

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Investigation on the
Commission's Own Motion into the Operations
and Practices of Pacific Gas and Electric
Company with Respect to Facilities Records for
its Natural Gas Transmission System Pipelines.

I.11-02-016
(Filed February 24, 2011)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 G)
SUPPLEMENTAL RESPONSE TO LEGAL DIVISION'S
"NOTICE AND DISCLOSURE OF SAFETY EVIDENCE
AND COMPANION MOTION FOR PUBLIC RELEASE OF
EVIDENCE"**

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PG&E provides this supplemental response to the "notice and disclosure of safety evidence" to assure the Commission and the public that what Legal Division declared to be "significant safety issue[s]" are not.^{1/} PG&E took Legal Division's claims of safety issues very seriously and has reviewed and analyzed the 83 documents Legal Division identified. There is nothing in those documents that raises any current safety concern and the conditions Legal Division mentions are being addressed through PG&E's ongoing safety programs.

The two issues Legal Division raised are (1) the alleged use of "salvaged or junked" transmission pipe (Notice & Motion at 2); and (2) the claimed placement into service on Line

^{1/} It is doubtful that even Legal Division believes it had evidence of any imminent safety issue. First, apparently Legal Division did not raise any safety issue with CPSD prior to filing its October 19 pleading (following Legal Division's filing, CPSD sent PG&E a data request asking for the documents referred to by Legal Division) or, if it did, CPSD did not consider it to be an imminent safety threat since CPSD did not raise any safety issue with PG&E. Second, Legal Division did not raise any safety issue with PG&E prior to filing. Then, after claiming in that pleading that the information needs to be released "quickly" (Notice & Motion at 3), and despite repeated requests from PG&E, Legal Division refused to identify the documents it claimed raised the safety issues until after PG&E responded to a set of data requests due on Friday, October 21. Legal Division finally provided a list of documents (not the documents themselves) at about 5:00 p.m. on Saturday, October 22. After repeated prodding from PG&E, Legal Division provided copies of the actual documents on October 25. Three of the documents were misidentified on the list.

132 of “pipes with [] poor or marginal welds.” (*Id.* at 3.) The first issue stems from documents dated mostly in the 1950s; the second is based on 1948 documents.

The following two sections discuss each of these issues. The Appendix to this filing contains the list of documents provided by Legal Division and copies of all the documents identified, redacted to protect the names and other personnel information of non-management employees. As we said in our initial response to Legal Division’s pleading, PG&E does not claim “blanket confidentiality” for the documents, like these, in its ECTS database. PG&E designated ECTS protected by Public Utilities Code § 583 because it is impossible to redact non-management employee information and critical infrastructure locations from a 2,000,000-document database PG&E uses for its daily work. PG&E will continue to promptly provide public versions of any documents Legal Division identifies to us.

Because of duplications in the documents Legal Division identified, there were only 69 unique documents. Attachment A identifies the duplicates and comments on each of the unique documents.

1. Reuse Of Salvaged Pipe

Legal Division refers to the use of “salvaged or junked” pipe, suggesting that the two words mean the same thing. The suggestion that salvaged pipe is “junk” is false.

“Salvaging” pipe refers to removing the pipe from the ground. The fact that pipe has been salvaged by itself says nothing about what happens to that pipe next. As described in Attachment A, most of the “salvaged pipe” documents Legal Division identified reflect the fact that pipe was removed from a prior installation, and say nothing about what use, if any, was made of that salvaged pipe.

Pipe is salvaged for a number of different reasons:

- ! To be reconditioned and reused as transmission pressure pipe.
- ! To be reconditioned and reused as casing pipe to provide physical protection for gas transmission pipe, and not for pressure service.

- ! To be “junked” and sold to a third party for scrap (*e.g.*, to melt down for manufacturing something else).
- ! To be sold or donated to third parties for their use as non-gas pipe (*e.g.*, for culverts, private water transportation).

Pipe may be removed from the ground for other reasons as well. For example, the location of the buried pipe may interfere with other planned construction, such as a replacement PG&E gas line, or third party construction (*e.g.*, a foundation, another buried linear facility, a road). Or PG&E’s land rights may require that pipe be removed from the ground once it is no longer in service.

Steel transmission pipe represents a substantial investment in a long-lived asset that customers pay for in rates. The reuse of salvaged pipe when it was in good condition was a common practice throughout the industry into at least the 1960s, and the Commission itself has long known of and approved the use of such pipe.^{2/} Reused pipe would be cleaned, inspected, and, if in satisfactory condition, recoated prior to use (a process referred to as reconditioning). Any pipe – reused or otherwise – installed in California from 1961 on would have required a pressure test.

PG&E is addressing the historical use of reconditioned pipe through its MAOP validation, hydro testing, Pipeline Safety Enhancement Plan (PSEP) filed in R.11-02-019, and its integrity management program. The Pipeline Features Lists being completed as part of the MAOP validation specifically note the presence of reconditioned pipe so that it can be catalogued and tracked. Taken together, the MAOP validation, hydro testing, PSEP and integrity management programs identify, validate, monitor and provide for the replacement of older pipe in PG&E’s natural gas transmission system as part of PG&E’s ongoing safety oversight.

^{2/} For example, a July 22, 1965 letter from the Commission to PG&E noted that a proposed 8-mile extension of 16” pipe in a Class 3 location would use “salvage and reconditioned pipes from Main No. 100 originally installed in 1929.” This letter is Attachment B (emphasis added).

Attachment A contains a summary description and comments on the documents Legal Division appears to believe are related to the use of reconditioned pipe (Documents 1-2, 4-75).^{3/}

2. The 1948 Weld Documents

The 1948 weld documents (Documents 75-83) concern Line 132. PG&E is convinced there is no safety issue on Line 132 for several reasons. First, that line is currently operating at a maximum pressure of 300 psig – 20 percent below the pre-San Bruno accident MOP of 375 psig and 25 percent below Line 132’s MAOP of 400 psig. That is a very substantial additional safety margin on top of that built into the MAOP itself. Beyond that, PG&E is subjecting Line 132 to a painstaking MAOP validation process that includes document review and nondestructive examination to confirm the qualities of the pipe and appurtenances on the line as well as hydro testing and the rigors of examination under PG&E’s Pipeline Safety Enhancement Plan and regular integrity management assessments. Because of Line 132’s age, PG&E’s integrity management program considers the line to be subject to a pre-1970 ERW threat and a construction threat, and it evaluates the construction threat in conjunction with the threat of outside force, such as ground movement at earthquake fault crossings, landslide zones, etc.

Legal Division claims the documents it identified show PG&E “has accepted known poor and marginal welds, and then placed pipes with these poor or marginal welds into service on Line 132.” (Notice & Motion at 3.) Neither the documents Legal Division identified (Documents 76-83) nor any others of which we are aware support the claim that PG&E knowingly placed pipe with poor (*i.e.*, unacceptable) quality welds into service.^{4/}

Documents 76-83 are logs of radiographs (X-rays) of certain girth welds and longitudinal welds on the pipe being installed on Line 132 in 1948.^{5/} The logs identify the welds by number

3/ Document 3 is a posting checklist for PG&E’s mapping department when processing job documents. It is unrelated to either of the issues Legal division has raised.

