



FILED

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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company
for Authority, Among Other Things, to Increase
Rates and Charges for Electric and Gas Service
Effective on January 1, 2020. (U39M)

Application 18-12-009
(Filed December 13, 2018)

DECLARATION OF DOUGLAS LIPPS

I, DOUGLAS LIPPS, declare as follows:

1. I am a Mechanical Engineer employed by the San Francisco Public Utilities Commission Wastewater Enterprise, Collection System Division and Technical Services Section. I have been working on the crossbore program for the City and County of San Francisco since its inception. If called upon to testify to the following, I could and would do so competently and from my own personal knowledge. I have reviewed the transcript of the testimony of PG&E witnesses Kerans and Abranches on September 25, 2019.

2. Pacific Gas & Electric Company (PG&E) testified repeatedly that its crossbore inspection plan for 2019, now abandoned, was to inspect and clear 10,000 "Unable to Access (UTA)" potential crossbore locations in San Francisco (Evidentiary Hearing, September 25, 2019 (Tscpt.) at 1141:18-20; 1150:14-19; 1159:26-27; 1160:1-4; 1163:21-25). PG&E testified that number increased to an estimated 21,000 UTA locations for 2020 (Tscpt. at 1163:21-22). PG&E admits that these numbers may be high and that an "experienced operator with training" might be able to inspect and "break through some of the UTA issues . . . and complete them." (Tscpt. at 1160:12-28; 1161:6-13). Despite these high estimates provided in testimony, PG&E has identified only 135 UTAs for the City.

3. PG&E also testified repeatedly that it abandoned UTA inspections in the City in 2019 because there is no agreement in place with the City and that PG&E's "[r]evised work plan is contingent on final negotiations with SF." (Tscpt. at 1143:7-12; 1144:3-5; 1146:26-28; 1147:1-4 and 111-16; 1168:1-7; 1170:24-25; 1171:7-14). But, PG&E and the City already have a process in place

1 and a working procedure for coordinating UTA work with the City. In October 2014, PG&E and the
2 City executed a “Crossbore Agreement” with a three-year term that detailed the process for PG&E to
3 inspect and repair crossbores in San Francisco, obligated PG&E to submit to the City sewer inspection
4 videos, and also stated how PG&E would proceed with directional drilling in the future. The Original
5 Crossbore Agreement obligated PG&E to complete all inspections within 30 months of the effective
6 date (i.e., by April 14, 2016). (Exh. 2, Original Agreement at §II.b.) The Agreement mandated that all
7 crossbore repairs be completed by October 14, 2017. (*Id.* at §VIII.g.) As described below, PG&E
8 missed both of those dates and is currently in breach of the Agreement.

9 4. In 2016, the City and PG&E amended the Crossbore Agreement to add a requirement
10 that PG&E provide funding for City work on the crossbore program. In 2017, PG&E informed the
11 City it would not be able to complete its inspections and repairs by either the April 14 or October 14,
12 2017 deadline and asked the City to agree to extend the term of the Crossbore Agreement. Initially,
13 UTAs’ were not at issue for Amendment Two. The City requested that PG&E provide a rationale for
14 its time extension request. PG&E identified “uninitiated” sites and “indeterminate” sites as problems,
15 but did not identify UTA sites as an issue:

Uninitiated	18,730
1. Signalized Intersection	590
2. Caltrans	440
3. Muni Bus	7,800
4. Muni Rail	2,400
5. No Special Permits anticipated	7,500
Attempted Incomplete Inspections (“Indeterminate”)	12,460
6. Signalized Intersection	320
7. Caltrans	210
8. Muni Bus	4,100
9. Muni Rail	630
10. No Special Permits anticipated	5,100
11. Pending Proximity Clearance	2,100
Total	31,190

25 (April 15, 2017 Letter, attached as Exhibit (Exh.) 1.)

26 5. During negotiations for Amendment Two, PG&E changed its characterization of the
27 remaining sites. Instead of identifying attempted incomplete Inspections as “indeterminate,” PG&E
28

1 began to call them “unable to access (UTA)” and began to blame the City for the blockages. In July
2 2018, PG&E provided the City with a report entitled, “Progress to Date” attached hereto as Exhibit
3 (Exh.) 3.) The report identified obstacles that PG&E has encountered causing UTAs as “buried p-
4 traps, buried manholes, sealed manholes, capped mains, sewer collapses, roots, debris, sewer defects,
5 and other conditions.” (Exh. 3 at p. 1.)

6 6. Despite the fact that PG&E appeared to be changing the narrative to blame the City for
7 the slow PG&E work, the City actively worked with PG&E to develop a new UTA coordination
8 clearance plan. That agreed upon process is set forth in a draft Amendment Two to the Crossbore
9 Agreement that the parties negotiated and PG&E executed in April 2019, which would have granted
10 PG&E an extension until 2021 to complete all crossbore inspections and repairs. The draft
11 Amendment Two details at a high level how the City and PG&E will coordinate work on UTAs,
12 including setting forth clear notice and response protocols for resolving issues such as defective sewer
13 laterals or inaccessible manholes. True and correct copies of the original Crossbore Agreement, plus
14 executed Amendment One and partially executed Amendment Two are attached hereto as Exhibit 2.

15 7. The draft of Amendment Two provides that PG&E will give the City a monthly report
16 that identifies sewer assets that are UTA. Within 30 days of discovering a potential UTA, PG&E is
17 required to submit to the PUC a completed “Potential Sewer Defect/Access Issue Form” that identifies
18 the potential sewer defect. The Amendment details how the City will address mainline sewer defects,
19 lower lateral defects, and upper lateral and/or vent trap defects. And, the Amendment identifies what
20 the City will do to address manhole access issues. (Exh. 2 at 3-5.)

21 8. In January 2019, during the negotiation process for Amendment Two, the City
22 developed the “Potential Sewer Defect/Access Issue Form” and associated instructions (attached
23 hereto as Exhibit 4) to create a streamlined communication process for helping PG&E resolve UTAs.
24 For each UTA, the form asks that PG&E identify the structural issue (collapse, deformed, broken); the
25 operation and maintenance issue (tap break-in intruding, roots, obstacles/obstructions); and the
26 manhole access issues (buried, welded shut, locked). The form requests photos, and map locations and
27 a description of the issues. Despite testifying that it has identified 10,000 or more UTAs, PG&E has
28 completed only 135 Potential Sewer Defect/Access Issue forms to date. Of those 135 forms, the City

1 determined that some of the sewer assets were not blocked, some were homeowner responsibility,
2 some required no action by the City because the sewer asset remained operational, and at least two of
3 the assets are in queue for replacement by the City. Use of the form has enabled the City to perform
4 an investigation and to clear identified UTAs as appropriate. Unfortunately, PG&E has declined to
5 follow the UTA coordination process developed by the City by not submitting the forms and required
6 sewer videos, impeding the City's ability to assist with UTA clearance.

7 9. As far as the City is concerned, PG&E and the City have already detailed and agreed to
8 a workable process to address UTA locations which is provided in the draft Amendment Two and the
9 Potential Sewer Defect/Access Issue Form. The only reason draft Amendment Two has not been
10 executed by the City is because PG&E has refused the San Francisco Public Utilities Commission's
11 repeated requests for a clear plan for completing all crossbore inspections and repairs by 2021. In fact,
12 at our most recent meeting with PG&E staff and legal counsel on August 15, 2019, PG&E stated that
13 it does not intend to complete all inspections by 2021 and that it would send the City a new draft of
14 Amendment Two for the City's consideration. As of today's date, PG&E has not sent the City a new
15 proposal for Amendment Two.

16 10. Although PG&E testified that between 10,000 and 21,000 UTA locations require
17 inspection, those numbers are not reflected in the monthly status count that PG&E provides to the
18 City. PG&E's September 15, 2019 status report reflects that it has cleared 130,448 potential crossbore
19 sites. Of that 130,448, PG&E has identified only 4,504 UTAs to date, representing less than 3.5% of
20 the sites inspected. Applying the 3.5% to the 23,312 remaining sites, PG&E should expect to
21 encounter only about 800 additional UTAs, making the UTA problem much less significant than
22 PG&E represents. The following table shows PG&E's current progress as reflected in its September
23 15, 2019 monthly report.

PG&E CBEP Location Inspection Status Count
September 15, 2019

INSP STAT	Total Count
Cleared by Inspection	72187
Cleared by post Inspection Records Review	82
Cleared by Review	58179
Crossbore Pending	7
Crossbore Repaired	546
Pending Inspection	18730
Pending Review	25
Potential Inspection	53
PG&E UTA	4504
TOTAL	154313

Inspection Status Grouped Totals

Cleared Total Count	130448
Crossbore Total Count	553
Sites left for Inspection Total Count (including 4504 known UTAs)	23312
TOTAL	154313

11. Not only is PG&E’s testimony about the number of UTAs exaggerated and its testimony about the need for a further UTA agreement with the City wrong, PG&E’s testimony about UTAs conflates “unable” to access with “difficult” to access. In its July 2018 “Progress to Date” memo, PG&E describes the difficulties the remaining inspection sites present:

Through collaboration made possible by [the Crossbore Agreement], PG&E and SFPUC have met regularly and determined the remaining work is *primarily* composed of locations in high traffic areas, near SF transit, and those that could not be accessed due to obstructions.

A large number of the remaining inspections coincide with SFMTA transit lines. . . .

(Exh. 3 at p. 7 (Remaining Scope of Work) (emphasis added).) As this memo makes clear, the real cause of the difficulties is not that the sites are not accessible and that the City is not providing needed assistance, but rather that the sites require special permits from SFMTA that may be costly and require complicated scheduling.

12. The July 2018 “Progress to Date” report characterizes the status of the remaining inspection locations as follows, reflecting that UTA locations are not the main problem, but rather the

remaining 12,463 special traffic permit locations are the true source of the problem. Comparing the following table from July 2018, with the table above from September 2019, shows just how little progress PG&E has made:

Key Numbers [FROM THE JULY 2018 REPORT]

Potential Special Permit Impacted Locations:	12,463
Incomplete Locations:	11,470
UTA Locations:	5,210
Total Remaining Locations:	29,145

(*Id.*)

13. The July 2018 table shows that PG&E basically stopped work in in mid-2018. As of the July 2018 Progress to Date report, PG&E had 29,145 sites to complete. Per the September 2019 report, PG&E now has 23,312 sites to complete. This shows that PG&E cleared fewer than 6,000 sites since July of 2018 and made basically no progress on special inspection sites. Notwithstanding my repeated instruction that PG&E needs to be working with SFMTA immediately to address the locations requiring special traffic permits, to my knowledge, PG&E has not been taking any of the necessary steps to work with SFMTA to address this problem.

14. In conclusion, the evidence provided by PG&E to the City as part of the crossbore inspection program shows that there are currently only 4,505 potential UTA locations. Based on the 3.5% calculation, PG&E should expect to encounter only about 800 more UTAs. PG&E's larger problem is transit special permit locations having nothing to do with UTAs. The City and PG&E have a robust coordination process in place to address UTAs. No further agreement is needed in that regard. PG&E, unfortunately, is not engaging in the agreed upon process. Out of the 4,505 UTA locations, PG&E has submitted only 135 Potential Sewer Defect/Access Issue Forms to the City. PG&E is not engaging in the process in any meaningful way and does not appear serious about completing this critical safety program in the near future.

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15. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on this 8th day of October, 2019.

