BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms (U 39 G)	R.11-02-019 (Filed February 24, 2011)

SUPPLEMENT TO REPORT OF PACIFIC GAS AND ELECTRIC COMPANY ON RECORDS AND MAXIMUM ALLOWABLE OPERATING PRESSURE VALIDATION

DRAFT 3/20/2011 P.M.

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March __, 2011

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At Pacific Gas and Electric Company (PG&E), safety is our highest responsibility. We empower our employees to take all appropriate actions to make our system safe and to help improve the safety of our operations at every stage.

Our approach to the Commission's January 3, 2011 directives to validate our gas transmission records and the MAOPs of our HCA pipelines reflects our commitment to safety. When we are done, will exceed the scope called for by the Commission.

The March 16, 2011 letter from Executive Director Paul Clanon and the draft Order to Show Cause, however, made us realize that our March 15th report failed to communicate both our commitment to safety and, more importantly, the full extent of the work we have done and are continuing to do to assure the public and ourselves that our pipelines are operating at safe MAOPs. That work goes far beyond merely complying with the law. We have endorsed the Commission's efforts in this Rulemaking to eliminate the "grandfathering" of pipeline MAOPs, and we do so again. We hope that our words and our actions demonstrate to our customers, the Commission and the industry at large that there are workable alternatives to the current

"grandfathering" approach that, when implemented, will improve the safety of our natural gas pipelines.

This supplement is intended to clear clarify our prior filing by providing additional information about four subjects: (1) what we have done and where we are in the process of gathering all the records needed to validate the MAOPs of our HCA pipelines; (2) what we are still doing and how rapidly we will complete the remaining work validating the MAOPs of all our pipelines (not just HCA pipelines where the MAOP was not established by pressure testing); (3) what near-term actions to enhance public safety we are taking based on our records review; and (4) what longer-term actions to enhance public safety we are going to take.

1. What we have done and where we are in the process

The first step in our records and MAOP validation process was, in the words of the Commission's directive, to "aggressively and diligently search" for all relevant records. We have approximately 1,805 miles of Class 3 and 4 locations and Class 1 and 2 HCA gas transmission pipeline included in this effort.

Our original pipeline records are primarily contained in what we call job files. As the name implies, job files relate to specific jobs or work projects. Job files typically include pressure test reports and charts where available, pipeline as-built drawings, alignment sheets, other drawings and sketches, bills of materials, and other related records. Any given segment of pipe may have multiple job files, depending on how much work has been done on that segment from its original installation to the present. Conversely, a single job file may contain information about multiple segments.

Based on the information in our Geographical Information System, we initially identified about 2,800 master job folders with underlying job files. We generally maintain our job files in

division field offices. A pipeline that traverses more than one division, as most of ours do, will have job files in more than one division office.

Our initial search for records began with our gas transmission office in Walnut Creek, our system-wide division offices and records storage centers, including our Bayshore records storage facility. The initial search included about 20 primary locations. The search soon grew to include additional storage areas in our San Francisco headquarters and a facility in Emeryville. Over the following weeks, our search continued to expand. A team of our mappers and third-party engineers traveled to approximately 50 locations, including some previously searched, where they interviewed personnel about records and went through file cabinets to search for gas transmission records. We wrote to more than 37,000 current and former employees and contractors in an effort to determine whether they had any relevant documents that were not in PG&E's possession. We followed up the letter to contractors with phone calls. Finally, for several days, we had over 1,500 employees from across the company working alternating shifts 24-hours a day at multiple locations, the most prominent of which was the Cow Palace, reviewing over 125,000 boxes of our historical records to see if there were relevant documents that were not appropriately indexed as such. We wanted to "leave no stone unturned."

We hired experts in document management, Iron Mountain and ADS, to scan and index the records collected. The complete contents of the relevant job files were scanned and loaded into an electronic system. Our IT organization developed a database, using our Enterprise Compliance Tracking System (ECTS), to store the scanned images for document review and data input. As of now, we have scanned and loaded more than 10,000 job files, comprised of about 1,250,000 documents (including duplicates).[1] The originals of the scanned documents were

[1] The documents we provided to CPSD on DVDs supported the results reported on March 15th, and are a tiny fraction of the universe of documents we have collected and scanned.

boxed, transported from the scanning locations for centralized storage in our Emeryville facility, where they were indexed and bar coded.

Once scanned, the documents needed to be reviewed. To accomplish this, we needed both more physical space and more people. In addition to assigning existing space to this project, we leased 11,000 square feet of new office space in Walnut Creek and brought together a team of over 200 of our employees and contractor personnel to review the scanned documents. Our process included independent quality control. The results of our team's efforts to date and a sample of the documents they reviewed were set out in our March 15th report (pp. 6-14).

