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My name is Richard D. Parks. I work as an investigator for the Government Accountability Project (GAP) in the Diablo Canyon Power Plant (DCPP) Investigation. I am providing this sworn statement to evidence concerns over a problem at DCPP.

Recently a packet of documents came into my possession from a series of anonymous sources. These documents included Design Change #DC-2-E-P-10544, Deficient Condition Notice (DCN) #1350-011, PSA Snubber Checklist, Field Support Process Sheets, Pipe Support Design Tolerance Clarification Forms (Quick Fixes) #QF-2-6916, QF-2-5168, QF-2-5156, QF-2-2011], Minor Variation Report #M-4490, PG&E DCPP-Environmental Qualification (EQ) Maintenance Training Course #MA050, and HP Foley Valve Maintenance Report #1845. They are enclosed in a packet identified as Attachment 1.

These documents relate to Residual Heat Removal (RHR) Pump #1 Recirculation Valve (FCV-641A- Unit 2), and its associated hanger #413-143 SL. On page 40 of Attachment 1, this valve is listed as being Environmentally Qualified. Attachment 1, pages 37-41 explain the significance of this qualification.

After receiving and reviewing this packet of documents, I reviewed the documents with several past/present Quality Control (QC) inspectors from DCPP. Each of these individuals are aware of the problem contained in the DCN and confirmed that the problem still exists in the plant. I also reviewed NUREG-0588 to complete my familiarization with the Qualification requirements.

8406250231 840621
PDR ADOCK 05000275
G PDR

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A review of the attached documents reveals the following problems with the Environmental Qualification Program practices at DCPD:

Problem #1: During the "As-built Inspection", the responsible QC Inspector identified that the 5/8" studs holding the valve motor to the seismic valve support plate (piece # 1, Attachment 1 page 9) had never been replaced. These studs were required to be changed by the original Design Change #DC-2-E-P-10544, (refer to Note #2 Attachment #1, page 7). This deficient condition was documented on a DCN (Attachment 1 page 16) and identified that a Deviation Report should be submitted to PG&E. This should have resolved the problem; however, the original inspector was over ridden and his DCN changed by A. Weinstein on 2/27/84. A. Weinstein's justification for his action is described on page 17 of Attachment 1.

The individuals that I reviewed this problem with informed me that the reason the studs had to be replaced was 1) due to the addition of a 1/2" support plate being bolted to the motor housing, it was necessary to ensure sufficient projection of threads, and 2) the existing old studs had visible indication of damaged threads. Apparently the craft, when disassembling the valve to make the modification, had used vise-grips to back the studs out of the motor. Thus to ensure adequate strength with respect to fastening/torque requirements the studs should have been replaced. They were not.

Conclusion: If the threads on the studs in question were in fact damaged, they should have been replaced. Paragraph 3 on page 36, Attachment 1 identifies that if any doubt existed on the studs, "good maintenance practice" would have been to replace them. Unfortunately, they were not.

Problem #2: The uncontrolled disassembly of an EQ Nuclear Safety Related Valve without use of a controlled procedure resulted in damage to the valve and discharge of personnel involved. This is documented on pages 35 and 36 of Attachment 1. This incident resulted in the generation of an MVR; that was deemed to be only a violation of Project Instruction #8 (Tagout Procedure) and a "PPP in-house Non-Compliance Report". However, the MVR was marked as "not reportable" and "not a Non-Conformance", despite its relevance for NUREG-0588 compliance.

Conclusion: Due to the significance of the valve and the conflicting statements on reportability, it should have been deemed "reportable" and reported to the NRC.

Problem #3: Attachment 1 page 36, "EQ Effects On Maintenance" states in part "...provide detailed descriptions of maintenance work performed as input for failure analysis (trend) study."

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However, a review of Valve Maintenance Report (#MVR-1845), Attachment 1 page 41, does not include a listing of "what damaged parts were repaired or how they were repaired."

Problem #4: A letter from D.A. Rockwell to P. Stieger (Attachment 1 page 34) identifies that the practice of installing seismic valve supports to EQ valves could be violating EQ requirements. The letter requires Pullman Power Products (PPP) to respond and provide "a list of all seismic valve supports completed or presently being worked" by March 5, 1984. This is a problem because valves that have already been disassembled to install the seismic supports may have already violated EQ Nuclear Safety Related Requirements and have gone unreported. In the instance of FCV-641A, the violation occurred 10 months before the problem was officially "flagged" to PPP for EQ compliance.

Conclusion: There is an apparent deficiency in PG&E's training program to acquaint personnel with the requirements of EQ and Nuclear Safety Related Equipment.

The problems identified in the review of the attached documents reveal significant deficiencies in the QA/QC and EQ compliance requirement practices of the Nuclear Safety Related Equipment at Diablo Canyon Unit 2. Even though the documents are restricted to Unit 2, the witnesses informed me that the problems they address are generic to both Units with respect to training and familiarity with specialized requirements. The same people perform the same type of work in both units. If the practices discussed in this statement exist in Unit 1 or Unit 2, the reliability of any EQ valve similarly disassembled is indeterminate. Unfortunately, the reliability of these valves is taken for granted by both the NRC and the operators of the plant.

I will further discuss these issues with NRC good faith efforts to address these issues.

I have read the above -4- page statement and attached documents, and swear under penalty of perjury, this statement is true

and accurate to the best of my belief.

Richard D. Parks
Richard D. Parks

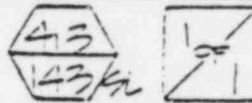
Subscribed and sworn to before me this 22 th day of May, 1984.



Lisa R. Wenter
Notary Public in and for
the County of San Luis
Obispo, State of
California

4-3-84

RL: BKW



CHECKED BY: JIM

| ITEM NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|
| CALLOUTS | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | |
| EOM. | ✓ | ✓ | ✓ | ✓ | ✓ | X | X | ✓ | X | | | | | | | | | | |
| LOCATING DIMENSIONS | ✓ | X | ✓ | ✓ | ✓ | ✓ | ✓ | X | ✓ | | | | | | | | | | |
| ORIENTATION | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | |
| WELDS | X | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | |

MISC:

| | |
|---|----------------------|
| ✓ | RES. STAMPED |
| ✓ | DESIGN & CODE CLASS |
| ✓ | FOR DATA SEE FILE... |
| ✓ | ISO. # |
| X | REF. HERS. |
| ✓ | END OF PIPE DIM. |
| ✓ | VIEW TITLES |
| X | REF. ELEVATIONS |
| ✓ | NORTH ARROWS |
| ✓ | KNEE BRACE DIM. |
| ✓ | VIEW ORIENTATION |
| ✓ | DELETED 4 CLARITY |
| ✓ | CUT AS SHOWN, ETC. |
| ✓ | NO. OF ASSEMBLES |
| ✓ | WELD NOTE |
| ✓ | VENT HOLES |

SNUBBERS:

| | |
|---|-----------------------|
| ✓ | PIN TO PIN DIM. |
| ✓ | OFFSETS |
| ✓ | N FOR PRENF |
| ✓ | ROTATION END FOR END |
| ✓ | S.N./MARK# |
| ✓ | RADIUS CLAMP# |
| ✓ | NPS T.T. IDENT# |
| ✓ | ACTUAL GROUND SETTING |
| ✓ | PIPE END VENT HOLE |

NOTES:

- ~~①~~ DOES IT. ② & ③ HAVE WASHERS? **NO**
~~②~~ EXTENSION PIPE IS DELETED ON AFL, ON R/L IT IS STILL THERE. WHICH IS IT?
~~③~~ ARE ② & ③ CENTERED ON ST (ELEV. WAS SOUTH)
~~④~~ IS IT WELDED 2 PLCS? **YES**
~~⑤~~ NOTE REF. HRS 413-141SL ON COVER SHEET
~~⑥~~ GIVE REF. PIPE ELEV.

61'-6" REF

FOR INFORMATION ONLY

A-1
pg 2

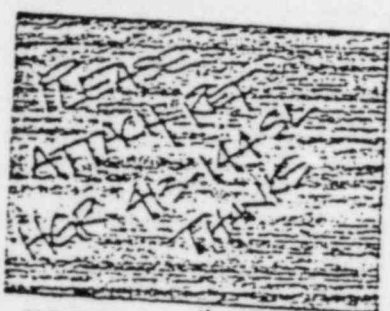
WIL TWO
SYSTEM 10

AREA H
ELEVATION 60'-0"

DATE PREPARED 3-30-84
BY BRAD WHITAKER

SUBMITTED TO PG&E FOR REVIEW AND DISPOSITION

Reason this As-Built is issued:



To close DCN # 1350-011

OR #

Exception list request #

PG&E work request #

Other

REFERENCE FOR HANGER SYMBOL 413-143 SL

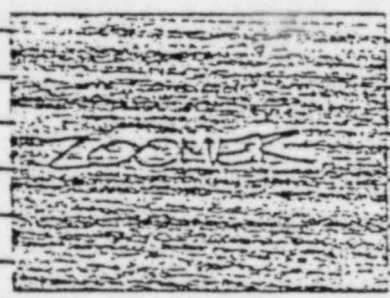
ORIGINAL DRAWING NO.'S/SERIES/REVISION SK 413-143 SL / 147, 147A, 147B, 147X / REV. 0

VARIED TO DRAWING NO.'S/SERIES/REVISION SAME

DRAWING ETC., FOR REFERENCE ONLY: QF-2-5155 QF-2-2011 QF-2-5162

REASON EXPLANATION OF CHANGE OUTSIDE OF THE JURISDICTION OF E&C - REV. 11-28-83

- 1) WELD CLARIFICATION PER QF-2-5155
- 2) ANCHOR BOLT SUBSTITUTION PER QF-2-2011
- 3) PIN TO PIN CLARIFICATION PER QF-2-5162
- 4) BOLT HOLE LOCATIONS PER QF-2-5162



FOR INFORMATION ONLY

3.0.4.2. COMMENTS:

A - 1

pg 3

SHEET 4 OF 7

| | | | |
|------------------|----------------------------|--|------------|
| AREA <u>2-H</u> | LINE <u>2-91-930-3 III</u> | HANGER SYMBOL <u>DP 222</u> <u>VER 11-10-83</u> <u>VER 11-10-83</u> | <u>413</u> |
| EL <u>60'-0"</u> | <u>RHR SYSTEM</u> | LOC ON DWG <u>500922</u> | |

| REV | ISSUE DATE | DESCRIPTION OF CHANGES | PREPARATION | | | APPROVAL | | |
|-----|------------|------------------------|-------------|-----|------|----------|------|-----------|
| | | | DSGN | DWN | CHKD | DLS | ENGR | SUPV ENGR |

| | | | | | | | | |
|---|--|---|-----|-----|-----|----|---|----|
| 1 | | SUPPORT ADDED PER STRESS PROB G-003-08 BY GPD ON 3-23-83 | U.D | KRM | VKM | 12 | - | 13 |
|---|--|---|-----|-----|-----|----|---|----|

FOR INFORMATION ONLY

10
RHR

P.P.P. AS BUILT DRAWING

| DATE | P.P.P. VERIFIED |
|----------|-----------------|
| 11-10-83 | BKW |

"APPROVED WITH
CONDITION THAT
NO REBAR BE CUT"

NOTES:

1. THE RING IS IN TWO HALVES AND IS TO BE WELDED ON UNDERSIDE AFTER BOLTING TO THE VALVE FLANGE
2. FIELD TO REPLACE EXISTING 5/8" Ø STUDS WITH LONGER STUDS OF SAME SPECIFICATION: ASTM A573 GR. 57

DC-2-E-P10544 25/10

SHEETS ASSIGNED TO THIS HANGER SYMBOL (TOTAL 4 SHEETS)

SK-413/239 REV. 0

147 142 143 142

CONTROLLED COPY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

| | | |
|---------------|------------|--|
| DSGN U.D | DRAWING NO | |
| DWN BY B.K.W. | | |
| CHKD VKM | 55-10 | |

| | | | | | |
|-------------------------------|----------------|---------------------|------------|-------|-----|
| PROJECT: <u>DIABLO CANYON</u> | UNIT: <u>2</u> | 147 X OF <u>SHS</u> | P G & E CO | ISSUE | REV |
|-------------------------------|----------------|---------------------|------------|-------|-----|

MICROFILM

76-1463 (11-80)

A-1
Pg 4

SHEET 5 OF 7

AREA 2-N

LINE 2-SI-930-3

HANGER SYMBOL

DP 222
A/S BY SKW 10-10-83
VERT. - SKW SNLB

413
1437

EL 60'-0"