By: Douglas J. Lipps
DOUGLAS LIPPS

EXHIBIT 1



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Managing Counsel,
Gas Operations

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April 15, 2017

SENT VIA ELECTRONIC MAIL

Louise S. Simpson
Deputy City Attorney,
San Francisco City Attorney's Office
City Hall, Room 234
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Re: Extension Request: Gas Pipeline Cross Bore Agreement

Dear Ms. Simpson:

Pursuant to Paragraph II.b. of the Gas Pipeline Cross Bore Agreement, PG&E requests an extension to the cross bore inspection schedule to December 31, 2022. This letter sets forth PG&E's justification for the requested extension. All other terms of the Gas Pipeline Cross Bore Agreement remain in full force and effect, including Amendment 1.

Progress to Date:

PG&E forecasts the total scope of the program that is covered by the Gas Pipeline Cross Bore Agreement to involve 154,500 property parcels to be cleared of cross bores by inspection or records review. Since the beginning of our Cross Bore Inspection Program, PG&E has expended approximately \$67 million performing cross bore inspections and repairs primarily in San Francisco. During the course of the agreement, PG&E has transmitted inspection videos and GIS files totaling 15.5 Terra-Bytes of valuable data to the SFPUC contributing to SFPUC's improved understanding of the condition of the waste water system. In addition, PG&E has identified and reported approximately 760 locations of sewer defects not associated with gas cross bores. Through the end of January 2017, PG&E has cleared approximately 123,000 parcels or approximately 80 percent of the forecast scope. In addition, PG&E initiated another 12,460 inspections for a total of 135,460 inspections or 88 percent of the total scope. As discussed below, the 12,460 inspections are not fully complete. Over 500 cross bores have been identified and repaired since the beginning of the program. PG&E forecasts approximately 31,000 inspections remaining.

Remaining Scope of Work:

The breakdown of the remaining approximately 31,000 inspection is as follows:

Uninitiated	18,730
1. Signalized Intersection	590
2. Caltrans	440
3. Muni Bus	7,800
4. Muni Rail	2,400
5. No Special Permits anticipated	7,500
Attempted Incomplete Inspections (“Indeterminate”)	12,460
6. Signalized Intersection	320
7. Caltrans	210
8. Muni Bus	4,100
9. Muni Rail	630
10. No Special Permits anticipated	5,100
11. Pending Proximity Clearance	2,100
Total	31,190

Uninitiated Inspections: PG&E requests an extension, to complete the uninitiated inspections, to the end of 2022 for the following reasons:

- Waste Water Records Review – PG&E needs more time to obtain, analyze and leverage the historic and future inspection, maintenance and construction records of the SFPUC Waste Water Division to determine if any of the remaining inspection locations can be removed based on work performed by SFPUC.
- Special Permitting - Due to the complexity of permitting in transit corridors and associated work hour restrictions, PG&E needs more time to obtain necessary permits and schedule inspections in these corridors.

PG&E’s completion of the Uninitiated Inspections by 2022 is contingent on the following:

- SFPUC’s willingness to facilitate the information exchange necessary for the Waste Water Records Review.
- SFPUC’s assistance to PG&E in gaining access to perform inspections by facilitating the permitting process with SFMTA or in leveraging any permits SFPUC may obtain that could support inspection work.
- Cooperation from SFMTA and DPW in developing plans and issuing required permits to support inspections in muni rail, bus corridors, and signalized intersections.

Indeterminate Inspections: PG&E requests an extension to complete the indeterminate inspections already attempted to the end of 2022 for the following reasons:

- PG&E and the SFPUC need more time to categorize indeterminate inspection locations and develop processes to clear obstacles to performing inspections.
- PG&E was not able to complete the remainder of inspection scope due to the following challenges:
 - Blockage of some sort – debris, roots, water sag (approximately 11 percent)

- Waste water pipe geometry or clean-out access – bends in piping system or inaccessible clean-out points prevent camera navigation (approximately 24 percent)
 - Indeterminate cause – further review is required by PG&E to determine the cause of the incomplete inspections (approximately 65 percent)
- PG&E needs the assistance of SFPUC in resolving the blockage and access issues. PG&E needs more time to resolve the indeterminate cause and to determine how much of this could be addressed by records review, proximity clearances or other inspection approaches. Depending on the approach to resolve these partially completed inspections, PG&E may need to align the work for funding in our next rate case proceeding.

PG&E's completion of the Indeterminate Inspections by 2022 is contingent on the following:

- PG&E providing SFPUC with field validated locations where sewer clean-outs are not accessible.
- PG&E completing the characterization of obstacles preventing inspection at indeterminate locations
- SFPUC assisting in resolving the blockage and access issues
- SFMTA cooperating in developing plans to support inspections in muni rail and bus corridors, which includes adopting an agreed-upon schedule and issuing the necessary permits
- PG&E seeking funding in its next rate case proceeding necessary to resolve this indeterminate work scope by 2022

Proposed Milestones:

PG&E proposes the following milestones to complete these inspections; details and timing of completion will be discussed in bi-weekly face-to-face meetings¹:

1. Confirmation from SFPUC that sewer assets south of the San Francisco county line are not within the jurisdiction of SFPUC nor within the scope of the program (see attached map) [SFPUC to provide]

Uninitiated inspection locations

2. SFPUC to coordinate meeting with SFMTA to establish target dates for inspections in SFMTA routes by [SFPUC to provide]
3. PG&E to complete or initiate inspection of 7500 locations where no special permits are anticipated (Item 5 in the table above) by the end of 2017.
4. PG&E to provide list of SFPUC assets including asset ID by 06/09/2017
5. PG&E to provide measles map of uninitiated locations by 06/09/2017
6. SFPUC to provide both planned and historic inspection, maintenance (maximo, 311 calls), and construction records for sewer assets remaining within PG&E's uninitiated inspection scope by [SFPUC to provide]

¹ The face-to-face meetings may transition to conference calls once established.

April 15, 2017

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7. PG&E to review SFPUC records to determine locations cleared by SFPUC records by 12/15/2018
8. PG&E to provide updated list of SFPUC assets including asset ID by 12/15/2018
9. PG&E to acquire permits for inspections and inspect all remaining locations by no later than 2022, or earlier depending on agreements reached with SFMTA
10. Some locations will not be able to be inspected and will end up in indeterminate bucket; we will require SFPUC support to address these

Indeterminate inspection locations

11. SFPUC to coordinate meeting with SFMTA to establish target dates for inspections in SFMTA routes by [SFPUC to provide]
12. PG&E to provide list of SFPUC assets including asset ID by 06/09/2017
13. PG&E to provide measles map of indeterminate locations by 06/09/2017
14. PG&E to determine, based on best available information, indeterminate cause of inspections by 12/15/2018
15. SFPUC to provide both planned and historic inspection, maintenance (maximo, 311 calls), and construction records for sewer assets remaining within PG&E's indeterminate inspection scope by [SFPUC to provide]
16. PG&E to review SFPUC records to determine locations cleared by SFPUC records by 12/15/2018
17. PG&E to provide updated list of SFPUC assets including asset ID by 12/15/2018
18. PG&E to acquire permits for inspections and inspect all remaining locations by no later than 2022, or earlier depending on agreements reached with SFMTA
19. Some locations will not be able to be inspected and will end up in indeterminate bucket; we will require SFPUC support to address these

PG&E looks forward to completing this program within the requested timeframe with the assistance of SFPUC.

Yours very truly,

Lise H. Jordan

cc: Harlan L. Kelly, Jr., General Manager, SFPUC
Michael Carlin, Deputy General Manager, SFPUC
Douglas Lipps, Mechanical Engineer, SFPUC
Sumeet Singh, Vice President, Gas Asset and Risk Management, PG&E
Raymond Thierry, Director, Distribution Integrity Management, PG&E
Michael Ritter, Director, Gas Programs, PG&E

EXHIBIT 2

**Amendment Two
to the Agreement between
City and County of San Francisco
and
Pacific Gas and Electric Company**

THIS AMENDMENT (this "Amendment") is made as of **October 14, 2017**, in San Francisco, California, by and between **Pacific Gas and Electric Company ("PG&E")**, and the **City and County of San Francisco ("City")**, acting by and through its Public Utilities Commission ("PUC").

RECITALS

WHEREAS, City and PG&E have entered into a Gas Pipeline Cross Bore Agreement (as defined below); and

WHEREAS, City and PG&E desire to modify the Agreement on the terms and conditions set forth herein; and

WHEREAS, this Amendment results from good faith negotiations regarding PG&E's request for a time extension to complete its inspections and repairs of existing cross bores ("Legacy Program");

WHEREAS, PG&E is committed to complete its inspection program by July 1, 2020, unless otherwise mutually agreed by the Parties by a term not to exceed April 13, 2021, conditioned on the City providing access to its public rights of way, and in particular to those areas impacted (1) by the San Francisco Municipal Transportation Authority (SFMTA) and/or SFMTA Blue Book or special traffic permit requirements, or (2) otherwise by unanticipated City requirements;

WHEREAS, PG&E is committed by the completion of its inspection program to have identified for the City for further review all "unable to access" ("UTA") sewer asset locations;

WHEREAS, PG&E intends to identify for the City its best estimate of the cause of each UTA and PG&E and the City agree to work together to resolve each UTA;

WHEREAS, the City agrees to use its best efforts to notify PG&E in advance, unless otherwise mutually agreed by the parties, by calling a number provided by PG&E's Designated Representative, if the City intends to perform sewer asset work using a "cutting tool" in a UTA location or other location that has not yet been inspected for Cross Bores.

WHEREAS, the City agrees further to use its best efforts to resolve UTAs during the inspection program involving manholes, sewer assets that the City determines acting in its sole discretion require repair/replacement, and/or notification to property owners about upper lateral issues requiring repair and/or replacement;

WHEREAS, PG&E represents that if a customer refuses PG&E access to its property to complete an inspection, PG&E does not have the authority to require access to the sewer line;

WHEREAS, the Parties understand that final resolution of UTAs will occur after the completion of PG&E's inspection program;

WHEREAS, PG&E intends to prioritize each UTA based on the likelihood of a cross bore and understands and agrees that PG&E retains full responsibility for providing that prioritization to the City;

WHEREAS, at the conclusion of the inspection program, PG&E and the City agree to meet and confer to reach agreement, if necessary beyond this Amendment Two, for resolution of the remaining UTAs;

WHEREAS, this Amendment is subject to final approval of the PUC, acting in its sole discretion, by Resolution authorizing the General Manager to execute this Amendment; and

WHEREAS, a copy of the PUC's Resolution shall be attached hereto;

NOW, THEREFORE, PG&E and the City agree as follows:

1. Definitions. The following definitions shall apply to this Amendment:

1a. Agreement. The term "Agreement" shall mean the Cross-Bore Agreement dated October 14, 2014 between PG&E and City, as amended by:

Amendment One dated August 23, 2016

Amendment Two dated October 14, 2017

1b. Other Terms. Terms used and not defined in this Amendment shall have the meanings assigned to such terms in the Agreement.

2. Modifications to the Agreement. The following terms are added to or supersede the Agreement:

2.a. Section VIII.g. Term currently reads as follows:

Section VIII.g. Term: This Agreement shall be effective for a period of three (3) years from the last date executed below ("the Effective Date"), and may be extended by mutual agreement for a total term not to exceed ten (10) years. Any extension beyond ten (10) years from the date last executed below requires approval by the San Francisco Board of Supervisors.

Such section is hereby amended in its entirety to read as follows:

Section VIII.g. Term: Subject to formal approval by the San Francisco Public Utilities Commission (SFPUC) acting in its sole discretion, the Term of this Agreement shall be from the Effective Date (October 14, 2014) through April 13, 2021. The Term may be extended by mutual agreement, subject to final approval of the SFPUC, for a total term not to exceed ten (10) years. Any extension of the Term beyond ten (10) years requires formal approval by the San Francisco Board of Supervisors.