4/ We assume that when it refers to “marginal” welds, Legal Division means welds close to the lower limit of acceptability. Inherent in the establishment of any standard is the fact that there will be a distribution within the range of acceptability with some welds close to the lower limit. Document 82 shows acceptance of two girth welds at the lower limits of acceptability (labeled, “borderline”) (welds 111 & 112).

5/ This is not the relocation of Segment 180 in 1956.

and contain an interpretation of the radiograph classified as “O.K.” or “Reject,” along with “Remarks.” Although there is a “Date Repaired” column on the form, it was not used.

For the most part, the radiograph logs show the welds – whether girth welds or longitudinal welds – were “O.K.” There are three instances in which a “crack” was noted in a longitudinal seam and neither the “O.K.” column nor the “Reject” column was checked. (Document 76, weld 82; Document 77, weld 71; Document 78, weld 51.) Given that every other weld on those three logs was marked “O.K.,” it is apparent that those three were not considered “O.K.”

In fact, early in the 1948 job, PG&E raised a question about the “squirt welds” at the ends of the longitudinal welds when X-rays of the girth welds showed some cracks on welds 1, 3 and 5 (Document 79). PG&E stopped wrapping and installing the welded pipe and met the next day with representatives from the pipe manufacturer (Consolidated Western), and the City. (See Attachment C, draft report, “The Construction of a 30-Inch High Pressure Gas Transmission Main 132,” p. 3.)^{6/} The following day, two of the repaired welds were re-X-rayed and found to be “O.K.” (Document 79, welds 9 & 10.) A September 18, 1948 report on the longitudinal seams stated:

Lowering of pipe into the trench was delayed during this past week when X-rays indicated small defects in three of the longitudinal seams. Investigation and additional X-rays showed the welding of the longitudinal seams to be acceptable and installation of the pipeline was resumed. (Attachment D; emphasis added.)

And an October 28, 1948 report, “Pertinent Information on the Construction of 30” High Pressure Gas transmission Main #132” explained the underpinning of PG&E’s confidence in the quality of the longitudinal welds:

The expansion of the pipe [during fabrication] was a severe test on the weld as it was stressed beyond its yield point which would cause a defective weld to fail. (Attachment E, pp. 3-4.)

^{6/} PG&E produced the job file for the 1948 construction of Line 132 to the NTSB and the Commission’s party participant in the NTSB investigation.

In a number of instances on the radiograph logs, the “O.K.” welds are accompanied by remarks indicating that some flaws were noted. The contract specification for the 1948 construction stated, “The welds shall be held to a predetermined set of standards prepared and agreed to by the Contractor’s welding engineer, the Company’s Engineer of Gas Construction, and representatives of the company making the radiographic tests.” While PG&E has not located that predetermined set of standards, there is no basis for assuming the standards were not appropriately applied in reviewing the radiographs. PG&E is confident that any welds that required repair or replacement were repaired or replaced per the specifications.

In short, there is nothing in the documents Legal Division has identified that provides any basis for believing that Line 132 is subject to any safety issue that is not already being addressed through PG&E’s MAOP validation, Pipeline Safety Enhancement Plan, hydro testing, and integrity management program.

PG&E stands ready to provide public versions of any ECTS documents Legal Division identifies and has done so for the 83 documents identified to date. Legal Division’s motion was unnecessary – as a pre-filing conversation with PG&E would have shown – and should be denied.

Respectfully submitted,

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ATTACHMENT A

No.	Date	Description	Comments	Line No.
1	1/1/57	<u>Construction Drawing</u> : As-built drawing showing 2598' of 24" pipe salvaged from a relocation job and 22' salvaged and reused.	The pipe installed next to this job is 1947 pipe. Based on other documents, it appears the 22' of pipe was not considered new pipe and is still labeled as 1947 pipe. PG&E is hydro testing this section of pipe this year.	132
2	2/15/68	<u>"Job Facesheet"</u> calls for installation and removal of temporary 30" main, including salvage of temporary main, and pipe removed or abandoned.	Where a temporary main is installed, the temporary portion will almost always be salvaged or removed because it is in the way of other construction work. There is no indication that this pipe was reconditioned and reused. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
3	10/1/94	<u>Posting check list</u>	This is a check off list for the mapping department when processing job documents.	109
4	5/7/57	<u>"Job Facesheet"</u> for the relocation of a main and calling for the salvage of the original 1947 pipe.	Typically on a relocation job where the old main is in the way of other construction, PG&E is paid to move the pipe out of the way of the other work. Here, the pipe was salvaged or removed from the ground. There is no indication it was reconditioned or reused. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
5	8/29/58	<u>"Job Facesheet"</u> calls for relocation of line and "Remove salvage."	Removal of old pipe is typical for a relocation job. There is no indication the pipe was reconditioned or reused. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
6	3/18/60	<u>Credit Requisition</u> form to list articles that "have been returned to the warehouse or abandoned in place." This form is for the reconditioning of 2485' ft of pipe and abandonment of "wrot [sic] iron" scrap.	There is no indication the reconditioned pipe was installed on this job. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132

No.	Date	Description	Comments	Line No.
7	12/26/57	<u>Plant Abandoned, Destroyed or Removed from Service</u> records a special temporary write off of 1947 pipe and the reversal of the temporary write off.	This document does not indicate the 1947 pipe was reconditioned or reused. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
8	8/1/57	<u>Credit Requisition</u> form to list articles that "have been returned to the warehouse or abandoned in place." This one is to "clean and recondition" 1480' of 12" pipe and scrap 239'.	This 12" pipe was used as temporary bypass then removed and reconditioned. It is typical to reuse temporary bypass pipe. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
9	4/14/58	<u>Combined Shipping Notice and Transfer</u> states 22' of 24" pipe originally installed in 1947 was salvaged and reused.	This is from the same job file as Document 1 and appears to refer to the same 22' of 24" pipe. See document 1 comments. PG&E is hydro testing this section of pipe this year.	132
10	7/18/57	<u>Partial Receiving Record</u> showing 377' of 24" wrapped pipe (9 pieces) were shipped from Decoto Pipe Yard.	There is no indication this was reconditioned pipe. PG&E is hydro testing this section of pipe this year.	132
11	9/9/57	<u>"Haul Tag"</u> showing 33 pieces of 24" wrapped pipe were shipped from Palo Alto to Decoto pipe yard.	This document merely shows the movement of pipe. There is no indication the pipe was reconditioned or installed on this job. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
12	6/6/57	<u>G.M. Assignment Letter</u> assigning relocation 3300' of 24" pipe to General Construction with the material to be drawn from the local warehouse.	This document indicates the pipe came from the local warehouse. There is no indication the pipe was reconditioned. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
13	10/21/58	<u>Requisition on Storekeeper</u> showing 500 lbs. of "junk, heavy wrought iron" consisting of 10' of 22" half sole	This is not a segment of pipe; it is part of a pipe. The document states the material is junk. Listing the quantity in pounds is consistent with scrap, and there is no indication the material was reconditioned or reused.	132

