Clamp Assembly (SK # AF-1-01-007-Y33 Sht. 2 of 2, Detail "A", IW-1160	1	
2	3/4"x6"x6" (SA-36) Angle, [illegible] Long, Detail B, IW-43A Shop Weld to Item #3 As Shown	2	
3	Carbon Steel (SA515 GR.65 or SA-36) Plate, Section B-B, IW-20A Shop Weld to Item #4 As Shown	1	
4	W6x15.5 (SA-36) 2'-11 1/2" Long, IW-46A Shop [illegible]	1	
5	W6x15.5 (SA-36) 3'-5" [illegible] Long, IW-53A As Shown		
6	3/4"x10" Hilti Kwik Bolt Concrete Anchors IW-11A	8	
7	Carbon Steel (SA515 GR.65 or SA-36) Plate, Section A-A, IW-87A Shop Center & Weld to Items # 5 & 8 As Shown	2	
8	1/2"x10" Carbon Steel (SA515 GR.65 or SA-36) Plate, 0'-10" Long, IW-16A [illegible]	1	
	SEISMIC ASSEMBLY SKETCH & ENGINEERING BUNDLE & TAG	1	
	MARKE AF-1-01-007-Y33B	1	
	Apply one coat of Carbo Zinc #11 to above mat'l		
	Approved by: [illegible] Date: [illegible]		

FOR MATERIALS AND OPERATIONS SEE SKETCH NO. SHEET

C.E.I. Job 2323-M-320-C[illegible]
I.F.D. No. AF-1-70-02 Rev.1
Data Point [illegible]
Pipe Mat'l [illegible]
Ins. [illegible] Plus. [illegible]

NOTES
1) All tolerances in accordance with CCP #7/CCI U.N.01
2) Fab. Procedure is FP-101
3) All products coated in accordance with LFD File No. 1[illegible] Rev.B

3 THRU 9	1-01-1-1	[illegible]
Shop Weld No.	Weld Procedure	[illegible]

THIRD PARTY INSPECTION
CODE CLASS [illegible]

LOCATION PLAN

ITT GRINNELL
PIPE HANGER DIVISION

REF. DRAWING NUMBERS
PIPE [illegible]
STEEL [illegible]

CONDITIONS	Fx	Fy	Fz	Mx
DESIGN				
NORMAL & UPSET				
EMERGENCY				
FAULTED				

CUSTOMER Texas Utilities [illegible]
ORDER OR CONT. NO. [illegible]
JOB NAME Comanche Peak [illegible]
MARK NO. [illegible]
SKETCH NO.
SHEET 1 OF 2

DOCUMENT [illegible] B
FOR CONSTRUCTION ... CHANGES

NCR M-1802 R1
Pg 16 of 28

WDC Serial # 16266

Drawing # AF-F001-007-Y33R

MULTIPLE WELD DATA CARD

Line # NA

1#7 GmR # 527 HT V Lwm 9-25-79

ITEM NO.	WPS NO.	REV.	ICN	WELD FILLER MATERIAL	WELD NOS.	P.NO.	FABRICATION CODE & CLASS/ACC STD
NA	11032	6	0	E7018	1	1-1	ASME III - 3

NOTES: 1) Applicable QC/ANI hold points shall be indicated by checkmark ✓
2) ANI inspection points indicated by (X).
3) Denote Satisfactory inspections by an "S"; Unsatisfactory inspections by a "U".