That report focused on a fraction of the 1.2 million documents we have collected and scanned because it primarily addressed the first part of the analysis to comply with the Commission's directive. That part was to determine what HCA pipeline miles had their MAOPs established based on "traceable, verifiable and complete" pressure test records. The priority for the engineering review to validate the MAOP, according to the Commission's directive, is the HCA pipelines that have not had their MAOP established based on pressure tests, so we had to define that universe.

As part of the analysis we submitted on March 15th, we also looked at and reported whether our records support the MAOPs of pipelines established by historical operating pressure, even though the Commission had not asked us to do so. We did not intend to rely on this analysis to comply with the Commission's directives. Rather, we did it for two reasons: (1) we wanted to provide added assurance that these MAOPs had been properly set on this basis while we complete the rest of the MAOP validation and the field work described in our report; and (2) as an added measure of safety, we plan to set the MAOPs of these lines at the **lower** of the

MAOP derived from our engineering analysis and calculations **or** historical operating pressure. We failed, however, to convey either of these points in our original report.

At this stage of our work, we have collected and scanned over 1.2 million documents. These are the primary documents required to complete the MAOP validation described below. We estimate these records will provide about 70-80% of the information we need for the MAOP validation. The remaining information will come from inspection and maintenance records. These records, which we will be collecting as part of the MAOP validation, include A Forms, which may document the replacement of a small section of pipe or the installation of a sleeve; valve maintenance forms, which may provide supplemental information about valve type, manufacturer, make, ANSI strength; and station drawings, which may contain as-builts and other information about taps off the mainline pipe. We have started to collect these additional records and will continue to do so in the order required to complete the MAOP validation in the priority order we have established, as discussed below.

2. What we are still doing and how rapidly we will complete the remaining work

Our ongoing efforts are focused on validation of the MAOP based on engineering analysis not only of the mainline pipe but also of each component (*e.g.*, valves, sleeves, bends, fittings) to validate the MAOP of the overall pipeline based on its weakest component. At the same time, we are continuing to search for pressure test records and uprate documentation. Completing these records will not reduce the scope of our MAOP validation work, but will allow us to assign lower priorities to those segments where we find pressure test records or uprate documentation.

Although the Commission's directive was to do the MAOP validation only for pipelines where the MAOP was not established by a pressure test, we are not stopping there. Instead, as

an added assurance of safety, we are performing the MAOP validation on the entire 1,805 miles of HCA pipelines. Once this is done, as we stated in our March 15th report (p. 13), we are going to extend this analysis to our remaining Class 1 and 2 gas transmission pipelines – not because it is required, but because we view it as providing an added measure of safety for our system.

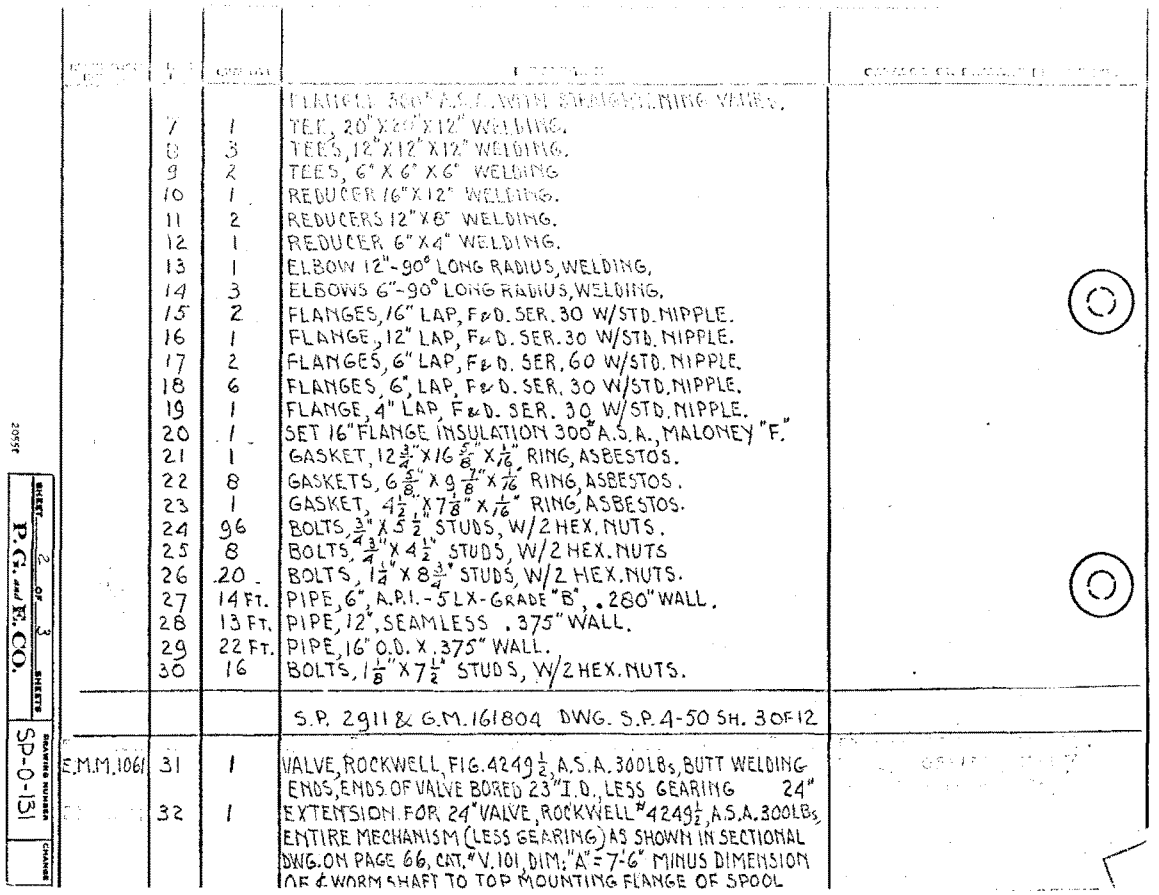
The MAOP validation process entails a more comprehensive examination of the records we have already collected and centralized. As mentioned before, our ECTS database includes all collected and scanned job files associated with the HCA lines. Not only do these files have the pressure documentation that was the primary focus of our analysis to date, they also contain records required to calculate MAOP. These include drawings (*e.g.*, construction, as-builts), construction material documentation (*e.g.*, bill of materials, material specifications), job estimate documentation, and pressure test-related documents.