No.	Date	Description	Comments	Line No.
14	1/4/60	<u>Credit Requisition</u> form to list articles that “have been returned to the warehouse or abandoned in place.” The “Salvaged” check box indicates 15 ft of 30” pipe and 6 ft of 6-5/8” pipe were salvaged.	There is no indication the pipe was reconditioned or reused, and the document states “kill & abandon 6” & 30” main,” indicating the pipe was intended to be scrapped. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
15	10/29/59	<u>Combined Shipping Notice and Transfer</u> showing transfer 4.5 ft of 30” pipe from a 1948 job.	The 30” pipe is no longer in service.	132
16	6/24/59	<u>Partial Receiving Record</u> showing receipt of 24” Grade B Seamless .3125 wt pipe from Decoto Pipe Yard.	There is no indication this was not new pipe. The pipe material codes are for new pipe.	132
17	11/16/59	<u>Combined Shipping Notice and Transfer</u> transferring 24” and 22” pipe and welding sleeves from one job to another.	There is no indication the pipe was not new. The pipe material codes are for new pipe.	132
18	3/3/59	“ <u>Job Facesheet</u> ” showing 12’ of 30” pipe and 5’ of 6” pipe were to be “removed and junked.”	Junked pipe, as referred to in this document, is not reused but sold for scrap or otherwise disposed of.	132
19	11/5/58	<u>Shipping Notice</u> showing shipment of 40’ of 24” pipe originally installed in 1944 to the Decoto Pipe Yard.	There is no indication of whether this salvaged pipe may have been reused. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
20	1957 or 1958	“ <u>Job Story</u> ” describing the replacement and relocation of 24” pipe. The existing 24” pipe was to be salvaged “in view of its comparative newness, accessibility and the absence of paving.”	There is no indication how the salvaged pipe may have been reused. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
21	This is the same as Document 73			
22	This is the same as Document 73			
23	5/7/57	“ <u>Job Facesheet</u> ” for installation of 3300’ of 24” pipe and removal and salvage of 3260’ of 24” pipe installed in 1947.	There is no indication that the salvaged pipe was reconditioned and reused. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system	132

No.	Date	Description	Comments	Line No.
			is being catalogued and tracked.	
24	9/2/64	“ <u>Job Facesheet</u> ” for relocation involving installation of 1376’ of 30” pipe, 1400’ of temporary 22” main, removal 1471’ of 22” installed in 1936, abandonment of 50’ of the 1936 22” pipe, removal of 717’ of the temporary 22” pipe, and abandonment of 894’ of the temporary 22” pipe.	There is no indication that the pipe installed was salvaged and reconditioned. Nor is there any indication that the salvaged 1936 pipe or temporary main was reconditioned and reused. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	109
25	6/4/64	“ <u>Job Facesheet</u> ” showing a credit to this job for salvage of 21038’ of 22” pipe and 18768’ of 30” pipe.	205’ of 22” pipe was reused on this job and was hydro tested. Approximately 85% of the 30” pipe installed on this job has been hydro tested with hydro tests scheduled this year for the remainder. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	109 132
26	6/4/64	<u>G.M and Work Order Estimate Detail Sheet</u> for the same job as Document 25. It shows the installation of 22”, 30” and 36” pipe, and the removal and reconditioning of 23375’ of 22” pipe installed in 1935 and 20853’ 30” pipe installed in 1948.	205’ of 22” pipe was reused on this job and was hydro tested. Approximately 85% of the 30” pipe installed on this job has been hydro tested with hydro tests scheduled this year for the remainder. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	109 132
27	10/27/54	<u>Shipping Notice</u> showing shipment of 16 joints of 22” pipe (617.48’) originally installed in 1930 to A.R. Reid Co. for “double wrapping pipe after reconditioning in field.”	There is no indication when or if this reconditioned pipe may have been reused. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	131
28A ¹	10/29/54	<u>Shipping Notice</u> showing shipment of 16 joints of 22” pipe (404.79”) originally installed in 1930 and reconditioned in the field to the Decoto Pipe Yard for	There is no indication when or if this reconditioned pipe may have been wrapped and reused. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in	131

¹ The “A” is appended to three numbers because the documents provided by Legal Division were different from the documents on Legal Division’s list. Where the document provided was different, the document is listed here with an “A” appended.

No.	Date	Description	Comments	Line No.
29	12/17/54	“storage and wrapping at a later date.” <u>Shipping Notice</u> showing that fittings, hardware, and 9-10’ of 16” seamless pipe connected to orifice tubes originally installed on another job were shipped to PG&E Sub-store #64.	the gas transmission system is being catalogued and tracked. These fittings, nuts/bolts, pipe and miscellaneous hardware had an ultimate destination of Kettleman Compressor Station, Avenal.	131
30	Unk.	<u>Shipping Notice</u> : This is Sheet 2 of a shipping notice showing shipment of salvaged or overdrawn pipe from multiple jobs	This document reflects shipment <u>away</u> from a job. PG&E has not located Sheet 1, and this page does not state the destination. There is no indication that the pipe was ever reconditioned and reinstalled. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	153
31	3/10/55	<u>Shipping Notice</u> showing shipment to storage at Milpitas Control Station Yard of 21’ of 24” pipe that was “salvaged and junked.”	The document states the pipe was junked (<i>i.e.</i> , di s ps æ of as s æ p) .	131
32	3/9/55	<u>Shipping Notice</u> showing shipment to storage at Irvington Control Station Yard of 90’ of 20” pipe that was “salvaged and junked.”	The document states the pipe was junked (<i>i.e.</i> , di s ps æ of as s æ p) .	131
33	3/10/55	<u>Shipping Notice</u> showing shipment to storage at Milpitas Control Station Yard of 9.5’ of 20” pipe that was “overdrawn and junked.”	The document states the pipe was junked (<i>i.e.</i> , di s ps æ of as s æ p) .	131
34A	This is the same as Document 41			
35	No Date	<u>Shipping Notice</u> showing shipment to storage at Milpitas Control Station Yard of 4’ of 30” pipe described as “small pieces Junk.”	The document states the pipe was junked (<i>i.e.</i> , di s ps æ of as s æ p) .	131

No.	Date	Description	Comments	Line No.
36	3/10/55	<u>Shipping Notice</u> showing shipment to storage at Milpitas Control Station Yard of 162' of 30" pipe that was "salvaged and junked."	The document states the pipe was junked (<i>i.e.</i> , disassembled).	131
37	1/27/54	<u>Combined Shipping Notice and Construction Journal Voucher</u> showing that a total of 161' of 30" D.W. pipe and two 30" elbows (90'S) originally installed 12/5/1951 were salvaged and reused.	The salvaged and reused material had been originally installed 25 months before. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	131
38	10/54	<u>Combined Shipping Notice and Construction Journal Voucher</u> showing 4,463.24' of 22" pipe originally installed in 1930 was salvaged and reused.	This section of pipe was hydro tested in 1977.	107
39	9/23/54	<u>Combined Shipping Notice and Construction Journal Voucher</u> showing shipment of 40.83' of 30" pipe.	There is no indication that this pipe was salvaged or reconditioned and reused. The line on the form, "Indicate Whether Overdrawn or Salvage," has the word "Salvage" crossed out, indicating that it is not salvaged pipe.	153
40	4/54 ²	<u>Plant Abandoned, Destroyed or Removed from Service</u> records that 212' of 30" pipe was "held for salvage" and later abandoned.	There is no indication this pipe was reconditioned or reused. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
41	11/57	<u>Plant Abandoned, Destroyed or Removed from Service</u> records that 1930' of 30" pipe was removed from service, 415' of which was abandoned.	There is no indication this pipe was reconditioned or reused. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
42	10/11/56	<u>Combined Shipping Notice and Transfer</u> showing that 61'8" of 30" pipe originally installed in 1949 was salvaged, shipped for wrapping, and then installed.	This reconditioned pipe was removed from service in 1970.	132

² This document has multiple handwritten notes with different dates. This is the earliest date, thus, presumably, the date the document was first created.

