U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

1200 New Jersey Ave, S.E.
Washington, D.C. 20590

MAR - 8 2011

Mr. Glen Carter
Pacific Gas and Electric Company
375 N. Wiget Lane
Walnut Creek, CA 94598

Dear Mr. Carter:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA) dated April 23, 2010, you requested an interpretation of the instructions to complete PHMSA Form F 7100.1-1. Your request also referenced a December 2008 letter from Pacific Gas and Electric Company (PG&E) to PHMSA seeking clarification on the wording in the instructions for reporting non-hazardous leaks on the operator annual report Form F 7100.1-1. You stated that PHMSA staff, Mr. Jamerson Pender, responded to the December 2008 letter request in a conference call with PG&E on January 13, 2009. You also stated that Mr. Pender explained that, despite use of the word "non-hazardous" in the instructions, PHMSA intended utilities to report any release of gas, regardless of how insignificant, excluding leaks that can be eliminated by lubrication, adjustment or tightening. You further stated that PG&E has modified its reporting for calendar year 2009 and brought to PHMSA's attention the resulting increase in reporting for leaks for PG&E that resulted from your change in reporting non-hazardous leaks and also your recent leak survey.

You stated that PG&E has historically included all leak repairs on gas distribution mains and service lines and hazardous above-ground leaks repaired in Form F 7100.1-1. Until last year, PG&E defined the criteria for reporting hazardous leaks as any leak below the service (shut-off) valve and had not historically reported above-ground leaks at the service (shut-off) valve or on the meter set unless the leak was deemed hazardous or potentially hazardous and required replacement of damaged, corroded, or non-operational equipment. You noted that PHMSA instructions direct that:

> "A leak is defined as an unintentional escape of gas from a pipeline. A non-hazardous release that can be eliminated by lubrication, adjustment or tightening is not a leak. Include all leaks eliminated by repair, replacement or other reason during the reporting year."

As Mr. Pender had indicated in his guidance provided to PG&E during the January 2009 phone call, PHMSA points out that the instructions do not indicate that only hazardous leaks are to be reported but rather, they direct operators to report all leaks defined as "an unintentional escape of gas" except for "non-hazardous releases that can be eliminated by lubrication, adjustment, or tightening." In reporting these above-ground non-hazardous leaks, PG&E is leak reporting in line with the leak reporting of similar sized companies. PG&E should continue to report above-

ground leaks including those at the shut-off valve and on the meter set unless the leak was non-hazardous and was remediated by simple lubrication, adjustment, or tightening.

PHMSA appreciates that PG&E brought this matter to its attention. PHMSA is considering how it can provide additional consistency and clarity in the use of the term "leak" across PHMSA regulations and guidance materials and will consider a revision to Form F 7100.1-1 in the future. PHMSA will involve stakeholder participation in evaluating the usefulness of the existing collection criteria. PHMSA will also evaluate potentially needed changes and will further assess the leak reporting criteria and guidance in the process.

I hope that this information is helpful to you. If I can be of further assistance, please contact me at 202-366-4046.

Sincerely,

John A. Gale
Director, Office of Standards
and Rulemaking

PI-10.0009

Pacific Gas and Electric Company®

Glen Carter
Sr. Director
GT&D Gas Engineering

375 N. Wiget Lane
Walnut Creek, CA 94598
925.974.4231
925.974.4220
gecj@pge.com

April 23, 2010

Mr. Jeffrey D. Wiese, Associate Administrator for Pipeline Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, S.E
Washington, D.C. 20590

Re Interpretation of Instructions to Complete PHMSA Form F7100.1-1

Dear Mr. Wiese,

As you are aware, PG&E recently submitted Form F 7100.1.1 for calendar year 2009 in compliance with our annual reporting to the Pipeline and Hazardous Materials and Safety Administration (PHMSA). The purpose of the letter is to explain the increase in the number of leak repairs reported in 2009 and to initiate a discussion leading to consensus regarding gas leak reporting criteria, specifically the reporting of non-hazardous leaks.

Each year, PG&E submits its annual gas distribution system report – PHMSA Form F 7100.1-1. For calendar year 2007, PG&E reported 7,844 leak repairs (Attachment A). On March 15, 2010, PG&E submitted the gas leak repair statistics for 2009 (Attachment B) and reported 58,089 leaks – a seven-fold increase from 2007. (For reference, Table 1 is attached to provide a summary of PG&E data filed from 2006 thru 2009.)

As detailed below, this increase is attributable to two factors. First, PG&E initiated an Accelerated Leak Survey (ALS) Project which increased the number of gas mains and services surveyed. Second, we changed the way we account for non-hazardous, above ground riser and meter set leak repairs as a result of the January 13, 2009 verbal response received from Jamerson Pender of your staff to our December 18, 2008 request for interpretation.

PG&E's Accelerated Leak Survey (ALS) Project:

All of the increase in reported gas main leaks and a portion of the service leaks are due to PG&E's ALS Project. In 2008, PG&E determined that its leak detection process needed enhancement. As a result, PG&E modified work procedures, training and the qualification processes associated with the leak survey. Following these enhancements, in late 2008, PG&E initiated the ALS Project designed to complete the five-year gas leak surveys, otherwise scheduled for 2011 and 2012, by April 2010. This was in addition to the routine gas leak surveys normally scheduled in 2008 and 2009. With 3.3 million gas services, PG&E would normally survey 22.25% or about 750,000 gas services per year. In 2009, as a result of the ALS Project, we surveyed 57% of the entire gas system or almost 2 million services. (Note: Since the ALS Project was completed in April 2010, the impact of the additional surveys will affect next year's annual PHMSA report as well.)