The MAOP validation starts with us matching the collected and scanned documents with the HCA pipeline miles we are examining. This is a time-consuming process as pipeline reference points have changed over the years and the documents were not created with reference to specific HCA segments nor are they presently organized that way. Our contractor, Celerity, has the primary responsibility for this task, which is foundational to the entire MAOP validation.

The following are two examples of the scanned images of the as-built drawings:

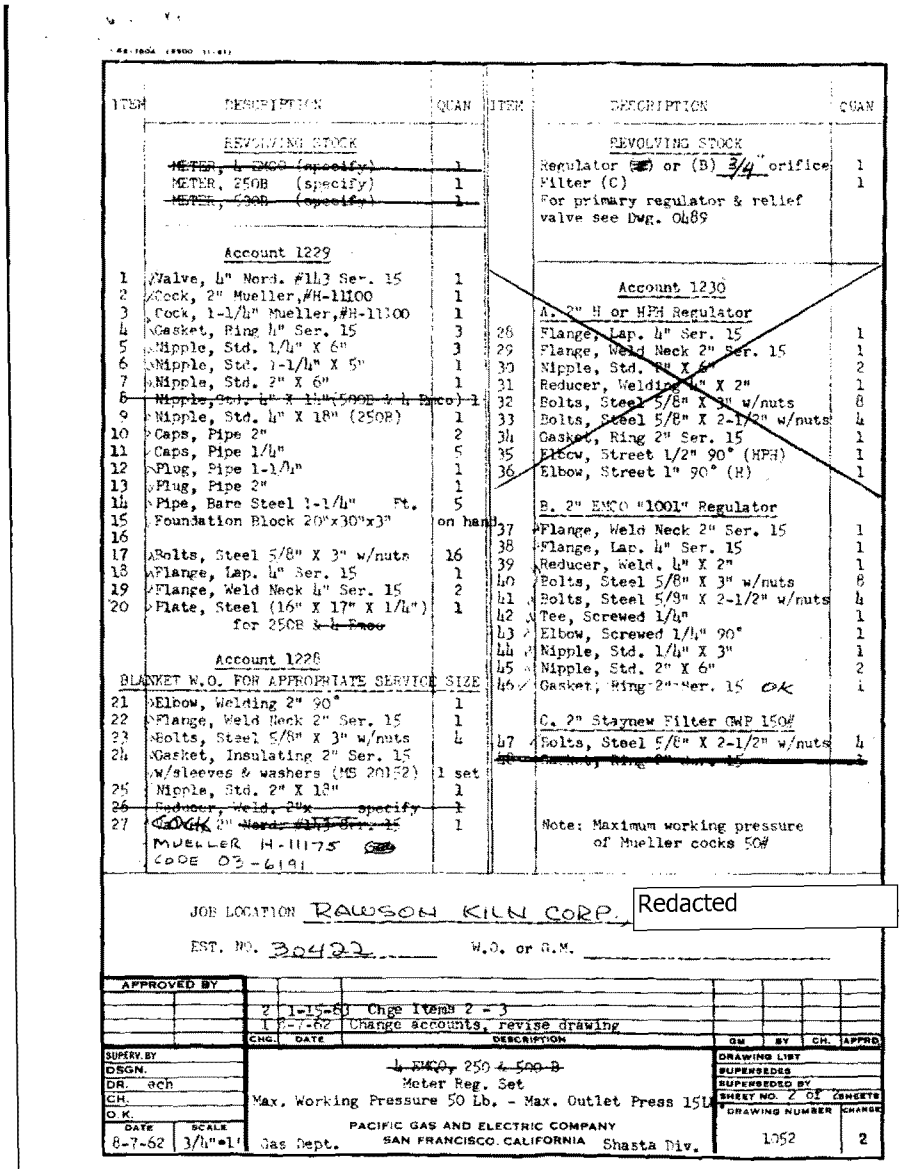
Redacted

The following are examples of the bills of materials with which our engineers will work in this MAOP validation effort:



			FLANGE 300# A.S.A. WITH SPRING RING VALVE.
	7	1	TEE, 20"X20"X12" WELDING.
	8	3	TEES, 12"X12"X12" WELDING.
	9	2	TEES, 6"X6"X6" WELDING.
	10	1	REDUCER 16"X12" WELDING.
	11	2	REDUCERS 12"X8" WELDING.
	12	1	REDUCER 6"X4" WELDING.
	13	1	ELBOW 12"-90° LONG RADIUS, WELDING.
	14	3	ELBOWS 6"-90° LONG RADIUS, WELDING.
	15	2	FLANGES, 16" LAP, F&D. SER. 30 W/STD. NIPPLE.
	16	1	FLANGE, 12" LAP, F&D. SER. 30 W/STD. NIPPLE.
	17	2	FLANGES, 6" LAP, F&D. SER. 60 W/STD. NIPPLE.
	18	6	FLANGES, 6" LAP, F&D. SER. 30 W/STD. NIPPLE.
