

Memorandum

Date: March 20, 1989
To: GOLDEN GATE REGION
From: GAS SYSTEM DESIGN
Subject: Failure of Longitudinal Weld on
30-Inch Steel Pipe

File # 460.21

Buss



[Redacted]

Thank you for bringing to our attention the problem with the longitudinal weld on the 30-inch steel pipe. The Gas System Design Department has finished processing the Material and/or Equipment - Problem or Failure Report you submitted (GSD received date 11/28/88). A copy of the completed report is attached.

If you have any questions concerning this report, please contact me on Ext. [Redacted]

[Redacted]

[Redacted] (223-1888):cm

cc: [Redacted]

Will find its way to you sooner or later - BUT HERE'S ADVANCE COPY

Attachment

[Redacted]

MATERIAL AND/OR EQUIPMENT - PROBLEM OR FAILURE REPORT

NOTE: Do not use this form for reporting failures or accidents which result in death, injury, and/or property damage. Also, this form should not be used for reporting corrosion leaks in pipe, or replacement due to normal wear.

TO BE COMPLETED BY FOREMAN AND/OR LOCAL ENGINEERING STAFF
See Attachment 2 of S.P.460.21-7 for Instructions

- Failed material or equipment LONGITUDINAL WELD ON 30" T.L. 132
- Location (address) where failure occurred [redacted] City, Co. [redacted]
- Material or equipment details and description of problem or failure
A PINHOLE LEAK WAS FOUND ON THE LONGITUDINAL WELD ON 30" T.L. 132.
- Service information: Date installed 1948 Other information GM 98015
- Disposition of failed material Delivered to [redacted] G.B.R. Gas Manager on 11-4-88.
- Person to contact for information [redacted] Telephone [redacted]
- Reported by: [redacted] Location Peninsula Region G.6 Date 10-27-88
- Noted by Regional office: By [redacted] Date 8/8/116

SEND ORIGINAL TO MANAGER GAS SYSTEM DESIGN DEPARTMENT - ROOM 2857, 77 BEALE STREET

FOR USE BY GAS SYSTEM DESIGN DEPARTMENT DATE RECEIVED

- Review assigned to: [redacted] - GS) 11/29/88
- Copies distributed to: (Gas Dist.) _____
- Evaluation, comments and action by Gas System Design:
FAILED SECTION OF PIPE WAS INSPECTED. SEE THE ATTACHED T&S LETTER DATED 3/1/89.
- Evaluation completed by: [redacted] Telephone [redacted] Date 3/15/89
- Approved by: [redacted] Date 3-20-89

GAS SYSTEM DESIGN		
PCH	F/U Date	KCR
JRG	NOV 28 1988	KMB
RCB		ED
JAC		CM
SYG	CIRCULATE	HANDLE
RFD	COMMENT	FILE
REB		

FEEDBACK*

- By: OEA Date 3/20/89 Method letter
To: _____

* IMPORTANT: Feedback must be provided on all Material Problem or Failure Reports either by letter or copy of completed report. Distribution should be made as outlined in the Guidelines (Supplement to S.P. 460.21-7).

62 0291 (REV 9/82) NO DAY YR

JOB ESTIMATE

JOB COORDINATOR S RC NUMBER 0269

DATE OF ESTIMATE 103188

DEPARTMENT SAS DISTRICT PENINSULA DIVISION GOLDENGATE REGION 02

APPLICANT PACIFIC GAS & ELECTRIC CO. SOURCE DOCUMENT OF ESTIMATE No 0234691727

LOCATION [REDACTED] COUNTY [REDACTED] PROJECT IDENTIFICATION NUMBER (PIN) G.D. 102188127

JOB TITLE VO TRANSMISSION MAINT GENERAL NEW BUSINESS/APPLICANT BILLING DATA

NAME OF PROJECT/PHASE COORDINATOR GALE SIU PG&E Est 626-7214 TOTAL SPECIFIC PROJECT/PHASE BUDGET AMOUNT \$

NECESSITY FOR PROPOSED WORK AND DESCRIPTION THEREOF

IT IS NECESSARY TO REPLACE A 6' SECTION OF 30" T.L. 132 DUE TO A LONGITUDINAL WELD DEFECT.