No.	Date	Description	Comments	Line No.
43	10/11/56	<u>Combined Shipping Notice and Transfer</u> showing that 487' 9" of 30" pipe originally installed in 1949 was salvaged, shipped for wrapping, and then installed.	This reconditioned pipe was removed from service in 1970.	132
44	This is the same as Document 61			
45	This is the same as Document 57			
46	This is the same as Document 57			
47	This is the same as Document 74			
48	6/6/55	<u>Combined Shipping Notice and Transfer</u> showing 10' of 24" pipe originally installed in 1944 salvaged and transferred to this job	This section of pipe was hydro tested in 1977.	107
49	2/9/55	<u>Shipping Notice</u> showing shipment to Emeryville warehouse of six fittings originally installed in 1951.	These are fittings, not pipe. Fittings were commonly moved between jobs and reused during this era. These fittings were in use less than four years before being salvaged. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	131
50	This is the same as Document 38			
51	10/54	<u>Combined Shipping Notice and Construction Journal Voucher</u> showing salvage and reuse of bolts, flanges, valves, and 70' of 2 3/8" pipe originally installed in 1946 at Irvington Gas Terminal.	PG&E's records do not reflect any 2" pipe still installed on this job.	131
52A	12/54	<u>Plant Abandoned, Destroyed or Removed from Service</u> records 41' of 30" pipe junked and 319' of 30" pipe abandoned.	The document states the pipe was junked (<i>i.e.</i> , disposed of as scrap) or abandoned, not salvaged and reused.	132
53	6/21/56	<u>"Job Facesheet"</u> for the relocation by replacement of a section of pipeline in the Crestmoor subdivision. The job called for installing 1900' of 30" pipe, abandoning 450' of 30" pipe, and removing and salvaging 1400' of 30" pipe installed in 1949.	The salvaged pipe reused on this job has been removed from service. There is no indication what was to be done with the remainder of the salvaged pipe. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132

No.	Date	Description	Comments	Line No.
54		This is the same as Document 53 with handwritten mark-up		
55	none	<u>GM Cost Report</u> : This handwritten accounting document contains a line item: "repairs to salv matl."	The document does not identify the salvaged material on which the repairs were made. Document 53, which is for the same job, states that old pipe was being salvaged from this job, suggesting that the repairs were to the material removed as part of the pipe relocation. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
56	3/19/57	<u>Combined Shipping Notice and Transfer</u> showing shipment of 90' of 30" pipe originally installed in 1949.	This appears to be shipment of some of the removed pipe referred to in Document 53 from the job. The material code appears to be that for salvaged pipe. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
57	6/12/56	<u>General Construction Department Material Procurement Order</u> showing 1186' of wrapped 30" pipe and 23' of bare 30" pipe to be delivered to Skyline Blvd.	There is no indication the pipe was not new, and the material codes are for new pipe.	132
58	9/7/56	<u>Credit Requisition</u> form to list articles that "have been returned to the warehouse or abandoned in place." This shows return to the warehouse of 45' of 30" pipe originally installed in 1929 [should be 1949], and salvaged from Crestmoor Park, San Bruno.	The document reflects the removal of the pipe from the job. There is no indication what was subsequently done with the pipe. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
59	9/24/56	<u>Credit Requisition</u> form to list articles that "have been returned to the warehouse or abandoned in place." This shows return to the warehouse of 13' of 30" pipe originally installed in 1949, and salvaged from Crestmoor Park, San Bruno.	The document reflects the removal of the pipe from the job. The inclusion of the weight of the returned pipe suggests it was scrapped. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132

No.	Date	Description	Comments	Line No.
60	10/3/56	<u>Credit Requisition</u> form to list articles that “have been returned to the warehouse or abandoned in place.” This shows return to the warehouse of 64’ of 30” pipe originally installed in 1949, and salvaged from Crestmoor, San Bruno.	The document reflects the removal of the pipe from the job. There is no indication what was subsequently done with the pipe. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
61	10/17/56	<u>Combined Shipping Notice and Transfer</u> showing shipment to this job of 158’ of 30” pipe salvaged from a 1949 job.	This salvaged pipe was used for casing, not for gas pressure service.	132
62	9/5/56	<u>Credit Requisition</u> form to list articles that “have been returned to the warehouse or abandoned in place.” This shows return to the warehouse of 272’ of salvaged 30” pipe originally installed in 1949 to be cleaned and reconditioned.	There is no indication of what was done with the pipe after it was returned the warehouse. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
63	3/25/57	<u>Credit Requisition</u> form to list articles that “have been returned to the warehouse or abandoned in place.” This shows abandonment of 415’ of 30” pipe in Crestmoor subdivision originally installed in 1949.	This documents the abandonment of pipe in place, so it was not salvaged or reused.	132
64	7/16/56	<u>Credit Requisition</u> form to list articles that “have been returned to the warehouse or abandoned in place.” This shows salvage of “W.I. Scrap” from 9’ of 30” bare pipe originally installed in 1949.	The identification of the material as “W.I. Scrap” and the inclusion of its weight (1080 lbs.) indicate the pipe was scrapped.	132
65	This is the same as Document 67			
66	This is the same as Document 41			
67	7/23/56	<u>Credit Requisition</u> form to list articles that “have been returned to the warehouse or abandoned in place.” This shows return to the warehouse of 315’ of salvaged	There is no indication of what was done with the pipe after it was returned the warehouse. As part of PG&E’s MAOP validation project, reconditioned pipe currently installed in the gas	132

No.	Date	Description	Comments	Line No.
		30" pipe originally installed in 1949.	transmission system is being catalogued and tracked.	
68	This is the same as Document 64			
69	10/4/56	<u>Requisition</u> for reconditioning 550' of 30" pipe.	This appears to be the same pipe referred to in Document 43. It was removed from service in 1970.	132
70	This is the same as Document 53			
71	3/4/49	<u>Shipping Notice</u> showing shipment for salvage and reuse of a 24" weld cap originally installed in 1947.	This is a fitting, not pipe. Fittings were commonly moved between jobs and reused during this era. This fitting was in use about two years before being salvaged. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
72	12/27/48	<u>Shipping Notice</u> showing 145' of bare 30" pipe and 62' of wrapped 30" pipe returned from the job as "SURPLUS MATERIAL."	The designation of this material as "surplus" indicates that it was never used and, therefore, not salvaged. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	132
73	1/27/54	<u>Combined Shipping Notice and Construction Journal Voucher</u> 161' of 30" pipe and 2 elbows originally installed 12/5/51 were salvaged and reused.	This pipe had only been in use for 12 1/2 months before being salvaged and reused. As part of PG&E's MAOP validation project, reconditioned pipe currently installed in the gas transmission system is being catalogued and tracked.	131
74	10/15/54	<u>Combined Shipping Notice and Construction Journal Voucher</u> showing shipment of 50' of 30" pipe, 8' of 16" seamless pipe and 2 caps from one job to another.	There is no indication that this was salvaged material, and the material codes are those for new pipe.	131
75	This is the same as Document 38			
76	9/30/48	<u>Radiograph Log</u>	All marked "O.K." except the one with the notation "crack," indicating that one was not accepted without repair.	132