	19	1	FLANGE, 4" LAP, F&D. SER. 30 W/STD. NIPPLE.
	20	1	SET 16" FLANGE INSULATION 300# A.S.A., MALONEY "F."
	21	1	GASKET, $12\frac{3}{4}$" X $16\frac{5}{8}$" X $\frac{1}{16}$" RING, ASBESTOS.
	22	8	GASKETS, $6\frac{5}{8}$" X $9\frac{7}{8}$" X $\frac{1}{16}$" RING, ASBESTOS.
	23	1	GASKET, $4\frac{1}{2}$" X $7\frac{1}{8}$" X $\frac{1}{16}$" RING, ASBESTOS.
	24	96	BOLTS, $\frac{3}{4}$" X $5\frac{1}{2}$" STUDS, W/2 HEX. NUTS.
	25	8	BOLTS, $\frac{3}{4}$" X $4\frac{1}{2}$" STUDS, W/2 HEX. NUTS
	26	20	BOLTS, $1\frac{1}{4}$" X $8\frac{3}{4}$" STUDS, W/2 HEX. NUTS.
	27	14 FT.	PIPE, 6", A.P.I.-5LX-GRADE "B", .280" WALL.
	28	13 FT.	PIPE, 12", SEAMLESS .375" WALL.
	29	22 FT.	PIPE, 16" O.D. X .375" WALL.
	30	16	BOLTS, $1\frac{1}{8}$" X $7\frac{1}{2}$" STUDS, W/2 HEX. NUTS.
			S.P. 2911 & G.M. 161804 DWG. S.P. 4-50 SH. 3 OF 12
E.M.M. 1061	31	1	VALVE, ROCKWELL, FIG. 4249 $\frac{1}{2}$, A.S.A. 300LBS, BUTT WELDING ENDS, ENDS OF VALVE BORED 23" I.D., LESS GEARING 24"
	32	1	EXTENSION FOR 24" VALVE, ROCKWELL #4249 $\frac{1}{2}$, A.S.A. 300LBS, ENTIRE MECHANISM (LESS GEARING) AS SHOWN IN SECTIONAL DWG. ON PAGE 66, CAT. #V.101, DIM. "A" = 7'-6" MINUS DIMENSION OF 4 WORM SHAFT TO TOP MOUNTING FLANGE OF SPOOL

