



**Public Utilities Commission**  
STATE OF CALIFORNIA

**Citation Date:** October 12, 2018  
**Citation #:** D.16-09-055 G.18-10-001  
**Operator ID#:** 15007

**CITATION**  
**ISSUED PURSUANT TO DECISION 16-09-055**

**Gas Corporation (Operator) To Which Citation is issued:** Pacific Gas and Electric (PG&E)

**OFFICER OF THE RESPONDENT:**

Mr. Jesus Soto, Senior Vice President  
Pacific Gas & Electric Company  
6111 Bollinger Canyon Road, Room 4590-D  
San Ramon, CA 94583

**CITATION:**

Operator is cited a financial penalty amount of \$1,000,000 for violating General Order (G.O.) 112-C which incorporates by reference Title 49 Code of Federal Regulations (CFR) Part 192. Safety and Enforcement Division (SED) found these violations as a result of SED's incident investigation in 2017.

**VIOLATIONS:**

1. 49 CFR §192.273, General, states in part:

*“(a) The pipeline must be designed and installed so that each joint will sustain the longitudinal pull-out or thrust forces caused by contraction or expansion of the piping or by anticipated external or internal loading.”*

SED reviewed the failure analysis report by Exponent. The report states:

*“The butt fusion may initially have held gas, but over time, the pressure inside the pipe, and particularly within the growing crack, separated the joint faces and the leak ultimately developed. The lack of fusion could be related to insufficient heat, but given the appearance of the cutting tool marks, it is more likely that the upstream pipe was poorly (i.e., not squarely or fully) faced and did not fully contact the heating plate. Thus, that area of the upstream pipe did not fuse and formed an initial leak-tight crack that ultimately grew through the pipe wall.”*

The evidence reviewed indicates that the pipeline was not installed so that the joint involved in the incident could sustain the anticipated internal loading. Therefore, SED finds PG&E in violation of CPUC General Order No. 112-C, 49 CFR §192.273 (a).

**PENALTY:**

SED assesses a penalty of \$500,000 based on the severity of the violation.

2. 49 CFR §192.281 Plastic Pipe states in part:



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*“(a) General. Each plastic pipe joint must be made in accordance with written procedures that have been proven by destructive burst test to produce joints at least as strong as the pipe being joined. A plastic pipe joint that is joined by solvent cement, adhesive, or heat fusion may not be disturbed until it has properly set. Plastic pipe may not be joined by a threaded joint or miter joint.”*

SED reviewed PG&E Gas Standard D-21 Heat Fusion Joining Of Polyethylene Pipe dated March 3, 1972<sup>1</sup>. The scope of Gas Standard D-21, which was in effect at the time of installation, was “to establish requirements for, and to define the limitations of, the fusion process for joining gas distribution polyethylene pipe. Included in this standard are instructions for the preparation of materials and the use of tools in the fusion process.”<sup>2</sup>

PG&E Gas Standard D-21 Section 3.4.2 Butt Fusion states:

### *“(a) General*

*This technique consists of heating the ends of matching surfaces by holding them against a heating plate until fusion temperature is reached, then slamming the two soft ends against each other and allowing the joint to cool. Since the surface area of the pipes to be joined is rather small, it is essential that the ends of the pipe are properly aligned. An approved butt fusion machine capable of holding the pipe in alignment must be used. A special heating plate capable of heating the two ends of the pipe simultaneously is required.*

### *(b) Technique*

- 1. Heat the tool equipped with the proper size heating plates to approximately 310°F (± 25°).*
  - 2. Place pipe ends into proper size joining unit.*
  - 3. Plane the ends of pipes to smooth, flat faces with special facing tool.*
  - 4. Bring the pipe ends together and carefully check alignment and fit. If either is incorrect, repeat step 3 as necessary. With coiled pipe, it is necessary to use short liners in the joining machine clamps. It may also be necessary to twist the pipe in the jig to accomplish alignment.*
  - 5. Bring the pipe ends to bear on the heating element with light force (70 inch pounds). To insure uniform heating at all points on both pipe ends, fusion should not be attempted until a bead of melt has rolled out on the heater face completely around the circumference of both pipe ends. See Table I for the approximate fusion melt cycle.*
  - 6. Snap the traveling carriage back and remove the heater plate.*
  - 7. Slam the two pipe ends together. Apply sufficient force to cause the fusion bead to roughly double its size.*
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- 3. The joint must be held in place in the carriage to allow it to set up. It may then be removed from the carriage, but it should not be worked or tested until it has had time to cool. (See Table I for set-up and cooling time.)*
  - 4. Clean heater faces, being careful not to damage the coating.”*