2.b. Section VIII.j. Quarterly Status Updates is added as a new term to the Agreement:

Section VIII.j. Quarterly Status Updates: In addition to its regular monthly report, PG&E agrees to provide the City with a status update of the Legacy Program covering a quarter's worth of work. The City will track the status of "Unable to Access (UTA)" locations via the "Potential Sewer Defect/Access Issue Form". The City will update the PG&E UTA spreadsheet at least quarterly to reflect the status of the City's actions to address the UTAs. The quarters will be defined as follows:

1. First Quarter – January, February March;
2. Second Quarter – April, May, June;
3. Third Quarter – July, August, September;
4. Fourth Quarter – October, November, December;

The report will be due on the last business day of first month of the next quarter as listed below.

1. First Quarter – April;
2. Second Quarter – July;
3. Third Quarter – October;
4. Fourth Quarter- January.

The first report will be submitted on the first report due date for the quarter during which the agreement is signed.

The report will include the following:

1. Count of remaining inspections;
2. Count of completed inspections in the previous quarter;
3. Count of attempted inspections;
4. Count of new UTAs found;
5. Count of UTAs pending City Resolution;
6. Completion schedule update;
7. Cross-Bore inspection and repair status report update (in Excel and narrative format);
8. City sewer asset number update for any assets that need to be cleared by the PUC (in Excel and narrative format).

2.c. Section VIII.h. Status Update Meeting is added as a new term to the Agreement:

Section VIII.h. Status Update Meeting: If either party wishes to hold an update meeting to discuss the status of the program after the submission of a quarterly status report, the parties agree to use the existing Wednesday meetings as a time to discuss the program status. A week's notice will be provided prior to using the existing Wednesday meeting time.

2.d. Section II.g. Programmatic Permit is hereby replaced in its entirety to read as follows:

Section II.g. Programmatic Permit: The Department of Public Works ("DPW") has issued a new Programmatic Permit for the Legacy Program that shall expire on April 13, 2021.

(2) Coordination with City Sewer Main Construction Projects.

Within 60 calendar days of the effective date of this Amendment Two, the City will provide PG&E a list of main sewers replaced during the period of August 24, 2016-August 31, 2018. The City's report will include the following information:

1. City sewer asset number
2. The street address or address range for each asset
3. The Notice to Proceed date for the project
4. The date the sewer asset replacement completed
5. Drawings for the sewer asset showing the scope of work or a GIS polygon showing the extent of the project including any sewer lateral work.

(a) 12-Month Look Ahead. Within 60 calendar days of the effective date of this Amendment Two, the City will provide PG&E a list of main sewers that are planned to be replaced during the upcoming 12 months (September 1, 2018-August 31, 2019). PG&E shall cross-check this list against the PG&E's "to-do" list and prioritize PG&E's inspection work accordingly. The City will provide PG&E with updated 12-month look ahead main sewer replacement lists every six months. The City will provide the following information for each project planned:

1. City sewer asset number
2. The street address or address range for each asset
3. The date the sewer asset replacement is forecast to commence (i.e., estimated NTP)
4. The date the sewer asset replacement is forecast to complete (i.e., estimated substantial complete date)
5. A GIS polygon showing the extent of the project.

(b) Lateral Inspection Coordination. The City will provide notice, preferably within 60 calendar days, of an Award of a city contract for sewer main work. The City will provide the City sewer main asset number information on whether existing lower laterals connecting to the sewer main asset will be inspected and/or replaced under the project scope. For clarity, this will not apply to 311 calls or 311 impacted work.

(c) If PG&E wishes to coordinate its upper lateral sewer inspections with an upcoming City main line sewer construction contract, PG&E shall notify PUC in writing within 30 days of the City's Award Notification letter for the contract. City will then work with PG&E so that PG&E can pay the City's contractor directly to video the upper lateral sewer(s) on behalf of PG&E, if preferred by PG&E.

(3) Procedures for Unable to Access (UTAs) Locations

(a) Designation of Pending UTAs. On the monthly report that PG&E provides to PUC pursuant to Section II.a (Possible Gas Pipeline Crossbores) of this Agreement, PG&E will label all assets that are UTA. Any assets that PG&E had previously designated as "Indeterminate" which are in fact UTA shall be re-named "UTA" on the next monthly report

(b) Potential Sewer Defect(s). Within 30 days of PG&E's discovery of a potential sewer defect (other than a crossbore) that prevents PG&E from accessing an asset, PG&E shall submit to PUC a completed "Potential Sewer Defect/Access Issue Form," which shall include the sewer Maximo asset number. For any sewer assets for which PG&E cannot identify a Maximo asset number, PG&E shall provide any information available

to assist with identification of the location. For clarity, the PUC will not be able to use the Potential Sewer Defect/Access Issue Form until the asset number is identified.

Different types of sewer defects will be addressed as follows:

(i) **Mainline Sewer Defects.** Upon PUC's receipt of a completed Potential Sewer Defect /Access Issue Form, PUC will review the video survey for the sewer asset in question from manhole to manhole and determine if spot repair or replacement of the entire sewer asset is warranted. A collapsed mainline sewer as defined by NASSCO will typically always be actionable. All other sewer defects are subject to PUC engineering review and prioritization. The PUC will track the status of UTA locations via the Potential Sewer Defect/Access Issue Form.

(ii) **Lower Sewer Lateral Defects.** Upon PUC's receipt of a completed Potential Sewer Defect Form, PUC will check if there is a record of 311 complaint for the subject property. If there is a 311 complaint, PUC will investigate and determine if repair by PUC is required. If PUC determines the lower lateral is still functional, PUC will so inform PG&E. The PUC will track the status of UTA locations via the Potential Sewer Defect/Access Issue Form.

(iii) **Upper Sewer Lateral and/or Vent Trap Defects.** Upper sewer laterals and vent traps are the responsibility of the property owner, which are overseen by the Department of Building Inspection ("DBI"). For upper sewer laterals and vent traps, in addition to the "Potential Sewer Defect/Access Issue Form" PG&E shall provide the City with identified vent trap defect locations in spreadsheet form. SFPUC will coordinate with DBI to notify property owners using their normal communication process of upper sewer laterals and/or vent traps that need remediation.

(b) Manhole Access.

(i) **PG&E Notice:** Within 30 days of PG&E's discovery of a buried, welded, or otherwise locked manhole, PG&E will submit the completed Potential Sewer Defect/Access Issue Form, including the Maximo sewer asset number and whether the manhole is buried, welded shut, locked by special fasteners, or other. PG&E shall state on the Form the date and time of the reasonable attempt(s) that PG&E made to reach the sewer asset in question through available upstream and downstream manholes relative to the manhole in question.

(ii) **PUC Response:** PUC will use its best efforts within 30 days of PUC's receipt of a completed Potential Sewer Defect/Access Issue Form, to unbury or unlock or unseal the manhole so that PG&E can access the assets. The PUC will track the status of UTA locations via the Potential Sewer Defect/Access Issue Form.

3. Legal Effect. Except as expressly modified by this Amendment, all of the terms and conditions of the Agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, PG&E and City have executed this Amendment as of the date first referenced above.

DATE: 4-19, 2019

PACIFIC GAS AND ELECTRIC COMPANY

By: 

AUSTIN HASTINGS

Director, Central Operations Support
Pacific Gas and Electric Company

DATE: _____, 2019

SAN FRANCISCO PUBLIC UTILITIES
COMMISSION

By: _____

HARLAN L. KELLY, JR.

General Manager, San Francisco Public Utilities
Commission

APPROVED AS TO FORM 8:

DATE: _____, 2019

DENNIS J. HERRERA
City Attorney

By: _____

LOUISE S. SIMPSON

Attorneys for City And County Of San Francisco

APPROVED AS TO FORM:

DATE: 4-19, 2019

JANET C. LODUCA
Senior Vice President, Interim General Counsel

By: 

LISE H. JORDAN

Attorneys for Pacific Gas and Electric Company

**Amendment One
to the Agreement between
City and County of San Francisco
and
Pacific Gas and Electric Company**

THIS AMENDMENT (this "Amendment") is made as of August 23, 2016, in San Francisco, California, by and between Pacific Gas and Electric Company ("PG&E"), and the City and County of San Francisco ("City"), acting by and through its Public Utilities Commission

RECITALS

WHEREAS, City and PG&E have entered into a Cross Bore Agreement (as defined below); and

WHEREAS, City and PG&E desire to modify the Agreement on the terms and conditions set forth herein;

NOW, THEREFORE, PG&E and the City agree as follows:

1. Definitions. The following definitions shall apply to this Amendment:

1a. Agreement. The term "Agreement" shall mean the Cross-Bore Agreement dated October 14, 2014 between PG&E and City, as amended by:

Amendment One dated August 23, 2016

1b. Other Terms. Terms used and not defined in this Amendment shall have the meanings assigned to such terms in the Agreement.

2. Modifications to the Agreement. The following terms of payment are added to or supersede the Agreement:

A. This Amendment results from good faith negotiations regarding reimbursement by PG&E of Cross Bore enterprise costs incurred by the City on or after October 14, 2014, as referenced in Section 3 of the Settlement Agreement and Release of Claims, entered into between the City and PG&E on October 29, 2015.

B. The costs subject to this Payment Agreement are those incurred by the City to implement the Cross Bore inspection, repair, and prevention program ("Cross Bore Program"). The anticipated costs are listed in paragraph 2.3, below.

C. The purpose of this Amendment is to facilitate reimbursement by PG&E to the City of past costs, including but not limited to inspection and First Priority Cross Bore Repair Costs, incurred between October 14, 2014 through the effective date of this Amendment, and to establish a payment process for reimbursement of future costs incurred after the effective date of this Amendment.

SECTION 1

SCHEDULES

1.1. Rolling 14-Day Inspection Schedule: PG&E will use its best efforts on a weekly basis, to email the City a rolling 14-day inspection schedule, identifying planned

sewer asset inspection work, providing the following details if available for each inspection ("Rolling 14-Day Inspection Schedule"):

- a) Day
- b) Date
- c) Time window
- d) Number
- e) Street
- f) Cross Street
- g) Planned duration
- h) City sewer asset (P, L, N) number
- i) PG&E Contractor
- j) Contractor Contact / Cell Phone Number
- k) PG&E Contact / Cell Phone Number
- l) Special Traffic Permit number (Y/N)
- m) MUNI Impact (Y/N)
- n) Remarks

1.2. **Rolling 14-Day Construction Schedule:** PG&E will use its best efforts on a weekly basis, to email the City a rolling 14-day construction schedule, identifying all planned Cross Bore related construction work, including excavations, detailing the following for each construction activity ("Rolling 14-Day Construction Schedule"):

- a) Day
- b) Date
- c) Time window
- d) Number
- e) Street
- f) Cross Street
- g) Planned duration
- h) City sewer asset (P, L, N) number
- i) Cross Bore description
- j) PG&E Contractor
- k) Contractor Contact / Cell Phone Number
- l) PG&E Contact / Cell Phone Number
- m) USA Number
- n) Excavation Permit No.
- o) Remarks

PG&E will use its best efforts to provide timely notice via email of any construction schedule change(s) or emergent repair activities.

PG&E understands and agrees that such Rolling 14-Day Construction Schedule is necessary for the City to effectively manage its Cross Bore Program Costs. PG&E must submit the Rolling 14-Day Construction Schedule even if no construction work is planned.

1.3 To the extent duplicative, PG&E and the City agree that Paragraphs 1.1 and 1.2 replace the reporting provisions of the Agreement contained in Section II.b.

SECTION 2

DRAWDOWN ACCOUNT

2.1. Within 15 calendar days, but no later than 30 calendar days, after the effective date of this Amendment, PG&E shall submit to the City a check made payable to the San Francisco Public Utilities Commission in the amount of \$1,500,000 for deposit into a dedicated City index code account from which the City may draw down funds sufficient to reimburse the City for its past and future Cross Bore Program Costs ("Drawdown Account"). The City understands and agrees that the Drawdown Account may be used for Cross Bore Program costs, only, unless otherwise agreed in writing by PG&E.