P.G. and E. CO. SHEET 2 OF 3 SHEETS — DRAWING NUMBER SD-0-151 — CHANGE



ITEM	DESCRIPTION	QUAN
	REVOLVING STOCK	
	~~METER, 4 EMCO (specify)~~	~~1~~
	METER, 250B (specify)	1
	~~METER, 500B (specify)~~	~~1~~
	Account 1229	
1	Valve, 4" Nord. #113 Ser. 15	1
2	Cock, 2" Mueller, #H-11100	1
3	Cock, 1-1/4" Mueller, #H-11300	1
4	Gasket, Ring 4" Ser. 15	3
5	Nipple, Std. 1/4" X 6"	3
6	Nipple, Std. 1-1/4" X 5"	1
7	Nipple, Std. 2" X 6"	1
~~8~~	~~Nipple, Std. 4" X 14" (500B & 4 Emco)~~	~~1~~
9	Nipple, Std. 4" X 18" (250B)	1
10	Caps, Pipe 2"	2
11	Caps, Pipe 1/4"	5
12	Plug, Pipe 1-1/4"	1
13	Plug, Pipe 2"	1
14	Pipe, Bare Steel 1-1/4" Ft.	5
15	Foundation Block 20"x30"x3"	on hand
16		
17	Bolts, Steel 5/8" X 3" w/nuts	16
18	Flange, Lap. 4" Ser. 15	1
19	Flange, Weld Neck 4" Ser. 15	2
20	Plate, Steel (16" X 17" X 1/4") for 250B ~~& 4 Emco~~	1
	Account 1228	
	BLANKET W.O. FOR APPROPRIATE SERVICE SIZE	
21	Elbow, Welding 2" 90°	1
22	Flange, Weld Neck 2" Ser. 15	1
23	Bolts, Steel 5/8" X 3" w/nuts	4
24	Gasket, Insulating 2" Ser. 15 w/sleeves & washers (MS 20152)	1 set
25	Nipple, Std. 2" X 18"	1
~~26~~	~~Reducer, Weld, 2"x specify~~	~~1~~
27	~~Cock~~ 2" ~~Nord. #113 Ser. 15~~ MUELLER H-11175 CODE 03-6191	1

ITEM	DESCRIPTION	QUAN
	REVOLVING STOCK	
	Regulator (A) or (B) 3/4" orifice	1
	Filter (C)	1
	For primary regulator & relief valve see Dwg. 0489	
	Account 1230	
	A. 2" H or HPH Regulator	
28	Flange, Lap. 4" Ser. 15	1
29	Flange, Weld Neck 2" Ser. 15	1
30	Nipple, Std. 4" X 6"	2
31	Reducer, Welding 4" X 2"	1
32	Bolts, Steel 5/8" X 3" w/nuts	8
33	Bolts, Steel 5/8" X 2-1/2" w/nuts	4
34	Gasket, Ring 2" Ser. 15	1
35	Elbow, Street 1/2" 90° (HPH)	1
36	Elbow, Street 1" 90° (H)	1
	B. 2" EMCO "1001" Regulator	
37	Flange, Weld Neck 2" Ser. 15	1
38	Flange, Lap. 4" Ser. 15	1
39	Reducer, Weld. 4" X 2"	1
40	Bolts, Steel 5/8" X 3" w/nuts	8
41	Bolts, Steel 5/8" X 2-1/2" w/nuts	4
42	Tee, Screwed 1/4"	1
43	Elbow, Screwed 1/4" 90°	1
44	Nipple, Std. 1/4" X 3"	1
45	Nipple, Std. 2" X 6"	2
46	Gasket, Ring 2" Ser. 15 OK	1
	C. 2" Staynew Filter GWP 150#	
47	Bolts, Steel 5/8" X 2-1/2" w/nuts	4
~~48~~	~~Gasket, Ring 2" Ser. 15~~	~~1~~

Note: Maximum working pressure of Mueller cocks 50#

JOB LOCATION RAWSON KILN CORP. Redacted

EST. NO. 30422 W.O. or G.M.

APPROVED BY						
		2	1-15-63	Chge Items 2 - 3		
		1	8-7-62	Change accounts, revise drawing		
	CHG.	DATE	DESCRIPTION	GM	BY	CH.

SUPERV. BY	
DSGN.	
DR. ach	
CH.	
O.K.	
DATE 8-7-62	SCALE 3/4"=1'

~~4 EMCO~~ 250 ~~& 500 B~~
Meter Reg. Set
Max. Working Pressure 50 Lb. - Max. Outlet Press 15Lb

PACIFIC GAS AND ELECTRIC COMPANY
Gas Dept. SAN FRANCISCO, CALIFORNIA Shasta Div.

DRAWING LIST	
SUPERSEDES	
SUPERSEDED BY	
SHEET NO. 2 OF 2 SHEETS	
DRAWING NUMBER	CHANGE
1052	2

The calculation of MAOP requires knowledge of detailed attributes of the pipeline and its components. These attributes include the following:

- project data
  - mile point
  - field stationing
  - pipe stationing
- bend data
  - type
  - radius
  - angle

project stationing
    - class location
    - design factor
    - year installed
- pipe data
    - length
    - wall thickness
    - grade
    - seam type
    - coating type
- sleeve data
    - type
    - length
- tap data
    - size
    - type
    - insertion
    - wall thickness
    - orientation
    - spacing
- tee data
    - branch size
    - wall thickness
    - barred
- valve data
    - type
    - full port
- casing data
    - size
    - length
- reducer data
    - type
    - length
    - size

The following slides, taken from the training materials for our MAOP validation team, illustrate what is involved in extracting the information from the existing records. Where the data are not explicitly listed on the source documents, the MAOP validation team needs to calculate the information from what is available (*e.g.*, using a protractor to estimate the degree of bend where not specified on the drawing).