No.	Date	Description	Comments	Line No.
77	9/29/48	<u>Radiograph Log</u>	All marked "O.K." except the one with the notation "Ind[ication] of crack," indicating that one was not accepted without repair.	132
78	9/58/48	<u>Radiograph Log</u>	All marked "O.K." except the one with the notation "crack," indicating that one was not accepted without repair.	132
79	9/14/48 9/17/48 9/18/48	<u>Radiograph Log</u>	Four welds marked "Reject." Two with notations of crack in longitudinal weld were repaired, re-radiographed and found acceptable. One entire 30' longitudinal seam was X-rayed and found "O.K."	132
80	9/22/48 9/23/48	<u>Radiograph Log</u> indicates 2 long seam cracks which were accepted	All marked "O.K." Two had notation of crack in longitudinal weld, one of which was X-rayed a second time. The acceptance of these welds indicates that the crack observed was not significant.	132
81		<u>Radiograph Log</u>	All marked "O.K." Some flaws were noted in the "Remarks," but "O.K." indicates they were within the acceptable range.	132
82	10/8/48	<u>Radiograph Log</u>	Three welds marked "Reject," including one with a crack in the longitudinal seam. Some flaws were noted in the "Remarks" for "O.K." welds, but "O.K." indicates they were within the acceptable range.	132
83	10/7/48	<u>Radiograph Log</u> flaws indicated, some rejected including long seam crack. No record of mitigation action taken.	Two welds marked "Reject." Some flaws were noted in the "Remarks" for "O.K." welds, including one crack in longitudinal weld, but "O.K." indicates they were within the acceptable range.	132

ATTACHMENT B

GM 162870

COMMISSIONERS
FREDERICK B. HOLOBOFF, PRESIDENT
MILNER E. MITCHELL
GEORGE G. GROVER
WILLIAM M. BENNETT
A. W. GATOV



Public Utilities Commission
STATE OF CALIFORNIA

July 22, 1965

LHS	COAST VALLEYS DIVISION			COB
SLC	REPLY	FILE	CIRCULATE	EMH
EMK				WPT
DSA	JUL 26 1965			RKM
ESH				LCS
ECH	ONLY COPY			RAB
CHB	COPY TO			HJD
RRJ				EAG

FILE NO. G.O. 112-A/5-65 CALIFORNIA STATE BUILDING
SAN FRANCISCO, CALIF. 94104

ADDRESS ALL COMMUNICATIONS
TO THE COMMISSION

Pacific Gas and Electric Company
245 Market Street
San Francisco, California 94106

JUL 26 1965
 DIV. GAS SUPT. JPS
 LBB
 LCS
 WPT
 RKM
 BB JBR EL RAH

Attention: Mr. John C. Morrissey
Attorney

Gentlemen:

This will acknowledge receipt of your letter dated June 29, 1965, forwarding for filing a proposed 8 mile, 16-inch pipeline extension from Feeder Main 301 near Castroville in order to boost the gas capacity of Monterey No. 2 main in Fort Ord. The report indicates that the installation will take place in areas of Class 3 location and Type C construction will be employed throughout the project. Since the pipe material used is salvage and reconditioned pipes from Main No. 100 originally installed in 1929, with 33,000 minimum yield and (80%) joint efficiency, the maximum allowable operating pressure under Section 107 of General Order No. 112-A will be 412 psig.

The report submitted in accordance with the requirements of Chapter IV, Section 401.2 of General Order No. 112-A has been reviewed and is acceptable for filing.

Very truly yours,

PUBLIC UTILITIES COMMISSION
STATE OF CALIFORNIA

By *William W. Dunlop*
William W. Dunlop, Secretary

7-23-65

cc: EHFisher RDSmith LHSmith EFSibley MHChandler
ATSchmidt

ATTACHMENT C

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PACIFIC GAS AND ELECTRIC COMPANY

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THE CONSTRUCTION OF A 30-INCH HIGH PRESSURE GAS TRANSMISSION MAIN 132

GENERAL

The extent of this project is the construction of 17.63 miles or 93,125 feet of 30-inch OD gas transmission line from the junction of Belmont and Canada Roads to Martin Station at Geneva and Schwerin Streets in the City of Bayshore.

The purpose of the new installation is to assist in meeting the peak hour demand in the San Francisco peninsula area, and also a supply to the new steam electric plant. A short 20-inch tie main at Martin Station between main 101 and 132 is being provided to protect the delivery capacity of both mains under possible ~~any~~ outage conditions.

Tie lines between this new 30-inch line and the paralleling existing 22-inch line are being installed and also metering and regulating stations.

The terrain is generally rolling with a few deep, steep, rocky canyon crossings, particularly San Mateo Canyon where slopes of 300 feet in lengths consists of 34 degrees, San Bruno Mountain area also added to the construction difficulties and the soil consisting of rock, clay and sand loam also some adobe.

AUTHORIZATION

GMC 98015 is an agreement between Pacific Pipeline and Engineers Limited and Stolte Incorporated, a joint venture, executed on the 24th of September 1948 by Pacific Gas and Electric Company; Carl Biddle, project manager and C. P. Hamilton, superintendent in charge under the supervision of the general construction department; M. S. Burgess, W. W. Moore, C. W. Young.

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MATERIALS AND SUPPLIES

All pipe, welding rod, tube turns, wrapping materials were furnished by the Company and delivered by truck to the job site. The pipe was hauled from Watson in Southern California by truck and strung along the right of way or stock-piled at strategic locations by truck crane or side boom-equipped tractors. The wrapping materials, welding rod and tube turns were hauled to the job site as needed by the Contractor from Martin Substation. Materials for all concrete work and tile drain replacements were furnished by the Contractor. Lumber, some skids, barbed wire, miscellaneous tools, nails, etc., were furnished by the Company.

CONSTRUCTION DETAILS

On August 23, 1948, the Contractor began work at the junction of Belmont and Canada Roads with two right of way angle dozers and a Parsons trenching machine. Average depth from ~~54~~ 54 to 60 inches and extra depth where it was required due to rocky section north of Ralston Avenue, a rooter was used and some drilling and blasting done. First pipe was received and strung out on September 3, 1948, also ~~one~~ one angle dozer started right of way on south side of San Bruno Mountain on August 31, 1948 and two loads of bare pipe was received and stock-piled at this location. Trenching continued north of Ralston Avenue using Parsons trencher and Northwest backhoe, Rooter and blasting crews clearing rocky sections. On September 2, 1948, stopped all work on San Bruno Mountain; right of way not cleared by Land Department. Pacific Pipeline moved out equipment, completed trenching up to Crystal Springs property line on September 3, 1948. C. W. Young called P. J. Pastoni of the Land Department, also M. S. Burgess and found right of way of Crystal Springs property would be delayed in County of San Francisco pro-