2.2 At any time that the Drawdown Account balance falls below \$1,000,000, PG&E agrees that the City may require PG&E, by written request, to replenish the Drawdown Account by adding \$250,000. PG&E agrees to submit to the City a check for the full \$250,000 replenishment amount made payable to the City and County of San Francisco within 30 calendar days of the City's written request.

2.3. PG&E agrees that the City may use the Drawdown Account for reimbursement of the following Costs:

Past Costs

- a. **October 14, 2014 – February 29, 2016:** PG&E agrees that past costs, other than First Priority Gas Pipeline Cross Bore repair costs, for the period October 14, 2014 through February 29, 2016, shall be paid based on the City's best cost estimate reviewed and approved by PG&E.
- b. **March 1, 2016 – Effective Date of this Amendment:** PG&E agrees that past cross bore inspection costs for the period March 1, 2016 through the effective date of this Amendment shall be paid at the rate of \$883 per inspection of PG&E's excavations to perform Cross Bore repairs or inspections.
- c. **Past First Priority Repairs:** PG&E and the City agree that Past First Priority Gas Pipeline Cross Bore repair costs shall be paid in accordance with the work categories set forth in paragraph III.c. of the Agreement. These costs shall be paid based on the City's reasonable supporting documentation of the repair costs, subject to review and approval by PG&E. PG&E and the City further agree that this Amendment shall supersede the payment mechanism set forth in paragraph III.c., only, and that payment shall be made via the Drawdown Account rather than separate invoice to/payment by PG&E.

Future Costs

- a. **Future First Priority Repairs:** PG&E and the City agree that Future First Priority Gas Pipeline Cross Bore repair costs shall be paid in accordance with the work categories set forth in paragraph III.c. of the Agreement. These costs shall be paid based on the City's reasonable supporting documentation of the repair costs, subject to review and approval by PG&E. PG&E and the City further agree that this

Amendment shall supersede the payment mechanism set forth in paragraph III.c., only, and that payment shall be made via the Drawdown Account rather than separate invoice to payment by PG&E.

- b. **Temporary PUC Employee Costs:** PG&E agrees to pay for five (5) temporary (newly hired) PUC employees dedicated to the Cross Bore Program at an annual not-to-exceed burdened salary cost of \$750,000. These five (5) temporary employees shall perform the following tasks in support of the Cross Bore Inspection Program: (i) Cross Bore Inspections including indeterminate investigations, cross bore repairs, gas line separation repairs, predominately for the benefit of the City; and (ii) researching and providing PG&E with SFPUC Sewer Video Surveys for the last five years, SFPUC lower lateral replacement data for the last ten years, and Mainline sewer replacement data for the last ten years, predominately for the benefit of PG&E. In addition, these employees may perform other Cross Bore program tasks at the request of SFPUC and approved by PG&E. Upon 30 days notice to PG&E, the City may eliminate the tasks to be performed under subsection 2.3(e)(i) above, and upon 30 days notice to the City, PG&E may eliminate the tasks to be performed under subsection 2.3(e)(ii) above. Each such employee shall bill his or her time to the City's eTime accounting program reflecting hours billed to the Cross Bore Program or otherwise. The City understands and agrees that only hours billed to the Cross Bore Program may be applied to the Drawdown Account. The City understands and agrees that any time spent by these employees on non-Cross Bore Program activities shall not be applied to the Drawdown Account.
 - c. **Lower Lateral Repair Costs:** PG&E agrees to pay for City repair costs incurred to fix any lower lateral pipe segment that breaks within one (1) year of a PG&E indeterminate Cross Bore excavation, excluding (1) lower laterals with 311 calls on record with the City before the date of excavation, and (2) sewer damage from Cross Bore caused by utilities not owned by PG&E. If the City elects to perform repairs beyond the failed pipe segment, the costs associated with that activity shall not be billed to PG&E or applied to the Drawdown Account.
 - d. **Other Costs:** PG&E agrees to pay for other Drawdown Account requests made by the City and approved in writing by PG&E.
- 2.4. City agrees to provide PG&E with quarterly expenditure details ("Accounting Reports"). City Accounting Reports shall include eTime reports and Work Orders by City asset number.
- 2.5. Any Drawdown Account balance, not encumbered by a City Accounting Report, remaining at the termination of this Amendment or conclusion of the Cross-Bore Program, whichever occurs later, will be refunded to PG&E.
- 2.6. The City agrees that PG&E may request additional information about Costs claimed. The City further agrees that PG&E or its agents, upon 90 days' written notice, may audit the City's records. PG&E shall use reasonable best efforts to notify the City of any Accounting Report disputes within 90 days of receipt of the Report.

SECTION 3
INDEPENDENT CONTRACTOR

3.1. It is understood and agreed that the City, while implementing the Cross Bore Program, is neither an agent nor employee of PG&E.

SECTION 4
INDEMNIFICATION

4.1. PG&E agrees to hold harmless, defend, and indemnify the City, including, without limitation, each of its boards, commissions, departments, officers, agents and employees from and against any and all first and/or third-party losses, liabilities, expenses, claims, demands, injuries, damages, fines, penalties, costs or judgments including without limitation, attorneys' fees and costs of any kind allegedly arising directly or indirectly from any act by and/or omission of, PG&E or its contractors, subcontractors, or the officers, agents, or employees of either while engaged in the performance of work performed under the Cross Bore Agreement.

SECTION 5

INSURANCE

5.1. PG&E and the City each agrees to require any contractor performing work ^{on} its behalf on the Cross Bore Program to include Commercial General Liability insurance naming the other as an additional insured against claims for property damage or personal injury arising directly or indirectly from work performed by the contractor under the Cross Bore Agreement.

SECTION 6

LIABILITY

6.1. PG&E agrees that the City shall not be liable to PG&E for any loss of or damage to property of PG&E or injury to employees of PG&E caused by the City while performing Cross Bore Program inspections.

SECTION 7

NOTICES AND EXECUTION OF PAYMENT AGREEMENT

7.1. All notices and other communications required or permitted to be given under this Amendment to the Agreement, shall be in writing and shall be mailed or emailed and shall be addressed or copied to the single points of contact as follows:

To PG&E:

Raymond Thierry, Director, Gas Distribution Integrity Management
Pacific Gas and Electric Company
6111 Bollinger Canyon Road
Mail Code BRIY4D, Rm. 4810A
San Ramon, CA 94583
925-328-5936 (office); 415-793-4037 (mobile)
Raymond.Thierry@pgc.com

OK/lgs

To the City:

Douglas J. Lipps, Mechanical Engineer
San Francisco Public Utilities Commission (SFPUC)
Wastewater Enterprise (WWE)
Bay View Plaza
3801 - 3rd Street, Suite 600
San Francisco, CA 94124-1450
415/695-7965 (office); 415/582-3467 (mobile)
dlippe@sfpwater.org

7.2 PG&E understands and agrees that a telephone call or other oral communication does not constitute effective notice under this Amendment to the Agreement. PG&E further understands and agrees that any email sent after 3:00 pm weekdays shall be deemed effective at 6:30 am on the next business day. Any email sent on a weekend shall be deemed effective on the following Monday at 6:30 am. Notice sent by mail shall be deemed effective three (3) days after deposit in the mail.

3. **Legal Effect.** Except as expressly modified by this Amendment, all of the terms and conditions of the Agreement shall remain unchanged and in full force and effect. The Amendment may be signed in counterparts and executed with the use of electronic signatures.

IN WITNESS WHEREOF, PG&E and City have executed this Amendment as of the date first referenced above.

DATE: September 2, 2016

PACIFIC GAS AND ELECTRIC COMPANY

By: 

RAYMOND THIERRY
Director, Gas Distribution Integrity Management
Pacific Gas and Electric Company

DATE: SEPT 6, 2016

SAN FRANCISCO PUBLIC UTILITIES
COMMISSION

By: 

HARLAN L. KELLY, JR.
General Manager, San Francisco Public Utilities
Commission

**APPROVED AS TO FORM AND
RECOMMENDED:**

DATE: 9/6, 2016

DENNIS J. HERRERA
City Attorney

By: 

LOUISE S. SIMPSON
Attorneys for City And County Of San Francisco

APPROVED AS TO FORM:

DATE: September 2, 2016

SANFORD HARTMAN
Vice President, Managing Director of Law

By: 

LISE H. JORDAN
Attorneys for Pacific Gas and Electric Company

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GAS PIPELINE CROSS BORE AGREEMENT

This Agreement is entered into by and between Pacific Gas and Electric Company ("PG&E"), and the City and County of San Francisco ("City"), acting by and through the San Francisco Public Utilities Commission (collectively "Parties").

RECITALS

1. WHEREAS, the City owns or operates main line sewers, force mains, collection system boxes, tunnels, collection system discharge structures, sewer laterals, sewer culverts, catch basins, and sewer manholes located throughout the City and County of San Francisco ("Sewer Assets").
2. WHEREAS, a Gas Pipeline Cross Bore or cross bore damage occurs whenever PG&E puts a gas pipeline ("PG&E Facility") through a Sewer Asset or otherwise damages a Sewer Asset during construction (hereinafter "Gas Pipeline Cross Bore").
3. WHEREAS, PG&E sometimes uses trenchless directional drilling when installing new gas pipelines, which can cause Gas Pipeline Cross Bores.
4. WHEREAS, the vast majority of permits issued by the City to private parties to conduct trenchless directional drilling throughout the City and County of San Francisco are issued to PG&E in connection with its installation of new gas distribution lines.
5. WHEREAS, all of the Gas Pipeline Cross Bores are caused by PG&E.
6. WHEREAS, the Parties wish to implement a formal protocol for promptly identifying and repairing existing and future Gas Pipeline Cross Bores, as well as taking such steps to avoid Gas Pipeline Cross Bores from occurring in the future, whereby PG&E will use the best available demonstrated technology for directional drilling and the latest industry practices in effect at the time, to the extent feasible, as soon as may be reasonably possible;
7. WHEREAS, the Parties wish to take steps to share information about their facilities to support public safety, whereby the City will include the City's Sewer Assets in USA North's (811) underground utilities location service, to the extent feasible, as soon as may be reasonably possible.

NOW, THEREFORE, PG&E and the City agree as follows:

AGREEMENT

**I. DESIGNATED REPRESENTATIVES FROM PG&E AND THE CITY;
REGULAR MEETINGS**

Within 30 days of the Effective Date, PG&E and the City each shall designate one primary representative and two alternate representatives, who shall be the contact(s) for all communication and exchange of information under this Agreement. Such designees may be changed only by written notification to the other Party's primary designee. The identification of primary and alternate representatives is necessary to facilitate the efficient flow of information under this Agreement in a timely manner. The designated representatives may be contacted by cell phone, email, land-line, and/or mail, as appropriate under the circumstances, and shall be

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available on an on-call basis weekdays from 6:30 am to 4:30 pm. At least one designated representative for each party together with such other individuals as the designated representatives shall meet no less frequently than quarterly to exchange information, update each other's records and coordinate upcoming and ongoing Gas Pipeline Cross Bore activities within the City.