Project Data from Sources

Redacted

Determine Bend Type

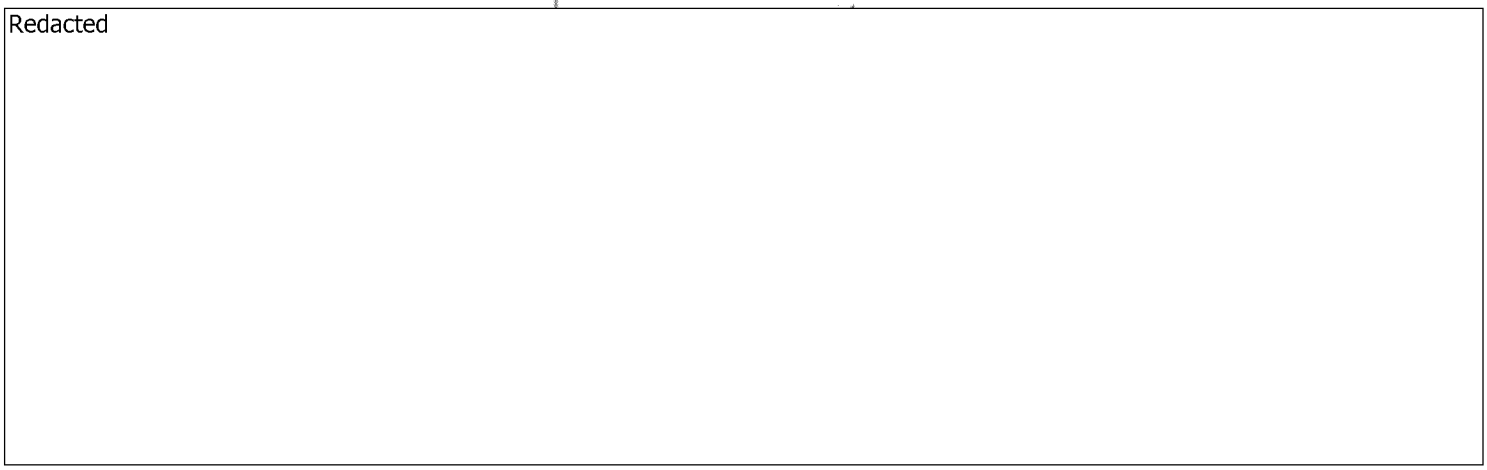
Redacted

Determine the Valve Attributes

Redacted

Determine the PCF Attributes

FOR CONT. SEE
DWG GOV4-34 SHT. 6



Typically, the information needed to calculate the MAOP comes from as-built drawings, bills of materials, and other related documentation from the job files. In addition to all the job files already collected and scanned, we may have to review additional non-HCA transmission line and selected distribution job files to accurately account for all pipeline features within a given segment boundary. We are also reviewing pipeline inspection and operations records to ensure all potentially relevant documents are included in the analysis. To the extent these documents are not currently in our ECTS database, we will perform additional document searches from our newly-established centralized gas transmission records repository in Emeryville and elsewhere across our system as needed.

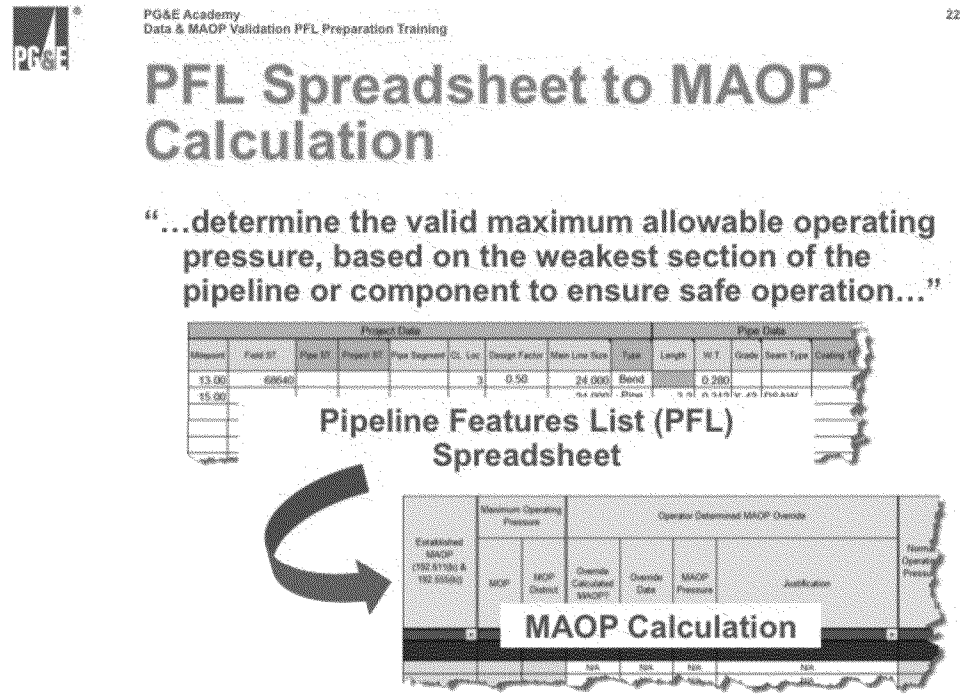
Our "grandfathered" pipelines were constructed 40 or more years ago. For many of these pipelines, we do not believe we will find "traceable, verifiable and complete" records of every component. Instead, we are making assumptions about certain components, such as fittings and