RHR SYSTEM

LOC ON DWG 500422

P.P.P. AS BUILT DRAWING

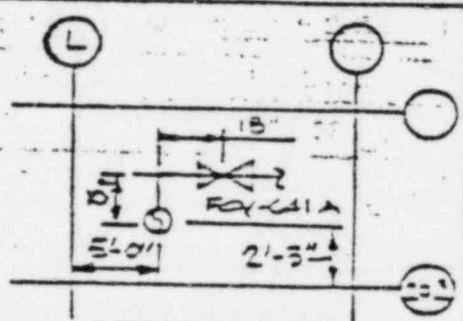
| DATE | P.P.P. VERIFIED |
|----------|-----------------|
| 11-10-83 | SKW |

DESIGN CLASS 1
CODE CLASS 3

CALLED NORTH



10
RHR



LOCATION PLAN

NO. OF ASSEMBLIES REQUIRED

| NO | REQ'D | MATERIALS PER ASSEMBLY |
|----|-------|--|
| 1 | 1 | 2 1/2" x 10' x 0'-10" (SEE DETAIL SECTION A-A) |
| 2 | 1 | BAR 1/2" x 2' x 0'-2" |
| 3 | 1 | PSX 1/2" WF. WITH TRANSITION TUBE KIT GS-138 H.S. = 1 3/16" (NOTE ONE REAR BRACKET INCLUDED IN ASSY) STROKE = 2 1/2" |
| 4 | 1 | W 6 x 13 x 1'-7" LG. |
| 5 | 1 | 2 1/2" x 10' x 0'-10" BW / 4-11/16" HOLES PER DETAIL SHOWN |
| 6 | 2 | 5/8" x 6" LG. HILT KWIK BOLT, MIN EMBED = 2 3/4" |
| 7 | 1 | EXTENSION PIPE 1.05 O.D. x 1.13 I.D. (LENGT - BY FIELD) |
| 8 | 1 | REAR BRACKET FOR PSX 1/2" AD 75 |
| 3 | 1 | AD 71 5/16" 14 W/AD 76 TT. & AD 75 R.B. C.S. = 1 3/8" H.S. = 1 3/16" |
| 9 | 2 | 5/8" x 4 1/2" LG. HILT KWIK BOLT MIN. EMBED = 2 3/4" |

APPROVED WITH
CONDITION THAT
NO REBAR BE CUT

FOR INFORMATION ONLY

CONTROLLED COPY

DC-2-E-P10544 28/0

SK-413/422 REV. 0

CSGK 4/0
OWN 2/27 3/24/83
CHKD VEM

DRAWING NO
251413

PROJECT: DIABLO CANYON

UNIT: 2

SHT. OF SHTS

P G & E CO

ISSUE REV

(MICROFILM)

A-1
185

SHEET 6 OF 7

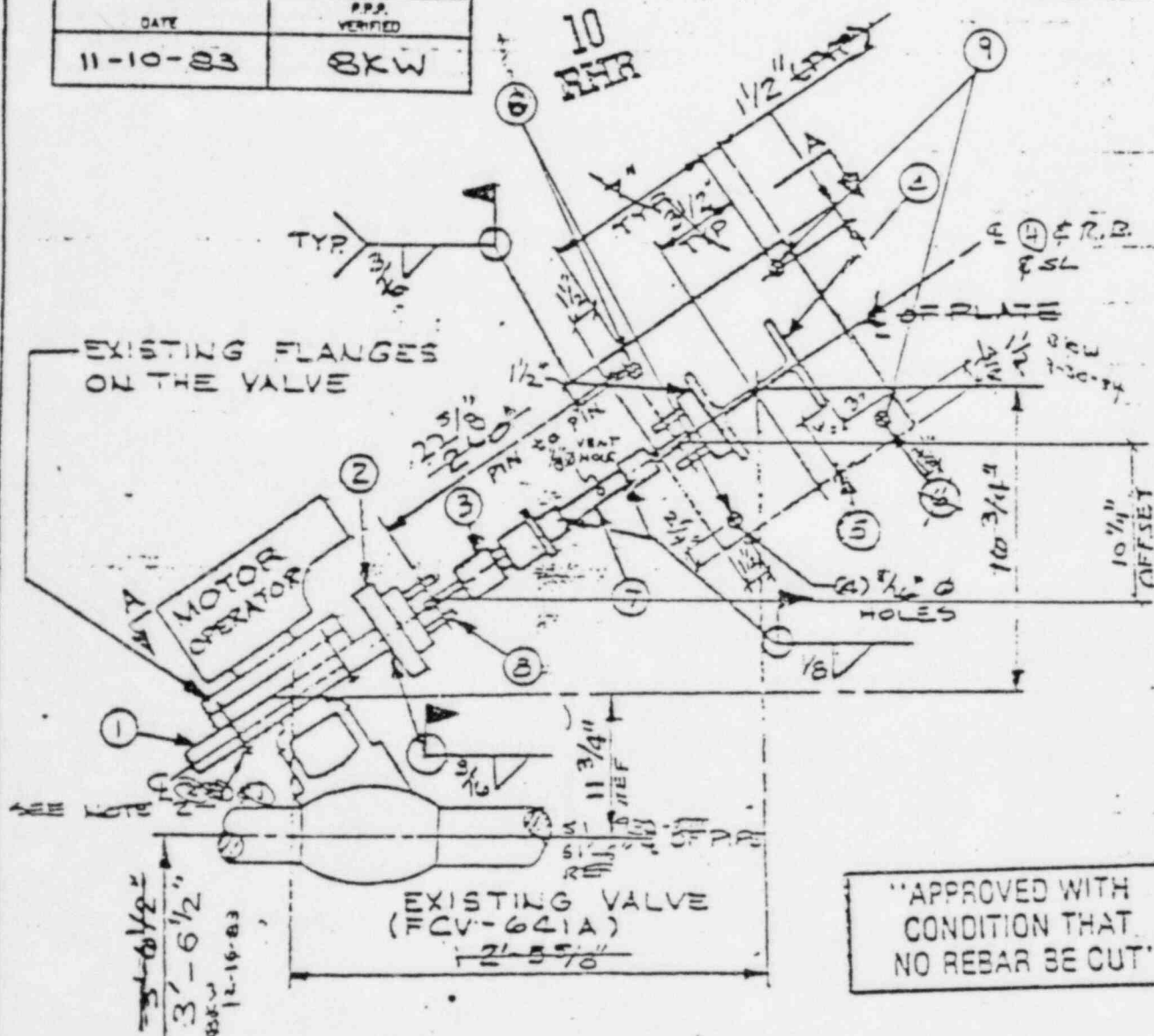
76-1117 Rev 3-75

| | | | |
|------------------|-------------------------|---|-------------|
| AREA <u>2-H</u> | LINE <u>2-SI-934-3I</u> | HANGER SYMBOL <u>DP 222</u> VERT-SREW 1/2-19-83 | 413 1435 |
| EL <u>60'-0"</u> | <u>RHR SYSTEM</u> | LOG ON DWG <u>504922</u> | |

FOR INFORMATION ONLY

P.P.P. AS BUILT DRAWING

| DATE | P.P.P. VERIFIED |
|----------|-----------------|
| 11-10-83 | 8KW |



"APPROVED WITH
CONDITION THAT
NO REBAR BE CUT"

EL. LKG SOUTH

DC-2-E-P10544 RSL
SK. 413/1435L REV. CONTROLLED COPY (REF)

| | | | |
|-------------------------------|----------------|---------------------------|---------------------------|
| PROJECT: <u>DIABLO CANYON</u> | UNIT: <u>2</u> | DESIGN <u>L.D.</u> | DRAWING NO. <u>504922</u> |
| | | DWN <u>2/29/83</u> | |
| | | CHKD <u>VLM</u> | |
| | | SHT <u>14</u> OF <u>1</u> | SHTS |
| | | P G & E CO | |
| | | ISSUE | REV |

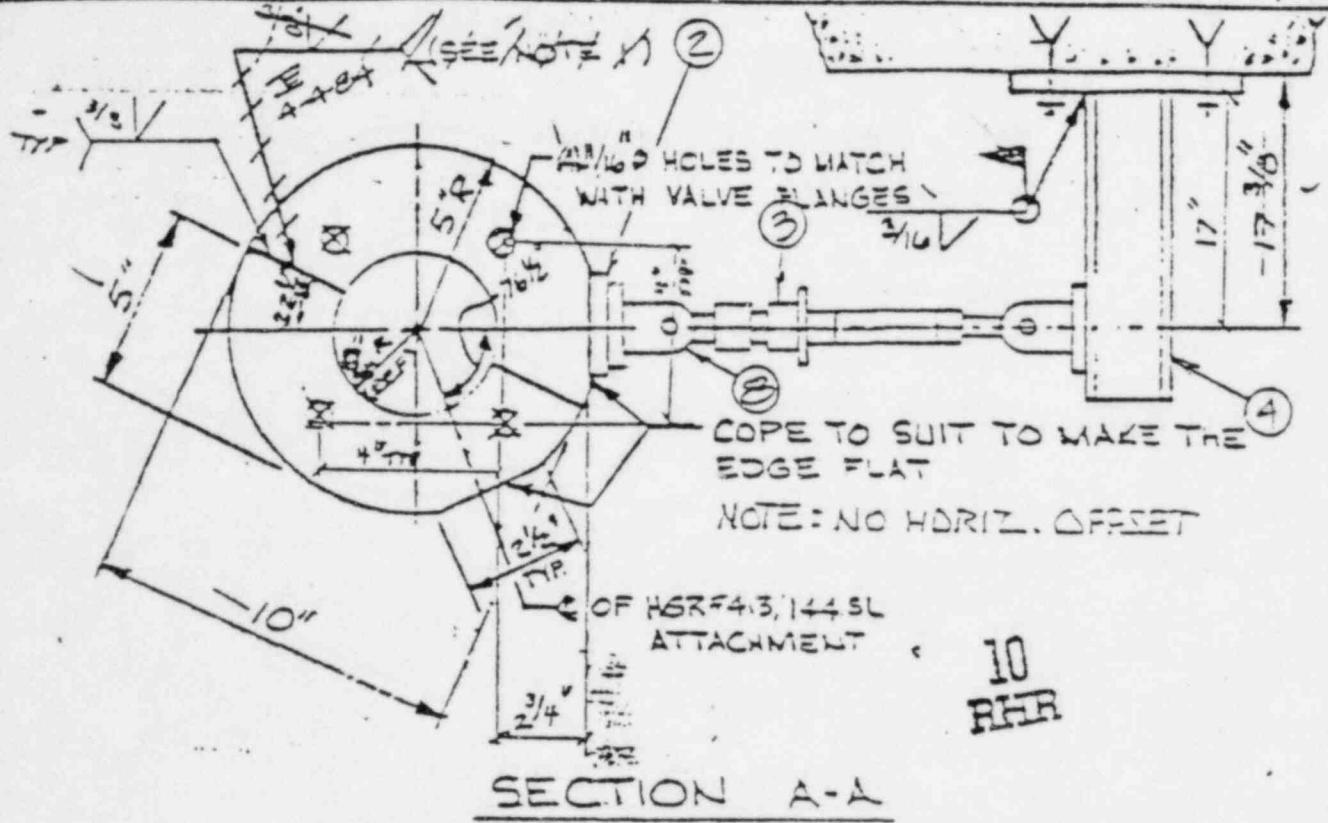
MICROFILM

A-1
Pg 6

SHEET 7 OF 7

76-1117 Rev 3-76

| | | | |
|------------------|------------------------|--|---------------------------|
| AREA <u>2-H</u> | LINE <u>2-SI-930-3</u> | HANGER SYMBOL <u>DD 222</u> VERT. SKEW <u>2</u> L.S. | <u>413</u> <u>H3SL</u> |
| EL <u>60'-0"</u> | <u>RHR SYSTEM</u> | LOC ON DWG <u>500922</u> | |



FOR INFORMATION ONLY

"APPROVED WITH
CONDITION THAT
NO REBAR BE CUT"

P.P.P. AS BUILT DRAWING

| DATE | P.P.P. VERIFIED |
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| 11-10-83 | BKW |

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|-------------------------|
| DC-2-E-P 10544 Rev. 0 |
| SK. 413/ H3SL REV. 0 |

| | | | | | | |
|-------------------------------|----------------|--------------------|--------------------------|-----------|----------------|-----|
| PROJECT: <u>DIABLO CANYON</u> | UNIT: <u>2</u> | DSGN <u>L.D.</u> | DRAWING NO. <u>05-02</u> | PG & E CO | ISSUE <u>1</u> | REV |
| | | CHKD <u>V.K.M.</u> | | | | |
| SHT <u>1</u> OF <u>2</u> | | MICROFILM | | | | |