II. PROTOCOL FOR GAS PIPELINE CROSS BORE INSPECTION PROGRAM:

a. **Possible Gas Pipeline Cross Bores:** PG&E has identified thousands of locations where PG&E Facilities may have damaged City Sewer Assets ("Possible Gas Pipeline Cross Bores,"). Within 30 days of the Effective Date, PG&E's designated representative (hereinafter referred to as "PG&E") shall provide the City's designated representative (hereinafter referred to as "the City") a Directional Drilling Record ("DDR") in Geocoded GIS Format reflecting areas within the City where PG&E has performed directional drilling resulting in Possible Gas Pipeline Cross Bores. Monthly, PG&E shall provide the City with an updated complete DDR, in Geocoded GIS Format, to keep the City apprised of all locations where PG&E has previously performed directional drilling. The DDR must identify the addresses and/or locations of each of the following:

- i. Possible Gas Pipeline Cross Bores, i.e., potential areas of previous directional drilling;
- ii. Existing Gas Pipeline Cross Bores, i.e., unrepaired cross bores, including identification of the type of Sewer Asset impacted;
- iii. Repaired Gas Pipeline Cross Bores, i.e., repaired cross bores, including identification of the type of Sewer Asset repaired and confirmation that PG&E has achieved its anticipated repair metric of completing 95% of repairs within 90 days of notification, pending obtaining the required permits;
- iv. Cleared Sewer Assets, i.e., assets PG&E has inspected and asserts are clear of any Gas Pipeline Cross Bore, including the type of Cleared Sewer Asset. To verify status as a Cleared Sewer Asset, PG&E must provide the City with video survey footage, demonstrating the Cleared Sewer Asset. In the event the Parties do not agree, such dispute shall be subject to the dispute resolution process provided in Section VII.

b. **Schedule for Inspection:** Within forty five (45) days after the Effective Date of this Agreement, PG&E shall provide the City with a schedule for records review and overall video inspection plan of all Possible Gas Pipeline Cross Bores. PG&E shall provide the City with monthly schedule updates of PG&E's inspection progress and with regular monthly look ahead schedules so that the City can monitor PG&E's progress. PG&E shall complete such inspections no later than thirty (30) months after the Effective Date of this Agreement. PG&E acknowledges it currently lacks precision on the work scope. Once the work scope is defined and inspection resources have been fully developed, PG&E and the City will re-confirm the duration of the inspection schedule. Such reconfirmation shall be provided to the City by no later than 120 days after the date of this Agreement. In no event shall the duration exceed thirty six (36) months, unless PG&E establishes that the work cannot be completed within this time

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period. PG&E acknowledges that timely performance of this Agreement supports public health and safety.

c. **Video Software and Standards:** All PG&E video surveys shall be produced by a certified National Association of Sewer Service Companies ("NASSCO") inspector. The inspector's NASSCO certification shall be current when the video survey is produced. Each video survey shall be in NASSCO standard format which can then be imported into any brand of software, including PIPELOGIX. Inspection records shall be in accordance with the City's asset naming convention provided by the City to PG&E. PG&E will provide all video surveys produced to the City.

d. **Schedule for Deliverables:** PG&E shall provide the City with all video footage of all Sewer Asset inspections no later than the fifteenth (15th) day of the month following the inspection, along with the updated DDR required by Section II.a, above, and the monthly schedules required by Section II.b, above. PG&E shall transfer the inspection data to the City electronically. The City shall provide an FTP site for the electronic file transfer.

e. **Manner of Inspection:** Video inspection of sewer laterals with vents shall be performed by inserting the camera from either the vent or from the main sewer. Sewer laterals without vents shall be inspected from the main sewer. It is assumed that each property with sewer service has at least one sewer lateral. All sewer laterals with Possible Gas Pipeline Cross Bores shall be inspected, and such inspection shall extend up to but need not include upper laterals - defined as the property's sewer lateral(s) from the edge of the curb to the structure provided it is subject to a Proximity Waiver, defined in section II.f below.

f. **Proximity Waiver:** A Proximity Waiver is a waiver from the video inspection requirements set forth herein and shall apply only to those laterals that PG&E is unable to inspect, where PG&E confirms that a minimum five (5) foot horizontal clearance exists between the upper and lower lateral and the PG&E gas facility.

g. **Programmatic Permit:** The Department of Public Works ("DPW") will issue a one-time programmatic permit for Street Occupancy for video inspection work performed under this MOU for locations identified in the monthly look ahead report described Section II.b.

h. **Customer Notice:** At least 15 days in advance of each scheduled video inspection, PG&E shall provide written notice to the resident(s) of each address where a Possible Gas Pipeline Cross Bore may exist, identifying PG&E as the entity responsible for repairing any Gas Pipeline Cross Bore that may exist at the location and warning the resident(s) of the potential risk associated with Gas Pipeline Cross Bores and appropriate steps they may take to mitigate such risks. Such notice shall include a customer protocol (i.e., actions to be taken by the customer) for handling Possible Gas Pipeline Cross Bores.

III. **PROTOCOL FOR REPAIR OF FIRST PRIORITY GAS PIPELINE CROSS BORES:**

a. **First Priority Gas Pipeline Cross Bore Defined:** A First Priority Gas Pipeline Cross Bore is a cross bore identified by the City: (1) following customer notification to the City of a sewer malfunction, requiring immediate repair to restore sewer service; or (2) determined by the City to require immediate repair to avoid a risk to public health and safety or construction delay. Such repairs are referred to herein as First Priority Repairs. PG&E will be provided with

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an opportunity to conduct First Priority Repairs. If after being provided the opportunity, PG&E either declines to perform the work and/or cannot complete it within eight (8) hours per Section III.b.i below, City will perform the necessary repairs to all First Priority Repairs on the sewer. All the costs associated with repairing the Gas Pipeline Cross Bores, including road and roadbed repairs performed in compliance with DPW's Standard Specifications in effect at the time of the repair as well as overhead, shall be the responsibility of PG&E.

- i. City overhead shall be calculated based on the published 57% rate utilized by the San Francisco PUC's Wastewater Enterprise as of fiscal year 2014 and reflected in the PUC's annual audited financial statements. This rate shall apply for the term of this Agreement and will be applied to all costs incurred by the City in effecting First Priority Repairs.
- ii. PG&E will make all necessary repairs to natural gas lines.

b. **Notification and Repair Process:** Promptly upon identification of the existence of a potential First Priority Gas Pipeline Cross Bore, the City shall notify PG&E at 1-800-PGE-5000 (1-800-743-5000) of the location and existence of the cross bore and the following shall occur:

- i. Within 8 hours of notification, PG&E shall verify such potential First Priority Gas Pipeline Cross Bore. If PG&E and the City agree that there was no Gas Pipeline Cross Bore at the location of the First Priority Repairs, then PG&E shall not be responsible. In the event the Parties do not agree, such dispute shall be subject to the dispute resolution process provided in Section VII;
- ii. Once PG&E has verified the First Priority Gas Pipeline Cross Bore, PG&E will dispatch a repair crew to resolve the Cross Bore so that sewer service can be restored within the 8-hour period. Permanent repair of the natural gas line by PG&E including the relocation of the natural gas line may follow if necessary.
- iii. To effect the repair, PG&E will relocate the PG&E Facility no less than one (1) foot vertical clearance and three feet laterally from the sewer asset. PG&E will replace the entire section of pipe from joint to joint of the damaged sewer laterals in accordance with all applicable standard drawings and City specifications.
- iv. For PG&E-conducted First Priority Repairs, PG&E shall also be responsible for restoring the road and roadbed in compliance with DPW's Standard Specifications in effect at the time of the repair.

c. **PG&E Shall Reimburse City:** PG&E understands and agrees that First Priority Gas Pipeline Cross Bores require City participation. Within 30 days of PG&E's receipt of an invoice (with reasonable supporting documentation that establishes the existence of a Gas Pipeline Cross Bore) from the City, PG&E shall reimburse the City for all First Priority Repairs performed by the City, including but not limited to (1) City crew costs to inspect, flush, and monitor each Sewer Asset until its return to service; (2) City costs to perform work such as permit fees, traffic routing, trench excavation, repair/replacement of City Sewer Asset, backfilling, compaction, inspection, overhead, pavement restoration, and any other construction-

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related costs necessary to complete the repair, as outlined in Sections III.a and III.b above. PG&E shall not be responsible for any betterment-related activities by the City.

IV. PROTOCOL FOR REPAIR OF SECOND PRIORITY GAS PIPELINE CROSS BORES:

a. **Second Priority Gas Pipeline Cross Bore Defined:** During the regular course of either entity's sewer assessment program, the City or PG&E may identify new Gas Pipeline Cross Bores that do not require First Priority Repairs ("New Second Priority Gas Pipeline Cross Bores"). Promptly upon identification of the existence of a New Second Priority Gas Pipeline Cross Bore, but in no event more than three (3) days following identification, PG&E or the City shall notify the other of the location and existence of the New Second Priority Gas Pipeline Cross Bore using the New Second Priority Gas Pipeline Cross Bore Notification Form attached hereto as Exhibit A. PG&E shall be responsible for the repair of all New Second Priority Gas Pipeline Cross Bores at its own cost. If PG&E and the City agree that there was no Gas Pipeline Cross Bore at the location identified by the City, then PG&E shall not be responsible for the repair costs. In the event the Parties do not agree, such dispute shall be subject to the dispute resolution process provided in Section VII.

b. **Notification And Repair Process:** Within three (3) days of notification, PG&E will schedule the repair of the Second Priority Gas Pipeline Cross Bore and will process all repairs in accordance with its repair metric of completing 95% of repairs within 90 days of notification, pending obtaining the required permits. All repairs shall be in conformance with section III.b.iii, above.

c. **Unanticipated First Priority Gas Pipeline Repair:** PG&E understands and agrees that the possibility exists that a Second Priority Gas Pipeline Cross Bore may at some future date require Emergency Repairs. In that instance, the Parties shall follow the protocol for Repair of First Priority Gas Pipeline Cross Bores set forth in Section III, above.

d. **As-Built Sketches:** PG&E shall provide as-built sketches for all repairs to Sewer Assets on a monthly basis by the 15th day of each month.

e. **Warranty Requirement:** PG&E shall provide a three (3) year warranty for all First and Second Priority Repairs to Sewer Assets. For repairs PG&E has made to Sewer Assets prior to the date of this Agreement, the warranty period shall commence from the Effective Date of this Agreement.

V. PROTOCOL FOR ALL FUTURE PG&E DIRECTIONAL DRILLING:

PG&E shall follow the protocol below for all future direction drilling within the City, at no additional cost to the City:

a. **Planning:** PG&E shall continue researching new technologies, construction methods, and techniques to prevent cross bores. Discovery of new technologies, construction methods and techniques will be shared with the City in order to further promote and enhance public safety and may be incorporated into this Agreement by written modification, as appropriate, by mutual agreement.

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- b. **Design:** All new PG&E Facilities to be installed through the use of trenchless directional drilling shall be designed to provide a minimum three (3) foot horizontal and a minimum one (1) foot vertical clearance between a City Sewer Asset and PG&E Facility.
- c. **Pre-Construction:** PG&E shall adhere to the following pre-construction protocol:
- i. PG&E shall review available City sewer maps before finalizing design of trenchless installation and perform field measurements as necessary.
 - ii. PG&E shall complete a pre-construction NASSCO compliant video inspection of Sewer Assets located in the path of the trenchless installation
 - iii. PG&E shall daylight (pothole) crossings of all known and assumed facilities within the construction path.
- d. **Construction:** PG&E shall adhere to the following construction protocol:
- i. PG&E shall obtain and comply with the terms of a BSM Street Excavation Permit before commencing any construction work.
 - ii. PG&E shall construct the facility while monitoring potholes to ensure no damage occurs.
- e. **Post-Construction:** PG&E shall adhere to the following post-construction protocol:
- i. PG&E shall perform a NASSCO compliant post-construction video inspection of Sewer Assets located within the construction site within thirty (30) days of construction completion.
 - ii. PG&E shall include the video inspections on DVD's with PG&E's monthly updated DDRs.
 - iii. The City will use PG&E's video surveys or any other relevant materials to determine the existence of Gas Pipeline Cross Bores or any other damage caused by PG&E's construction work to any Sewer Asset.
- f. **As-Built Information:** On a monthly basis, PG&E shall provide City with their current Geocoded GIS files of facility installations, as well as Geocoded GIS files of all facility installations within the City not otherwise previously supplied.
- g. **As-Built Sketches:** PG&E shall provide as-built sketches for all repairs to City assets on a monthly basis by the 15th day of the month following completion of the work.
- h. **Warranty Requirement:** PG&E shall provide a three (3) year warranty for all future repairs to Sewer Assets.