With the addition of the ALS Project, the number of gas mains and services surveyed by PG&E in 2009 increased by about 165%. Therefore, using 2007 (the last full year of reporting before PG&E implemented ALS) as a base year, where we surveyed 22% of the gas mains and repaired 1,302 reportable leaks, in 2009, with the addition of 165% more leak surveys, it would be expected that the number of reportable gas main leak repairs would increase by the same percentage to approximately 3,500. In fact, 2009 gas main leak repairs were 3,101, only slightly less than predicted.

Similarly, for gas services, with additional leak surveys attributable to the ALS Project, the 6,542 service leak repairs in 2007 should have increased to approximately 17,000. However, as noted above, the actual increase of 54,988 was more than three times the projected amount. By far, the larger share of the gas service leak repair increase was attributable to changes in the PHMSA leak repair reporting interpretation as described more fully below.

Implementation of New PHMSA Reporting Interpretation:

PHMSA Form F7100.1-1 requires pipeline operators to report the repair of gas leaks due to corrosion, natural forces, excavation, other outside force damage, equipment failure, operations or other causes. The Instructions for Completing Form PHMSA F7100.1-1 ("Instructions") provides guidance (Attachment C.) Specifically, the Instructions provide that:

> A leak is defined as an unintentional escape of gas from a pipeline. A non-hazardous release that can be eliminated by lubrication, adjustment or tightening is not a leak. Include all leaks eliminated by repair, replacement or other reason during the reporting year.

PG&E has historically included all leak repairs on gas distribution mains and service lines and hazardous above-ground leaks repaired in Form F 7100.1.1. Until last year, PG&E defined the criteria for reporting hazardous leaks as any leak below the service (shut-off) valve. We have not historically reported above ground leaks at the service (shut-off) valve or on the meter set unless the leak was deemed hazardous or potentially hazardous and required replacement of damaged, corroded, or non-operational equipment.

In response to my December 2008 letter, your staff arranged a conference call with Jamerson Pender on January 13, 2009. During that call, Mr. Pender explained that, despite use of the word "non-hazardous" in the instructions, PHMSA intended utilities to report any release of gas, regardless of how insignificant, excluding those leaks which can be eliminated by lubrication, adjustment or tightening. Based on this verbal advice, PG&E has modified its reporting criteria for calendar year 2009.

The table below is included to provide a clear comparison of the impact on results for calendar year 2009 reporting compared to historical practices consistent with PG&E's reporting in 2007 and the current practices of most other AGA utilities consulted.

- Historical Reporting Criteria: Reporting consistent with historic practices that included all leak repairs on mains and services plus hazardous or potentially hazardous, above ground leaks on risers and meter sets

- New PHMSA Reporting Criteria: Reporting consistent with the new PHMSA advice that includes all leak repairs on mains and services plus all leak repairs on risers and meter sets regardless of leak severity or potential risk

PG&E Calendar Year 2009 Leak Repairs – Reporting Criteria Comparison				
	Historical Reporting Criteria		New PHMSA Reporting Criteria	
Category	Mains	Services	Mains	Services
Corrosion	1062	2986	1062	5049
Natural Forces	26	45	26	47
Excavation	215	1507	215	1510
Other outside force damage	26	171	26	175
Material or Welds	1057	5889	1057	26896
Equipment	35	176	35	481
Operations	10	49	10	72
Other	670	2647	670	20758
Subtotal:	3101	13470	3101	54988
Total:	16,571		58,089	
Non-hazardous Leak Repairs	1,981 (12%)		46,576 (80%)	
Leaks Scheduled for Repair	5,600		25,700	

Under the historical reporting criteria, PG&E would have reported a total of 16,571 leak repairs in 2009. While this represents a significant increase over the 7,844 leak repairs reported in 2007, the number is consistent with expectations given the 165% increase in 2009 leak surveys due to PG&E's ALS Project. However, the actual number of reportable leak repairs in 2009 was 58,089. This is an increase of 41,518 reported leak repairs and represents a 250% increase in total leak repairs based solely on the new PHMSA reporting interpretation.

Looking separately at the reportable leak repairs on mains and services, it should be noted that while the number of reportable leak repairs on gas mains is constant under the two reporting criteria (3,101), the inclusion of non-hazardous leak repairs on risers and meter sets increased more than 300%. The increase of 41,518 service leak repairs includes approximately 36,600 (88%) non-hazardous, "fuzz" leak repairs on service riser valves and threads and approximately 4,900 (12%) similar non-hazardous leak repairs on meter sets where the technician elects to replace a fitting or install a clamp rather than lubricating and tightening. (In many cases, these "fuzz" leaks or fugitive emissions would not be detected or repaired on below ground pipe.)

Also, under the two reporting criteria, there is a dramatic increase in non-hazardous leak repairs that would be reported. Historically, PG&E would have reported 16,571 total leak repairs which included 1,981 (12%) non-hazardous leak repairs. However, under the new reporting criteria, total leak repairs (58,089) have ballooned with the addition of 46,576 non-hazardous leaks, representing 80% of the total.