<sup>1</sup> Data Response Index 10788 received 5/17/2017

<sup>2</sup> PG&E Gas Standard D-21 dated 3/3/1972



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SED reviewed the failure analysis report by Exponent. The report states:

*“The lack of weld bead is evidence that, in the region that failed to fuse, the upstream side was solid when contacted with the downstream side. The downstream side must have been molten, as evidenced by its interior weld bead. The cold upstream side left an imprint of its striations in the molten downstream side. Thus, it appears that a circular facing tool was used during fabrication, but the facing was incomplete and left a portion of the surface that was below the plane of the cut. This lower portion failed to contact the heater plate sufficiently to melt. Thus, when the pipe ends were brought together to form the fusion, the upstream unmolten region deformed the molten downstream region but did not adhere to it.”*

The failure analysis report further indicated:

*“The direct cause of the leak was a fabrication error during original installation of the main in late 1973 or early 1974. Specifically, the end of the upstream pipe comprising the joint had not been fully faced flat and square with the axis of the pipe. Thus, when this pipe was butt-fused to the downstream pipe, a portion of the contact plane failed to melt and fuse, forming a crack-like defect open to the interior of the pipe on the eastern side of the joint.”*

The evidence reviewed indicated a lack of weld bead and that a portion of the surface plane failed to contact the heater plate sufficiently to melt. PG&E Gas Standard D-21 Section 3.4.2 (b) (5) states that *“fusion should not be attempted until a bead of melt has rolled out on the heater face completely around the circumference of both pipe ends.”*

SED therefore finds PG&E in violation of CPUC General Order No. 112-C, 49 CFR §192.281 (a) because it failed to make the joint in accordance with PG&E Gas Standard D-21.

### **PENALTY:**

SED assesses a penalty of \$500,000 based on the severity of the violation.

### **Total Penalty Amount**

As a result of the violations determined by SED and identified in this report, the total amount of this citation is \$1,000,000.

### **STATEMENT OF FACTS AND ENCLOSURES:**

The following enclosures were used to establish the findings of fact:

- 1- Enclosure 1 – SED’s Incident Investigation Report, dated September 12, 2017
- 2- Enclosure 2 – SED’s Notice of Probable Violation (NOPV) letter, dated October 20, 2017
- 3- Enclosure 3 – Attachment A to SED’s NOPV letter dated October 20, 2017
- 4- Enclosure 4 – PG&E’s response to SED’s NOPV letter, dated November 13, 2017



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The violations in this citation were established based on the aforementioned four enclosures, Operator's records and/or substantiating documents obtained from other sources, or other reasons as stated in the this report.



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### SED CITATION ANALYSIS

<b>Element</b>	<b>Staff Finding</b>
Number of violation(s) and duration of violation(s)	<i>Two (2) violations of Title 49 CFR Part 192, Sections §192.273 and §192.281. The violations occurred sometime between October 1973 and January 1974. The violations occurred approximately 44 years ago.</i>
Severity or gravity of the offense	<i>The proper installation of pipe is critical to providing safe and reliable natural gas to its customers. As a result of the leak and subsequent explosion, two customers were injured inside the house and were taken to the hospital. Total damage was estimated to be \$350,000. This violation resulted in a fine amount of \$1,000,000.</i>
Conduct of the utility	<i>The utility is being cooperative.</i>
Self-reporting of the violation	<i>Not self-reported. Violations found as a result of SED's 2017 incident investigation</i>
Financial resources of the utility	<i>4.3 Million customers, \$715 Million Revenue requirement</i>
The totality of the circumstances	<i>PG&amp;E failed to install its pipeline in accordance with the federal code and/or its own procedures. The pipeline failed, and the subsequent explosion resulted in two injuries and property damage.</i>
The role of precedent	<i>N/A</i>
<b>Resultant Citation Taking All Of These Factors Into Account</b>	<b>\$1,000,000</b>



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### **RESPONSE:**

Respondent is hereby called upon to provide a response to this Citation by: **5:00 PM on November 11, 2018**. By way of such response, Respondent, **within 30 calendar days**, must either pay the amount of the penalty set forth in this citation<sup>3</sup>, or appeal<sup>4</sup> the citation. In addition Respondent must do one of the following:

- (1) For violations constituting immediate safety hazards: Respondent must immediately correct the immediate safety hazards.
- (2) For violations that do not constitute immediate safety hazards: Violations that do not constitute immediate safety hazards must be corrected within 30 days after the citation is served. If said violations that do not constitute immediate safety hazards cannot be corrected within 30 days, then the Respondent must submit a detailed Compliance Plan to the Director of SED within 30 days after the citation issues, unless the utility and the Director of SED, before the expiration of the 30 day period, agree in writing to another date, reflecting the soonest that the Respondent can correct the violations. The Compliance Plan must provide a detailed description of when the violation will be corrected, the methodology to be utilized, and a statement supported by an declaration from Respondent's Chief Executive Officer or appropriate designee (CEO Declaration) stating that in the Respondent's best judgment, the time that will be taken to correct the violation will not affect the safety or integrity of the operating system or endanger public safety.

Note: Respondent will forfeit the right to appeal the citation by failing to do one of these two options outlined in the Response above within 30 days. Payment of a citation or filing a Notice of Appeal does not excuse Respondent from curing the violation. The amount of the penalty may continue to accrue until a Notice of Appeal is filed. Penalties are stayed during the appeal process. A late payment will be subject to a penalty of 10% per year, compounded daily and to be assessed beginning the calendar day following the payment-due date. The Commission may take additional action to recover any unpaid fine and ensure compliance with applicable statutes and Commission orders.

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<sup>3</sup> For fines paid pursuant to Pub. Util. Code § 2107 and D.16-09-055 Respondent shall submit a check payable to California Public Utilities Commission using the attached Citation Payment Form. Upon payment, the fine will be deposited in the State Treasury to the credit of the General Fund and this citation will become final.

<sup>4</sup> Respondent may Appeal this citation by completing and submitting a Notice of Appeal Form. Please see the attached document, "Directions For Submitting An Appeal To A Citation Issued Pursuant To Decision 16-09-055" for information on the appeals process and the attached "Notice of Appeal Of Citation Form."



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**NOTIFICATION TO PUBLIC AGENCIES:**

As soon as is reasonable and necessary, and no later than 30 calendar days after service of the citation is effected, Respondent must provide a notification to the Chief Administrative Officer or similar local agency authority in the city and county where the violation occurred. Within 10 days of providing such notification, Respondent must serve an affidavit to the Director of SED, at the mail or e-mail address noted below, attesting that the local authorities have been notified; the date(s) for when notification was provided; and the name(s) and contact information for each local authority so notified.

The CPUC expects the Operator to take actions, as soon as feasible, to correct, mitigate, or otherwise make safe all violations noted on the Citation regardless of the Operator's intentions to accept or appeal the violation(s) noted in the Citation.

FOR ESIM 

***Elizaveta Malashenko***  
Director – Safety and Enforcement Division  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102  
[elizaveta.malashenko@cpuc.ca.gov](mailto:elizaveta.malashenko@cpuc.ca.gov)



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**CITATION PAYMENT FORM**

I (we) \_\_\_\_\_ hereby agree to comply with this citation dated \_\_\_\_\_, and have corrected/mitigated the violation(s) noted in the citation on \_\_\_\_\_ and no later than \_\_\_\_\_, all work to make permanent corrections to any mitigated, or otherwise remaining concerns related to the violation(s) will be completed as noted in the Compliance Plan we have submitted to the Director of SED and, herewith, pay a fine in the amount of \$ \_\_\_\_\_ as included in the citation.

Signature of Gas Corporation's Treasurer,  
Chief Financial Officer, or President/Chief Executive  
Officer, or delegated Officer thereof

\_\_\_\_\_  
(Signature) (Date)

\_\_\_\_\_  
(Printed Name and Title)

Payment must be with a check made payable to the **California Public Utilities Commission** and sent to the below address. Please include the citation number on the memorandum line of the check to ensure your payment is properly applied.

**California Public Utilities Commission**  
**Attn: Fiscal Office**  
**505 Van Ness Avenue**  
**San Francisco, CA 94102-3298**

NOTE: A copy of the completed Citation Payment Form must be sent to the Director of the Safety and Enforcement Division, via email or regular mail, to the address provided on the Citation.