VI. PG&E'S OBLIGATION TO INDEMNIFY AND HOLD THE CITY HARMLESS FOR CROSS-BORES:

PG&E shall defend, indemnify and hold harmless the City, its boards and commissions, and all of their officers, agents, members, employees, and authorized representatives (collectively "the City") from any and all claims, suits, actions, losses and liability of every kind, nature, and description, including but not limited to attorney's fees, directly or indirectly arising

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out of, connected with, or resulting from PG&E Gas Pipeline Cross Bores resulting from directional drilling within the City including, but not limited to, claims for negligence, fault or wrongdoing arising out of or related to Gas Pipeline Cross Bores to the extent such claims arise out of the delay in inspecting and/or repairing the Gas Pipeline Cross Bore. PG&E shall not be required to defend, indemnify or hold the City harmless to the extent that claims, suits, actions, losses and liability are otherwise caused by the City's own negligence, fault, or wrongdoing.

VII. DISPUTE RESOLUTION:

a. **DRA Definition:** The Dispute Resolution Advisor ("DRA") is a non-employee, neutral third-party selected by PG&E and the City, to act independently and impartially as the decision maker regarding disputes that may arise under this Agreement.

b. **DRA Selection:** Within five (5) days after the Effective Date, the City and the PG&E shall each propose three (3) potential DRA candidates, including an exchange of their resumes and qualifications. The City and PG&E shall then select one of the 6 nominees to be the DRA. If the City and the PG&E cannot agree on one candidate, the City and PG&E shall each choose one of the 3 candidates nominated by the other. The final selection of the DRA will be decided by a coin toss between the two candidates. Should the DRA at any time be unable to fulfill his or her DRA responsibilities, this process will be repeated for the selection of a new DRA. The DRA's term shall be of no more than one year unless the parties agree to extend his or her term. The Parties are to equally share the fees and costs of the DRA.

c. **Dispute Meeting:** Upon being notified of a dispute, the DRA shall convene a meeting, attended by the City and PG&E, to review and consider the dispute. The DRA shall determine the time and location of the dispute meeting with due consideration for the needs and preferences of the Parties, while recognizing the importance of a speedy resolution to the dispute. The Dispute Meeting shall be held no later than two (2) business days after a request by either Party, unless all agree to a later date.

d. **Technical Services:** The DRA, with approval of the Parties, may obtain technical services necessary to adequately review the disputes presented. The Parties' technical staff or an outside expert may supply those services, as appropriate. The Parties are to equally share the fees and costs for these services.

e. **DRA Report:** The DRA shall issue a written nonbinding Report recommending resolution of each dispute within 2 business days of the Dispute Meeting, unless the DRA determines additional time or information is needed for resolution. Gas Pipeline Cross Bore repairs and payment, as the case may be, are to be made in accordance with such DRA Report. In any subsequent litigation or similar proceeding arising out of a dispute heard by the DRA, the written DRA Report will not be admissible as evidence. Neither party may call the DRA as a witness in any subsequent proceeding.

VIII. GENERAL PROVISIONS:

a. **Integration Clause:** This Agreement supersedes any and all prior agreements and understandings of the Parties regarding inspection and repair of Gas Pipeline Cross Bores and PG&E directional drilling and constitutes the entire understanding between and among them

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with regard to the matters herein set forth. There are no representations, warranties, agreements or undertakings, written or oral, between or among PG&E and the City, relating to the subject matter of this Agreement, which are not fully expressed herein.

b. **Severability:** In case any part, term, portion or provision of this Agreement is or shall be invalid, illegal or unenforceable, the remaining parts, terms, portions and provisions shall be deemed severable and the validity, legality and enforceability of the remaining parts, terms, portions and provisions shall not be affected or impaired.

c. **Headings:** The headings in this Agreement are for convenience only and do not limit or alter the described paragraphs in any manner.

d. **Amendment of Agreement:** This Agreement may only be amended by written agreement.

e. **Counterparts:** This Agreement may be executed in multiple counterparts and signatures may be exchanged by facsimile or electronically, each of which shall be deemed to be an original document, and all of which together shall constitute one and the same document.

f. **Governing Law:** This Agreement shall be construed in accordance with the laws of the State of California and shall not be construed to amend, modify, supersede or conflict with any law, rule, regulation, or other requirement applicable to natural gas pipelines and facilities.


g. **Term:** This Agreement shall be effective for a period of three (3) years from the last date executed below ("the Effective Date"), and may be extended by mutual agreement for a total term not to exceed ten (10) years. Any extension beyond ten (10) years from the date last executed below requires approval by the San Francisco Board of Supervisors.

h. **Continuous Public Safety Improvement:** Within six months of the Effective Date, one or more of each Parties' designees shall meet again to make any necessary written refinements to this agreement in the spirit of continuous public safety improvement and expediting completion of the work contemplated by this Agreement.

i. **Effective Date:** The Agreement becomes effective on the date it is executed by the Parties. If executed on different dates, it shall be effective on the later of the two.

IN WITNESS WHEREOF, each of the Parties has executed this Agreement on the date and year set forth below:

DATE: September 3, 2014

By: 
RAYMOND THIERRY
Director, Gas Distribution Integrity
Management
Pacific Gas and Electric Company

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DATE: October 14, 2014

SAN FRANCISCO PUBLIC UTILITIES
COMMISSION

By: [Signature]
HARLAN L. KELLY, JR.
General Manager, San Francisco Public
Utilities Commission

APPROVED AS TO FORM
AND RECO NDED

DATE: U 1, 2014

DENNIS J. HERRERA
City Attorney

By: [Signature]
Louise S. Simpson
Attorneys for City And County Of San
Francisco

APPROVED AS TO FORM:

DATE: September 3, 2014

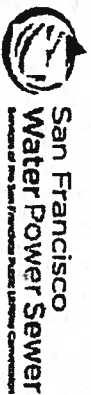
SEDGWICK LLP

By: [Signature]
Gayle L. Gough
Attorneys for Pacific Gas & Electric Company

EXHIBIT A

CROSS BORE - Could be a GAS pipe.

**Crossbore Inspection Program
Wastewater Asset Defect**



ASSET

Street Number	Street Name	From Street	To Street	Cross Street 2	Asset Number

Name Date Time Inspected

Sewer Ops

Lateral Main

Pipe:

City:
Date:

CROSSBORE DETAILS

Type Operating Status Material Size

Crossing Pipe:

Damaged Pipe:

Company Supervisor

Phone

Date Work Started

Repair Contractor:

Found By:

Owner Notified:

Notification Time:

CONTACTS

Name Title Phone Notification Time

City:

City Inspector:

PG&E:

City:

WW Agency:

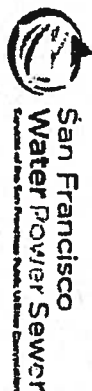
PG&E Division:

DESCRIPTION

EXHIBIT A

CROSS BORE - Could be a GAS pipe.

**Crossbore Inspection Program
Wastewater Asset Defect**



PLEASE CHECK OFF THE FOLLOWING REQUIREMENTS BELOW:

☐ PG&E has verified the Cross-Bore and agrees to proceed with the repair at

☐ PG&E will hire an on-site inspection of the Non-Emergency Cross-Bore. PG&E agrees to complete such on-site

EVALUATION NOTES (PG&E COMMENTS)

ATTACH PHOTOS & LOCATION MAP

EXHIBIT 3

**PG&E Status update
Legacy Cross Bore Program
San Francisco
July 2018**

Progress to Date

PG&E has cleared 126,971 inspection locations by sewer camera inspection or by records review. This encompasses 82% of the total scope and PG&E has invested \$68 million since the program started in 2013. The below table shows the number of inspections completed each year since the program started.

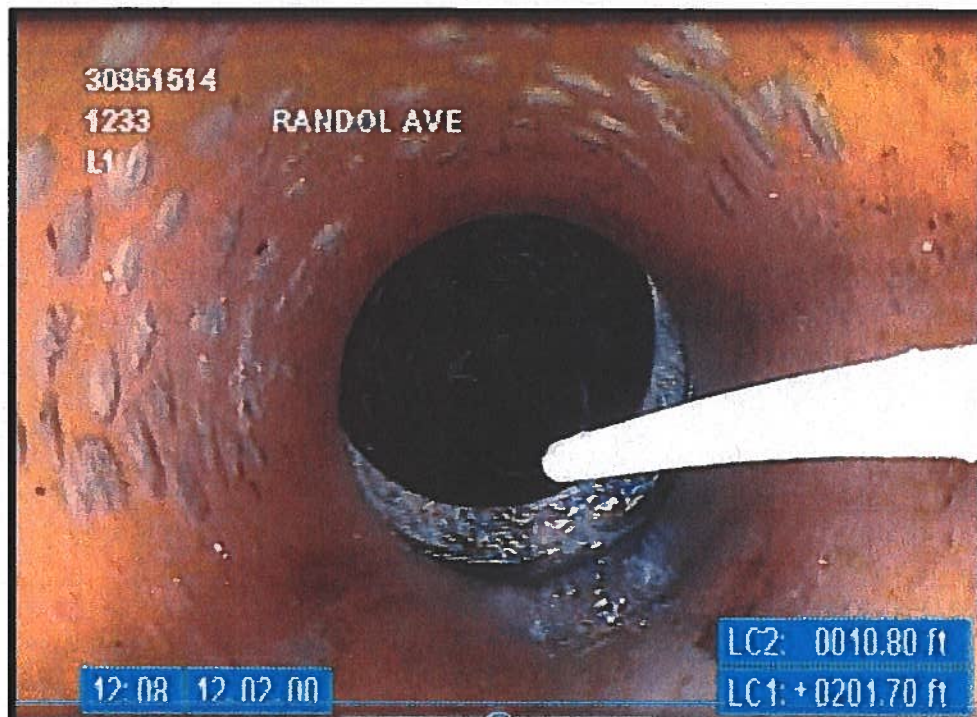
Year	2013	2014	2015	2016	2017
Completed	15,097	32,970	23,179	17,822	2,232
Total Attempted	Data not available				6,504

In 2017, PG&E paused inspections midway through 2017 after attempting 6,504 inspections due to a completion rate of 34%. The drop in completion rate compared to previous years is due to the condition of the sewer system in remaining locations. Common obstacles PG&E has encountered include buried p-traps, buried manholes, sealed manholes, capped mains, sewer collapses, roots, debris, sewer defects and other conditions. The following pictures show some obstacles that bar completion of inspections.