The potentially confusing impact of the new reporting criteria is further illustrated by the increase in the number leaks scheduled for repair under the two reporting criteria. Using the historic approach, PG&E would have reported about 5,600 scheduled leak repairs. However, the scheduled leaks actually reported in 2009 were 25,700 – an increase of more than 350%. This is particularly noteworthy when you consider that all of this increase was attributable to the change in the reporting criteria and that all of these scheduled leaks are non-hazardous.

Conclusion:

PG&E understands that PHMSA is a data-driven organization that uses Form F 7100.1.1 data to evaluate the trends and frequently proposes policy changes based on the statistics reported by pipeline operators. Our concern is that the inclusion of these previously unreported non-hazardous leaks without fully understanding the underlying data may mask the significance of leaks that are potential safety issues and may divert operator and industry attention on non-hazardous leaks.

For this reason, PG&E has attempted to illustrate the impact of the verbal interpretation that we received from PHMSA staff on the PHMSA leak repair reporting criteria. We believe such a change deserves careful consideration particularly given the potential that it may impair meaningful historical trending analysis until such time as a new body of statistics has been developed. Additionally, at this point, only PG&E has received new reporting criteria interpretation; unless all utilities are directed to adopt the same leak repair reporting criteria, PHMSA and others will be unable to make meaningful comparisons across utilities.

We have tried to explain the impact of PHMSA's advice on PG&E's 2009 leak repair statistics and to provide a comprehensive analysis of the impact of that advice to stimulate further discussion. PG&E looks forward to these discussions with a view to developing consensus on this matter. If you have any questions, do not hesitate to call me.

Sincerely,

Glen Carter

cc: John Gale, PHMSA
Roger Little, PHMSA
Raffy Stepanian, CPUC
Bob Howard, PG&E
Christina Sames, AGA

Attachments: A – PG&E's Calendar Year 2007 PHMSA Form F7100.1-1.
B – PG&E's Calendar Year 2009 PHMSA Form F7100.1-1.
C – Instructions for Completing Form PHMSA F7100.1-1
D – PG&E's December 18, 2008 Letter to John Gale

Table 1: PG&E's Annual PHMSA Form 7100.1-1 Data
(Years 2006 - 2009 for reference and comparison)

	2006		2007		2008		2009	
Category	**Mains**	**Services**	**Mains**	**Services**	**Mains**	**Services**	**Mains**	**Services**
Corrosion	229	1208	240	1233	433	1971	1062	5049
Natural Forces	36	134	31	88	21	51	26	47
Excavation	594	2441	483	2791	319	1878	215	1510
Other outside force damage	73	113	13	104	28	157	26	175
Material or Welds	252	1471	368	1595	602	5417	1057	26896
Equipment	1	4	1	5	7	105	35	481
Operations	0	0	0	0	3	25	10	72
Other	221	752	166	726	378	5952	670	20758
Subtotal:	1406	6123	1302	6542	1791	15556	3101	54988
Total:	7,529		7,844		17,347		58,089	

NOTICE: This report is required by 49 CFR Part 191. Failure to report may result in a civil penalty not to exceed $100,000 for each violation for each day the violation continues up to a maximum of $1,000,000 as provided in 49 USC 60122. Form Approved OMB No. 2137-0522

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

ANNUAL REPORT FOR CALENDAR YEAR 2007
GAS DISTRIBUTION SYSTEM

INITIAL REPORT ☒
SUPPLEMENTAL REPORT ☐

PART A - OPERATOR INFORMATION

DOT USE ONLY: 20071063 -- 7932

1. NAME OF OPERATOR
PACIFIC GAS & ELECTRIC CO

2. LOCATION OF OFFICE WHERE ADDITIONAL INFORMATION MAY BE OBTAINED
PO BOX 770000
Number and Street
SAN FRANCISCO SAN FRANCISCO
City and County
CA 94177
State and Zip Code

3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER
/ / 15007 / / /

4. HEADQUARTERS NAME & ADDRESS, IF DIFFERENT
Number and Street
City and County
State and Zip Code

5. STATE IN WHICH SYSTEM OPERATES: / CA / (provide a **separate** report for each state in which system operates)

PART B - SYSTEM DESCRIPTION

Report miles of main and number of services in system at end of year.

1. GENERAL

	STEEL				PLASTIC	CAST/ WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	OTHER	TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MILES OF MAIN	213.3	0	0	20880	20528	182.6	0	0	0	0	41803.
NO. OF SERVICES	17839	0	0	1203551	2005589	0	0	75037	0	0	330201

2. MILES OF MAINS IN SYSTEM AT END OF YEAR

MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	TOTAL
STEEL	0	12690.14	5068.31	2573.18	410.21	351.46	21093.3
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	0	0	0	0	0	0
CAST/WROUGHT IRON	0	.65	106.7	58.25	11.41	5.59	182.6
PLASTIC 1. PVC	0	0	0	0	0	0	0
2. PE	0	16205.66	3751.59	566.56	4.19	0	20528
3. ABS	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
SYSTEM TOTALS	0	28896.44999	8926.6	3197.99	425.81	357.0499999	41803.9

3. NUMBER OF SERVICES IN SYSTEM AT END OF YEAR AVERAGE SERVICE LENGTH 55 FEET

MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	TOTAL
STEEL	0	1140510	75913	4408	555	4	1221390
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	74929	108	0	0	0	75037
CAST/WROUGHT IRON	0	0	0	0	0	0	0
PLASTIC 1. PVC	0	0	0	0	0	0	0
2. PE	0	1970123	34368	892	199	7	2005589
3. ABS	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
SYSTEM TOTALS	0	3185562	110389	5300	754	11	3302016