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### DIRECTIONS FOR SUBMITTING AN APPEAL TO A CITATION ISSUED PURSUANT TO DECISION 16-09-055

Within 30 calendar days of the Respondent being served with a **CITATION ISSUED PURSUANT TO DECISION 16-09-055**, Respondent may appeal the citation. Beyond 30 calendar days of being served with the citation, Respondent is in default and, as a result, is considered as having forfeited rights to appeal the citation. The Respondent must still correct the violation(s) as instructed in the Response section of this citation.

To appeal the citation, Respondent/Appellant must file a Notice of Appeal (including a completed title page complying with Rule 1.6 of the Commission's Rules of Practice and Procedure, and attached Notice of Appeal Form) along with copies of any materials the Appellant wants to provide in support of its appeal with the Commission's Docket Office **and** must serve the Notice of Appeal, at a minimum, on

- 1) The Chief Administrative Law Judge (with an electronic copy to: [ALJ\\_Div\\_Appeals\\_Coordinator@cpuc.ca.gov](mailto:ALJ_Div_Appeals_Coordinator@cpuc.ca.gov)),
- 2) The Director of Safety and Enforcement Division
- 3) The Executive Director
- 4) General Counsel
- 5) The Director of the Office of Ratepayer Advocates

At the address listed below within 30 calendar days of the date on which the Appellant is served the Citation. The Appellant must file a proof of service to this effect at the same time the Appellant files the Notice of Appeal. The Notice of Appeal must at a minimum state: (a) the date of the citation that is appealed; and (b) the rationale for the appeal with specificity on all grounds for the appeal of the citation.

**California Public Utilities Commission**  
**505 Van Ness Ave**  
**San Francisco, CA 94102**  
**Attn: <Insert Title>**

**NOTE:** Submission of a *Notice of Appeal Form* in no way diminishes Appellant's responsibility for correcting the violation described in the citation, or otherwise ensuring the safety of facilities or conditions that underlie the violations noted in the Citation.

Ex Parte Communications, as defined by Rule 8.1(c) of the Commission's Rules of Practice and Procedure, are prohibited from the date the citation is issued through the date a final order is issued on the citation appeal.



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After receipt of the Appellant's *Notice of Appeal Form*, Appellant has a right to a hearing to be convened before an Administrative Law Judge. At least ten business days before the date of the hearing, the Appellant will be notified and provided with the location, date, and time for the hearing. At the hearing,

- (a) Appellant may be represented by an attorney or other representative, but any such representation shall be at the sole expense of the Appellant;
- (b) Appellant may request a transcript of the hearing, but must pay for the cost of the transcript in accordance with the Commission's usual procedures;
- (c) Appellant is entitled to the services of an interpreter at the Commission's expense upon written request to the Chief Administrative Law Judge not less than five business days prior to the date of the hearing;
- (d) Appellant is entitled to a copy of or electronic reference to Resolution ALJ-299 Establishing Pilot Program Citation Appeal and General Order 156 Appellate Rules (Citation Appellate Rules); and
- (e) Appellant may bring documents to offer in evidence (Rule 13.6 (Evidence) of the Commission's Rules of Practice and Procedure applies) and/or call witnesses to testify on Appellant's behalf. At the Commission's discretion, the hearing in regard to the Appellant's appeal can be held in a CPUC hearing room at either of the following locations:

**San Francisco:**  
505 Van Ness Avenue  
San Francisco, CA 94102

**Los Angeles:**  
320 West 4<sup>th</sup> Street, Suite 500  
Los Angeles, CA 90013

The hearing(s) held in regard to the Appellant's appeal will be adjudicated in conformance with all applicable Public Utilities Code requirements.



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**Notice of Appeal Form**  
**Appeal from Citation Issued by Safety and Enforcement Division**  
**Pursuant to Decision 16-09-055**

**Appellant:**

Name  
Vice President, Gas Operations  
Gas Utility Name  
Mailing Address  
City, CA Zip

Citation Date: October 8, 2018  
Citation #: D.16-09-055 G.18-10-001  
Operator ID#: 15007  
Appeal Date: \_\_\_\_\_

“Appeal of \_\_\_\_\_ from \_\_\_\_\_ issued by Safety and  
[Operator Name] [Citation Number]  
Enforcement Division”

Statements supporting Appellant’s Appeal of Citation (You may use additional pages if needed and/or attach copies of supporting materials along with this form).



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**Enclosures to Accompany Utility Appeal**

*Utility to add Enclosures as appropriate*