OPERATION #	OPERATIONS		
1	CLEANED	7	
2	ALIGNMENT	8	
3	FINAL VT	9	
4		10	
5		11	
6		12	

PRODUCTION RELEASE

WELD NO.	OPERATION	HOLDPOINTS WT	QC	ANI	CONST.	SAT. or UNSAT.	INSPECTION RESULTS (SIGN & DATE) QC or WT	NDE CERT LEVEL	ANI	NDEP/REV.	M&TE # / CALIB. DUE DATE
1	1	NA	✓	NC		S	[illegible] 10/18/79	II		200 10/18/79	
	2		✓			S	[illegible] 10/18/79	II			
	3		✓								
Reviewed	B.P. [illegible] 8-7-79					SJK	8-7-79	[illegible]	8-9-79		

FOR INFORMATION ONLY

NCR M-18520
P2.170f28

NCC Serial No. 16264, 33012

Drawing No. AF-L-001-007-Y33R

WELD FILLER MATERIAL LOG Weld No. 1-2, 3

WELD NO.	DATE	SIZE/CLASS	WELDER SYMBOL	WPS/ICN #	HEAT/LOT # or CODE #	ANT. ISS.	ANT. RT'D.	ISSUANCE APPROVAL
1	10-17-79	E-7018 1/8	ATU	11032 6-0	A80964 D268203	19 rds	19	Larry Tarbay
2	↓	↓	↓	↓	↓	1 rd.	1	Larry Tarbay
3	↓	↓	↓	↓	↓	2 rds.	2	Larry Tarbay P130
1	10-18-79	E-7018 1/8	ATU	11032 6-0	A80964 D268203	15 rds	0	Larry Tarbay
2	↓	↓	↓	↓	↓	3 rds	0	Larry Tarbay
3	↓	↓	↓	↓	↓	2 rds	0	Larry Tarbay P124
1	10-22-79	E-7018 1/8	ATU	11032 6-0	A80964 D268203	5 rds.	3	Larry Tarbay P143
1	10-22-79	E-7018 1/8	ATU	11032 6-0	A80964 D268203	5 rds.	0	Larry Tarbay P01

FOR INFO

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. № 17671

(1) APPLICATION: HFE SUPPORTS — Q ☑ NON-Q ☐ DESIGN CHANGE/DEVIATION ☑	(7) REQUESTED/PREPARED BY: LARRY TOWNLEY / LAS — NAME; HANGER — DEPT
(2) DWG. NO.: AF-1-001-007-Y33R	(4) REASON FOR CHANGE: REVISE TO SHOW MISFABRICATION BY NPS
(3) LINE NO./COMPONENT NO.: AF-1-001-007-Y33R [illegible]	