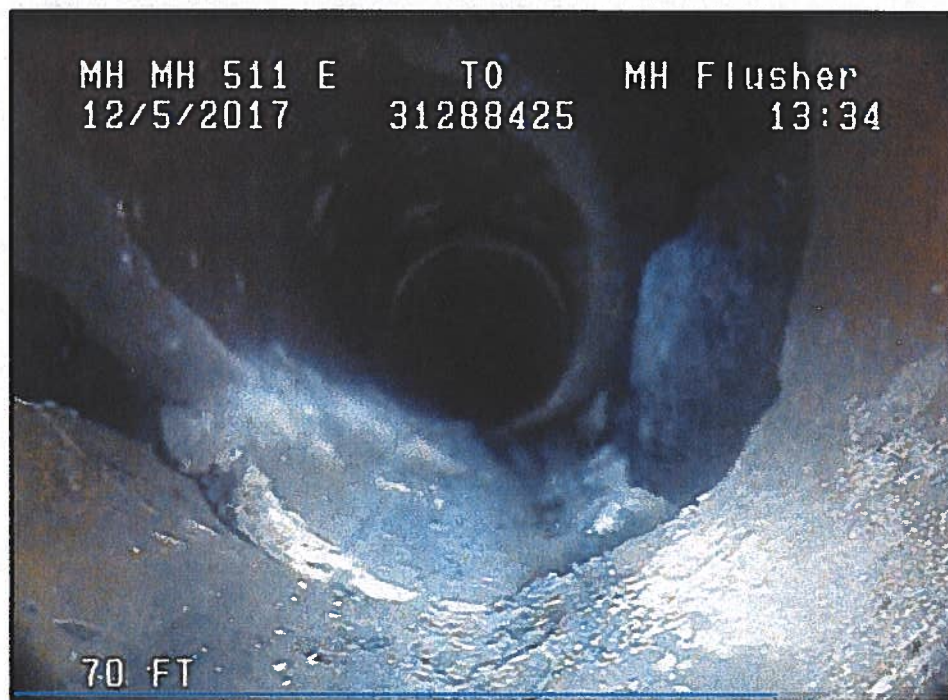
Bend



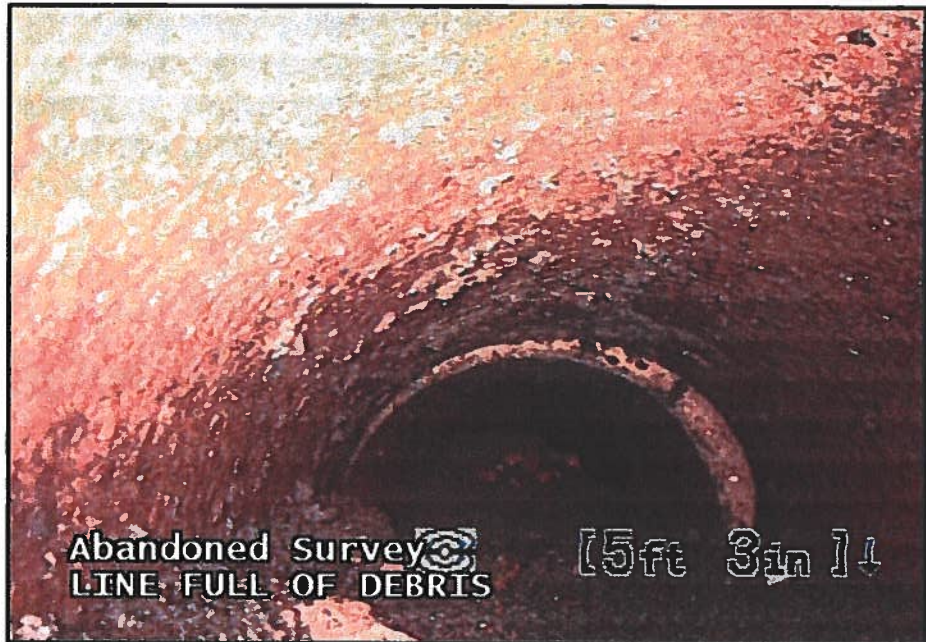
Offset



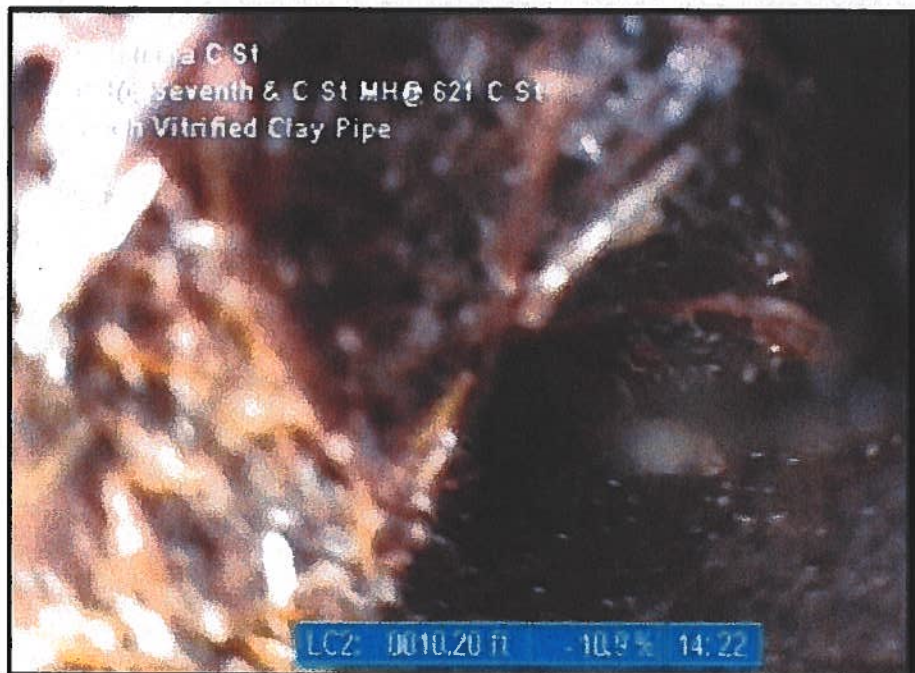
Sewer Defect



Debris



Roots



Water Level



Buried (paved over) Manhole



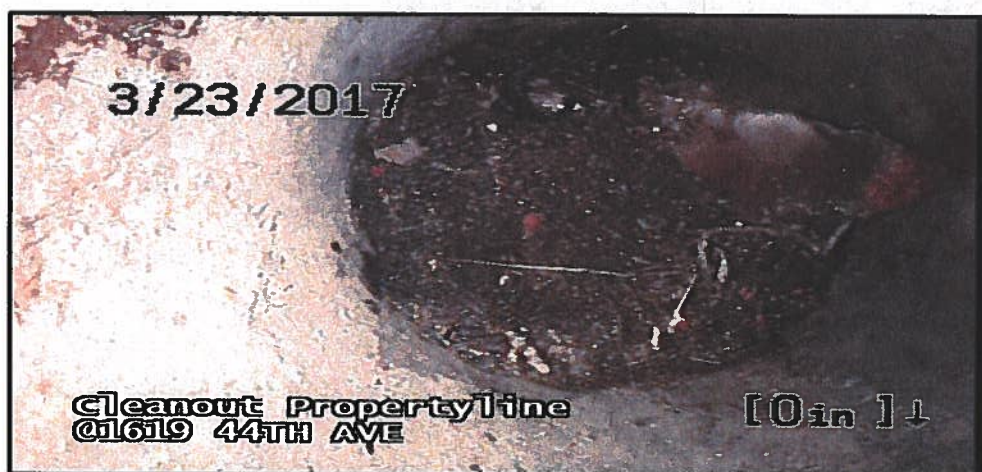
Sealed and Locked Manhole



Paved Over Manhole



Inaccessible P-trap



PG&E consulted with the City of San Francisco regarding possible solutions for inspecting these difficult locations and found that recommendations were limited and the City may not have techniques to overcome these obstacles. PG&E continued to meet with the SFPUC to discuss these locations. In addition, PG&E has continued its' review of locations to determine additional candidate locations as well as determine any transit or other items impacting execution of work.

Risk Removed

Throughout the legacy inspection program, PG&E has repaired 541 cross bores, eliminating the associated risk in these locations.

In addition to finding cross bores, PG&E has identified and notified the City of San Francisco of over 700 Sewer defects. These are instances in which the sewer and storm system is in a condition of failure or near failure to a degree where residents could be impacted.

Partnership and Lasting Benefits

PG&E has transmitted 18 Terra-Bytes of data to San Francisco Water. The majority of this data is PG&E video surveys of the City and County of San Francisco storm and sewer system. This includes both City owned Main pipe but also homeowner sewer lateral data not previously available to the City and County of San Francisco. It is our understanding that this valuable video data has been imported into the City maintenance files for ongoing use. We understand that SFPUC has used, and continues to use, these video surveys to review and respond to 311 calls.

PG&E has shown partnership with SFPUC by implementing a process of calling and reporting imminent issues, such as a possible road collapse due to sewer defect. As a result, SFPUC has been able to send urgent resources to these locations.

As noted in Amendment 1 dated August 23, 2016, SFPUC requested funding from PG&E to pay for its costs in supporting the Gas Pipeline Cross Bore Agreement work. PG&E provided \$1.5M to the SFPUC. These funds are in a drawdown account to be used for recovery of gas cross bore repair costs. In addition, Amendment 1 provided for resources to be used within SFPUC to provide critical data to aid in the completion of this Agreement. In mid-2017, SFPUC began providing its video data in the date range of August 2006 to August 2016. SFPUC is still in the process of providing that data and PG&E is reviewing this video data as it is available. In 2018, PG&E was provided data on sewer capital main installed (March 2018) and sewer repair history (June 2018). To date this data hasn't been as useful as PG&E hoped but we continue to review this data to determine if field inspections will be required for these locations.

New Technology

PG&E continues to explore new technologies in an attempt to address UTA inspections. Depending on the level of success, PG&E will require help from the City of San Francisco to provide access to its sewer system and allow PG&E to complete its inspections. PG&E has already made San Francisco aware of 5,212 locations (5,028 addresses) that have

one of the aforementioned challenges. Some locations remaining have multiple UTA's on a single pipe segment.

Regardless of the result of the pilots, PG&E plans on completing a total of 3,000 attempted inspections in 2018. Due to the nature of the remaining work, PG&E expects a high rate of UTAs to be generated from this work. If new technologies are not successful, the support PG&E will need from the City of San Francisco to complete inspections will increase.

Remaining Scope of Work

Through collaboration made possible by this agreement, PG&E and SFPUC have met regularly and determined the remaining work is primarily composed of locations in high traffic areas, near SF transit, and those that could not be accessed due to obstructions.

A large number of the remaining inspections coincide with SFMTA transit lines. PG&E has been working regularly with SFMTA to develop a process for inspecting within the areas of SFMTA lines while minimizing the impact to the people of San Francisco. One step that PG&E has taken has been to coordinate with SFMTA planned shutdowns to gain access to sewer systems. Based on the current list of SFMTA planned shutdowns, this should result in about 1,000 attempted sewer camera inspections in 2018.

Based on discussions with SFMTA, PG&E is currently allowed to submit up to 2 Special Traffic Permits (STP) per day and up to 2 rail permits per week. These numbers are based on typical staffing levels and a typical volume of requests coming from other groups. Using 10/1/2018 as a start date and 2/1/2021 as an end date (this end date allows PG&E time to perform the actual inspections), SFMTA has the bandwidth to handle 1,222 STPs. There are 12,463 inspections remaining that may require a STP. It is unknown how many STPs are going to be required at this time which is why PG&E is conducting a review.

PG&E is currently working to review all the SFMTA locations to determine which locations will require STP. This will depend on the sewer access point and the street width. Each location needs to be reviewed individually before a determination can be made. PG&E plans to complete this review by 4/1/2019. SFMTA resource levels and their ability to issue STP's will likely be a constraint on the program, limiting our ability to complete inspections. More details will be known once the review is completed. Although this may become a constraint on the program the meetings with the SFMTA team have been very productive. PG&E will continue to submit STPs where practical while the review is being performed.

Key Numbers

Potential Special Permit Impacted Locations:	12,463
Incomplete Locations:	11,470
UTA Locations:	5,212
Total Remaining Locations:	29,145

The following table highlights some of the challenges PG&E will face to complete the remaining locations. Many of these locations PG&E has attempted previously and have some sort of access issue. Unaware of the concept of UTA's at the start of the program, PG&E did not start tracking UTA's until midway through 2016. The below table shows some of the UTA's PG&E has found on the homeowner side of the sewer system. PG&E's current plan is to utilize reasonable new technology to address these homeowner UTAs but if not successful PG&E will need support from the City of San Francisco to resolve these UTAs.