Form PHMSA F 7100.1-1 (12-05)

4. MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION

	UN-KNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	TOTAL
MILES OF MAIN	0	2130.2	3277.7	6378.6	6401.3	7439.8	5832.6	5694.1	4649.6	41803.9
NUMBER OF SERVICES	0	120913	187003	438050	463878	652265	527209	512157	400541	3302016

PART C - TOTAL LEAKS ELIMINATED/REPAIRED DURING YEAR

CAUSE OF LEAK	Mains	Services
CORROSION	240	1233
NATURAL FORCES	31	88
EXCAVATION	483	2791
OTHER OUTSIDE FORCE DAMAGE	13	104
MATERIAL OR WELDS	368	1595
EQUIPMENT	1	5
OPERATIONS	0	0
OTHER	166	726

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR 2126

PART D - TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED FOR REPAIR

6

PART E - PERCENT OF UNACCOUNTED FOR GAS

Unaccounted for gas as a percent of total input for the 12 months ending June 30 of the reporting year.

[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (purchased gas + produced gas) equals percent unaccounted for.

Input for year ending 6/30 1.97 %.

PART F - ADDITIONAL INFORMATION

PART G - PREPARER AND AUTHORIZED SIGNATURE

LAWRENCE BERG
(type or print) Preparer's Name and Title

9259744084
Area Code and Telephone Number

LMB5@PGE.COM
Preparer's email address

9259744232
Area Code and Facsimile Number

CHRIS WARNER MANAGER INTEGRITY MANAGEMENT AND (
Name and Title of Person Signing

9259744248
Area Code and Telephone Number

Authorized Signature

Form PHMSA F 7100.1-1 (12-05)

NOTICE: This report is required by 49 CFR Part 191. Failure to report may result in a civil penalty not to exceed $100,000 for each violation for each day the violation continues up to a maximum of $1,000,000 as provided in 49 USC 60122. Form Approved OMB No. 2137-0522

U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

ANNUAL REPORT FOR CALENDAR YEAR 2009
GAS DISTRIBUTION SYSTEM

INITIAL REPORT ☒
SUPPLEMENTAL REPORT ☐

PART A - OPERATOR INFORMATION

DOT USE ONLY: 20091020 -- 13735

1. NAME OF OPERATOR
PACIFIC GAS & ELECTRIC CO

2. LOCATION OF OFFICE WHERE ADDITIONAL INFORMATION MAY BE OBTAINED
375 N. WIGET LANE SUITE 170
Number and Street
WALNUT CREEK CONTRA COSTA
City and County
CA 94598
State and Zip Code

3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER
/ / 15007 / /

4. HEADQUARTERS NAME & ADDRESS, IF DIFFERENT
77 BEALE STREET MAIL CODE N14A
Number and Street
SAN FRANCISCO SAN FRANCISCO
City and County
CA 94106
State and Zip Code

5. STATE IN WHICH SYSTEM OPERATES: / CA / (provide a **separate** report for each state in which system operates)

PART B - SYSTEM DESCRIPTION — Report miles of main and number of services in system at end of year.

1. GENERAL

	STEEL				PLASTIC	CAST/ WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	OTHER	TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MILES OF MAIN	211	0	0	20844	20937	150	0	0	0	0	42142
NO. OF SERVICES	17037	0	0	1222092	2064981	0	0	26991	0	0	3331101

2. MILES OF MAINS IN SYSTEM AT END OF YEAR

MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	TOTAL
STEEL	0	12673	5048	2571	411	352	21055
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	0	0	0	0	0	0
CAST/WROUGHT IRON	0	1	86	50	8	5	150
PLASTIC 1. PVC	0	0	0	0	0	0	0
2. PE	0	16464	3850	619	4	0	20937
3. ABS	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
SYSTEM TOTALS	0	29138	8984	3240	423	357	42142

3. NUMBER OF SERVICES IN SYSTEM AT END OF YEAR — AVERAGE SERVICE LENGTH 79 FEET

MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	TOTAL
STEEL	0	1158592	75589	4393	551	4	1239129
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	26981	10	0	0	0	26991
CAST/WROUGHT IRON	0	0	0	0	0	0	0
PLASTIC 1. PVC	0	0	0	0	0	0	0
2. PE	0	2028286	35557	937	201	0	2064981
3. ABS	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
SYSTEM TOTALS	0	3213859	111156	5330	752	4	3331101

Form PHMSA F 7100.1-1 (12-05)

4. MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION

	UN-KNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980–1989	1990–1999	2000–2009	TOTAL
MILES OF MAIN	0	2081	3270	6367	6391	7433	5828	5691	5081	42142
NUMBER OF SERVICES	0	117593	176181	429654	457041	653644	530378	512858	453752	3331101

PART C - TOTAL LEAKS ELIMINATED/REPAIRED DURING YEAR

CAUSE OF LEAK	Mains	Services
CORROSION	1062	5049
NATURAL FORCES	26	47
EXCAVATION	215	1510
OTHER OUTSIDE FORCE DAMAGE	26	175
MATERIAL OR WELDS	1057	26896
EQUIPMENT	35	481
OPERATIONS	10	72
OTHER	670	20758

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR 25700

PART D - TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED FOR REPAIR

21

PART E - PERCENT OF UNACCOUNTED FOR GAS

Unaccounted for gas as a percent of total input for the 12 months ending June 30 of the reporting year.