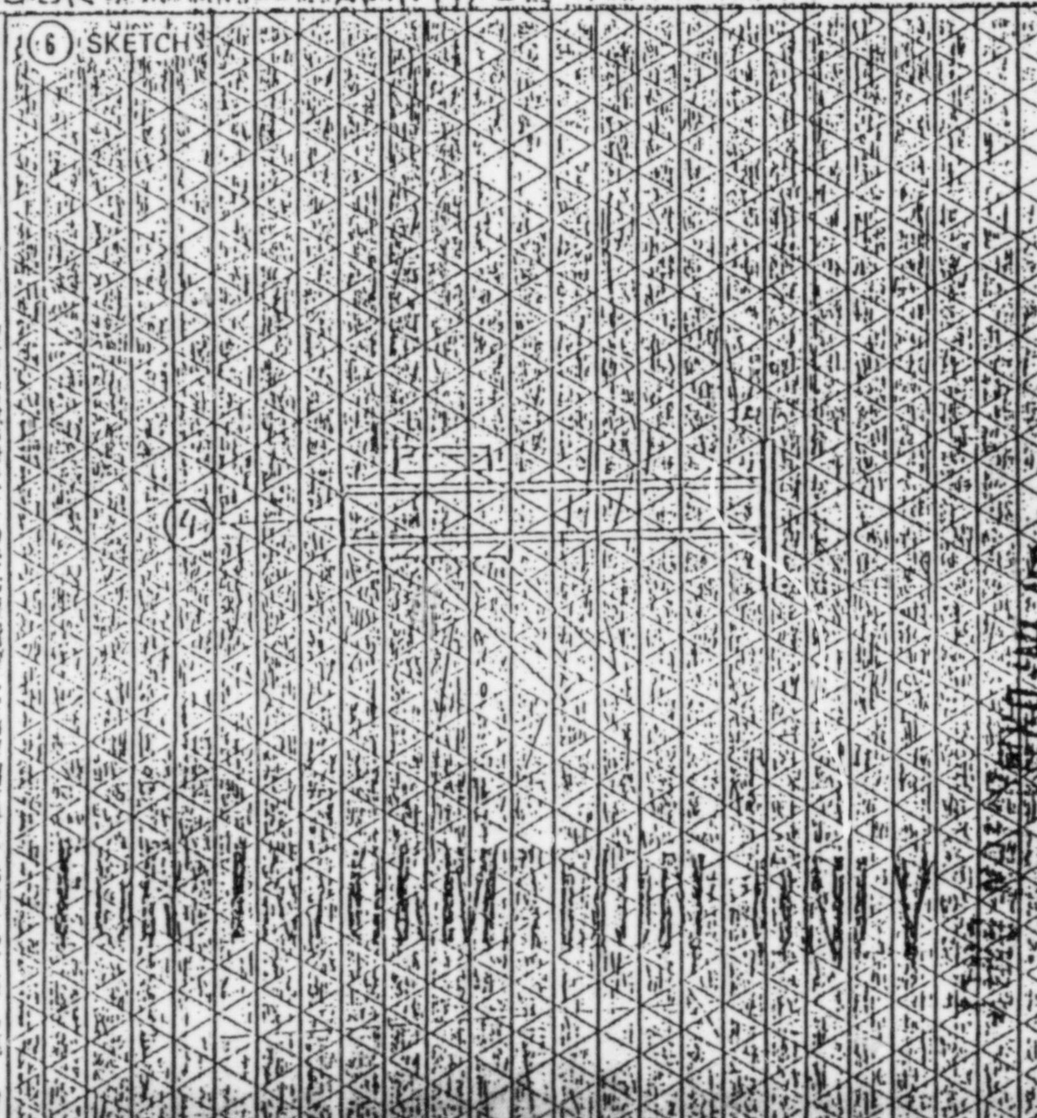
(5) INSTRUCTIONS

REMOVE N/A

REVISE AS SHOWN

ADD N/A

(6) SKETCH



(8) APPROVED BY: A. Phillips 10-17-7[illegible] DATE

DATE

DATE

DATE

DATE

DATE

(9) DISTRIBUTION	DCC CNTL NO.	QT
NPS (SITE)	INFO	[illegible]

NCR M-1802 R1 Pg 18 of 28

NCR M-7[illegible] pg 12 of 26

00072

"AS BUILT" RECORD FORM

1. Hanger Number AF-1-001-007-Y33R Rev. 0
2. Indicate Plate Orientation on above sketch
3. Plate Material Carbon Steel (SA515 Gr.65 or SA36)
4. Plate Thickness 1"
5. Hilti Bolt Size 3/4" x 10"
6. If hanger has more than one plate, indicate which plate is covered. Attach additional forms for other plates as required.

Pipe Support Foreman	Date
[signature]	10/23/79
QC Inspector	Date
Field Mechanical Originator	Date

Revision 0
September, 1979

FOR INFORMATION ONLY

COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)

COMPONENT MODIFICATION CARD (CMC)

SERIAL NO. 17678

(1) APPLICATION: Q ☑ NON-Q ☐ DESIGN CHANGE/DEVIATION ☑

(2) DWG NO.

(3) AE NO./COMPONENT NO.

(4) REASON FOR CHANGE: WALL NOT PLUMB

(5) INSTRUCTIONS:

REMOVE: N/A

Revise AS SHOWN

ADD: N/A

(6) SKETCH

FIELD SHIM

(7) REQUESTED/PREPARED BY: LARRY TOWNLEY / 1A5

NAME

HANGER

DEPT.

(8) APPROVED BY: A. Phillips 10-18

DATE

DATE

DATE

DATE

DATE

DATE

(9) DISTRIBUTION

DCC CNTL NO.

