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June 28, 2024

Mr. Terence Eng, P.E.
Gas Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: Notice of Probable Violations – June 8, 2023 Gas Pipeline Incident in San Jose

Dear Mr. Eng:

Pacific Gas and Electric Company (PG&E) submits this response to the Safety and Enforcement Division's (SED) Notice of Probable Violations (NOPV) letter dated May 31, 2024, regarding the gas pipeline incident that occurred on June 8, 2023 in San Jose, CA. For clarity, the two NOPVs identified in Attachment A of SED's NOPV letter are repeated below, followed by PG&E's response.

NOPV #1: §192.605(a) Procedural manual for operations, maintenance, and emergencies

§192.605(a) Procedural manual for operations, maintenance, and emergencies states:

Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

PG&E's Utility Procedure TD-4150P-202, section 7 "Inserting Completion Plug" required employees to physically check and visually confirm thread engagement when installing or inserting completion plugs after the first few turns. At least two PG&E employees (foreman/injured coworker (ICW) and gas mechanic/coworker #2 (CW2)) did not check and confirm thread engagement on the completion plugs. PG&E employee ICW acknowledged that there was leaking gas but failed to follow utility procedures for the Abnormal Operating Condition (AOC) (i.e. gas leak) which required a work stoppage.

Therefore, PG&E is in probable violation of G.O. 112-F, Reference Title 49 CFR, Part 192, §192.605(a) for failing to follow Utility Procedure TD-4150P-202.

PG&E Response to NOPV #1:

PG&E acknowledges that our employees did not confirm thread engagement when installing the completion plug in this instance in accordance with the requirements in TD-4150P-202. PG&E took immediate corrective actions to make the situation safe by repairing the leak from the completion plug and revoking the coworker's operator qualification to operate Mueller tapping and plugging equipment. In addition, PG&E also communicated interim controls to our front-line employees (e.g., Gas Maintenance and Construction, Leak Survey, General Construction, contractors, and more generally Gas Operations) to reduce line of fire hazards when working with Mueller equipment, including completion plugs.¹

¹ PG&E's Apparent Cause Evaluation report, page 5

After the incident, PG&E conducted an apparent cause evaluation² (ACE) to understand the shortcomings and contributing factors to the incident. An extent of condition analysis was performed as part of the ACE and determined that there is no condition present with Mueller equipment or its application that would cause a repeat event.³ As a result of the ACE, PG&E determined two corrective actions that would address this NOPV #1 and strengthen our existing process controls, see Figure 1 below.

Cause # (RC,AC,CC)	Cause(s)	CA/CAPR Description	Completion Date
AC-1	<p>Apparent Cause Statement: Workers were qualified but not proficient with the Mueller Line Stopper process contained in Utility Procedure TD-4150P-202.</p> <p>NERC Cause Code: A3-B1-C4 Infrequently performed steps were performed incorrectly</p>	<p>Type of Control: Administrative</p> <p>Action: Virtual refresher training sessions for Mueller Line Stopper process. Training should reinforce the use of PPE when an AOC occurs. Videos to be profiled annually along with the OQ written test.</p> <p>Deliverables to show completion: Confirmation of training revision.</p>	3/5/2024
AC-2	<p>Apparent Cause Statement: Less than adequate (LTA) job preparation (job plan/instructions) provided to workers.</p> <p>NERC Cause Code: A5-B4-C2 Shift communications LTA</p>	<p>Type of Control: Administrative</p> <p>Action: Roll out Streams application videos from Methods and Practices for proper use of Mueller devices as it pertains to applicable standards. This may be accomplished via 5 Minute Meeting email directed to users of Mueller equipment.</p> <p>Deliverables to show completion: Roster or email distribution of 5MM communication</p>	5/29/2024

Figure 1. Corrective actions to improve training and resources for operating Mueller equipment

To complete these two corrective actions, PG&E leveraged the existing partnership between field organizations, PG&E’s Learning Academy and Operator Qualifications (OQ) team to create an annual refresher training for operating Mueller equipment, which includes instructions to stop and assess for Abnormal Operating Conditions (AOCs) and evaluate whether it is safe to proceed with the proper personal protective equipment (PPE). This refresher training is complemented with new training videos on operating Mueller equipment, which have been uploaded to PG&E’s OQ Performance Support Portal as additional resources for our employees as they train and study to obtain and re-qualify for their OQs (see Figure 2 below for an example). PG&E also implemented the Streams application, using Mueller equipment as the pilot, that utilizes QR code technology to enable our field employees to scan a QR code in the field to retrieve the appropriate training videos and guidance documents on-demand. PG&E believes that these corrective actions will elevate our employees’ expertise in operating Mueller

² Provided in Index 16709 Supp01 on 3/7/24

³ PG&E’s ACE report, page 6

equipment, while also providing them with the necessary resources to perform their duties safely when questions and situations arise.