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erty boarding the piece above mentioned. Started clearing right of way on north side of San Mateo Canyon on September 1, 1948. Moved Parsons trenching machine around to this area September 3, 1948, and started trenching. Ransome Company, Emeryville made first bore at Skyline Drive south end of Crystal Springs Golf Course on this date. Moved Northwest backhoe around and started trenching City-County of San Francisco Game Refuge property September 7, 1948, right of way "cats" pulling rooster through rocky section of this area. Line up crew started north of Ralston Avenue ~~XXX~~ on September 8, 1948, welding and wrapping followed. First pipe was installed on September 14, 1948 and line up was complete up to where right of way change was made. X-rays or gamma ray tests were started north of Ralston Avenue. These tests will be made daily and will average about 10% of total welds. Trenching complete up to Skyline Drive south end of Golf Course, moved to north end of Golf Course on September 15, 1948. Wrapping was stopped by M. S. Burgess ~~xxx~~ as X-rays showed cracks on ~~many~~ welded seams #1 - 3 - 5 tests made. Next day, various representatives from the City came out to inspect seams -- Mr. Earl, vice president in charge of Western Consolidated Steel, Los Angeles; Ted Rooney, San Francisco office; Mr. Lindblad and Mr. Chamberlin, Bureau of Tests; R. S. Fuller, Mr. Stanley, Alex Spratling, Hap Chandler of Pacific Gas and Electric Company.

Moved another line up crew and lowering-in crew on job September 17, 1948, making a total of three crews, one north of Black Mountain Road, one north of San Mateo Canyon, and the installing crew north of Ralston Avenue. Right of way cleared in Crystal Springs property south of San Mateo Canyon September 16, 1948--this will require changing 2,100 feet of trench already done in City-County of San Francisco property and will be an extra cost to the Company. Equipment moved back and work started. Wrappers ordered to continue work this date. Right of way trenching line and weld doing very good.

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Moved Parsons trencher back and started trenching south end of Golf Course on September 21, 1948; completed first bore under Skyline Drive on this date. On September 23, 1948, pipe was lined and welded up to Skyline Drive crossing except from right of way change in Crystal Springs property up to south side and including San Mateo Canyon crossing. On September 24, 1948, a line-up crew moved over and started south end of Golf Course, also an angle dozer moved back and backfilled the 2,100 feet of trench ~~not used~~ not used due to right of way change. Completed trenching of Golf Course October 27, 1948. Some drilling and blasting of rock was done. Started bore under ~~2nd~~ second Skyline Drive crossing. Completed bore and installed 36-inch casing on September 30, 1948, also moved right of way "cats" into Mills Estate this date. All pipe installed from north side of San Mateo Canyon to south end of Golf Course. Completed all trenching in Crystal Springs property down to hill-top ~~xxxx~~ south side of San Mateo Canyon; this also includes 2,100 feet of right of way change. Line-up, welding and wrapping crews working in this area. Right of way and trenching both being done in Mills and Jersey Estates. Stopped all trenching October 4, 1948--too much trench open. Installed all pipe up to hill top south side of San Mateo Canyon on this date, also completed line-up in Golf Course this ~~date~~ making all pipe ^{lined and} ~~line~~ ~~over~~ welded up to Highway Maintenance Division Station except San Mateo Canyon. On October 6, 1948 installed span across San Mateo Canyon October 9, 1948. Line-up crew moved around to Hill top on north side. Right of way cleared in the Crocker Estate on this date. Moved backhoe over to north side of Hillside Drive October 12, 1948 and started trenching uphill on San Bruno Mountain as right of way had already been cleared in August by angle dozer. Line up and welding over half done at this time. Completed installing of pipe on both sides of San Mateo Canyon on October 15, 1948, except tie ins on top that will be made after foundations of span are poured with concrete and given time to settle. Completed backfilling Golf Course and

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tion except San Mateo Canyon. On October 6, 1948, installed span across San Mateo Creek, also started line up on ~~hill~~ hilltop of south side. Pipe is being made up and skidded downhill by holding back with a winch cat.

Trenching was continued again on October 7, 1948 in the Jersey Estate. All pipe installed in Golf Course this date, making all pipe installed up to Highway Maintenance Station except San Mateo Canyon. Right of way cats working between Junipero Serra and El Camino.

Completed road crossing, span and south side of San Mateo Canyon October 9, 1948. Line up crew moved around to hill top on north side. Right of way cleared in the Crocker Estate on this date. Moved backhoe over to North side of Hillside Drive October 12, 1948, and started trenching uphill on San Bruno Mountain as right of way had already been cleared in August by angle dozer. Line up and welding over half done at this time. Completed installing of pipe on ~~both~~ both sides of San Mateo Canyon on October 15, 1948, except tie ins on top that will be made after foundations of span are poured with concrete and given time to settle. Completed backfilling Golf Course and (continued, page #5)

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excess dirt is being hauled away. Trenching stopped on side of San Bruno Mountain, backhoe is too heavy. Pacific Pipeline and Engineers Limited is going to change backhoes to a lighter one and hold it from turning over with a winch "cat". Rocky sections are being drilled and blasted ahead of trenching by labor crew.

Moved large Cleveland trencher around on October 16, 1948, and started trenching the south end of Junipero Serra Boulevard. Also started bore for 36-inch casing under this Boulevard. All pipe lined, welded, wrapped and installed up to second Skyline crossing north of San Andreas Meter Station. On October 17, 1948, a line up crew was moved over to south side of San Bruno Mountain and started line up north of Hillside Drive. Completed bore under Junipero Serra on this date. Trenching was caving in along Mission Road — very sandy soil. Poured both anchors at San Mateo Creek and our check on hill tops show very little settling. Started bore under railroad track on Mission Road October 20, 1948.

Backhoe making very slow progress on San Bruno Mountain. ~~MAKING~~ Moved a line up crew back to San Mateo Canyon to make final tie ins. Completed bore under railroad track October 21, 1948; also completed trenching of Junipero Serra Boulevard. All pipe lined and welded up ~~this~~ to this Boulevard except span at creek crossing Mills Estate and Sneath Lane road crossing. Line up crew on south side of San Bruno Mountain has completed all wrapped pipe north of Hillside Drive and started line up of ^{bare pipe} ~~Hillside Drive~~ and started line up of bare pipe October 23, 1948. All pipe installed up to and through casing on Junipero Serra on this date. Also completed tie in on south side of San Mateo Canyon. All ~~back~~ backfilling complete up to second Skyline Drive crossing except San Mateo Canyon, Meter Station and valve pits. Installed all wrapped pipe north of Hillside Drive. On October 25, 1948 at 3:30 p.m. O. W. Peterson gave orders to stop work on 1,000 feet of line east of Junipero Serra. Pacific Pipeline and Engineers Limited moved off and down to south side of El Camino Boulevard. Line up crew completed tie in

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on hill top north side of San Mateo Canyon. This makes all pipe tied together from Ralston Avenue to San Andreas Meter Station. SX X-ray Company left job on October 28, 1948, completing 209 tests of all kinds. Last x-ray being taken east of Mission Road in vegetable field. Moved both Cleveland trenchers on top of San Bruno Mountain on this date to start trenching down hill on north side. Backfilled all wrapped pipe north of Hillside Drive on October 29, 1948. Installed xxx 40 joints of bare pipe south side of San Bruno Mountain. Started bore under El Camino on this date. Received word from City that right of way is cleared on xxx 1,000 feet hold up east of Junipero Serra; it will require moving line over seven feet and be an extra cost to the Company. Line up crew working on Mission Road installing as they go. Started trenching A Street -- very slow progress due to many service lines. Completed bore under El Camino on October 31, 1948, this finishes all work for the Ransome Company, Emeryville. On November 2, 1948, trenching was complete on 1,000 feet change over, also pipe was installed at Sneath Lane crossing. Line up crew working on A Street installing as they go -- very slow progress. On November 4, 1948, completed installing bare pipe up to top of San Bruno Mountain. Moved line up crew around to valley on north side of mountain and started line up hill. Both Cleveland trenchers finished north side of mountain and valley on November 8, 1948. Backhoe working down hill to Martin Station, north of County Road. All right of way clearing is complete. Pipe is all installed on Mission Road and A Street. Line up crew working on East side of El Camino on Orange Avenue -- very dangerous due to cave ins.