[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (purchased gas + produced gas) equals percent unaccounted for.

Input for year ending 6/30 1.53 %.

PART F - ADDITIONAL INFORMATION

THE NUMBER OF LEAK REPAIRS REPORTED IN 2009 REPRESENTS A SIGNIFICANT INCREASE IN COMPARISON TO PRIOR YEARS. FOR 2009, PG&E IS REPORTING 3,101 GAS MAIN LEAK REPAIRS AND 54,988 GAS SERVICE REPAIRS (SUMMING THE ENTRIES IN PART C). THIS REPRESENTS AN INCREASE OF APPROXIMATELY 130% OVER THE 1,350 AVERAGE GAS MAIN REPAIRS REPORTED IN 2006 AND 2007 AND AN INCREASE OF ABOUT 770% OVER THE 6,330 AVERAGE IN GAS SERVICE REPAIRS. THE KEY REASONS FOR THE INCREASE ARE AS FOLLOWS:

- IN 2009, PG&E CONTINUED AN ACCELERATED LEAK SURVEY (STARTED IN 2008) RESULTING IN A SURVEY OF APPROXIMATELY 2.8 TIMES THE NUMBER OF SERVICES IN 2009 COMPARED TO THE 2006-7 PERIOD (57% OF THE SYSTEM SERVICES COMPARED TO 20%).
- PG&E ENHANCED ITS LEAK GRADING CRITERIA TO BECOME MORE CONSERVATIVE RESULTING IN FEWER NON-HAZARDOUS GRADE 3 (MONITOR) LEAKS AND MORE GRADE 2 OR 2+ (SCHEDULED REPAIR) LEAKS
- PG&E IMPLEMENTED THE JANUARY 13, 2009 PHMSA VERBAL INTERPRETATION OF LEAK REPAIR REPORTING ON NON-HAZARDOUS ABOVE GROUND LEAKS WHICH RESULTED IN REPORTING IN 2009 THE

PART G - PREPARER AND AUTHORIZED SIGNATURE

LAURENCE DENISTON
(type or print) Preparer's Name and Title

9259744313
Area Code and Telephone Number

LCD1@PGE.COM
Preparer's email address

9259744214
Area Code and Facsimile Number

GLEN CARTER
Name and Title of Person Signing

9259744231
Area Code and Telephone Number

Authorized Signature

INSTRUCTIONS FOR COMPLETING FORM PHMSA F 7100.1-1 (Rev.12/05)
ANNUAL REPORT FOR CALENDAR YEAR 2008
GAS DISTRIBUTION SYSTEM

All references are to Title 49 of the Code of Federal Regulations. Reporting requirements are contained in Part 191, "Transportation of Natural and Other Gas by Pipeline; Annual Reports, Incident Reports and Safety Related Condition Reports." Except as provided in §191.11(b), each operator of a natural gas distribution line (see definitions below) must submit an annual report Form PHMSA F 7100.1-1 for the preceding calendar year not later than **March 15th**. Be sure to report TOTAL miles of main pipeline and services in the system at the end of the reporting year, including additions to the system during the year. The annual reporting period is on a calendar year basis ending on December 31st of each year.

Reports for intrastate pipelines subject to the jurisdiction of a State agency pursuant to certification under 49 U.S.C. § 60105 may be submitted in duplicate to the State agency if the regulations of that agency require the submission of these reports and provide for further transmittal of one copy not later than **March 15th** to the Information Resources Manager, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, 1200 New Jersey Ave., SE East Building, 2nd Floor (PHP-10), Room Number E22-321, Washington, DC 20590.

Use one of the following methods to submit your report. **We prefer online reporting over hardcopy submissions**. If you prefer, then you can mail or fax your completed reports to DOT/PHMSA.

Methods:

1. **Online:**
   a. Navigate to the OPS Home Page http://www.phmsa.dot.gov/pipeline, click the **ONLINE DATA ENTRY** link listed in the fourth column of hyperlinks on the Pipeline Safety Community main page
   b. Click on the Annual Gas Distribution Systems Report name
   c. Enter Operator ID and PIN (*the name that appears is the operator name assigned to the operator ID and PIN and is automatically populated by our database and cannot be changed by the operator at the time of filing*).
   d. Click **add** to begin
   e. Click **submit** when finished. NOTE: For supplemental reports use steps 1a and 1b then click on the report ID to make corrections. Click **save** when finished.
   f. A confirmation page will appear for you to print and save for your records

   If you submit your report online, PLEASE DO NOT MAIL OR FAX the completed report to DOT as this may cause data entry errors.

2. **Mail to:**
   DOT/PHMSA Office of Pipeline Safety
   Information Resources Manager,
   1200 New Jersey Ave., SE
   East Building, 2nd Floor, (PHP-10)
   Room Number E22-321
   Washington, DC 20590
3. **Fax to: Information Resources Manager at (202) 366-4566.**

INSTRUCTIONS FOR COMPLETING FORM PHMSA F 7100.1-1 (Rev.12/05)
ANNUAL REPORT FOR CALENDAR YEAR 2008
GAS DISTRIBUTION SYSTEM

If you need copies of the Form PHMSA F 7100.1-1 and/or instructions they can be found on the Pipeline Safety Community main page, http://www.phmsa.dot.gov/pipeline, by clicking the Library hyperlink and then the Forms hyperlink under the "Mini-Menu". If you have questions about this report or these instructions, please call (202) 366-8075. Please type or print all entries when submitting forms by mail or fax.