SHEET 4 OF 7

76-1483(4-82)

| | | | |
|------------------|------------------------|--------------------------------|--|
| AREA <u>2-H</u> | LINE <u>2-51-930-3</u> | HANGER SYMBOL <u>DP 222</u> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">413 1934</div> |
| EL <u>60'-0"</u> | <u>RHR SYSTEM</u> | VERT SKEN ENUB. | |
| | | LOC ON DWG <u>500922</u> | |

| REV | ISSUE DATE | DESCRIPTION OF CHANGES | PREPARATION | | | APPROVAL | | |
|-----|------------|------------------------|-------------|-----|------|----------|------|-----------|
| | | | DSGN | DWN | CHKD | DUS | ENGR | SUPV ENGR |

| | | | | | | | | |
|---|--|--|-----|----|-----|----|---|----|
| 1 | | SUPPORT ADDED PER STRESS PROB G-003-08 BY GPD ON 3-23-83 | U.D | KM | VKM | 12 | - | 13 |
|---|--|--|-----|----|-----|----|---|----|

FOR INFORMATION ONLY

•10
RHR

APPROVED FOR CONSTRUCTION
5-19-83 BS
DATE 5-10-83 ENGR BS

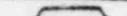
"APPROVED WITH CONDITION THAT NO REBAR BE CUT"

NOTES:
1. THE RING IS IN TWO HALVES AND IS TO BE WELDED ON UNDER SIDE AFTER BOLTING TO THE VALVE FLANGE
2. FIELD TO REPLACE EXISTING 5/8" STUDS WITH LONGER STUDS OF SAME SPECIFICATION WITH ADD. GR 37
USE ASTM 193, GR 3
6-7-83 BS 5-10-83
SHEETS ASSIGNED TO THIS HANGER SYMBOL (TOTAL 4 SHEETS)

DC-2-E-P10544 25/0
SK: 413/435 REV. 0

| | | | | | | | | | | | | | |
|-------------------------------|-----|-----|----------------|-----|-----|----------|-----|-----|----------------------------|-----|-----|-------|-----|
| 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 |
| PROJECT: <u>DIABLO CANYON</u> | | | UNIT: <u>2</u> | | | 147 X OF | | | SHE: <u>P G & E CO</u> | | | ISSUE | REV |

76-1463 (11-80)

| | | | |
|------------------|------------------------|---|---|
| AREA <u>2-H</u> | LINE <u>2-SI-930-3</u> | HANGER SYMBOL <u>DP 222</u> |  |
| EL <u>60'-0"</u> | <u>RIR SYSTEM</u> | VERT.-SKEW <u>5N13</u> LOC ON DWG <u>5004.22</u> | |

DESIGN CLASS I
CODE CLASS 3

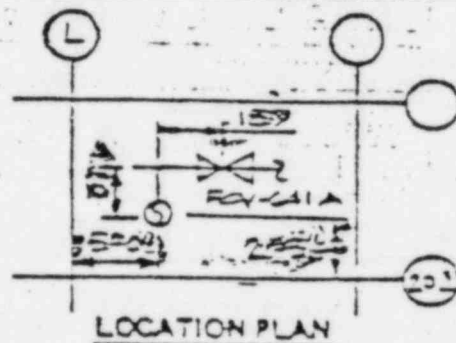
CALLED NORTH



APPROVED FOR
CONSTRUCTION

5198) 21
DATE 5. FEB 83

10
RHR



NO. OF ASSEMBLIES REQUIRED

| NO | REQ'D | MATERIALS PER ASSEMBLY |
|----|-------|--|
| 1 | 1 ✓ | P. 1/2"x10x0'-10" (SEE DETAIL SECTION A-A) |
| 2 | 1 ✓ | BAR 1/2"x2"x0'-2" OF A/D TG 27-850273, 6 10.8 60 10.8 93 |
| 3 | 1 ✓ | 2SA 40/11 WF, WITH TRANSITION TUBE KIT C.S = 13.8 WS. = 1.3/16 (NOTE ONE REAR BRACKET INCLUDED IN ASSY) STROKE = 2 1/2" |
| 4 | 1 ✓ | W 6 x 13 x 1'-7" LG. |
| 5 | 1 ✓ | P 1/2"x10x0'-10" W/ 4 - 1/2" HOLES PER DETAIL SHOWN |
| 6 | #2 | 5/8" x 6" LG HILTI KWIK BOLTS, MIN EMBED = 2 3/4" |
| 7 | 1 | EXTENSION PIPE 1.05 O.D X 112 I.D. T.C L.F.G. = 7' 5 1/2" 3/16 |
| 8 | 1 ✓ | REAR BRACKET FOR 2SA 40/11 #2 5/17/33 35 115 515 515 515 |
| 9 | 2 ✓ | 5/8" x 4 1/2" LG. HILTI KWIK BOLT, MIN EMBED = 2 3/4" 6.3 83 20.3 20V |
| | | |
| | | |
| | | |
| | | |
| | | "APPROVED WITH |

APPROVED WITH
CONDITION THAT
NO REBAR BE CUT

THE UNIVERSITY OF CHICAGO

CONTROLLED COPY

DC-2-E-P 10544 2410

SK-413/REV. 0

28 x 10

DRAWING NO.

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合

PROJECT: DIABLO
CANYON

UNIT: 2

2000

22-00000

REVIEWS

PROFILE

A-1
pg 9

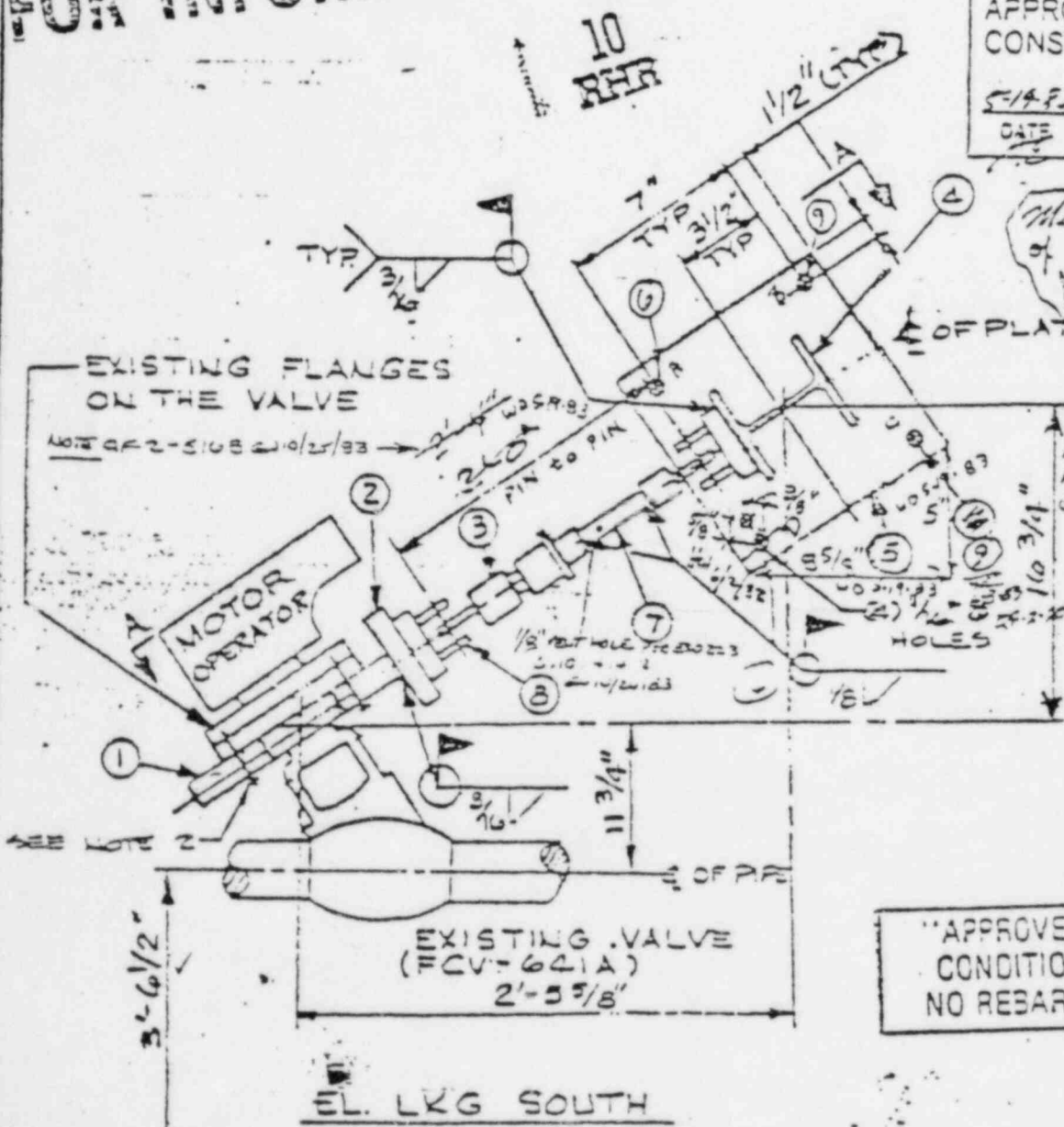
SHEET 6 OF 7

76-1117 Rev 3-76

| | | | |
|------------------|--------------------------|--------------------------------|---------------------------|
| AREA <u>2-H</u> | LINE <u>2-SI-936-3II</u> | HANGER SYMBOL <u>DP 222</u> | <u>413</u> <u>435L</u> |
| EL <u>60'-0"</u> | <u>RHR SYSTEM</u> | VERT-SKEW SUB. | |
| | | LOC ON DWG <u>506922</u> | |

FOR INFORMATION ONLY

APPROVED FOR CONSTRUCTION
5/14/83
DATE 5/16/83
ENGR



Min Embed at 1 end of Final AS Duct 10/15/84
A = 4 9/16
B = 2 1/16
C = 2 1/16
D = 2 1/16
E = 10/25/83

"APPROVED WITH CONDITION THAT NO REBAR BE CUT"

| | |
|---------------------|-----------------------|
| DC-2-E-P10544 R510 | FL. EL. <u>55'-0"</u> |
| SK. 413/435L REV. 0 | CONTROLLED COPY |

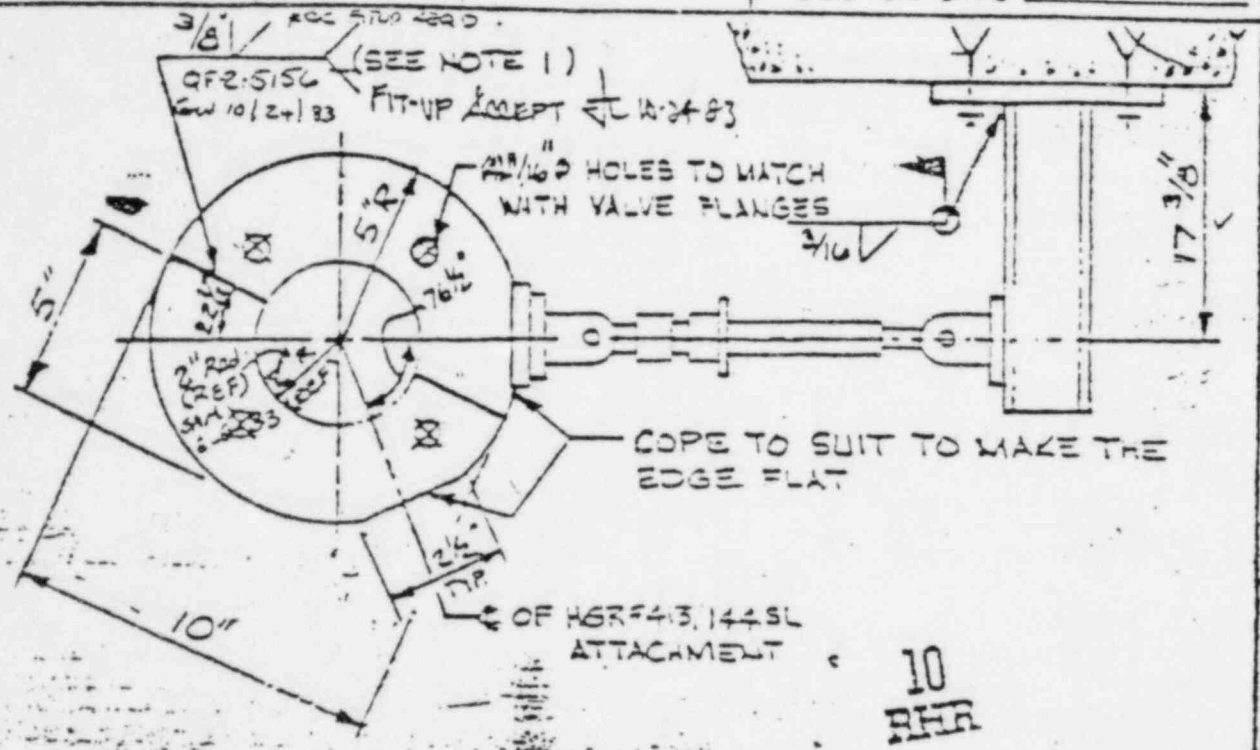
| | | | | |
|-------------------------------|----------------|-----------------------------|----------------------------|-----------------------------|
| PROJECT: <u>DIABLO CANYON</u> | UNIT: <u>2</u> | SHT. <u>147</u> OF <u>2</u> | SHTS. <u>PG & E CO</u> | ISSUE <u>1</u> REV <u>1</u> |
| MICROFILM | | | | |