Made tie in at Ralston Avenue on October 10, 1948, and blew out line up to San Andreas Meter Station. Moved Parsons trencher around to Rio Verde Street. On November 12, 1948, completed all work on Orange Avenue, and line up crew moved back to line up and install the 1,000 feet east of Junipero Serra. The line up crew on San Bruno Mountain is half way up on north side; all trenching complete but Schwerin and Martin Streets.

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On November 16, 1948, completed installing the 1,000 feet change and vegetable field making line all installed up to top of San Bruno Mountain except Hillside Drive road crossing and span at creek crossing Mills Estate. Started trenching Schwerin Street on November 18, 1948. Completed line weld and install of all bare pipe San Bruno Mountain on this date. Trenched out Hillside Drive crossing and installed pipe; there is a valve to be put here. Line up crew moved around to Schwerin Street installing as they go. Completed span at creek crossing Mills Estate, November 20, 1948; this makes all line tied together from Ralston Avenue to Hillside Drive. Made tie ins at Crystal Springs valve pit to Line 109 on this date. Completed all machine trenching on November 22, 1948; pipe all installed on Schwerin Street. One line up crew in valley and one working down hill from the County Road. Welders making up valve for Hillside Drive and completed on November 24, 1948. Line was blown out in afternoon from San Andreas Meter Station, bringing gas up to this location. Made tie in on north side of Hillside Drive making all line tied together up to drip location in valley. Completed line up of all 30-inch pipe November 27, 1948. Preparing to make final tie in at County Road, installing almost complete; started filling 24-inch line at Martin Station with air November 29, 1948.

On November 30, 1948, final tie in was made at County Road. Line was blown out with air from Martin Station and gas from Hillside Drive, then line was purged from both ends and final tie in made completing at 5:20 p.m. This completes job except for some backfilling valve pits and meter station, clean up and pavement repair.

CREW

The Company's crew consisted of eight men, three engineers and five inspectors. The Contractor's crew consisted of one project manager, one superintendent, two field clerks, one time keeper and an average of 40 to 175 men, the minimum being around 20 men at the end of project for clean up work.

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PROGRESS

Work started on August 23, 1948, and the Contractor's physical work was completed on November 30, 1948. The job will be considered complete on _____.

Trenching was done on an average of $\frac{1}{2}$ two to five feet per minute in clay or sand loam, down to a low of 120 feet a day in rocky sections of San Bruno Mountain. Wrapping averaged about six wraps per man a day. Welding consisted of about three and half welds per man a day. Pipe installed being around 1,200 feet per day.

The wrapping consisted of a primer coat followed by $\frac{3}{32}$ -inch of asphalt tar, a covering of 22 pounds of rag felt paper, another coating of tar and a covering of 18 pounds mica finish paper and a coating of tar.

The welding consisted of making one/^{pass} with $\frac{5}{32}$ -inch Fleetweld #5, one pass with $\frac{5}{32}$ -inch Shield Arc #85 and finishing with $\frac{3}{16}$ -inch Shield Arc #85.

EXTRA COST

The following work will be considered extra cost by the Contractor:

- Ralston Avenue valve pit,
- Right of way change, 2,100 feet in City-County of San Francisco property,
- Concrete foundations, San Mateo Creeek,
- Crystal Srpings valve pit,
- San Andreas Meter Station,
- Hillside Drive valve pit,
- Move off San Bruno Mountain, September 2, 1948,
- Martin Station meter lot,
- 101 line valve pit, Martin Station,
- Installing of all blow offs,
- One Thousand feet change east of Junipero Serra.

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CONTRACTOR'S EQUIPMENT

- 19 Welding machines, truck mounted
- 1 Welding machine, trailer mounted
- 2 Welding machines, sled mounted
- 11 Trucks, flatbed
- 3 Trucks, dump
- 1 Truck, low bed
- 1 Ford coupe
- 1 station wagon
- 1 Jeep
- 10 Pick ups
- 3 Truck mounted cranes
- 5 Compressors
- 9 angle dozers
- 7 Side boom "cats"
- 1 Parsons trenching machine
- 2 Cleveland trenching machine
- 2 Northwest backhoe
- 1 Byers backhoe
- 4 Tool trailer
- 4 Tar pots
- 2 Loaders
- 2 Rooters
- 2 Chain saws
- 8 Water pumps
- 3 Line up clamps
- 3 Self powered light plants
- 1 Blower
- 2 Sanitary water closets
- Miscellaneous jack hammers, air drills, clay spades and hand tools.

ATTACHMENT D

GMG 98015

September 18, 1948

95,000 feet of 30" pipeline, extension of main 132, north from Belmont and Canada Roads to Martin Sub-station, San Mateo County, Pacific Pipeline and Engineers Limited, and Stolte, Incorporated, a Joint Venture, Contractors

Progress for week ending September 18, 1948

	<u>THIS WEEK</u>	<u>TOTAL TO DATE</u>	<u>PERCENT COMPLETE</u>
Rights of way cleared	10,400	37,400	40%
Trenched	9,885	25,885	27
Welded	6,500	7,100	5
Backfilled	50	50	0

Total job progress

4%

Company men employed 3

Contractors men on job 28

Days worked this week 6 (10 hr. day)

Pipeline scheduled for completion, November 15, 1948

REMARKS: Contractor moved on job August 23, 1948. Work has been delayed by lack of rights of way. Right of way clearances for Crystal Springs development property was obtained Friday, September 17, but was too late to prevent moving equipment to a new location. The Crocker Estate and Jersey Farms properties are still not cleared.

Lowering of pipe into the trench was delayed during this past week when X-rays indicated small defects in three of the longitudinal seams. Investigation and additional X-rays showed the welding of the longitudinal seams to be acceptable and installation of the pipeline was resumed.

ATTACHMENT E

File
98015

Pertinant Information On The Construction of 30" High
Pressure Gas Transmission Main #132

10-28-48

The extent of this project embraces the construction of approximately 1.8 miles or 95,000 feet of 30" O.D. gas transmission pipe line from the junction of Belmont and Canada Roads to Martin Substation at Geneva and Schwerin Streets in the city of Bayshore.