LATERALS REMAINING, EXCLUDING: SFPUC ACTION REQUIRED UTA's			
CATEGORY	TRANSIT IMPACTED	NON-TRANSIT IMPACTED	TOTAL
Abandoned	8	23	31
Access Issue	126	194	320
Obstacle	344	455	799
Pending Inspection/Follow-up	11,083	9,543	20,626
Pending Mainline	902	1,255	2,157
Grand Total	12,463	11,470	23,933

3 Month Plan and Beyond

Based on the number of planned MUNI shutdowns PG&E is planning on attempting 1,000 inspections tied to a MUNI shutdown plus an additional 2,000 inspections within San Francisco in 2018. The approximately 1,000 MUNI inspections should be completed by the end of August when the Twin Peaks shutdown is complete. Once those inspections are completed PG&E will begin inspecting approximately 500 inspections a month for the remaining 4 months of the year to attempt the additional 2,000 planned inspections to reach our target of 3,000 attempted inspections in 2018.

After attempting the planned 2018 inspections, PG&E has the following inspection schedule planned for the remaining inspections. Depending on the pace of STPs and UTAs completed by the City, PG&E will shift resources between those types of inspections with the goal of keeping the program moving as quickly as possible.

2019

- PG&E to initiate 11,851 inspections
- City will need to resolve new UTAs as they occur

2020

- PG&E attempt 11,852 inspections
- City will need to resolve new UTAs as they occur

2021

- PG&E attempt 2,442 inspections
- City will need to resolve new UTAs as they occur

The 5,212 UTA locations (5,028 addresses) already identified are included in PG&E's plan above plus additional UTAs as they are resolved.

The above inspection plan includes locations that PG&E will be directly attempting to resolve through inspection with SFMTA permits, repeat camera inspection, records research, field mark and locate, customer appointments to do additional field research, excavation, pot-holing, and other means to define the cause of the incomplete inspection. If a gas cross bore is discovered, as has been the program practice, PG&E will notify the City, submit an individual permit request, and coordinate with the City to complete the repair.

Regarding the existing, 5,212 UTA locations, to date PG&E has provided a list of these locations with the address, City asset number, and UTA category (buried manhole, buried p trap, sewer defect) to the City. The City has confirmed that it will work with PG&E to achieve the timely completion of the crossbore project. The City has requested additional detail on these locations. PG&E is working with the city to understand what additional details are required and will provide the data where available after the requirements for each type of UTA are established. PG&E will also provide ongoing data on UTAs as they are discovered for the duration of the program. The City will then need to work closely with other City agencies to uncover buried and sealed manholes, issue citations to property owners to uncover/install vents, and repair sewer asset defects. As PG&E receives updates, PG&E can then return to the location to resume the sewer camera location and complete the inspection. The City and PG&E will coordinate closely on these locations at the bi-weekly coordination meetings. Other agencies, such as the Chief Plumbing Inspector, will join these meetings for coordination and resolution. It's imperative the City puts the proper amount and the right kind of resources to facilitate these sewer and storm drain repairs and access issues so PG&E can complete the inspections.

Currently, PG&E and the Chief Plumbing Inspector are preparing a pilot in which three to five locations (address, asset number, image, and vent trap condition) are provided to the Chief Plumbing Inspector for review and next action. The work on the pilot will help all parties determine best practice to aid in resolution of these locations.

For the 2018 to 2021 Inspection work, PG&E continues to work closely with Department of Public Works and SFMTA to coordinate inspections that cannot be accessed due to rail, trolley and/or other transit lines. For example, SFMTA provided PG&E an advance alert regarding the Twin Peaks MUNI shutdown, and PG&E has been granted permits to conduct inspections in those locations. PG&E continues to work with SFMTA to gain notice of any other planned shutdowns as well as off hours (night) opportunities to perform our sewer camera inspections. To date we have improved our understanding of the SFMTA permitting process. SFMTA has provided us with a point of contact and an expected pace for STPs. Additionally, in 2018 we have successfully received permits on approximately 1,000 SFMTA rail locations which in the past have been extremely difficult to gain access to.

EXHIBIT 4

PG&E Cross Bore Elimination Program, January 4th, 2019 Draft Instructions for Potential Sewer Defect / Access Issue Form

Introduction

During the PG&E Cross Bore Elimination Program (CBEP), PG&E is encountering sewer defects and access issues for which PG&E believes action should be taken. As such, the potential sewer defect / access issue form has been created to facilitate reporting, evaluation, and tracking of these sewer defects / access issues. This process will be facilitated by use of the Maximo sewer asset numbers that are updated and made available to PG&E on or about the 15th of each month on the San Francisco GIS data base for the active sewer assets in question. When PG&E encounters a sewer defect or access issue for which PG&E is asking that action be taken, PG&E completes a potential sewer defect / access issue form and submits it to the SFPUC. A blank potential sewer defect / access issue form is included as Attachment No. 1. It is impossible to list all the possible situations that could be encountered. Therefore, a sample form that has been completed will be used as an example and general guidelines provided. A sample form that has been completed for a collapse is included as Attachment No. 2.

Scope exclusions

- This procedure / form is not to be utilized for cross bores (NASSCO designation "OBI") of any type.
- This procedure / form should not be used for upper laterals and vent traps.
- This procedure / form should not be used if the sewer asset number is not available.

PG&E Guidelines for Completion of the Potential Sewer Defect / Access Issue Form

Using the form provided in Attachment No. 1, save the form with the sewer asset number in question (i.e. P-103489 and insert the date submitted in the space provided. If resubmitted, insert "Revised" and then the date. Only one form should be used per sewer asset. If new information becomes available after the form has been submitted, then the original form should be updated and resubmitted.

Sewer Asset Section:

Asset Number

- Input Maximo sewer asset number found on GIS for the sewer asset in question
- For example: MH-25949, P-103489, CB-163394, L-166553

PG&E Cross Bore Elimination Program, January 4th, 2019 Draft Instructions for Potential Sewer Defect / Access Issue Form

Street Number and Street Name

- List the closest street number and street name to the sewer defect / access issue

From Street and To Street

- List the cross streets that surround the street in question

Inspection Entry Point

- The location of where the inspection was started from
- Typically, a manhole

Entry Point ID

- The Maximo asset manhole number

Distance from Entry Point (Feet)

- The distance to the sewer defect / access issue

Depth (Feet)

- The measured distance from the manhole rim to the invert of the pipe

Sewer Asset Type

- Mark an "X" in the corresponding box to where the sewer defect / access issue was found

Contacts Section:

For the City, the default contact is Douglas J. Lipps. And for PG&E, the default contact is Nathaniel Naylor. These contacts should be updated as necessary with the person who completed/reviewed the form and has the most knowledge of the sewer defect / access issue.

Description Section:

In this section, the reasoning for why the inspection and reverse setup of the asset could not be completed should be elaborated upon. PG&E should provide information that indicating that every reasonable effort has been made to obtain a NASSCO compliant video survey of the sewer asset in question. Dates are important if 311 calls or other action has been taken since the PG&E attempt(s). PG&E should always check to see if there is an SFPUC video survey available. NASSCO compliant justification for the incomplete inspection survey must be provided if it was abandoned. Alternate access must be attempted through a reverse setup or the next manhole either upstream or

PG&E Cross Bore Elimination Program, January 4th, 2019 Draft Instructions for Potential Sewer Defect / Access Issue Form

downstream. As a reminder, it is highly recommended that PG&E utilize Rain-X on the camera lens to ensure a clear picture (This polymer coating allows water to simply roll off the lens and thus improves visibility). A few situations in which an inspection could not be completed include structural defects, operation and maintenance related issues, or manhole access issues. The list provided below includes, but is not limited to, some example sewer defect situations that PG&E may have encountered.

Structural:

- Collapse
- Deformed
- Broken

Operation and Maintenance:

- Tap Break-In Intruding
- Roots
- Obstacles / Obstructions

Manhole Access Issues:

- Buried (document both upstream and downstream approach attempts to video and note the street material)
- Welded Shut
- Locked

Name the structural, maintenance, or other defect causing the access issue. For manholes please specify whether buried, welded shut, or uses special locking features. The street or immediately adjacent surface type should also be noted if the manhole is buried; for example, concrete, asphalt, brick, or grass.

Attach Photos & Location Map Section:

A minimum of three photos should be attached to this section. Photos required include: a picture of the defect / access issue, a GIS screenshot with the asset highlighted and arrow pointing to approximate location of defect, and a picture of the house or building closest to the defect. If there are multiple issues involved, include a picture of each sewer defect / access issue involved for this particular sewer asset.

SFPUC Evaluation Notes:

This section is for SFPUC use.

Excel Tracking Spreadsheet

PG&E Cross Bore Elimination Program, January 4th, 2019 Draft Instructions for Potential Sewer Defect / Access Issue Form

An Excel spreadsheet used to track the completed forms is included in Attachment No. 3.

Attachments:

1. Blank Potential Sewer Defect / Access Issue Form
2. Sample Potential Sewer Defect / Access Issue Form
3. Future Excel Tracking Spreadsheet for Potential Sewer Defect / Access Issue Form
4. TBD

Cross Bore Elimination Program



Potential Sewer Defect / Access Issue Form (Other than Cross Bores)

Date Submitted: 12/20/2018

SEWER ASSET:

Asset Number	Street Number	Street Name	From Street	To Street
P-103489	80	El Verano Way	Maywood Drive	Fernwood Drive
Survey No.	Survey Date	Insp. Entry Point	Entry Point ID	Dist. From Entry Pt.
P-103489	10/28/2015	DSMH	MH-25949	72.1 FT
Video Survey:	Depth (Feet)			
	6'-0"			
Lower Lateral	Mainline Sewer	Culvert	Manhole	Other
	X			
Sewer Asset Type:				

CONTACTS:

	Name	Entity	Phone
City:	Janelle Lee	SFPUC	415/695-7346
PG&E:	Nathaniel Naylor	PG&E	541/892-2347

DESCRIPTION:

Note: For manholes please specify whether buried, welded shut, or uses special locking fasteners.

Collapse pipe at 72.1 feet upstream of manhole MH-25949. Two video inspections was performed by PG&E. Second inspection date is 4/21/17 starting at the downstream MH-25949. Both inspections show collapsed pipe with 100% of cross sectional area lost. Both inspections were abandoned due to the collapsed pipe. No reverse set up completed due to the fact that upstream manhole MH-25960 . Pipe is 8" ISP built in 1927.

Cross Bore Elimination Program



Potential Sewer Defect / Access Issue Form (Other than Cross Bores)

ATTACH PHOTOS & LOCATION MAP:



SFPUC EVALUATION NOTES: Maximo work order 5573098, December 11th, 2018

TSS BoE, Fr PG&E, #37-105 El Verano Way. Map-J06, DU 235 LF of 8" MS broken. Residential... Go to: Map-J06, 37 to 105 El Verano Way. Replace and install about 235 linear feet of 8" inch ISP main sewer marked in paint over asset# P-103489 installed in year 1927. This main sewer line has a severe break 74 feet from DS MH discovered by PG&E's TV Crew. (NOTE: CALL FROM PG&E VIDEO / NO MORATORIUM STREET / LIGHT VEHICLE TRAFFIC / LIGHT PEDESTRIAN FOOT TRAFFIC / NO MUNI BUSES ON THIS BLOCK). The 8" inch main sewer depth is about 10 feet. The lower lateral trap is about 8 feet. [This may include 3 Lower lateral connection. Inspected by PUC Swr Ops Camera Crew: Roberto Alas. (Block Replacement)]