FOR INFORMATION ONLY

FOR REFERENCE

MER M-8022, Pg 20. 1 28

NCR M-1802
Pg. 21 of 28

WOC Mat'l # 33012
Drawing # AF-1-001-007-Y331
Line # NA

MULTIPLE WELD DATA CARD

ITEM NO.	WPS NO.	REV.	ICN	WELD FILLER MATERIAL	WELD NOS.	P.NO.	FABRICATION CODE & CLASS/ACC STD.
NA	11032	6	0	E7018	2-3	1-1	3 ASME III

NOTES: 1) Applicable QC/ANI hold points shall be indicated by checkmark ✓
2) ANI inspection points indicated by (X).
3) Denote Satisfactory inspections by an "S"; Unsatisfactory inspections by a "U".

OPERATION #	OPERATIONS		
1	CLEANED	7	FOR INFO
2	ALIGNMENT	8	
3	FINAL VT	9	
4		10	
5		11	
6		12	

PRODUCTION RELEASE

WELD NO.	OPERATION	HOLDPOINTS WT	HOLDPOINTS QC	HOLDPOINTS ANI	CONST.	SAT. or UNSAT.	INSPECTION RESULTS (SIGN & DATE) QC or WT	NDE CERT. LEVEL	ANI	NDE # / REV.	M&TE # / CALIB. DUE DATE
2	1	NA	✓	NC		S	10/18/79	II		209 10/18/79	
	2	1	✓			S	10/18/79	II			
	3	1	✓	✓		S	10/18/79	II			
Reviewed: [illegible] 10-2-79							10-3-79		SKT 10-16-79		
3	1	NA	✓	NC		S	10/18/79	II		209 10/18/79	
	2	1	✓			S	10/18/79	II			
	3	1	✓	✓		S	10/18/79				
Reviewed: [illegible] 10-16-79							10-16-79		SKT 10-16-79		

FOR INFORMATION ONLY

WE QC ANI

Approval signatures shall be affixed on the line immediately below the last step in each sequence.

C.T. [illegible] on FWD. [illegible] 1936

NCR M-1962 QC Serial # 43339
12-22-78

Drawing # AE-1-A01-007-Y33R

MULTIPLE WELD DATA CARD

Line # NA

ITEM NO.	WPS NO.	REV.	ICN	WELD FILLER MATERIAL	WELD NOS.	P.NO.	FABRICATION CODE & CLASS/ACC STD.
NA	11032	C		E7018	2A	1-1	ASME III - 3

NOTES: 1) Applicable QC/ANI hold points shall be indicated by checkmark ✓.
2) ANI inspection points indicated by (X).
3) Denote Satisfactory inspections by an "S"; Unsatisfactory inspections by a "U".

OPERATIONS

OPERATION #			
1	CLEANED	7	
2	ALIGNMENT	8	
3	FINAL VT	9	
4		10	
5		11	
6		12	

PRODUCTION RELEASE

WELD NO.	OPERATION	HOLDPOINTS WT	HOLDPOINTS QC	HOLDPOINTS ANI	CONST.	SAT. or UNSAT.	INSPECTION RESULTS (SIGN & DATE) QC or WT	NDE CERT LEVEL	ANI	NDEP/REV.	MT&E #/CALIB. DUE DATE
2A	1	NA	✓	NC							
	2		✓	✓							
	3		✓	NC							
Reviewed:	BPD	10-26-79				JJK	10-29-79		SCT 10-25-79		

FOR INFORMATION ONLY

WE QC ANI

Approval signatures shall be affixed on the line immediately below the last step in each sequence.