The purpose of the new installation is to assist in meeting the peak-hour demands in the San Francisco peninsula area, it is planned as a daily operation to peak Main 132 between Milpitas and San Francisco to 350 pounds and draft it down to normal operating pressures. This operation will effect a line draft of 10 million cubic feet. 4.7 of the 10 million cubic feet of line draft is provided by the construction planned under this authorization. Obtaining this added draft potential is essential to assist in meeting system peak day firm gas demands until such time as the planned storage holders in the load centers are constructed. To effect this drafting potential and avoid inducing high pressures in San Francisco proper, a pressure limiting station, remotely operated from Potrero Gas Plant, will be installed at Martin Station. A short 20" tie main at Martin Station between Main Nos. 101 and 132 is being provided to protect the delivery capacity of both mains under possible outage conditions.

A border meter on Main 132 between San Jose and San Francisco Divisions to obtain necessary inter-division accounting on gas deliveries is to be installed. Volumes and pressures from this station will be telemetered to Potrero Gas Plant.

The added capacity made available by completing Main 132 will also assist in making deliveries to Station A steam electric plant, as well as the new units at Station F.

The terrain is generally rolling with a few deep, steep, rocky canyon

crossings, particularly San Mateo Creek Canyon where slopes of 300 ft. in length consist of 34 degrees. San Bruno Mountain area topography also added to the difficulties of pipe line construction.

Approximately 85% of the excavation thus far was in adobe, clay loam and sand loam or disintegrated rock. Extremely hard rock of the serpentine varieties is generally spotty and concentrated in the first 4 miles with the exception of San Bruno Mt. which is largely rock.

The sequence of construction follows a typical pattern on this project and is noted here:

- 1- Clearing right of way & locating sub-structures.
- 2- Trenching
- 3- Hauling & stringing pipe.
- 4- Lining pipe.
- 5- Welding
- 6- Wrapping
- 7- Installing
- 8- Back filling
- 9- General cleanup and paving etc.

The clearing and grading of the right of way is accomplished with bulldozers and the trenching by wheel and ladder type diggers, backhoes and clamshell. The pipe is hauled to the job site from Watson in Southern California by truck and is strung along the right of way or stockpiled at strategic locations by truck crane or side boom equipped tractors. Side boom cats are used for lining the joints of pipe over the trench on 8" x 8" x 10' long skids using mechanical or electrical operated internal line up clamps. The Welding is then completed making 1 pass with 5/32" fleetweld #5, 1 pass with 5/32" Shieldarc #85 and

finishing with 3/16" Shieldarc #85.

Gamma Ray tests are made daily of the welding in lieu of air pressure tests and will average about 10% of total welds. The joints are then primed and wrapped after which the pipe is lowered into the trench by two side boom cats with stiff leg attachments. At this time final wrapping inspection is made and all skid marks and damaged wrapping is repaired. Backfilling is accomplished by blade equipped cats and clamshell. Padding with dirt is done in rocky terrain. Clean-up of the right of way and removal of excess dirt and brush follow.

State highway and railroad crossings are bored and 36" diameter casing pipe installed. The 30" main is subsequently installed in the casing and a 2" vent pipe from one end of the casing is installed and the ends of the casing sealed with burlap and tar.

The average daily progress to date on the basis of pipe installed is approximately 1500 ft. per day. This average is based on rolling terrain and does not take into consideration San Bruno Mt. or San Mateo Creek Canyon, which presents special construction features. Approximately 5,300 ft. of bare pipe is being used on the San Bruno Mt. section.

The pipe was fabricated from 3/8" plate and rolled to 29 $\frac{1}{2}$ " O.D. the longitudinal seam butt welded by automatic machine and the cylinder then expanded in a die, by application of internal hydrostatic pressure as 1700 P.S.I. The expansion causes the metal to be stretched beyond its yield point and assume a permanent set. The increase in diameter also caused a decrease of from .003" to .005" in the thickness of the plate and a decrease in the axial length of the pipe of approximately 2 $\frac{1}{2}$ " in 30 feet. The expansion of the pipe was a severe test on the weld as it was stressed beyond its yield point which would cause a

defective weld. to fail. The transverse yield strength reached a minimum of 52000 P.S.I. and the transverse ultimate strength a minimum of 72000 P.S.I. The manufacture of the steel plate for the pipe followed strict specifications and following is the ladle analysis:

Carbon 0.30% Maximum
Manganese 1.15% Maximum
Phosphorous 0.045%
Sulphur 0.05%

It was advantageous to the progress of the job to use 60 ft. sections of pipe, so approximately 30,000 ft. of pipe in 60 ft. joints was made at the Consolidated plant at Maywood by welding 2- 30' joints together and shipped to the job site.

After fabrication the pipe was wrapped by machine and tested for defects with a "holiday detector". The wrapping consisted of a primer coat followed by 3/32" of asphalt tar, a covering of 22 lbs. rag felt paper, another coating of tar and a covering of 18 lbs. mica finish paper with a whitewash coating over all for protection in the stock piles and in hauling. Special precautions were taken in hauling the coated pipe from the coating yard to the job site by fitting the trucks and trailers with special bolsters and cradles.

Tie lines between this new 30" line and the paralleling existing 22" line are being installed as well as the previously mentioned metering and regulating stations. The total cost of this project including all material and fittings will be approximately \$2,250,000.00

**Appendix to
Pacific Gas and Electric Company’s Supplemental
Response to Legal Division’s “Notice and
Disclosure of Safety Evidence and Companion
Motion for Public Release of Evidence”**

(Due to the volume of the Appendix, it has been submitted to the Docket
Office by DVD format.)^{1/}

^{1/} A link to the entire pleading including the Appendix can be found at:
<http://apps.pge.com/regulation/SearchResults.aspx?NewSearch=True&CaseID=1108&DocType=12&PartyID=4&fromDate=10%2F31%2F11&toDate=10%2F31%2F11&sortOrder=FileName¤tPage=1&recordsPerPage=100&searchDocuments=Search>

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Investigation on the
Commission's Own Motion into the Operations
and Practices of Pacific Gas and Electric
Company with Respect to Facilities Records for
its Natural Gas Transmission System Pipelines.

I.11-02-016
(Filed February 24, 2011)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 G)
NOTICE OF AVAILABILITY**

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October 31, 2011

**BEFORE THE PUBLIC UTILITIES COMMISSION
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**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 G)
NOTICE OF AVAILABILITY**

Contemporaneously with this Notice of Availability, Pacific Gas and Electric Company (PG&E) is filing with the California Public Utilities Commission (CPUC or Commission) Pacific Gas and Electric Company's Supplemental Response to Legal Division's "Notice and Disclosure of Safety Evidence and Companion Motion for Public Release of Evidence."

Because of the size of the Appendix to the pleading, pursuant to Rule 1.9(c) of the Commission's Rules of Practice and Procedure, PG&E is serving this Notice of Availability on all interested parties in lieu of the Appendix. The Appendix together with the entire pleading and attachments is posted on the PG&E website at the following link:

<http://apps.pge.com/regulation/SearchResults.aspx?NewSearch=True&CaseID=1108&DocType=12&PartyID=4&fromDate=10%2F31%2F11&toDate=10%2F31%2F11&sortOrder=FileName¤tPage=1&recordsPerPage=100&searchDocuments=Search>

The appendix can also be provided on a CD-ROM on a request basis only. PG&E asks that requests be submitted in writing or by email to:

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Operations Proceedings
77 Beale Street, Mail Code B30A
San Francisco, CA 94120
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Copies of the Appendix will also be available at the Prehearing Conference on November 1, 2011.

Respectfully submitted,

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/s/

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