ESTIMATED BASE ANNUAL REVENUE \$

RESIDENTIAL ELECTRIC, NON P T GAS US ELEC OR GAS TRENCH FT No UNITS

CONTRIBUTIONS EXCESS SERVICE CHARGE \$

OTHER \$

REFUNDABLE ADVANCE \$

OTHER RELATED JOB AUTHORIZATIONS (INCLUDING D & C)

D & C No

OTHER JOB No

PERC PROJ No

DSE LOCATION

ESTIMATOR

DATE REQUIRED 11-11-88

RECOMMENDATION RULE No and RATE SCHEDULE COMPANY EXPENSE

LINE NO	FACILITY	ACCOUNT	SUB ACCOUNT	SPECIAL CODE	DESCRIPTION OF DIRECT COST ITEMS	WEEKDAYS OF EST AMOUNT	AMOUNT (Dollars Only)			
							LABOR	MATERIAL	EMPLOYEE RELATED COST	CONTRACT AND OUTSIDE SERVICES
02132		3475	6034		SHUTDOWN AND RESTORE MAIN	40	5800		75	1000
02132		3664	2040		REPAIR LONGITUDINAL WELD DEFECT	22	3190	300		5000

TOTAL AMOUNT (Dollars Only)				TOTAL CAPITAL DIRECT COSTS		TOTAL M&O DIRECT COSTS		TOTAL DIRECT COSTS	
ALLA	CH	C	RECT	REGIONAL DIRECT	TRAVEL LABOR	DECAUTION	D & C DIRECT (See TRM 1)	DECAUTION	
				15365				15365	
PLANT TO BE REMOVED OR ABANDONED (Enter on Form 62-043B "Detail Sheet for Plant to be Removed")									
JOB EXPENDITURE BY YEAR									
COSTS		FIRST YEAR 88		YEAR		YEAR		TOTAL	
DIRECT COSTS		15365						22195	
GROSS COSTS		22195							

FOR ACCOUNTING USE ONLY

PLANT CODE	PERIOD	FUNCTIONAL GROUP	SELF REPORT No	COMMENTS	CLASSIFICATION

FOR ACCOUNTING USE ONLY

CHECKLIST	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.P. I.T. INTENTION									
2.P. I. SUPP. No.									
TREE TRIMMING									
CITY OR CO PERMIT									
HIGHWAY PERMIT									
R. R. RING PERMIT									
OTHER PERMITS									