GENERAL INSTRUCTIONS

The following definitions are from § 192.3:

1. "Distribution line" means a pipeline other than a gathering or transmission line.

2. "Gathering line" means a pipeline that transports gas from a current production facility to a transmission line or main.

3. "Transmission line" means a pipeline, other than a gathering line, that:
   a. Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center;
   b. Operates at a hoop stress of 20 percent or more of SMYS; or
   c. Transports gas within a storage field. A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.

4. "Operator" means a person who engages in the transportation of gas.

Make an entry in each block for which data are available. Estimate data if necessary. Avoid entering mileage in the **UNKNOWN** columns, if possible. Some companies may have very old pipe for which installation records do not exist. Estimate the total of such mileage in the **UNKNOWN** section of item 4: "Miles of Main and Number of Services by Decade of Installation."

Please round all mileage to the nearest 3 decimal positions. **DO NOT USE FRACTIONS.** Examples of rounding are as follows: 3/8 should round to 0.375; 3/4 should round to 0.75 and ½ should round to 0.5.

The total miles of main and services reported in Part B sections 1 through 4 **MUST** all sum to the same totals in the appropriate rows. Please do not to report miles of main in feet. If necessary, please convert feet into a decimal notation (e.g. 1,320 feet = .25 miles).

INSTRUCTIONS FOR COMPLETING FORM PHMSA F 7100.1-1 (Rev.12/05)
ANNUAL REPORT FOR CALENDAR YEAR 2008
GAS DISTRIBUTION SYSTEM

SPECIFIC INSTRUCTIONS

Enter the Calendar Year for which the report is being filed. Check **Initial Report** if this is the original filing for this calendar year. Check **Supplemental Report** if this is a follow-up to a previously filed report to amend or correct information. On Supplemental Reports, please complete Part A and only amended, revised, or added information for Parts B, C, D, E and F.

PART A – OPERATOR INFORMATION

The operator's five digit identification number appears on the PHMSA mailing label (without leading zeroes when less than 10000). If the person completing the report does not have the operator identification number, they should contact the Information Resources Manager or PHMSA at (202) 366-8075 for the five-digit operator identification number.

Provide the address where you would like PHMSA to mail forms and the phone number where PHMSA can contact you regarding this report. The Pipeline and Hazardous Materials Safety Administration assigns the operator's five-digit identification number. Contact PHMSA at (202) 366-8075 if you need assistance with determining your operator's five-digit identification number.

Enter the **State for which information is being reported. Submit a separate report for each State** in which the company operates a gas distribution pipeline system.

PART B – SYSTEM DESCRIPTION

"Coated" means pipe coated with any effective hot or cold applied dielectric coating or wrapper.

"PVC" means polyvinyl chloride plastic.

"PE" means polyethylene plastic.

"ABS" means acrylonitrile-butadiene-styrene plastic.

"Cathodically protected" applies to both "bare" and "coated."

"Other" means a pipe of any material not specifically designated on the form. If you check "other pipe," describe it in Part F.

"Number of services" is the number of service lines, not the number of customers served.

Provide miles of main and numbers of services by decade installed in Part B, section 4.

If you do not know the decade of installation of the pipe because there are no records containing such information, enter an estimate in the UNKNOWN column. The sum total of mileage and numbers of services reported for Part B, section 4 should match total mileage and numbers of services reported in sections 1, 2, and 3 in Part B.

PART C – TOTAL LEAKS ELIMINATED/REPAIRED DURING YEAR

A leak is defined as an unintentional escape of gas from the pipeline. A non-hazardous release that can be eliminated by lubrication, adjustment, or tightening, is not a leak.

Include all leaks eliminated by repair, replacement or other reason during the reporting year. Also include leaks reported on form PHMSA 7100.1, "Incident Report Gas Distribution Systems." A reportable incident is one described in §191.3. Do not include test failures.

Leaks are classified as:

CORROSION: leak resulting from a hole in the pipe or other component that galvanic, bacterial, chemical, stray current, or other corrosive action causes.

NATURAL FORCES: leak resulting from earth movements, earthquakes, landslides, subsidence, lightning, heavy rains/floods, washouts, flotation, mudslide, scouring, temperature, frost heave, frozen components, high winds, or similar natural causes.

EXCAVATION: leak resulting from damage caused by earth moving or other equipment, tools, or vehicles. Include leaks from damage by operator's personnel or contractor or people not associated with the operator.

OTHER OUTSIDE FORCE DAMAGE: Include leaks caused by fire or explosion and deliberate or willful acts, such as vandalism.

MATERIAL AND WELDS: leak resulting from failure of original sound material from force applied during construction that caused a dent, gouge, excessive stress, or other defect that eventually resulted in a leak. This includes leaks due to faulty wrinkle bends, faulty field welds, and damage sustained in transportation to the construction or fabrication site. Also include leak resulting from a defect in the pipe material, component, or the longitudinal weld or seam due to faulty manufacturing procedures. Leaks from material deterioration, other than corrosion, after exceeding the reasonable service life, are reported under Other.