elbows, based on the material specifications at the time those materials were procured, sound engineering judgment, and conducting excavation and field testing of pipeline systems as appropriate. We will determine what field testing to use on a case-by-case basis from such techniques as X-ray or camera inspection of welds and meauring yield strength using Advanced Technology Corporation's Automated Ball Indentation technique.

Such field testing also goes beyond what the Commission's directives call upon us to do to validate the MAOP of our pipelines. Again, however, our objective is safety, and we believe that such field testing provides an additional measure of confidence in our MAOPs.

The information from the document review, engineering analysis and field-testing gets compiled into a document known as a pipeline features list (PFL). Based on the recent effort on our Peninsula gas transmission lines, we estimate it will take 50 to 60 person-hours (or more) per mile to build each PFL (this does not include the time to collect, scan, assemble the source documents needed for PFL build, oversight, field work, the MAOP calculation, or quality assurance). Extrapolating from this experience, building the PFLs for the 1,805 HCA miles we are validating will take about 100,000 person-hours or 12,500 person-days.

The completed PFLs feed directly into the engineering calculation of the MAOP:



To perform the calculation of the MAOP based upon the weakest component, we plan to use a proprietary MAOP calculation tool developed by a third-party gas pipeline engineering firm that specializes in MAOP calculations.

To help ensure the quality of data obtained from this effort, we are continuing a separate quality assurance (QA) team to review the defined processes and the output from our work. As we move further into the MAOP validation effort, the QA team will build on the knowledge that team has already gained about our data systems, gas transmission records practices, and the relevant document types. The quality assurance review will be tracked and reported. If the QA testing produces any "failures" (specific errors), the QA team will ensure that the information is passed along to the appropriate team members and documented. To the extent the quality assurance team believes it is necessary to ensure quality for the ongoing production process, we will implement process changes.

As this description shows, we have designed and are implementing a rigorous process to use engineering analysis to calculate the MAOP of our pipelines based on the weakest component. The following table shows how we have prioritized our work and the schedule on which we expect to complete it this year:

Priority	Description	Miles	Planned Completion
1	Pipe similar in specification to that involved in the San Bruno incident, or similar to the way in which it was recorded • DSAW; and 24-36" outside diameter; and installed prior to 1962 • Seamless; and >24" outside diameter; and installed prior to 1974	152[2]	Q2 2011
2	Certain other seams and joint efficiencies • ERW, SSAW, Flash and Lap Welded and all pipe with Joint Efficiency < 1; and installed prior to 1970	295	Q2-Q3 2011
3	All remaining 619(c) documented pipe and pipe installed prior to 7/1/1970 with records still under review	206	Q3 2011
4	All pipe installed after 7/1/1970 with records still under review	52	Q3 2011
5	All remaining pipe with partial pressure test records and pressure test records from the 1968 CPUC Filing	83	Q3 2011
6	Pipe with verified pressure test documentation, but where the STPR footage tested does not equal the pipeline HCA footage	270	Q3 2011
7	Pipe with verified pressure test documentation	748	Q3-Q4 2011
	TOTAL	**1,805***	

* Figures do not sum due to rounding.

[2] Although we have prioritized this work for the MAOP validation, we are still going ahead with hydro testing or replacement this year, as discussed further below.

We believe this schedule, while aggressive, is realistic. We have completed this process for the 375-psig MOP sections of the three Redacted pipelines, Lines 101, 109 and 132. We did the validation of the approximately 135 miles of Redacted pipelines in about 45 days with 25 people (not counting personnel involved in the field work). Based on that experience, we believe we can complete the remaining HCA miles by year-end with 100 to 125 people (again, not including personnel needed for field work).