JOB AUTHORIZATIONS

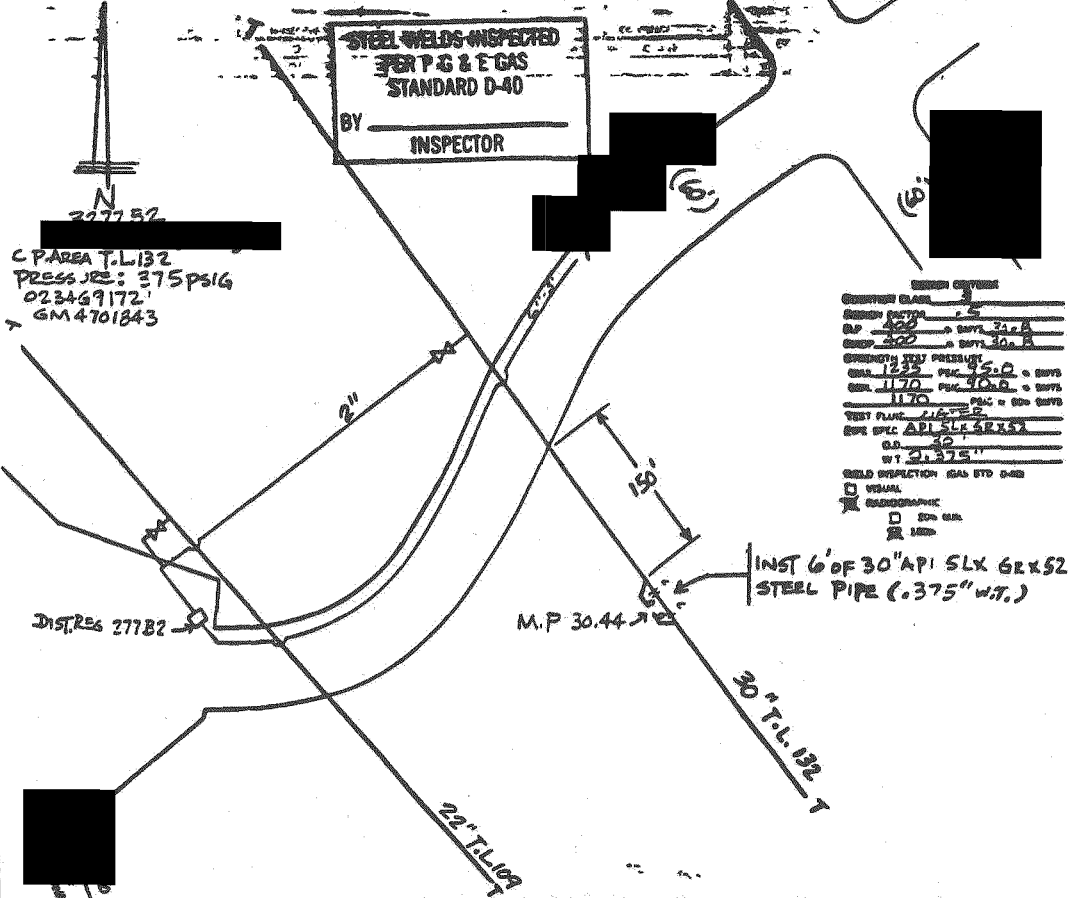
JOB ORDER NUMBER GM4701843

Work Started: _____ Date Completed: _____ Foreman Signature: _____

MATERIAL USED IN THIS AUTHORIZATION				LOCAL PURCHASE ORDERS	MAPPING RECORD
PERMITS AND CREDIT CHECK NUMBERS				REFERENCE Nos	POSTED TO DATE
CREDIT	CREDIT NO.	CREDIT NO.	CREDIT CHECK		H Sheet
					Fran Sheet
					Prop Tax Rec
					Plat Sheet
					Switch & Wall Map

For transformer installation - Job foreman shall show following data on sketch at transformer location: Type, Mfg Serial No., KVA, Voltage, New or Old (fill space in duplicate, and separate sheet with same data and transformer location grid coordinates or pole reference number)

SKETCH OF WORK - Foreman to submit 2 sheets of work - showing D.C. by installation



ADD ALL DETAILS NOT CLEARLY SHOWN BY SKETCH ON MEMO FORM

Code Area	Pub RW	COUNTY	RA-UNINC	RA-INC	NON RA	UG	CL	SL	SL
Poles - Twp.	Part RW							OH	UG
Cond	No Trls					Cables	Conduit	Line No	Computer
KVA									

LEAK SURVEY, INSPECTION AND REPAIR REPORT (S.P. 460-2)
 FOR UNSCHEDULED REPAIR OR RESPONSE
 Revised 09/02/00 107/071

USA FORM 107
 Valid on: _____

INITIAL LEAK REPORT

LEAK NUMBER: 18 E - 203 - C - 1 RC NUMBER: 12050 TODAY'S DATE: 10/27/99 TIME: 4:00 PM
 ADDRESS: [REDACTED] DATE FOUND: 11/7/00 GRADE: 1
 READING: _____ LOC: _____ 150 OPERATOR: _____ REPAIRTEE DISTRICT: _____
 # 13222 PLAT: 182 BLOCK: 122 SURFACE OVER LEAK: _____ CITY: San Jose DISTRICT NO: 159
 FED'L LAND? (Y/N) ENCL. PROT.? (Y/N) YEAR INST: 1998 SYSTEM PRESS: 325 SPAN: 020-22

REPAIR REPORT
 LOCATION: San Jose
 MISC. INFO/REMARKS: 11-4-RH G&S Replaced 30" Pipe
 REPAIR DATE: 10/28/99
 JOB CODE: M Capital, R Maintenance
 LINE SIZE: 30 inches
 LINE MATERIAL: Cast Iron or Ductile Iron, Copper, Steel or Wrought Iron, Alloy A, TE 416, Plastic other than 'A' or 'T', Other
 LINE USE: Distribution Main, Service, Transmission Main, Gathering Main, Distribution Feeder Main
 FOR SERVICE ON: Aboveground? Yes No
 Material of Main Connected to Service: Cast Iron, Steel, Plastic
 LEAK CAUSE: Corrosion, Damage by Outside Forces, Signs, Damage by Electrical Failure, Construction Defects, Material Failure, Cast Iron Fracture, Other
 LEAK SOURCE: Birth Hole, Longitudinal Hole, Other Holes, Body of Pipe, Valve, Scraper Trap, Tap Connection, Drop, Compressor Components, Gas Cooler, Physical (Mechanical) Joint, Fitting, Bell Joint, Regulator, Other
 TYPE REPAIR: Temporary, Permanent
 REPAIR CODE: Weld Over Sleeve or Cap, Patch Applied, Clamp, Replace Pipe, Tighten Cap or Bolt, Bell Joint Clamp, Bell Joint Seal, Other
 FOR CAST IRON ONLY - NO. OF B.S. CLAMPS/SEALS/FRACTURES: _____