A-1
Pg 10

SHEET 7 OF 7

76-1117 Rev 3-76

| | | |
|------------------|---------------------------|--------------------------------|
| AREA <u>2-H</u> | LINE <u>2-SI-930-3 II</u> | HANGER SYMBOL <u>DP 222</u> |
| EL <u>60'-0"</u> | <u>RHR SYSTEM</u> | VERT-SKEW <u>SLUS</u> |
| | | LOC ON DWG <u>500-22</u> |



SECTION A-A

FOR INFORMATION ONLY

| | |
|---------------------------|------|
| APPROVED FOR CONSTRUCTION | |
| 549-12 | 12 |
| DATE 5-10-83 | ENGR |

"APPROVED WITH
CONDITION THAT
NO REBAR BE CUT"

| |
|----------------------|
| DC-2-E-P 10544 23/10 |
| SK. 4137 10 Rev EUT |

| | | | | | | |
|-------------------------------|----------------|--------------------------|--------------------------|-----------|-------|-----|
| PROJECT: <u>DIABLO CALVOL</u> | UNIT: <u>2</u> | DSGN <u>L.D</u> | DRAWING NO <u>05-0-2</u> | PG & E CO | ISSUE | REV |
| | | OWNR <u>3/20/83</u> | | | | |
| | | CHKD <u>V.K.M</u> | | | | |
| | | SHT <u>1</u> OF <u>3</u> | SHTS | | | |

MICROFILM

A-1
Pg 11

INSTRUCTION NO. 12
ATTACHMENT A

PIPE SUPPORT DESIGN TOLERANCE CLARIFICATION FORM

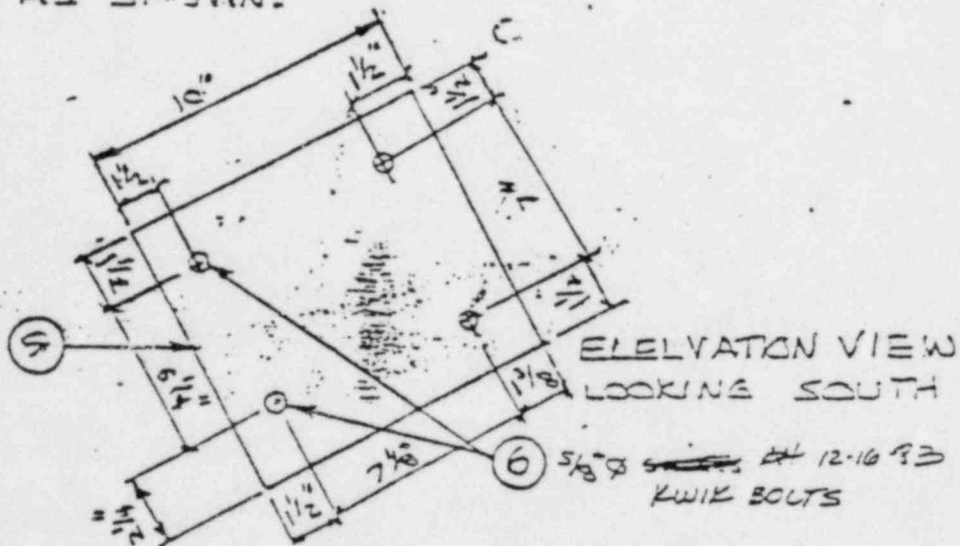
SUBJECT 413-143SL REV 0 SEQUENCE NUMBER QF-2-6916
CLASS 1-B

LOCATION AREA: 2-H ELEV: 60'-0"

FOR INFORMATION ONLY

- ☐ pre-inspect
☐ post pre-inspect
☐ during installation
☒ after installation
☐ other

DESCRIPTION: BOLTHOLE LOCATION ON BASE R 5
AS SHOWN:



IS THIS ACCEPTABLE?

THIS IS ACCEPTABLE

P.P.P. F.E. 12/16/83
G.C. F.E. MF 12-16-83

REFERENCE DRAWING SK-413-143SLSH 147

ATTACHMENTS YES (NO) PAGES (INC. THIS SHEET) 1

AREA ENGINEER:

CONSTRUCTION MAY PROCEED

Pete Libera

DATE 12-16-83

CONSTRUCTION C.P. REC'D

CONTRACTOR RECEIVED

[Signature] 12-16-83

A-1
pg 12

INSTRUCTION NO. 12
ATTACHMENT A

PIPE SUPPORT DESIGN TOLERANCE CLARIFICATION FORM

SUBJECT 413-143SL REV (DC) 0 SEQUENCE NUMBER DF-2-5/68 CLASS I/B

LOCATION AREA: 2-H ELEV: 60'

- ☐ pre-inspect
- ☐ past pre-inspect
- ☒ during installation
- ☐ after installation
- ☐ other

DESCRIPTION: AS INSTALLED, THE PIN TO PIN DIMENSION FOR THE A/D SWUBBER IS 22 1/16" WHICH IS 5/16" SHORTER THAN THE CURRENT ESD 223 ALLOWS AS TOLERANCE. 10-26-83

IS THIS ACCEPTABLE?

FOR INFORMATION ONLY

THIS IS ACCEPTABLE!

DC-2-EP - 10544 REV. 0

REFERENCE DRAWING SK-413/143SL SH

P.P.P. F.E. GW
S.C. F.E. T.C
REGL.

ATTACHMENTS YES

(NO)

PAGES (INC. THIS SHEET) 1

AREA ENGINEER:

CONSTRUCTION MAY PROCEED

D B P L

DATE 10/25/83

CONSTRUCTION S.S. REC'D

CONTRACTOR RECEIVED

Allen Wang

DATE 10/25/83

A-1
Pg 13

INSTRUCTION NO. 10
ATTACHMENT A

PIPE SUPPORT DESIGN TOLERANCE CLARIFICATION FORM

SEQUENCE NUMBER OF-2-S156

SUBJECT 413-143 SL REV(DC) 0 CLASS I / 3

LOCATION AREA: 2-H ELEV: 60

- ☐ pre-inspect
☐ past pre-inspect
☐ during installation
☐ after installation
☒ other

DESCRIPTION: THE FULL PENETRATION WELD JOINING ITEM ①
WILL ATTACH ITSELF TO THE VALVE FLANGE
WHEN WELDING IN PLACE.

SOLUTION: CHANGE THE WELD SYMBOL TO A 3/8" PARTIAL
PENETRATION.

FOR INFORMATION ONLY

DC-2-E-P 10544 REV. 0

REFERENCE DRAWING SK-413/143 SL REV. 0

ATTACHMENTS YES

NO

PAGES (INC. THIS SHEET) 1

AREA ENGINEER:

CONSTRUCTION MAY PROCEED

DATE 10/21/83

CONSTRUCTION S.P. RECD

CONTRACTOR RECEIVED

DATE 10/21/83

PIPE SUPPORT DESIGN TOLERANCE CLARIFICATION FORM

SUBJECT 413-143 SL REV 0 SEQUENCE NUMBER 01-25 2011
CLASS 1-B

LOCATION AREA: 2-H ELEV: 60 pre-inspect ☐

in-work ☒

past work ☐

~~TOUCH~~ DESIGN DWG CALLS OUT 5/8" ϕ X 6" LG. HILTI KWIK BOLT

DESCRIPTION: - CRAFTS DRILLING BOLT HOLES ENCOUNTER
- REBAR (2) LOGS, AT 3/4" DEPTH (MIN. EMBD IS 2 3/4")
- THE STUD WILL PROJECT TOO FAR FROM FACE OF
PLATE WITH UNTHREADED PORTION OF ~~REBAR~~ STUD
EXPOSED.

SOLUTION: CHANGE ITEM ⑥ TO (2) QTY. - ADD ITEM ⑦
5/8" ϕ X 4 1/2" HILTI KWIK BOLT, MIN EMBD 2 3/4"
- USE 3/4" DIA HOLES AS DRILLED.

FOR INFORMATION ONLY

RESOLUTION: DECREASE HILTI KWIK BOLT LENGTH CALL OUT
TO 5/8" ϕ X 4 1/2" LG. . MIN EMBD LENGTH WILL
BE ACHIEVED W/ 4 1/2" LG. (ONLY AS REQUIRED)

DC-2-E.P. 10544

D.P.P. F.E. R. LERRY, 6383

G.C. F.E. _____

REFERENCE DRAWING SK-413-143 SL 147X, A, B

ATTACHMENTS YES

01

PAGES (INC. THIS SHEET) 1

AREA ENGINEER: M.K. TEHRANI

CONSTRUCTION MAY PROCEED Majid - Karamzadeh Tehrani

DATE 6-7-83

CONSTRUCTION D.P. REQ'D _____

CONTRACTOR RECEIVED R. LERRY DATE 6-8-83

PIPE SUPPORT INSTALLATION WORKLIST

A-1
Pg 15

NGER NO 413-143^{SL} SYSTEM 10 PRIORITY 35
 EV: 60 AREA: H DWG. NO. SK SHT. 147
 Y NO. _____ REV. DCO NO QC ACCEPT
 DATE _____
 OLD ENGINEER: TAO DATE: 3/14/84
 VIEWED BY: _____ DATE: _____

INSTRUCTIONS TO CRAFT

THE FOLLOWING WORK IS REQUIRED TO COMPLETE THIS PIPE SUPPORT:

REWORK TO DCN 1350-011

11 RESET HILTI KWIK BOLT TO
ACHIEVE PROPER EMBEDMENT

FOR INFORMATION ONLY

NLS

SEE 401-000 DCN 1350-011 3/10 DCN 1A1 200X145

| | | | |
|---------------------|-----------|-------------|------------------------|
| DEFICIENT CONDITION | AREA H | ELEV 605 | NOTICE NO. 1350-011 |
|---------------------|-----------|-------------|------------------------|

DEFICIENT CONDITION: During Inspection of Final AS-Built Hanger = 413-143-84
Rev 0, Line = 2-SI-950-3 3 sys 10 RAR. IT was
found to have several violations ① Anchor violation per ESD. 223 pgs 44123.
lower Right $\frac{5}{8}$ " x $4\frac{1}{2}$ " Kwik has a min emb. of $2\frac{1}{16}$.
② Note = 2 on sh-147, still has existing $\frac{5}{8}$ " studs. "New studs must be installed"
③ 1 Not loose on $\frac{5}{8}$ " studs see Note 2 sh-147.
ORIGINATOR'S SIGNATURE:
John Paul Plummer

| | | | |
|------------------------------|-------------------|-----------------------|-----------------|
| HOLD TAG APPLIED: <u>yes</u> | TAG # 1350-011 | INITIALS <u>GP</u> | DATE 1-15-84 |
|------------------------------|-------------------|-----------------------|-----------------|

RECOMMENDED DISPOSITION:
① Re Work Hanger ① Reset HKB. to correct embedment.
GP - GP - ② Replace $\frac{5}{8}$ " studs with new studs per Note #7. on X sheet.
GP 2-27-84
2.) SEE ATTACHED MEMO TO PDC. NUTS WILL BE TIGHTENED BY NPD - NO NEED FOR LONGER.

| |
|---|
| FIELD ENGINEER <i>J. N. Miller</i> <u>GP</u> 2-27-84 |
| FIELD QC INSPECTOR <u>GP</u> 1/350 |
| CHIEF ENGINEER <i>Sto. H. Miller</i> |
| LEVEL III <u>GP</u> 3-13-84 |
| FIELD QA/QC MANAGER <i>UK Miller</i> <u>GP</u> 2-27-84 |

| | | |
|----------------------------------|---|--------------------------------|
| FIELD QA/QC MANAGERS EVALUATION: | <input checked="" type="checkbox"/> APPROVED AS RECOMMENDED | <input type="checkbox"/> OTHER |
|----------------------------------|---|--------------------------------|

| | | |
|--|--|------------------------|
| <input type="checkbox"/> NON-CONFORMANCE - D.R.# | COMMENTS: IF This hanger and Valve is to be Re worked, I Request That a N.P.O. Line Clearance be attached To protect Craft From Injury <u>GP</u> . CONTROLLED COPY | CAUSE CODE <u>3</u> |
| <input type="checkbox"/> REPAIR ORDER | | |
| <input type="checkbox"/> RERWORK/REINSPECT | | |
| <input type="checkbox"/> INTERNAL AUDIT | | |

| | | |
|---|------------------------|---|
| <input checked="" type="checkbox"/> OTHER <u>THIS DCN ZFPS</u> <u>SEE COMMENTS SECTION</u> | DATE <u>3/11/84</u> | FIELD QA/QC MANAGER <i>UK Miller</i> <u>GP</u> 3-13-84 |
|---|------------------------|---|

| | |
|---|-----------------------------|
| CORRECTIVE ACTION REQUIRED BY: <u>ENGRG OC CRAFT SUPV</u> | NOT LATER THAN: <u>ASAP</u> |
|---|-----------------------------|