EQUIPMENT AND OPERATIONS: leak resulting from malfunction of control/relief equipment including valves, regulators, or other instrumentation; stripped threads or broken pipe couplings on nipples, valves, or mechanical couplings; or seal failures on gaskets, O-rings, seal/pump packing, or similar leaks. Also include leaks resulting from inadequate procedures or safety practices, or failure to follow correct procedures, or other operator error.

OTHER: leak resulting from any other cause, such as exceeding the service life, not attributable to the above causes.

PART D – TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED/ELIMINATED OR SCHEDULED FOR REPAIR

Federal Lands: As defined in 30 U.S.C. §185, federal lands means "all lands owned by the United States except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf." Indicate only those leaks repaired, eliminated, or scheduled for repair during the reporting year, including those incidents reported on Form PHMSA F 7100.1.

PART E – PERCENT OF UNACCOUNTABLE FOR GAS

"Unaccounted for gas" is gas lost; that is, gas that the operator cannot account for as usage or through appropriate adjustment. Adjustments are appropriately made for such factors as variations in temperature, pressure, meter-reading cycles, or heat content; calculable losses from construction, purging, line breaks, etc., where specific data are available to allow reasonable calculation or estimate; or other similar factors.

State the amount of unaccounted for gas as a percent of total input for the 12 months ending June 30 of the reporting year.

[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (purchased gas + produced gas) equals percent unaccounted for.

Do not report "gained" gas. If a net gain of gas is indicated by the calculations, report "0%" here. (Decimal or fractional percentages may be entered.)

PART F – ADDITIONAL INFORMATION

Include any additional information which will assist in clarifying or classifying the reported data.

PART G - PREPARER AND AUTHORIZED SIGNATURE

PREPARER is the name of the person most knowledgeable about the report or the person to be contacted for more information. Please include the direct phone number and email address.

AUTHORIZED SIGNATURE may be the preparer, an officer, or other person whom the operator has designated to review and sign reports. Please include the direct phone number and email address. If submitting via the Online Data Entry System your Operator ID and PIN take the place of the Authorized Signature.

Pacific Gas and Electric Company®

Glen Carter
Sr. Director
GT&D Gas Engineering

375 N. Wiget Lane
Walnut Creek, CA 94598

925.974.4231
925.974.4220
gecj@pge.com

Mr. John Gale
Regulations Director
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, S.E
Washington, D.C. 20590

Re: Interpretation of Instructions to Complete PHMSA Form F7100.1-1

Dear Mr. Gale:

This letter is to request an interpretation of the intent of the instructions to complete PHMSA Form F7100.1-1 regarding the inclusion of non-hazardous leaks above the customer service (shut-off) valve on the meter set with other distribution and service pipeline leak repair statistics.

Part C of Form F7100.1-1 requires the operator to report the repair of gas leaks due to corrosion, earth movement or other natural forces, excavation or outside force damage, equipment failure or other causes. The Instructions for Completing Form PHMSA F7100.1-1 provides operator guidance for completing this section of the Form. Specifically, on page 3, the Instructions for Completing Form PHMSA F7100.1-1; "Part C – Total Leaks Eliminated/Repaired During Year" provides the following guidance:

> A leak is defined as an unintentional escape of gas from a pipeline. A non-hazardous release that can be eliminated by lubrication, adjustment or tightening is not a leak. Include all leaks eliminated by repair, replacement or other reason during the reporting year.
>
> Include all leaks eliminated by repair, replacement of other reason during the reporting year. Also include leaks reported on form PHMSA 7100.1, "Incident Report Gas Distribution Systems." A reportable incident is one described in §191.3. Do not include test failures.

For reference, I have enclosed a copy of PG&E's 2007 PHMSA Form F7100.1-1.

As you can see, in 2007, PG&E reported about 7,800 leak repairs for the year. Most of these were subsurface leaks on mains or service lines up to the shut-off valve on the customer riser. This number also included other meter set leaks (above the shut-off valve) where a customer called to report a gas smell that was the result of corrosion, natural forces, or outside forces like construction or vehicle accidents that required repair by a gas maintenance crew.

Traditionally, however, PG&E has not included other non-hazardous meter set leaks that were fixed by a gas customer service representative during the same service call. The vast majority of these meter set leak repairs can be eliminated by lubrication, adjustment or tightening and, according to the PHMSA instructions, are not leaks and are not reportable. However, each year, there are a handful of cases, where a customer service representative will repair a non-hazardous meter set leak by replacing a fitting, a regulator or some other part. This portion of reporting instructions seems unclear as to whether such meter set leaks need to be reported or not.

Is it the intent of the instructions noted above to report any of the following types of non-hazardous meter set leaks repaired or eliminated on Form F7100.1? If so, what criterion do we use to distinguish reportable hazardous leak repairs from non-reportable non-hazardous repairs?

I have reviewed the PHMSA website and can find no further clarification regarding the criterion used to distinguish hazardous or non-hazardous meter set leaks.