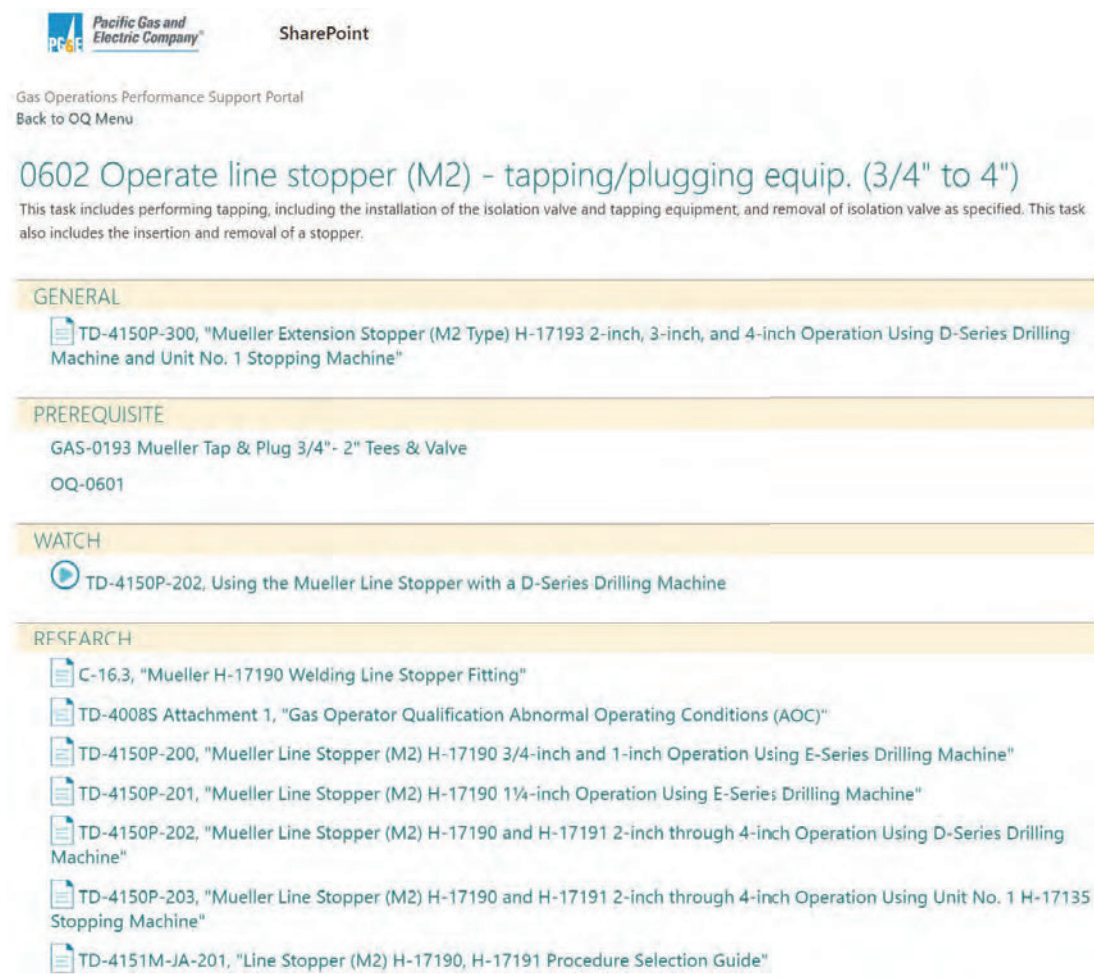


Figure 2. OQ Performance Support Portal with new video and training resources

NOPV #2: §192.605(b)(1) Maintenance and normal operations

§192.605(b)(1) Maintenance and normal operations states:

The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

- (1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and subpart M of this part.*

PG&E's Cause Evaluation team identified that the Utility Procedure TD-4150P-202 only recommends employees to "consider using additional levels of PPE such as face shields and flash suits when encountering an abnormal operating condition (AOC)." The use of additional levels of Personal Protective Equipment (PPE) should be a requirement for PG&E workers who may be exposed to leaking gas, including but not limited to, during the insertion of completion plugs. Standard PPE safety glasses are not sufficient to provide safety against metal shavings when an AOC (i.e. gas leak) is present.

Therefore, PG&E is in probable violation of G.O. 112-F, Reference Title 49 CFR, Part 192, §192.605(b)(1) for failing to provide adequate written procedures or instructions for the use of additional PPE when its employees encounter an AOC while operating a Mueller machine.