STEPS TO PREVENT RECURRENCE: ☐ NOT APPLICABLE
Instruct Personal of Applicable Requirements
N/A TO ENGINEERING. Adam C. Weinert 2-27-84

FOR INFORMATION ONLY

| | | |
|------------------------|------|---------------------|
| RESPONSIBLE SUPERVISOR | DATE | FIELD QA/QC MANAGER |
|------------------------|------|---------------------|

| | | |
|-----------------------------|------|------------|
| DEFICIENT CONDITION CLOSED: | DATE | SIGNATURE: |
|-----------------------------|------|------------|

FULLMAN POWER PRODUCTS CORPORATION

JCS 87177

AVILA BEACH, CALIFORNIA 93424 (805) 595-2356

M. MICHAELS

DATE 2-27-84

PTGC AREA LEAD

SUBJECT DCU 641A

REV. ϕ (DC-2-EP-10544) OF SUPPORT
413-143SL CALLS FOR "LONGER STUDS"
TO BE USED TO CONNECT ITEM ①
TO THE MOTOR HOUSING. QC INSPECTION
NOTED THAT EXISTING STUDS ARE OLD
AND ONE HAS A LOOSE NUT. EXISTING
STUDS HAVE ADEQUATE PROJECTION TO
ACCOMMODATE ITEM ①. PLEASE HAVE THE
NUTS CONNECTING ITEM ① TO MOTOR
HOUSING TIGHTENED. BY Adam C. Weinstein

DATE

RECEIVED BY Howard Goethen P.T.G.C.
WILL SEND TO PROPER GROUP.

FOR INFORMATION ONLY

SIGNED



Form F-107

R-1 7-11-76

R-2 6-16-80

PSA SHUBBER CHL KLIST

DATE: 5-14-83 INSPECTOR: [Signature] 10-26-83

LINE NO: 930 SYS: 10 DRWG. NO: SK 413-143 SHT: 147

✓ INDICATES ACCEPTABILITY

| | |
|---|-----|
| SHUBBER AXIS WITHIN 10° OF OPTIMUM (NO INTERFERENCE AT REAR BRACKET OR FORWARD ADAPTER) | ✓ |
| COLD SETTING WITHIN FIELD TOLERANCE ($\pm 1/4$ IN) OS $1 13/32$ A/K * | ✓ |
| Transition Tube bolts/cap screws tightened, Torque sealed, and Safety Wired (if applicable) at final inspection | ✓ |
| Bolt/cap screw lock washers installed (if applicable) | N/A |
| REAR BALL JOINT NOT LOOSE OR PUSHED OUT | ✓ |
| REAR BRACKET COTTER PINS SPREAD | ✓ |
| REAR BRACKET WASHERS INSTALLED CORRECTLY | ✓ |
| PSA SHUBBER CLAMP INSTALLED | N/A |
| CLAMP LINED IF REQUIRED | N/A |
| CLAMP SHORTENED INSTALLATION ONLY | N/A |
| GRADE 5 BOLT INSTALLED IN PROPER HOLE | N/A |
| LOCK NUT INSTALLED ON GRADE 5 BOLT | N/A |
| 1-3 BOLT THREADS EXPOSED BEYOND NUT ON ALL CLAMP BOLTS | N/A |
| ALL CLAMP NUTS TIGHTENED | N/A |
| NEW-STYLE LOCK NUT NOT BACKED OFF OR REMOVED ONCE TIGHTENED | N/A |
| SPACER INSTALLED IN PROPER LOCATION | N/A |
| FORWARD ADAPTER BALL JOINT NOT LOOSE OR PUSHED OUT | ✓ |
| WASHERS INSTALLED EACH SIDE OF FORWARD ADAPTER | ✓ |
| EXTRA REAR BRACKET WASHERS INSTALLED CORRECTLY | NA |
| EXTRA REAR BRACKET COTTER PINS SPREAD | N/A |
| SHUBBER NOT DAMAGED INTERNALLY | ✓ |
| PROTECTIVE BOOT INSTALLED | N/A |

NOTE: IF THERE IS MORE THAN A SMALL AMOUNT OF PLAY WHEN ONE END OF THE SHUBBER IS TWISTED WITH RESPECT TO THE OTHER, THE SHUBBER IS BROKEN INTERNALLY AND MUST BE REPLACED.

*A - HOLD FOR T DURING BOOT INSTALLATION ONLY.

Page 1 of 2

10-01
 275-432 SK - 20
 7/14/84

| | | | |
|--|--|---------------|--|
| 1. LOCATION OF SUPPORTS (NOTES THE DRAWING) | | 9450 W 4th St | |
| 2. DRAWING SHOWN WITH AND SUPPORTS FROM THE NATIONAL LIST | | 3450 W 1st | |
| 3. APPROX DISTANCE AND VERTICAL BY S.C. | | 3450 W 1st | |
| 4. HOLES DRILLED TO TOLERANCE AND CHECK READING FACTORS | | 3450 W 1st | |
| 5. DRILL/PISTON DRILLED TO TOLERANCE | | 3450 W 1st | |
| 6. TYPE STEEL INSTALLED | | 3450 W 1st | |
| 7. APPROX TORQUE | | 3450 W 1st | |
| 8. THICKNESS OF PLATING | | 3450 W 1st | |
| 9. BASE OF BOLTS FROM TO WEARING OF BASE PLATE | | 3450 W 1st | |
| 10. PRE-OPS: A. PACE ATTACHMENTS INSTALLATION | | 3450 W 1st | |
| B. SUPPORT MEMBERS | | 3450 W 1st | |
| C. GROOVE & PAINT FOR TOLDS | | 3450 W 1st | |
| D. PACE ESTABLISHED VARIOUS REQUIRE | | 3450 W 1st | |
| E. TALL FIVE THREE THREE OF PACE, ONE | | 3450 W 1st | |
| F. WEARING OF PIPE ATTACHMENTS (FOR SEPARATE PROCESSING SHEET) P.1.1 | | 3450 W 1st | |
| G. WEARING OF BATTERY SUPPORT MEMBERS ONE | | 3450 W 1st | |
| H. SPECIAL TOLERANCE REQUIREMENTS | | 3450 W 1st | |
| I. OTHER REQUIREMENTS | | 3450 W 1st | |
| J. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| K. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| L. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| M. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| N. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| O. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| P. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| Q. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| R. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| S. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| T. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| U. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| V. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| W. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| X. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| Y. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |
| Z. TALL FIVE THREE THREE THREE THREE THREE | | 3450 W 1st | |

[illegible]

A-1
P522

DC-2-E-P-10544 REV. C

SHEET 2 OF 7

Does this change affect any additional documents? If yes, list drawings and specifications on Design Document list and attach. If any of the following, list below:

NRC Licensing Submittal: ☒ No ☐ Yes

Design Classification: ☒ No ☐ Yes 10
RHR

Design Criteria Memorandum: ☒ No ☐ Yes

Design Calculations: ☒ No ☐ Yes

Design Verification: ☒ No ☐ Yes

Others: ☒ No ☐ Yes

If the above is yes, the appropriate licensing engineer (NRC) has been notified to initiate revisions.

FOR INFORMATION [Signature] 5/4/83
Engineer Date

[Signature] 5-4-83
Group Supervisor Date

Coordination Required: ☒ Yes ☐ No

Coordinated With:

| Dept. | Engineer (Signature) | Date |
|--------|----------------------|--------|
| DRG | STUTES COORDINATION | |
| STRESS | STG 3-2 | |
| CIVIL | [Signature] | 5/4/83 |
| | | |
| | | |
| | | |

CONTROLLED COPY

PACIFIC GAS AND ELECTRIC CO.
ENGINEERING DEPARTMENT

SAN NO. 524

NUCLEAR PROJECT
DESIGN CHANGE
Diablo Canyon #2
(PLANT)

DATE: 4-11-83
NO. DC-2-E-P-10544 REV. 0

To: V.P. MERCADO

From: B. TJCA

SHEET 1 of 7

PLANT DESIGN GROUP SUPERVISOR

PIPE SUPPORT GROUP

Description of Change: ADD PIPE SUPPORT NUMBER: 413/143SL

ON LINE NO. 2-SI-930-III B ISO NO. 449287

SYSTEM: RESIDUAL HT REM PP=1 RECIRC.

AS SHOWN IN THE ATTACHED DRAWING(S).

THIS NEW SUPPORT IS REQUIRED AS A RESULT OF PIPING STRESS ANALYSIS

NO. G-003-08

REV. 0

NODE POINT: 222

IN#400138#47027

10

Estimated Total Costs: \$ 2,500.00

RHR

Effect on Project Schedules: ☒ None ☐ Other (Explain) _____

Construction Status: ☐ Not Started

☒ Partially Complete

☐ Completed

Documents affected by change: ISO NO. 449287

AREA DWG. NO. 500922

List of Attachments: SKETCH NO. SK-413/143SL

REV. NO. 0

Br 5F

SHEET NOS. 147X, 147A, 147B

Steward/Bechtel

CITY/EX/SUE/MEC/CIV_ELC_INSTR/ES/VIC

2-5 PPS-

Requested Change is:

- ☐ Approved at the site by _____ per telecon with _____ on _____
- ☒ Approved FIELD TO ISSUE AS-BUILT WITHIN 30 DAYS AFTER INSTALLATION.
- ☐ Noted, document change not required
- ☐ Rejected (explain) _____

Work ☒ is ☐ is not authorized to proceed prior to design document revisions in accordance with this Design Change Notice.

Safety-Related Work: ☒ Yes ☐ No

Additional documents attached: ☐ Yes ☒ No

Reviewed By:

Slabe

Discipline Engineer

5/4/83

Date

Approved By:

Slabe

Group Leader/Supervisor

5-4-83

Date

☒ Nuclear Project Engineer Review Required.

Signature: [Signature]

Get: Revision, JWG: Revision, BHP: Revision, PUS, JOT: Revision, VDU: Revision, CS: Revision, SCS: Revision

| RECEIVED ENGINEERING | RECEIVED DESIGN DRAFTING | RECEIVED A/Z-CONSULTANT | REVISIONS COMPLETED | REVISIONS APPROVED |
|-------------------------|-----------------------------|----------------------------|------------------------|-----------------------|
| By _____ | By _____ | By _____ | By _____ | By _____ |
| Date _____ | Date _____ | Date _____ | Date _____ | Date _____ |

PULLMAN POWER PRODUCTS
ACCOUNTING REQUIREMENTS (A-1)

ATTN: Credit Manager

Write the following code on the time sheet in the "Range No. or Job No." of Range Time Sheets or in the "Place No./Weld No." section of Range Time Sheets when working on the attached work authorization:

| |
|----------------|
| 413-14351-4001 |
| 2-62/19-10 |
| P265913-1663 |

Supplemental or additional work authorizations pertaining to this work authorization must be received in the field before recording. No other work authorization information or accounting is required in this section of the time sheet.

