

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



March 24, 2020

G20171001-2367- L235 West

Mr. Rodger Schwecke, Senior Vice President
Gas Transmission, Storage & Engineering
Southern California Gas Company
555 West 5th Street, GT21C3
Los Angeles, CA 90013

SUBJECT: Notice of Gas Incident Violations for Southern California Gas Company (SoCalGas)

Dear Mr. Schwecke:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission (Commission) submits the following Notice of Probable Violations (NOPV) for DOT #1192024 reportable incident investigation that occurred on October 1, 2017. SED found SoCalGas responsible for several factors leading to the rupture of Line 235 West. Those identified include:

1. SoCalGas failed to maintain adequate external cathodic protection
2. SoCalGas failed to provide adequate coating during construction
3. SoCalGas failed to have a procedure for investigating transmission leaks
4. SoCalGas failed to control the pressure

This letter serves as notification to you that as a result of SED's investigation, SoCalGas was in violation of the followings rules and regulations:

1. General Order (GO) 112-F, Title 49 of Code of Federal Regulation (CFR), Part 192, §192.465(d) External Corrosion Control states in part:

"Each operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring."

SoCalGas failed to take prompt remedial action to maintain an adequate level of cathodic protection. SoCalGas commissioned the pipeline in 1959 with the cathodic protection (CP) system criteria in accordance to Part 192, Appendix D (1), which requires "a negative (cathodic) voltage of at least 0.85 volts". The pipeline was requalified in 1994 with the cathodic protection system criteria in accordance to Part 192, Appendix D (3), which requires "a minimum negative (cathodic) polarization voltage of 100 millivolts." SoCalGas failed to take prompt remedial action to address the deficiencies found during the operation and maintenance activities. See attached Table 1 showing dates and length of time of deficiencies. The longer an underground system remains without protection, the more the pipe will corrode compromising its integrity. Therefore, SoCalGas is in violation of §192.465(d).

2. State of California Public Utilities Code §451 states in part:

"Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone

facilities, as defined in Section 54.1 of the Civil Code, as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.”

SoCalGas failed to adequately install and maintain coating during construction. Southern California Gas Company, Technical Root Cause Analysis of 30-Inch Diameter Pipeline 235 West Rupture (10/1/17), dated April 27, 2018, states in part:

“The first technical root cause identified for the October 1, 2017, failure is the use of native backfill during initial construction reduced the long-term effectiveness of the corrosion control system of Line 235 West (i.e. coating and cathodic protection) ”.

The installation method and backfill material (soil condition-rocky material) at the time of the initial construction of Line 235 West contributed to the coating damage and degradation of the coating system. This caused a reduction in effectiveness of the external corrosion protection and resulted in gas leaks/rupture. SoCalGas failed to ensure that the furnished backfill material was adequate, free of rocks material or other substance that may cause damage to pipeline coating. This resulted in the reduction of effectiveness of the external corrosion protection. Therefore, SoCalGas is in violation of State of California Public Utilities Code §451.

3. GO 112-F, Reference Title 49 of CFR, Part 192, §192.605(a) Procedural maintenance for operations, maintenance, and emergencies states in part:

“General. 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 one each calendar year. This manual must be prepared before operations of a pipeline system commence.”

SoCalGas did not have a Gas Standard to address leakage investigation on a transmission line. Instead, SoCalGas used its Gas Standard 184.0245, Leakage investigation – Distribution to perform leakage investigation on transmission line 235 West. Therefore, SoCalGas is in violation of §192.605(a) for not having a leakage investigation procedure for transmission lines.

4. GO 112-F, Reference Title 49 of CFR, Part 192, §192.615(a)(6) Emergency Plans states in part:

“Each operator shall establish written procedures to minimize the hazard resulting from gas pipeline emergency. At a minimum, the procedures must provide for the following:

...

(6) Emergency shutdown and pressure reduction in any section of the operator's pipeline system necessary to minimize hazards to life or property.”

On September 25, 2017, SoCalGas performed an aerial leakage survey where both Line 4000 and Line 235 are parallel (20 feet apart) and found a gas leak indication. On September 29, 2017, SoCalGas excavated a section of Line 4000 and did not find any gas leaks. SoCalGas shifted its attention to Line 235 West (parallel to Line 4000) and performed a leakage investigation using its Gas Standard 184.0245, Leakage investigation – Distribution. At this point, SoCalGas knew that the source of the gas leak was Line 235 West. While SoCalGas was investigating to determine the exact location of the gas leak, the pressure on Line 235 was increasing. This exacerbated the location of the gas leak and changed its behavior and resulted in a rupture of Line 235 West. See

attached Table 2 for the dates and pressure readings. SoCalGas did not react to the gas leak situation or reduce the pressure on Line 235 West in a timely manner. Instead, SoCalGas allowed the pressure on Line 235 to continue to increase until the pipeline ruptured. The failure of SoCalGas' action to this hazardous circumstance compromised the safety of its employees, the general public, and the environment. SED found that none of the SoCalGas' Gas Standards (applicable at the time of the incident) addressed the shutdown or pressure reduction requirement to prevent pipeline rupture caused by pressure increase after a gas leak indication on a transmission pipe. SoCalGas crew were exposed to the imminent danger at the time of the pipeline rupture. Therefore, SoCalGas is in violation of §192.615 (a) (6) for failing to establish and follow adequate written emergency response procedures.

Please provide a written response within 30 days of the date of this letter indicating the measures taken by SoCalGas to address the violations. Pursuant to Commission Decision 16-09-055, SED staff has the authority to issue citations for each violation found.

Thank you for your cooperation in this investigation. If you have any questions, contact Mahmoud (Steve) Intably at (213) 576-7016 or by email: mai@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Terence Eng", with a long horizontal flourish extending to the right.

Terence Eng, P.E.
Program Manager
Gas Safety and Reliability Branch
Safety and Enforcement Division

cc: Troy Bauer, SoCalGas (TBauer@socalgas.com)
Dan Rendler, SoCalGas (DRendler@socalgas.com)
Kan-Wai Tong, SED (KWT@cpuc.ca.gov)
Claudia Almengor, SED (CA2@cpuc.ca.gov)

TABLE 1

Test Station MP Start	Test Station MP End	Date First Identified	Calculated Days out-of-Tolerance	Actual CP Reading	Required CP
128.35	128.35	2/12/2005	769	0.3610	0.567
128.35	128.35	3/27/2010	712	0.3750	0.567
128.35	128.35	6/24/2013	674	0.4650	0.567
128.35	128.35	7/14/2015	1081	0.4460	0.567
128.73	128.73	2/12/2005	395	0.3890	0.470
128.73	128.73	3/27/2010	712	0.4210	0.470
129.06	129.06	3/27/2010	712	0.4508	0.529
130.62	130.62	2/12/2005	395	0.4450	0.481
130.62	130.62	3/23/2011	359	0.4750	0.481
130.62	130.62	7/25/2014	343	0.4200	0.481

TABLE 2

Date	Highest pressure	Lowest pressure
Sept 25, 2017	763.75 psig	707.44 psig
Sept 26, 2017	754.36 psig	711.72 psig
Sept 27, 2017	732.34 psig	670.26 psig
Sept 28, 2017	771.89 psig	712.69 psig
Sept 29, 2017	748.09 psig	706.36 psig
Sept 30, 2017	826.47 psig	729.98 psig
Oct 1, 2017	907.00 psig	717.64 psig