INSPECTION REPORT
 FOR: MAIN or SERVICE
 DATE: 11/7/00 REPORTED BY: [REDACTED]
 SIZE: 30" IN O.D. THICK.: _____ IN MATERIAL: STL
 COVER ON PIPE: 24" FT OF PIPE EXPOSED: 16 SPEC.: _____
 TEST DATE: 10/28/99 TIME: 5:00 PM PRESSURE: N/A
 COATING: None (BARE), Double Wrap, Single Wrap, Other: _____
 WRAP CONDITION: Excellent, Fair, Poor
 PIPE CONDITION:
 EXTERNAL - RUST: None, Light, Heavy
 PITTING: None, Light, Heavy
 PIT DEPTH (IN): _____
 GRAPHITIZED (C.I.): Yes, No
 INTERNAL - INSPECTION: Clean, Dirty, Dirty
 RUST: None, Light, Heavy
 PITTING: None, Light, Heavy
 PIT DEPTH (IN): _____
 SOIL TYPE: Hard Rock, Soft Rock, Sand, Clay, Hard Clay, Mud, Other: _____
 CAST IRON MAIN FRACTURE REPORT: (Cause or probable cause)

AMENITY PROBLEMS REPORT? Yes No
 PREPARED BY: _____ DATE: 11-4-99
 Post Repair Backcheck Req'd Yes No
 Date: _____ Reading: _____ By: _____
 ONLY BY: Field Survey, Call-in, Hoisting Contractor or Outside Force, Public Service, Serviceman or Company Emp., Public Survey, Other
 SURFACE OVER LEAK: Concrete, Tar Compound, Waterproofed, Other

GRADE 1 LEAK RESPONSE
 (For Damaged or Deleted Grade 1 Leaks)

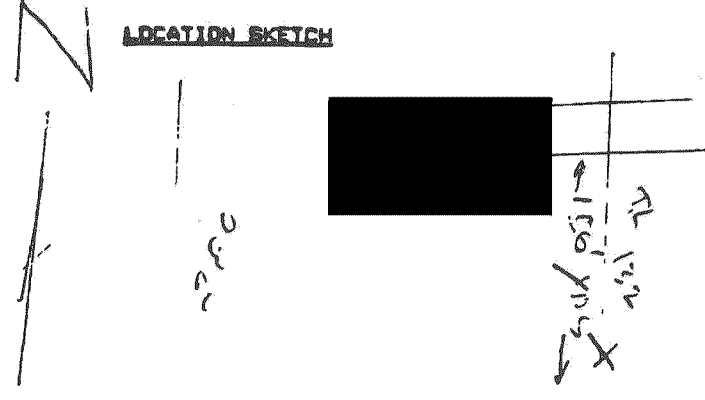
REPORT NO: 1 OPERATOR: BAW
 DATE: 11/17/88 TIME: 4:00 PM @: J.B.
 LEAK: 1 Damaged Leak to Grade 2 Deleted Leak
 OTHER: Broken Valve
 ACTION/REMARKS: over man TIC: 4:00 PM
 NO. 102 over man

REPORTED BY: 11 Perform Special Action on: 11 Authorized By: _____ Date: 11

LEAK NO.	DATE	TIME	OPERATOR	ACTION/FOLLOW-UP

Legend: Type = H - Hydrogen flame ionization or C - combustible gas indicator

LOCATION SKETCH



Date: December 1, 1988

File #: 460.21

To: GOLDEN GATE

From: GAS SYSTEM DESIGN

Subject: Failure of Longitudinal Welding on
30-Inch Steel Pipe



[Redacted]

I have received the Material and/or Equipment - Problem or Failure Report that you prepared describing the failure of the longitudinal welding on 30-inch steel pipe. This report has been assigned to [Redacted] of the Pipe Line System Engineering of Gas System Design Department. The evaluation for this report is expected to be completed by April 1989.

If you have any questions concerning this report, please contact me on Ext. [Redacted]

[Redacted]

[Redacted] :cm

cc: [Redacted] (attachment)

Memorandum

Date March 1, 1989 File# 4152
To GAS SYSTEM DESIGN
From TECHNICAL AND ECOLOGICAL SERVICES
Subject [REDACTED] 30" Transmission Line Failure



[REDACTED]

A section of the 30" [REDACTED] transmission line (132) was removed for failure analysis because of a pinhole leak in the longitudinal seam weld (see attached materials failure report) X-ray, dye penetrant, and magnetic particle inspections were performed on the submitted section, but these did not locate the leak. The X-ray and subsequent metallographic examination identified several weld shrinkage cracks, but they did not extend through wall. The cracks are pre-service defects, i.e., they are from the original manufacturing of the pipe joint.

Overall, the X-ray inspection showed the weld to be of low quality, containing shrinkage cracks and voids, lack of fusion, and inclusions. Although the actual leak could not be found, it is likely that it was related to one of the weld defects. With the leak removed, the remaining pipe should be fully operational again.

If you have any further questions, please contact myself or [REDACTED] respectively.

[REDACTED]

[REDACTED] kar *DK*

033102 [REDACTED]

xc [REDACTED]

Attachment