The following pertains to the Pullman Accounting Office only:

DOI NO. 10544

WORK REQUEST NO. _____

DRAWING NO. _____

DATE ISSUED 9-13-83

FOR INFORMATION ONLY

A-1
Pg 26

ENGINEERING



SPECIFICATION

SPEC. NO.
3711

ENGINEERING DEPARTMENT

ES 1-000

WELDING PROCEDURE RECOMMENDATIONS

| CODE CLASSES | LINE SPEC. | ACCEPTABLE PROCEDURE | WALL THICKNESS LIMITS | USE OF PROCEDURE |
|--------------------------|--|-----------------------------|-----------------------|---|
| A & B SEC. I | J, K, K2, K5, K6, K12, K13, K14, K15 | 4/5 | 3/16" to 3.024" | BUTT WELDS, GTAW ROOT, SPAN WELDOUT |
| | | 92/93 | 1/16" to 0.50" | FILLET & SOCKET WELDS - SPAN |
| | | 201 | 1/16" to 0.50" | BUTT, FILLET, SOCKET WELDS - SPAN |
| | | 202(1) | 1/16" to 0.50" | OPEN BUTT WELDS ONLY - GTAW |
| | | 203(1) | 1/16" to 0.474" | OPEN BUTT WELDS ONLY - GTAW |
| | | 200(2) | 3/16" to 1.5" | BUTT WELDS, GTAW ROOT, E8018 WELDOUT |
| | | 204(2) | 3/16" to 1.5" | OPEN BUTT, GTAW ROOT, E8018 WELDOUT |
| | | 80/89(1) | 3/16" to 3.024" | OPEN BUTT, GTAW ROOT, SPAN WELDOUT |
| C & E | J, K, K2, K5, K6, K12, K13, K14, K15 | SAME AS ABOVE AND INCLUDING | | |
| | | 7/8 | 3/16" to 3.024" | BUTT WELDS, BACKING RING, SPAN |
| E SPECIAL | K14, K15 | 4/5 | 3/16" to 3.024" | BUTT WELDS, GTAW ROOT, SPAN WELDOUT |
| | | 92/93 | 1/16" to 0.50" | FILLET & SOCKET WELDS - SPAN |
| | | 201 | 1/16" to 0.50" | BUTT, FILLET & SOCKET - GTAW |
| | | 203(1) | 1/16" to 0.474" | OPEN BUTT WELDS - GTAW |
| | | 80/89(1) | 3/16" to 3.024" | OPEN BUTT, GTAW ROOT, SPAN WELDOUT |
| A & B C & E SEC. I | S, S1, S2, S3, S5, S6 S8 | 15/16 | 1/4" to 1.4" | BUTT WELDS (GTAW ROOT, SPAN WELDOUT) HEAVY WALL SOCKET & FILLET WELDS |
| | | 79/80 | 1/16" to 1.0" | BUTT WELDS, 1/16" to 1/4" WALL INSERT, GTAW |
| | | 129 | 1/16" to 0.50" | OPEN BUTT, FILLET & SOCKET WELDS |
| | | | | |

- Notes: 1) Requires Q.A. Managers approval before using on mainstream and Feedwater Systems
- 2) Requires Q.A. Managers approval before using anywhere on the site.

FOR INFORMATION ONLY

PAGE 27 R.S. FINK DATE OF ISSUE 6/20/72 PAGE 1 OF 1
DATE OF REV. 7/17/72

ENGINEERING



SPECIFICATION

ENGINEERING DEPARTMENT

SPEC. NO.

2711

25 2-277

A-1
Pg 27

Carbon Steel (PI) to Carbon Steel (PI)

| PROCEDURE CODE NO. | POSITION AND WALL THICKNESS LIMITS | BACKING PURGE (S) | BACKING | ROOT FIT-UP | ROOT | WELDING | POST-WELD HEAT TREATMENT | USAGE AND TYPES OF WELD |
|--------------------|---------------------------------------|-------------------|-----------------------------------|-----------------------|------------------------------------|--------------------|--------------------------|------------------------------|
| 205 | 1G, 2G, & 3G unlimited wall thickness | None | Jacking Strip 1/8" min. thickness | Groove 1/16" min. gap | Opt. E7018 Root GMAW E701-1 | GMAW E701-1 | None | Rupture Restraints Only |
| 206 | 1G, 2G, & 3G unlimited wall thickness | None | Jacking Strip 1/8" min. thickness | Groove 1/16" min. gap | Opt. E7018 Root GMAW E705-3 | GMAW E705-3 | None | Rupture Restraints Only |
| 25/26 | 1/16" to 1.0" | None | None | Open Vee | Opt. E705-3 GMAW E705-3 GMAW E7018 | GMAW E705-2, or -6 | None | Butt, sockets, and couplings |

Stainless Steel (PI) to Stainless Steel (PI)

| PROCEDURE CODE NO. | POSITION AND WALL THICKNESS LIMITS | BACKING PURGE (S) | BACKING | ROOT FIT-UP | ROOT | WELDING | POST-WELD HEAT TREATMENT | USAGE AND TYPES OF WELD |
|--------------------|------------------------------------|-------------------|---------|---------------|-------------|---------------------|--------------------------|--------------------------|
| 15/16 | 1/16" to 1.4" | Argon | None | Insert ER 308 | GMAW ER 308 | Stainless Steel (1) | None | Butt, fillet, and socket |
| 19/20 | 1/16" to 1.0" | Argon | None | Insert ER 308 | GMAW ER 308 | Stainless Steel (1) | None | Butt welds only |
| 129 | 1/16" to 0.56" | Argon | None | Open (S) Butt | GMAW ER 308 | Stainless Steel | None | Butt, fillet, and socket |

Carbon Steel (PI) to Stainless Steel (PI)

| PROCEDURE CODE NO. | POSITION AND WALL THICKNESS LIMITS | BACKING PURGE (S) | BACKING | ROOT FIT-UP | ROOT | WELDING | POST-WELD HEAT TREATMENT | USAGE AND TYPES OF WELD |
|--------------------|------------------------------------|-------------------|---------|-------------------|-------------|-----------------|--------------------------|--------------------------|
| 149 | 1/16" to 1.436" | Argon | None | Insert (S) ER 309 | GMAW ER 309 | Stainless Steel | None | Butt, fillet, and socket |
| 150 | over 2" O.D. only 1/16" to 0.56" | Argon | None | Insert (S) ER 309 | GMAW ER 309 | Stainless Steel | None | Butt, fillet, and socket |

- Notes: 1) Optional GMAW cover pass allowed, using ER 308.
 2) For fillets, sockets, and couplings, delete insert and root pass and follow with balance of passes.
 3) Argon backing required on the GMAW part of the process.

FOR INFORMATION ONLY

A-1
Pg 29

ENGINEERING



SPECIFICATION

SPEC. NO.
8711

ENGINEERING DEPARTMENT

ES D-227

WELDING PROCEDURES

This procedure is a reference guide for approved welding procedures. Although the welding procedure may be qualified for more than this procedure recommends, the recommendations of this procedure shall apply unless the Welding Engineer gives permission to deviate from this procedure. No deviations from the approved welding procedures shall be permitted.

FOR INFORMATION ONLY

| | |
|---------------------|------------------|
| DATE OF ISSUE | DATE OF REVISION |
| <i>10/1/51</i> | <i>10/1/51</i> |
| <i>W. H. C. Jr.</i> | |

SHEET 5 OF 7

76-1463 (11-80)

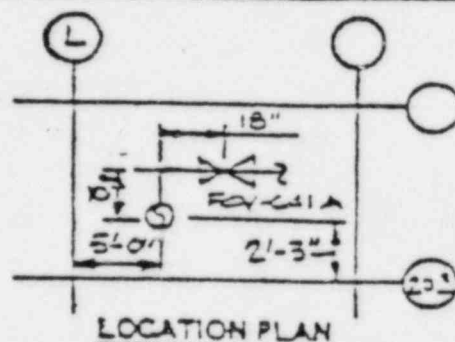
| | | | |
|------------------|--------------------------|--------------------------------|---------------------------|
| AREA <u>2-H</u> | LINE <u>2-5-930-3-18</u> | HANGER SYMBOL <u>DP 222</u> | <u>413</u> <u>1437</u> |
| EL <u>60'-0"</u> | <u>RUR SYSTEM</u> | VERT.-SKEW <u>SWUB</u> | |
| | | LOC ON DWG <u>500422</u> | |

DESIGN CLASS I
CODE CLASS B

CALLED NORTH



10
RHR



NO. OF ASSEMBLIES REQUIRED

| NO | REQ'D | MATERIALS PER ASSEMBLY |
|----|-------|---|
| 1 | 1 | R 1/2"x10x0'-10" (SEE DETAIL SECTION A-A) |
| 2 | 1 | BAR 1/2"x2x0'-2" |
| 3 | 1 | PSA-1/2, NF, WITH TRANSITION TUBE KIT C.S = 13.8 HS. = 13/16 (NOTE ONE REAR BRACKET INCLUDED IN ASSY) STROKE = 2 1/2" |
| 4 | 1 | W 4x13x1'-7" LG. |
| 5 | 1 | R 1/2"x10x0'-10" W/ 4-11/16" HOLES PER DETAIL SHOWN |
| 6 | 4 | 5/8" B x 6" LG HILTI KWIK BOLTS, MIN EMBED = 2 3/4" |
| 7 | 1 | EXTENSION PIPE 1.05 O.D. x 11.3 WALL THK (LENGTH BY FIELD) |
| 8 | 1 | REAR BRACKET FOR PSA-1/2. |

ORIGINAL
DRAWING

APPROVED WITH
CONDITION THAT
NO REBAR BE CUT

FOR REFERENCE

DC-2-E-P 10544 2-10

SK-413/435 REV. 0

| | |
|-----------|------------|
| DESIGN NO | DRAWING NO |
| CHKD BY | DATE |

PROJECT: DIABLO CANYON

UNIT: 2

SHT. 127 OF 128 SHTS

P G & E CO

ISSUE 1 REV 0

A-1
Pg-31

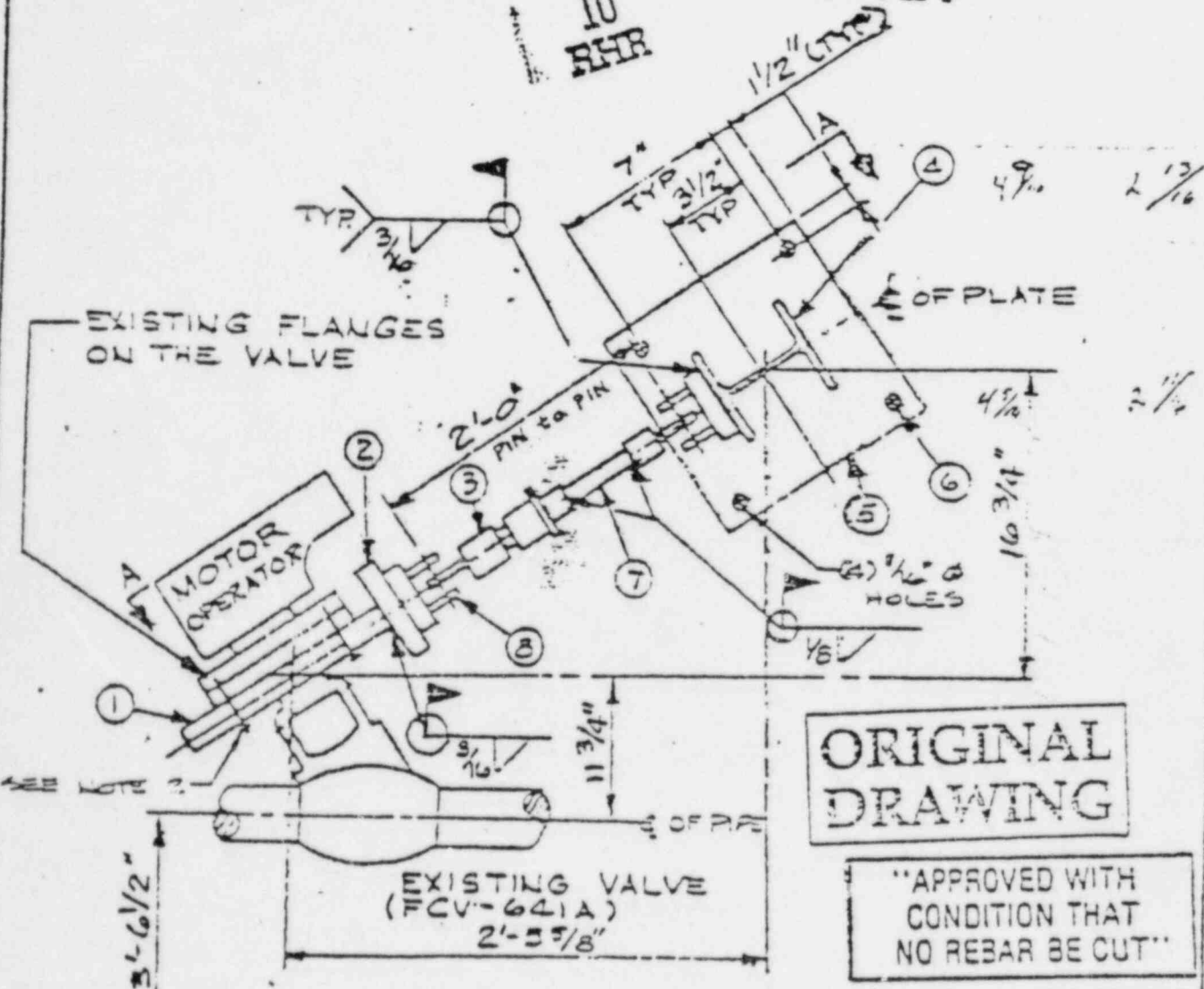
SHEET 6 OF 7

76-1117 Rev 3-76

| | | | |
|------------------|---------------------------|--------------------------|-------------|
| AREA <u>2-H</u> | LINE <u>2-SI-936-3 II</u> | HANGER SYMBOL DP 222 | 413 435L |
| EL <u>60'-0"</u> | <u>RHR SYSTEM</u> | VERT-SKEW SUB. | |
| | | LOC ON DWG <u>506922</u> | |