NCR M-1802e/
Pg. 23 of 28

WDC Serial No. 43339

Drawing No. AF1-001-007-Y33R

WELD FILLER MATERIAL LOG Weld No. 2A

WELD NO.	DATE	SIZE/CLASS	WELDER SYMBOL	WPS/ICN #	HEAT/LOT # or CODE #	AMT. ISS.	AMT. RT'D.	ISSUANCE APPROVAL
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
	[illegible]							[illegible]

FOR INFORMATION ONLY

OMANCHE PEAK STEAM
LECTRIC STATION (CPSES)

WELD ADDITION / REMOVAL CARD

SERIAL NO. 1936

(1) APPLICATION: PIPE SUPPORT Q [X] NON Q [ ]

(10) REQUESTED BY: LARRY TOWNLEY
NAME
PIPE SUPPORT
DEP

(2) DWG. NO.
AF-1-001-007-Y33R

(3) WELDS ADDED/REMOVED

REMOVE [FW 2]

CUT FW 2

ADD [FW 2-A]

REPLACE
BOLT AND
REWELD
FW 2A

(4) REASON FOR CHANGE: BOLT BROKEN

(8) SKETCH

WELD ENGR	[illegible]
MECH ENGR	[illegible]
START UP	[illegible]
Q.C. DEPT.	[illegible]
[illegible]	[illegible]
PIPE SUPT.	[illegible]
HGR SUPT.	[illegible]
G.J.H.	[illegible]
[illegible]	[illegible]

M.R.S. REQUIRED

(7) APPROVAL NAME: K. McClung DATE: 10-26-79

NCR M-1802e/ pg 25 of 28

00315

"AS BUILT" RECORD FORM

1. Hanger Number: AF-1-001-007-V33R Rev. 0

2. Indicate Plate Orientation on above sketch

3. Plate Material C-S SA515 Gr 65 or SA36

4. Plate Thickness 1"

5. Hilti Bolt Size 3/4 x 10

6. If hanger has more than one plate, indicate which plate is covered. Attach additional forms for other plates as required.

Pipe Support Foreman ______ Date ______

QC Inspector ______ Date ______

Field Mechanical Originator ______ Date ______

Revision 0
September, 1979

TEXAS UTILITIES
GENERATING CO.

COMANCHE PEAK STEAM ELECTRIC STATION
NONCONFORMANCE REPORT (NCR)

NCR No. C-82-00523

Vault

UNIT	STRUCTURE/SYSTEM	ITEM/COMPONENT	TAG/ID NUMBER	LOCATION OR ELEVATION	RIR NO.
1	RB #1 Containment Wall	Reinforcing Bars	Pour Number 101-5805-036	820'8"	N/A

REPORTING PERSONNEL

NONCONFORMING CONDITION

2323-SS-10, R.4, para. 6.4.1, states in part "...reniforcement shall be accurately placed in accordance with the drawings ..." 2323-S1-0505, R. 13, Section1-1, calls for the first row of #6 "Z" shaped bars to originate at approximately Elev. 820'8". The concrete of pour 101-5805-036 was placed to Elev. 823'6" without the above mentioned bars being installed.

REFERENCE DOCUMENT: 2323-SS-10/2323-S1-0505 REV 4/13 PARA 6.4.1/Sect.1-1

REPORTED BY: Dan Chandler DATE: 5/3/82

QE

QE REVIEW/APPROVAL: Harry D. Williams DATE: 5/3/82

ACTION ADDRESSEE: J. T. Merritt/Kissinger DEPARTMENT: Engineering

ACTION ADDRESSEE

DISPOSITION:

REWORK _____ REPAIR _____ USE AS IS _____ SCRAP _____

FOR INFORMATION ONLY

ENG. REVIEW/APPROVAL DATE: / /

QE

QE REVIEW APPROVAL: DATE: / /

DISPOSITION VERIFICATION & CLOSURE: DATE: / /

COMMENTS:

R148

Date

ROUTING AND TRANSMITTAL SLIP

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1.		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

To

Mail it to John Fudan
He is in Vince Noonan's
(P-234)
office

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
12/6/84	Phone No.

OPTIONAL FORM 41 (Rev. 7-76)
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R149

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