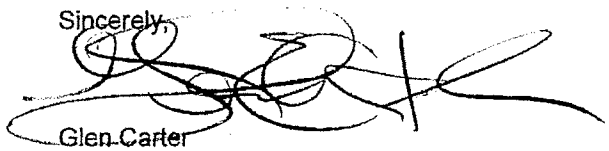
I have provided the following examples of non-hazardous leak repairs typically completed by customer service representatives during the service call instead of calling a gas maintenance crew:

1. A venting service regulator that is eliminated by replacement.
2. A leak at a fitting that has the threads re-doped and is simply reinstalled.
3. A leak at a fitting that is eliminated by replacing the fitting.
4. A leak at a fitting that is eliminated by re-building the meter set.
5. A dielectric bushing that has become cracked and is replaced within the meter set.
6. A pin-hole leak on the meter swing pipe that is eliminated by a pipe clamp.
7. A pin-hole leak on the meter swing pipe that is eliminated by replacing the pipe.

Please contact Larry Berg, PE, at 925-974-4084 if you have questions or need additional information.

Thank you, in advance, for your attention to this matter. Your guidance on the intent of requirement to report meter set leaks repaired or eliminated would be appreciated.

Sincerely,



Glen Carter
Sr. Director
GT&D Gas Engineering

cc: Roger Little, PHMSA
Bob Howard, PG&E

Enclosure: PG&E 2007 PHMSA Form F7100.1-1

NOTICE: This report is required by 49 CFR Part 191. Failure to report may result in a civil penalty not to exceed $100,000 for each violation for each day the violation continues up to a maximum of $1,000,000 as provided in 49 USC 60122. Form Approved OMB No. 2137-0522

U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

ANNUAL REPORT FOR CALENDAR YEAR 2007
GAS DISTRIBUTION SYSTEM

INITIAL REPORT ☒
SUPPLEMENTAL REPORT ☐

DOT USE ONLY: 20071063 -- 7932

PART A - OPERATOR INFORMATION

1. NAME OF OPERATOR: PACIFIC GAS & ELECTRIC CO
2. LOCATION OF OFFICE WHERE ADDITIONAL INFORMATION MAY BE OBTAINED
   PO BOX 770000 (Number and Street)
   SAN FRANCISCO SAN FRANCISCO (City and County)
   CA 94177 (State and Zip Code)
3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER: 15007
4. HEADQUARTERS NAME & ADDRESS, IF DIFFERENT
   (Number and Street)
   (City and County)
   (State and Zip Code)
5. STATE IN WHICH SYSTEM OPERATES: CA (provide a separate report for each state in which system operates)

PART B - SYSTEM DESCRIPTION

Report miles of main and number of services in system at end of year.

1. GENERAL

	STEEL				PLASTIC	CAST/ WROUGHT IRON	DUCTIL E IRON	COPPER	OTHER	OTHER	TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MILES OF MAIN	213.3	0	0	20880	20528	182.6	0	0	0	0	41803.
NO. OF SERVICES	17839	0	0	1203551	2005589	0	0	75037	0	0	330201

2. MILES OF MAINS IN SYSTEM AT END OF YEAR

MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	TOTAL
STEEL	0	12690.14	5068.31	2573.18	410.21	351.46	21093.3
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	0	0	0	0	0	0
CAST/WROUGHT IRON	0	65	106.7	58.25	11.41	5.59	182.6
PLASTIC 1. PVC	0	0	0	0	0	0	0
2. PE	0	16205.66	3751.59	566.56	4.19	0	20528
3. ABS	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
SYSTEM TOTALS	0	28896.44999	8926.6	3197.99	425.81	357.0499999	41803.9

3. NUMBER OF SERVICES IN SYSTEM AT END OF YEAR — AVERAGE SERVICE LENGTH 55 FEET

MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	TOTAL
STEEL	0	1140510	75913	4408	555	4	1221390
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	74929	108	0	0	0	75037
CAST/WROUGHT IRON	0	0	0	0	0	0	0
PLASTIC 1. PVC	0	0	0	0	0	0	0
2. PE	0	1970123	34368	892	199	7	2005589
3. ABS	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
SYSTEM TOTALS	0	3185562	110389	5300	754	11	3302016

Form PHMSA F 7100.1-1 (12-05)

Reproduction of this form is permitted.

4. MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION

	UN-KNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	TOTAL
MILES OF MAIN	0	2130.2	3277.7	6378.6	6401.3	7439.8	5832.6	5694.1	4649.6	41803.9
NUMBER OF SERVICES	0	120913	187003	438050	463878	652265	527209	512157	400541	3302016

PART C - TOTAL LEAKS ELIMINATED/REPAIRED DURING YEAR

CAUSE OF LEAK	Mains	Services
CORROSION	240	1233
NATURAL FORCES	31	88
EXCAVATION	483	2791
OTHER OUTSIDE FORCE DAMAGE	13	104
MATERIAL OR WELDS	368	1595
EQUIPMENT	1	5
OPERATIONS	0	0
OTHER	166	726

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR 2126

PART D - TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED FOR REPAIR

6

PART E - PERCENT OF UNACCOUNTED FOR GAS

Unaccounted for gas as a percent of total input for the 12 months ending June 30 of the reporting year.

[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (purchased gas + produced gas) equals percent unaccounted for.

Input for year ending 6/30 1.97 %.

PART F - ADDITIONAL INFORMATION

PART G - PREPARER AND AUTHORIZED SIGNATURE

LAWRENCE BERG
(type or print) Preparer's Name and Title

9259744084
Area Code and Telephone Number

LMB5@PGE.COM
Preparer's email address

9259744232
Area Code and Facsimile Number

CHRIS WARNER MANAGER INTEGRITY MANAGEMENT AND (
Name and Title of Person Signing

9259744248
Area Code and Telephone Number

Authorized Signature