FOR INFORMATION ONLY

10
RHR



ORIGINAL
DRAWING

"APPROVED WITH
CONDITION THAT
NO REBAR BE CUT"

EL. LKG SOUTH FOR REFERENCE

DC-2-E-P10544 Rev 0
SK. 413/435L REV. 0

FL. EL.
60'-0"

| | | | | |
|--|----------------|-----------------|----------------|--------------------|
| PROJECT: <u>DIABLO</u> <u>NUCLEAR</u> | UNIT: <u>2</u> | DSGN <u>LD</u> | DRAWING NO | |
| | | CHKD <u>VLM</u> | <u>2/26/57</u> | |
| SHT <u>147</u> OF <u>147</u> | | P G & E CO | | ISSUE <u>1</u> REV |
| MICROFILM | | | | |

SHEET 7 OF 7

76-1117 Rev 3-76

AREA 2-H

LINE 2-SI-930-3 II

HANGER SYMBOL

DP 222

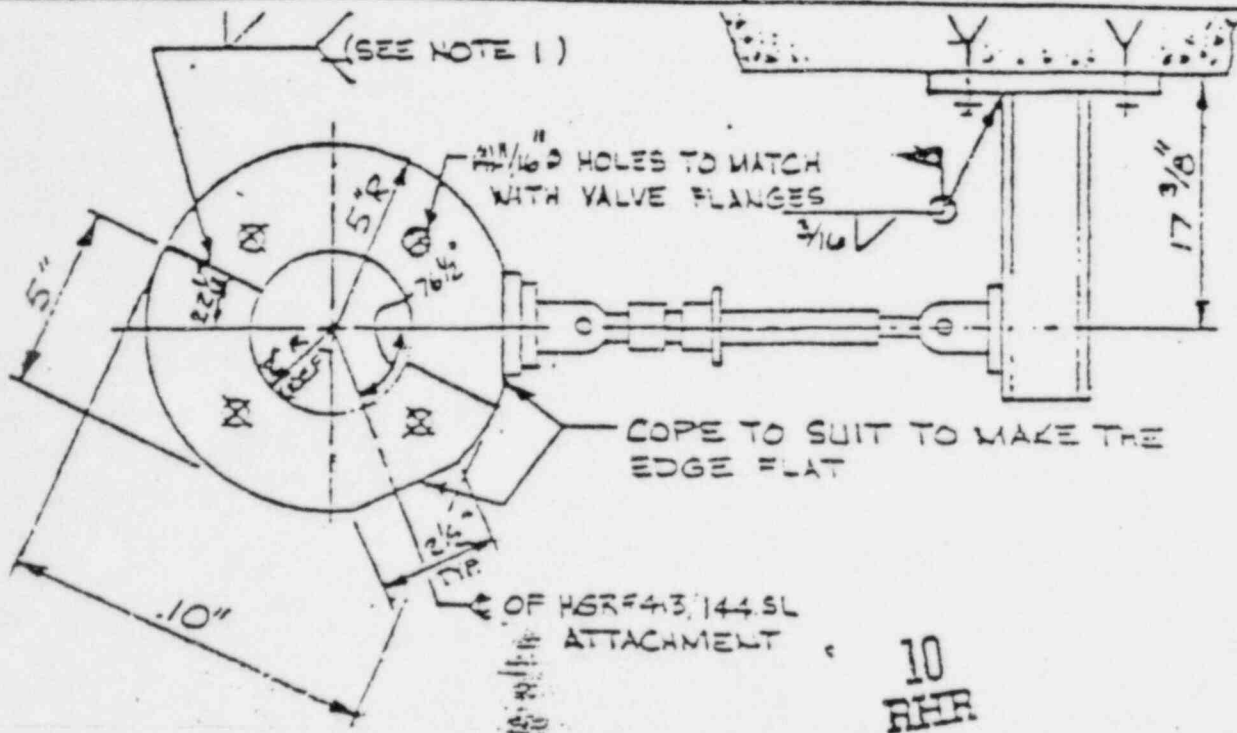
VERT-SKEW SLUR.

LOC ON DWG 500922

EL 60'-0"

RHR SYSTEM

43
H36L



SECTION A-A

10
RHR

INFORMATION ONLY

ORIGINAL
DRAWING

"APPROVED WITH
CONDITION THAT
NO REBAR BE CUT"

FOR REFERENCE

DC-2-E-P 10544 2810

SK. 473/439 REV. 0

DESIGN M.D.
DRAWN M.D.
CHECK M.D.

DRAWING NO

05-03

PROJECT: DIAGNOSTIC

UNIT: 2

SHT. 1 OF 2

SHTS

P G & E CO

ISSUE: REV

MICROFILM

| AREA <u>2-H</u> | | LINE <u>2-51-930-3</u> | | HANGER SYMBOL <u>DP222</u> <u>VERT-SYEN ENCL.</u> | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">413</div> | | |
|---|------------|--|----------------------|---|--------|--|---|-----------|
| EL <u>60'-0"</u> | | <u>RHR SYSTEM</u> | | LOC ON DWG <u>500922-</u> | | | | |
| REV | ISSUE DATE | DESCRIPTION OF CHANGES | PREPARATION | | | APPROVAL | | |
| | | | DSGN | OWN | CHKD | DUS | ENGR | SUPV ENGR |
| 1 | | SUPPORT ADDED PER STRESS PROB. G-003-08, BY GPD ON 3-23-83 | U.D. | K.M. | V.K.A. | R | - | H.B. |
| <div style="margin-bottom: 10px;">10 RHR</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; text-align: center;">FOR REFERENCE</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; text-align: center; margin-top: 10px;">ORIGINAL DRAWING</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; text-align: center; margin-top: 10px;">"APPROVED WITH CONDITION THAT NO REBAR BE CUT"</div> | | | FOR INFORMATION ONLY | | | | | |
| NOTES: 1. THE RING IS IN TWO HALVES AND IS TO BE WELDED ON UNDERSIDE AFTER BOLTING TO THE VALVE FLANGE 2. FIELD TO REPLACE EXISTING 5/8" Ø STUDS WITH LONGER STUDS OF SAME SPECIFICATION: ASTM 193 GR 57 | | | | | | | | |
| SHEETS ASSIGNED TO THIS HANGER SYMBOL (TOTAL <u>4</u> SHEETS) | | | | | | | DC-2-E-P10544 2B/0 SK-413/439 REV. 0 | |
| 147 | 142 | 143 | 142 | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| PROJECT: <u>CHLORINE</u> | | | UNIT: <u>2</u> | | | 147 X OF <u>SHS</u> | | |
| P G & E CO | | | P G & E CO | | | ISSUE REV | | |

A-1
pg 34

PACIFIC GAS AND ELECTRIC COMPANY

PGE +

DIABLO CANYON PROJECT • GENERAL CONSTRUCTION
P.O. BOX 117 • AVILA BEACH, CALIFORNIA 93424 • (805) 595-2324

February 29, 1984

P. Stieger
Pullman Power Products
P.O. Box 357
Avila Beach, California 93424

Dear Mr. Stieger:

Pullman Power Products is presently installing seismic valve supports per various DCN's. However, no notification is being given to J. Arnold, Mechanical Department - Attention: Valve Maintenance, prior to installation of the supports. This could cause violation of valve Environmental Qualification Procedures.

Written notification for each seismic valve support shall be given to Miscellaneous Mechanical prior to start of work.

Valve Maintenance will issue a Valve Maintenance Report and order parts as required, to allow installation of the support. In this manner all valve QA/QC and Environmental Qualification Procedures can be complied with.

Please supply a list of all Unit 2 seismic valve supports completed or presently being worked.

ORIGINAL SIGNED BY
D.A. ROCKWELL

D. A. Rockwell
Project Field Engineer

Reply Requested: Yes
Due Date: March 5, 1984
JArnold/RT:cb

cc: G. V. Cranston
R. O. Etzler
H. B. Friend
J. B. Hoch
J. R. Manning
G. H. Moore
E. Rosetta
R. Lieber
J. Macias
R. Toomire

FOR INFORMATION ONLY

DCC

12276

MINOR VARIATION REPORT

| | | | | | | | | | |
|----------------------------|---|-----------------------------|------|------------------------|------|----------|---------|----|---|
| Location | Diablo Canyon | Unit No. | 2 | Reference Spec. No. | 3711 | Page | 1 | of | 2 |
| Contractor | Fullman Power Products | | | Contractor R/A | | PG and E | 11-4490 | | |
| Is this item to Contractor | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Name | Fullman Power Products | | | | | |
| MVR No. | | | | | | | | | |

DESCRIPTION OF DISCREPANCY

Violation of Project Instruction # 6

Station See Page 2

| | | |
|-----------|--------|-----------|
| CLDENKANA | FILE | HAMPTON |
| FLODERMAN | KARWEL | PERCHER |
| LANKES | FALL | MADSON |
| GURLEY | MURPHY | DALLS |
| HENDERSON | MCGRAW | MAGGALLS |
| | | C. ROBERT |
| | | CORNISH |
| | | ELING |

Station See Page 2

Date 5/11/83

Contractor's Representative

Name

Date 6/14/83

Is this minor variation report

(1) ☒ Is Not Reported as

(2) ☐ Is Not a Nonconformance

May be Reported as Per Title 10 CFR, Part 211

Date 6/22/83

Date 6/14/83

DISPOSITION ACCOMPLISHED

FOR INFORMATION ONLY

EXPLANATION:

During construction of pipe support 412-143SL, 4 bolts were removed from the motor drive support, PCV-641-A, by Pullman craft. The process sheet in the Special Remarks section stated before installing Item 1, contact engineering with all contact N.P.O. for clearance. Pullman Power failed to do this. On 5/10/83, at 12:10 P.M., N.P.O. activated the motor drive from the Control Room causing it to unscrew itself, damaging the valve stem and valve stem drive gear. Craft did have the motor drive suspended with slings and a chain fall, preventing motor drive from falling to the floor and causing more damage.

DISPOSITION:

- 1) Those hangers that will require clearances will be highlighted in red, on 3-week schedule.
- 2) "Clearance Required" will be stamped in red on cover and process sheet.
- 3) A memo to all project team members and contractor personnel will be generated noting that Unit 2 will be treated similar to Unit 1, where clearances are required.
- 4) Training Sessions will be held to reinforce the necessity of clearances on operating systems. The Sessions will be given by the Residents and Contractor supervision.
- 5) Personnel coverage will be increased in the field by P.T.G.C. and Contractor supervision.
- 6) The three individuals involved in the disassembly have been terminated.
- 7) Valve to be repaired according to approved Procedures per H.P. Foley Co. Valve Maintenance Report # 1845.
- 8) P.P.P. to document this on in-house Non-Compliance Report and provide steps to prevent recurrence.

FOR INFORMATION ONLY

PACIFIC GAS & ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT

DCPP MAINTENANCE TRAINING MANUAL

COURSE NO. MA050

ENVIRONMENTAL QUALIFICATION
MAINTENANCE TRAINING

REVISION 0
JUNE 16, 1982

PREPARED BY

Bauer / Jones

APPROVED BY

Al O Backens

FOR INFORMATION ONLY

Environmental Qualification Training Outline

FOR INFORMATION ON

SCOPE

The purpose of this training outline is to familiarize Maintenance Department personnel with requirements and responsibilities of the Environmental Qualification Program.

INTRODUCTION

A major category addressed in assuring safe operation of nuclear power plants deals with equipment operation under various environmental conditions. Simply stated, if the equipment is required to operate during and after a worst case accident, we must prove that the equipment can operate in an environment similar to the one caused by such an accident. To verify operability, equipment identified as being potentially exposed to accident environments must be Environmentally Qualified through laboratory tests and/or engineering analysis.

DEFINITION OF ENVIRONMENTAL QUALIFICATION

Environmentally Qualified (E.Q.) equipment is a special category of Safety Related, Vital equipment. This equipment is not only required for safe control of the plant but may also be required to operate in extreme environments of adverse temperature, pressure, humidity, chemistry and radiation that could occur during and following a Loss of Coolant Accident (LOCA) or a Main Steam Line Break (MSLB). Basically, this means that the equipment must not fail under severe environmental conditions resulting from a major plant accident. Another E.Q. consideration identifies equipment which must fail in a safe mode during an accident or which must survive for only a short period after an accident. We will generally address the first requirement since it is most demanding. Currently, E.Q. has been directed toward electrical equipment; however, in the future this attention will expand to most other equipment including seismic considerations. A formal description of E.Q., taken from NRC requirements and used as the basis for our Administrative Procedure D-756 states that,

"...electrical equipment shall have been environmentally qualified for the environment in which it has to operate and for the environment in which it would operate during or following an accident."