PG&E Response to NOPV #2:

PG&E respects SED’s opinion that additional levels of PPE are required when employees are exposed to leaking gas during the insertion of completion plugs. However, PG&E respectfully disagrees with this NOPV and does not believe that we are in violation of §192.605(b)(1). The “Personal Protective Equipment (PPE)” section of TD-4150P-202 is not meant to be a comprehensive list of required PPE to perform the steps outlined in the procedure, rather it is a minimum list of PPE that employees should utilize. AOCs associated with operating Mueller equipment manifest in various forms and it is infeasible to develop an accompanying list of required PPE for each AOC scenario. In addition, TD-4150P-202 section 7.22.2 already provides instructions to pause and assess the AOCs for potentially hazardous atmosphere, then determine the appropriate safety equipment and PPE to use. These instructions are designed to be an engineering control in the process, with the intent that employees are to evaluate potential risks and hazards before continuing their job, if safe to do so. If these instructions were re-written to simply require additional PPE before proceeding with the task, this designed engineering control will be bypassed by giving our employees a false sense of security from additional PPE and could expose our employees to additional risks they may not have been aware of but are identified through the evaluation process.

For additional details on required PPE, PG&E employees are trained to refer to our PPE Matrix for various tasks they are qualified to perform. This PPE Matrix was developed to comply with Cal OSHA’s Title 8 Subchapter 4, “Construction Safety Orders” and Subchapter 7, “General Industry Safety Orders.” References to the PPE Matrix are incorporated in various guidance documents and reminders of the PPE Matrix’s existence are provided in various trainings and meetings like safety summits and grassroots safety teams. According to the PPE matrix, the two tasks that SED references in this NOPV (leak repair and operating Mueller equipment) do not require the use of additional PPE like face shields or goggles (see Figures 3 and 4 below). Therefore, PG&E does not believe we are in violation of §192.605(b)(1).

Rev. 5 - August 2022

Gas Construction, Quality, Qualifications (continued)

Required PPE for this activity	Work Gloves	Hearing Protection	Single Layer FR (See notes)	Electric rated Rubber Gloves with Protectors	Face Shield with Safety Glasses or Goggles	Kneeling Protection (Available)	EH-Rated Boots/Foot wear	Chaps
GAS CONSTRUCTION <small>(continued)</small>								
Digging/ Excavating in Joint Trench (Electric Secondary/ Primary/ G for E)				When working with direct buried lines				
Operating Mueller Equipment (Tapping and Plugging)								
Operating a Demolition Saw					** See Notes			

****NOTES****
Both Mesh and Plastic face shields are acceptable.

Figure 3. PPE requirements for operating Mueller equipment are shown in orange boxes

Gas Construction, Quality, Qualifications (continued)

Required PPE for this activity	Work Gloves	Hearing Protection	Single Layer FR (See notes)	Electric rated Rubber Gloves with Protectors	Face Shield with Safety Glasses or Goggles	Kneeling Protection (Available)	EH-Rated Boots/Footwear	Chaps
GAS CONSTRUCTION <small>(continued)</small>								
Hand Excavation								
Service Splitter								
Bottle Gas (Quick Change Tank)								
Leak Repair								
Valve Change, Meter Sets*						Available		
Purging/ Blowing Down Facilities								
Horizontal Directional Drilling See Manual, page 3, Section 3.2	Electric Gloves available for operator	Available as needed					EH boot or over boot available to HDD operator	
Pneumatic Piercing Tool		Available as needed						
Operating a Pavement Breaker	High Impact Gloves				**Breaking Concrete – See Notes		Metatarsal boots or external metatarsal protection required	
Operating a Clay Spade					Safety glasses only			
Operating Compactor/ Tamper	High Impact Gloves						Metatarsal boots or external metatarsal protection required	

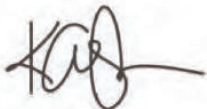
****NOTES****

*Hard hat can be removed for valve change, meter sets if there are no overhead hazards. While breaking concrete, we recommend using wet methods and/or a dust mask to reduce silica dust inhalation risks.

Figure 4. PPE requirements for leak repair are shown in orange boxes

To reinforce the aforementioned engineering control in TD-4150P-202, PG&E held several human performance workshops for our front-line employees in 2024. During these workshops, PG&E leadership discussed the pivotal role human performance plays in achieving optimal outcomes in the work that our employees perform every day and how it impacts our safety culture. At these workshops, employees were trained or reminded of concepts like situational awareness, employing a questioning attitude, and exercising stop work authority. These concepts all reinforce the idea that employees should be mindful of ever-changing risks on the job and speak up when they notice new potential risks that arise. In addition, the workshops equipped employees with safety tools like the Two-Minute Rule, where coworkers simply take two minutes before starting a job to review the immediate work environment to identify hazards and potential hazards that may arise as conditions change or as work progresses. These workshops were well received by our coworkers, and PG&E believes that these workshops remind our employees that it's okay to stop to re-evaluate changing conditions or stop when AOCs are identified to determine a safe course of action to proceed.

Sincerely,



Kristina Castrence
Sr. Director, Gas Regulatory and Risk
Gas Engineering

cc: Hengyao Chen, SED
Dennis Lee, SED
Joel Tran, SED