We currently have 50 members of this team on board. Thirty of them have completed training for the MAOP validation, and the remaining 20 are being trained Monday and Tuesday of this week. These 50 individuals – from PG&E's ranks and three contractors, Exponent, Celerity and Gas Transmission Services – will be fully engaged in the MAOP validation by mid-week. The 50 are the first half of the team of over 100 engineers, estimators, and mappers (from contracting firms and from our own gas engineering group) we are assembling to review all the collected documentation and extract the necessary data to complete the PFLs. This is an extremely detailed and painstaking process requiring forensic analysis of all relevant documents associated with a pipeline to identify the location, characteristics and qualities of all pipeline components that are part of the existing pipeline configuration. To do it right, we must use people with specialized skills in pipeline engineering, construction, and mapping. They then have to be carefully trained to be able to determine the necessary information from different sources dating back 60 of more years, and to ensure a standardized process and methodology with appropriate controls is followed by all personnel throughout the project. To secure the additional 50-75 team members, we are actively looking at third party contractors to supplement these resources and are in discussions with third parties who may have the capacity to provide turnkey PFL builds.

We attach a copy of the PFL completed for Line 101 as well as the draft MAOP validation report for Line 101 and Line 132-A that we shared with the Commission's staff two days after we received the January 3, 2011 directive. The PFL and draft report provide concrete illustrations of the application of our process to validate the pipeline MAOP through the records review and supplemental field investigation.

If our MAOP validation work identifies any safety concerns or we encounter any pipeline segments for which we cannot validate the MAOP as planned, we will take immediate action. These actions may include one or more of the following: pressure reduction, pressure testing or replacement of the section of pipe in question.

We will provide the Commission monthly reports on progress of our MAOP validation work.

3. <u>What near-term actions we are taking based on our records review</u>

As described in our March 15th report (pp. 14-17), this year we are going to hydro test or replace 152 miles of HCA pipelines based on the results of our record review to date. These 152 miles – 699 pipeline segments – meet the following criteria: (1) we have not located pressure test records and (2) our records indicate the segments contain either: (a) pre-1962 24 to 36 inch double submerged arc welded (DSAW) pipe or (b) pre-1974 seamless pipe greater than 24 inches in diameter. We selected these criteria for this year's field actions because they are most similar to the ruptured segment of Line 132.

Even though, as described above, we expect to complete the MAOP validation of these pipeline segments based on our records review and limited field work in the second quarter of this year, we are not satisfied with that level of MAOP validation. We want to provide added assurance of the safety of these pipelines by hydro testing or replacing them. And, we will do

that this year. In fact, the contracting, engineering planning, and permit application preparation for this work are already under way.

Because the miles of each pipeline segment are not contiguous and are not always located near valves, our work will extend over more than 250 miles on 24 separate pipelines, as detailed on page 16 of our March 15th report.

4. <u>What longer-term actions we are going to take</u>

Beyond this work, we have prioritized for further physical assessment approximately 435 miles of HCA pipelines for which we have not yet located pressure test records and that meet the following criteria (in priority order): 1) pipelines containing low frequency electric resistance weld (ERW), single-submerged arc weld (SSAW), lap weld or flash pipe installed prior to 1970; 2) pipelines installed prior to 1970; and 3) pipelines installed after 1970.[3]

As described in more detail in our March 15th filing (pp. 17-19), our field action program on these additional miles of HCA pipelines will be based on further analysis of, and tailored to the unique characteristics of each pipeline. These actions will include one or more of the following: in-line inspections with so-called "smart pigs" equipped with special "crack" tools capable of examining weld seams; pressure testing; use of other emerging technologies, such as advanced camera inspection; and/or pipe replacement.[4]

As we committed in our report, we will work with state and local government agencies and officials, emergency responders and customers in the areas where we intend to perform these

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[3] Priorities 2 – 4 of our MAOP validation, as set out in the table on page 16, are similar to but broader than these categories because the MAOP priorities include pipe with pressure test records.

[4] *See* Kiefner & Associates, Inc., "The Benefits and Limitations of Hydrostatic Testing" by J. Kiefner and W. Maxey, pp 5-6. http://www.kiefner.com/downloads/apihydro.pdf.

field actions, and will submit periodic progress reports to the Commission updating our progress and the latest schedule of field actions.

Conclusion

We hope this supplement has clarified both our commitment to safety beyond requirements and our intent to exceed the scope of the Commission's January 3, 2011 directives. While we wish we could have completed all this work by now, the fact is that the magnitude of the task is enormous. We have dedicated and continue to dedicate resources commensurate with the task and are proceeding as quickly as we can.

We look forward to continuing to work with the Commission and other stakeholders to enhance the safety of our natural gas transmission system and to adopt new, higher safety standards applicable to all pipelines.

Respectfully submitted,

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