"...measures are required to ensure that the environmental qualification of this equipment be maintained as it ages and after repair or replacement."

Now, reread and understand the second statement since it "states" the requirements of E.Q. which generally affect our daily maintenance activities.

E.Q. AFFECTS ON MAINTENANCE

In addition to the maintenance documentation prepared for safety related equipment, we must, on E.Q. equipment, provide detailed descriptions of maintenance work performed as input for failure analysis (trending) study. We must note visual signs of aging or degradation of E.Q. components listed in the applicable maintenance procedure. Second, insure that replacement parts are identical to the parts assembled in the equipment originally tested and/or analyzed to verify

FOR INFORMATION ONLY VA-1 pg 38

E.Q. Comparable part numbers will usually satisfy this requirement but, also, always be certain that the parts look alike. It's important to understand that a manufacturer's suggested "equal replacement" is NOT acceptable in this application unless E.Q. is specifically addressed. NRC requirements specify that any material change must be in accordance with the original design requirements and its environmental qualification.

Materials considered susceptible to postulated worst case environment are all from non-metallic groups. Examples which we will encounter are: motor and cable insulations, lubricants, seals, molded switch materials, gasket materials and special conductor terminations.

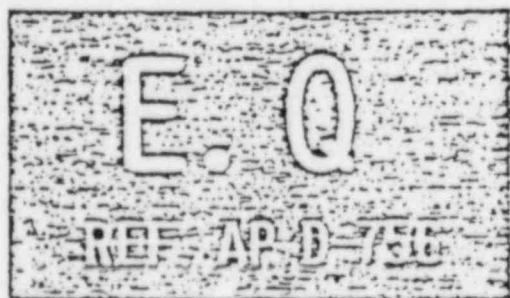
Beyond the additional maintenance documentation needs and the extra care necessary in parts identification and replacement, normal "good maintenance practices" should ensure operable equipment under all environmental conditions. Attention to supplier assembly instructions (when provided), careful gasket preparation and placement, proper connector torquing and strict adherence to the applicable maintenance procedure will guarantee a successful program.

REQUIREMENTS FOR E.Q.

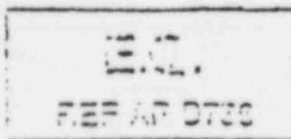
Guidelines for establishment of an E.Q. program are contained in the NRC document NUREG-0588. PG&E management directive to OCPP requiring implementation of an E.Q. program was issued as Administrative Procedure NPAP C-41 and the detailed methods and instructions by which we actually accomplish E.Q. are shown in AP D-755. Questions not answered in this E.Q. training outline should be covered in the latter procedure.

RECAP

When you repair or maintain equipment identified with a bright orange plastic tag, like this:



or are assigned NPPR's, Shop Work Followers or any work directing form stamped in orange ink, like this:



You must first review the applicable maintenance procedure. Give special attention to the special E.Q. components, replace E.Q. parts with identical items only and carefully document what maintenance or repair was performed. Note all unusual material appearances and if E.Q. components fail, save them for examination and testing.

CONCLUSIONS

1. Environmentally Qualified equipment helps us maintain plant safety during normal operations and in accident conditions.
2. The Environmental Qualification Program provides the organization and guidance necessary to maintain qualified equipment in design condition for the life of the plant.
3. Aherence to the E.Q. Program assures compliance with NRC guidelines and regulations.

FOR INFORMATION ONLY

FOR INFORMATION ONLY

DIABLO CANYON POWER PLANT

ENVIRONMENTALLY QUALIFIED EQUIPMENT

A-1
B 40

List includes only those currently designated E.Q. devices assigned as Electrical/Mechanical Maintenance responsibility. I&C associated devices are not listed separately. Refer to "controlled listing" of E.Q. devices if up-to-date accuracy is required.

| ITEM | "IH" FILE NO. | ITEM | "IH" FILE NO. |
|--------------------------------------|---------------|----------------------|---------------|
| EHRS-1 (H) H ₂ Recombiner | 20 | 8801A Limitorque MOV | 16 |
| EHRS-2 " " | 20 | 8801B " " | 16 |
| FCV-356 Rotork MOV | 28 | 8802A " " | 16 |
| FCV-363 " " | 28 | 8802B " " | 16 |
| FCV-357 Limitorque MOV | 16 | 8803A " " | 16 |
| FCV-440 " " | 16 | 8803B " " | 16 |
| FCV-441 " " | 16 | 8804A " " | 16 |
| FCV-641A " " | 16 | 8804B " " | 16 |
| FCV-641B " " | 16 | 8805A " " | 16 |
| FCV-749 " " | 7a | 8805B " " | 16 |
| FCV-750 " " | 7a | 8807A " " | 16 |
| LCV-106 " " | 12 | 8807B " " | 16 |
| LCV-107 " " | 12 | 8809A " " | 16 |
| LCV-108 " " | 12 | 8809B " " | 16 |
| LCV-109 " " | 12 | 8821A " " | 16 |
| LCV-110 ITT Gen. Cncls. EMOV | 14 | 8821B " " | 16 |
| LCV-111 " " " " | 14 | 8835 " " | 16 |
| LCV-113 " " " " | 14 | 8976 " " | 16 |
| LCV-115 " " " " | 14 | 8980 " " | 16 |
| 8000A Limitorque MOV | 7b | 9003A " " | 16 |
| 8000B " " | 7b | 9003B " " | 16 |
| 8000C " " | 7b | | |
| 8072A Target Rock SOV | 15 | | |
| 8072B " " " | 15 | | |
| 8072C " " " | 15 | | |
| 8072D " " " | 15 | | |
| 8105 Limitorque MOV | 16 | | |
| 8106 " " | 16 | | |
| 8107 " " | 16 | | |
| 8112 " " | 7b | | |
| 8701 " " | 7a | | |
| 8702 " " | 7a | | |
| 8716A " " | 16 | | |
| 8716B " " | 16 | | |

| | "EH" FILE NO. |
|-----------------------------|---------------|
| S11-S15 RCFC Motors | 5 |
| SI Pump 1-1 & 1-2 | 16 |
| RHR Pump 1-1 & 1-2 | 14 |
| CC Pump 1-1 & 1-2 | 14 |
| Cont. Elect. Pen. | 1 |
| Special Cables-Inside Cont. | 2-10, 16 |
| LOCA Seals - OZ Gedney | 13 |
| LOCA Splices - Raychem | 11 |

PM Procedures, NPPR's, Shop Work Followers, receipt, storage and inspection documents, M&S action documents and/or other records relating to above equipment should be stamped "E.Q." and forwarded to the on-site E.Q. Coordinator along with a completed Record Management System input form. For inclusion in RMS (legible copies acceptable).

valve
Tony 3545

A-1
B 41

☒ Class I

THE HOWARD P. FOLEY COMPANY
VALVE MAINTENANCE REPORT

☐ Class II

* Q.C. Verification ☒ is ☐ is not required.

VME # 1845

ISO # 10-7 Rev. # Ref. DNG. # 9510 34 x 010

Size # 930 Valve Insn # Valve Spec. 9800 Valve # FCV-641A

Area H Elevation 60' Valve MFG. VELAN

Unit 1

4/12/83

(LIMITORQUE)

Unit 2

VR

REASON FOR MAINTENANCE OR REPAIR:

VALVE WAS DAMAGED DURING HANGER INSTALLATION BY P.P.P., SEE MVR # 4490 ✓
FOR REFERENCE.

THE ENVIRONMENTAL QUALIFICATION OF THIS VALVE SHALL BE PRESERVED AS OUT-
LINED IN PGGE OF NUCLEAR PLANT OPERATIONS PROCEDURE D-756 AND WP-51.3.

RECOMMENDED DISPOSITION:

1. ALL WORK PER HPF QCPM-5.
2. REFER TO LIMITORQUE MANUAL DC-663219-629-1.
3. DISASSEMBLE ACTUATOR & INSPECT INTERNALS FOR DAMAGE. OC Bd Miller II 6-17-83.
4. VISUALLY INSPECT STEM & VALVE INTERNALS. OC Bd Miller II 6-17-83.
5. REPAIR OR REPLACE DAMAGED PARTS TO ACTUATOR, STEM & VALVE AS NEEDED. OC Bd Miller II 6-23-83.
6. ADD EXXON NEBULA EPO GREASE AS NEEDED TO MAINTAIN APPROX. 4 LBS.
OC Bd Miller II 6-23-83
7. REPLACE ANY DAMAGED GASKETS W/ANCHORITE #425 MATERIAL OF EQUAL THICKNESS.
OC REPLACED GASKET #107 W/ANCHORITE #425 Bd Miller II 6-23-83

COMPLETE AS NOTED Ralph Gourea 6/24/83

ALERT.

REF. FOR INFORMATION ONLY

E.Q.

AUTHORIZED BY FOLEY Tommy

POSITION ASSIGNED Valve

DATE 6-23-83

DATE 6-24-83

INSPECTED BY Valve DATE 6-23-83

A-1

Barry Calk PG42

Fullmer Power Products Corporation

TRADE MARK

OF

REGISTERED

DCN 1350-011

This description of subject matter includes certain reference

FOR INFORMATION ONLY
FOR INFORMATION ONLY

Drawn by: D. Mares Date: _____

SECTION OF FIGURE OF FIGURE

- | | |
|-----------------------------|------------------------------|
| 1. THERE IS NO | 2. HWT 2 3/4" DIAPHR |
| 2. VIOLATION OF ANCHOR | 3. DELETE THIS CON- |
| 3. EMBEDMENT PER | 4. DITION FROM DCN |
| 4. ESO 222 (2AP) | 5. 1350-011 |
| 5. L. V. D. 3. AC-BUILT | 6. Barry Calk 1/398 |
| 6. IN COLLECTOR IS DEFS- | 7. 3/22/84 |
| 7. DRIVING EMBEDMENT | 8. THESE MEASUREMENTS WERE |
| 8. DEPTH FROM THE | 9. REVERIFIED BY D. MARES |
| 9. TOP OF BOLT TO | 10. DEPENDING WHICH PORTION |
| 11. THE CONCRETE SURF- | 12. OF THE ADJACENT CONCRETE |
| 13. ARE ADJACENT TO | 14. IS USED AS A BASIS |
| 15. THE R.P. DURING | 16. D. Mares 322-2 |
| 17. CONSTRUCTION OF | 18. U |
| 19. UCR & AFTER FINAL | 20. _____ |
| 21. MAGUE EMBEDMENT | 22. _____ |
| 23. DEPTH WAS MEASURED | 24. _____ |
| 25. BY LENGTH OF BOLT | 26. _____ |
| 27. THICKNESS OF HWT | 28. _____ |
| 29. G.R. & 1/4" GAP BETWEEN | 30. _____ |
| 31. G.R. & CONCRETE SURF- | 32. _____ |
| 33. EDGE. MEASURING DEPT | 34. _____ |

STEELMAN POWER PROTECTORS
STEELMAN CUTTING
PERSONNEL TRAINING RECORD

A-1
pg 43

DATE: 2-26-84

INSTRUCTOR: D. MAPES

POSITION: LEAD UNIT II

Brief description of subject covered including ID references:

1/1

Signature of personnel in attendance:

1. _____
2. 2-26-84
3. MEASUREMENT OF
4. ANCHOR EMBEDMENT
5. REVEALED A 1/32" OUT OF
6. TOLERANCE CONDITION.
7. ACTUAL EMB DEPTH
8. IS 2 23/32"
9. By D. Mapes 2-26-84
10. By C. L. Sabian 3-26-84
11. _____
12. 1100W MEASUREMENT WITH A STEEL
13. WIRE AND A LEVEL I HAVE COME
14. TO THE CONCLUSION THAT THE
15. ANCHOR BOLT IN QUESTION IS
16. EXACTLY AT THE MINIMUM EM-
17. BEDMENT. I RETRACT MY STATE-
18. MENT ABOVE THE PARAGRAPH.
19. By C. L. Sabian Q.C. LEAD
20. 3-26-84

21. AFTER CLOSE SCRUTINY OF FINDING
22. A STEADY GAGE AND A LEVEL
23. AND STEEL WIRE I CONCUR
24. AND RETRACT MY PREVIOUS
25. STATEMENT MADE IN THIS
26. DATE. EMBEDMENT IS ACC. AT MIN. CND.
27. (N. Mapes) 2-26-84 Q.C. LEAD
28. UNIT II
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