

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



January 31, 2020

Jerry Schmitz  
Vice President, Engineering  
Southwest Gas Corporation  
P.O. Box 98510, LVA-581  
Las Vegas, NV 89193-8510

GI-2019-09-SWG-32

**Subject: SED's Closure Letter for General Order (G.O.) 112-F Inspection of Southwest Gas Company's (SWG) Gas Facilities in Southern California Division (covering Barstow, Victorville and Big Bear areas)**

Dear Mr. Schmitz:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission reviewed Southwest Gas Company's (SWG) response letter dated December 20, 2019 for the findings identified during the General Order 112-F inspection of SWG's facilities in Southern California Division. The inspection was conducted between September 23 - October 4, 2019.

Included is SED's evaluation of SWG's response taken for each identified Violation and Area of Concern/ Recommendation.

This letter serves as the official closure of this 2019 GO 112-F Inspection and any matters that are being recommended for enforcement will be processed through the Commission's Citation Program or a formal proceeding.

Thank you for your cooperation in this inspection. If you have any questions, please contact Sikandar Khatri at (415) 703-2565 or by email at [Sikandar.Khatri@cpuc.ca.gov](mailto:Sikandar.Khatri@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Dennis Lee".

Dennis Lee, P.E.  
Program and Project Supervisor  
Gas Safety and Reliability Branch  
Safety and Enforcement Division

CC: Laurie Brown, SWG  
Claudia Almengor, SED

# Summary of Inspection Findings

## (Transmission)

**Dates of Inspection:** September 23-27 and September 30-October 4, 2019

**Operator:** SOUTHWEST GAS CORP

**Operator ID:** 18536 (primary)

**Inspection Systems:** Transmission (Southern California Division)

**Assets (Unit IDs):** SWG - Transmission Victorville (88674)

**System Type:** GT

**Inspection Name:** SWG - Transmission Victorville

**Lead Inspector:** Sikandar Khatri

**Operator Representative:** Laurie Brown

## Unsatisfactory Results

### A. Maintenance and Operations: Gas Pipeline Overpressure Protection (MO.GMOPP)

**Question Text** Does the process include procedures for inspecting and testing each pressure limiting station, relief device, and pressure regulating station and their equipment?

**References** 192.605(b)(1) (192.739(a), 192.739(b))

**Assets Covered** SWG - Transmission Victorville (88674 (91))

**Issue Summary** SWG has a "Pressure Regulation Procedure", effective date of January 31, 2018, in their Operations Manual. During the field inspection on October 1, 2019, SED observed a Regulator Station located at the southerly intersection of Las Flores Street and Summit Valley Road, Hesperia, (Facility ID 12TS15007095) where the established Pressure Regulation Procedure was not being followed.

When questioned, the SWG supervisor/manager provided the following explanation: Following the established procedure may cause catastrophic results of natural gas flow being reversed due to a separate bypass for the working regulator and monitor. Therefore, a non-established modified guideline is used for routine maintenance of this regulator station. SWG claims that this station is scheduled to be reconfigured into an above ground station with a filter in the near future.

Therefore, SED found SWG in violation of G.O. 112-F, Reference Title 49 CFR, Part 192, §192.605(b)(1) for failing to have a written procedure for operating, maintaining, and repairing, for this regulator station. Therefore, the written procedure must be established until the planned reconfiguration of this station is done, and thereafter appropriate procedure must also be available.

**SWG's Response:**

As a point of clarification, the Company has a written procedure for operating, maintaining and repairing regulator stations. Further, the Company's procedure acknowledges that certain steps may not be applicable to every regulator station configuration. The regulator station at Las Flores Street and Summit Valley Road in Hesperia is one such configuration. Notwithstanding, Southwest Gas agrees to develop a site-specific procedure for this facility, which will be kept and maintained in the District, and will be made available to the affected field personnel. Southwest Gas anticipates the site-specific procedure will be effective in the first quarter of 2020, in advance of the next required inspection.

**SED's Conclusion:**

SED has reviewed the response from SWG and has opted not to impose a fine or penalty at this time.

# Summary of Inspection Findings (Distribution)

**Dates of Inspection:** September 23-27 and September 30-October 4, 2019

**Operator:** SOUTHWEST GAS CORP

**Operator ID:** 18536 (primary)

**Inspection Systems:** Distribution (Southern California Division)

**Assets (Unit IDs):** Dist (Barstow, Victorville, Big Bear) (89837)

**System Type:** GD

**Inspection Name:** SWG – Distribution Victorville

**Lead Inspector:** Sikandar Khatri

**Operator Representative:** Laurie Brown

## Unsatisfactory Results

**No Findings.**

## Concerns

### A. Records: Operations And Maintenance (PRR.OM)

Question Text Do records indicate distribution patrolling was conducted as required?

References 192.603(b) (192.721(a), 192.721(b))

Assets Covered Dist (Barstow, Victorville, Big Bear) (89837 (32))

Issue Summary The distributions patrolling records were reviewed and no issue was found, but during SED bridge and span patrolling field visit located on Bear Valley Road at Mojave River on September 30, 2019, it was observed that one of pads attached to the pipe while resting on roller type support was rotated from original location and the pad is not protecting the pipe and the coating against physical surface damage.

In a follow-up provided, SWG reported that it is scheduled for remediation by end of November 2019 and a photo will be provided once completed.

#### **SWG's Response:**

Distribution patrolling is conducted as required, currently twice annually. The observed pad attached to the pipe, an adhered Fiberglass Reinforced Plastic (FRP) shield, did not rotate from its original installation location as initially suspected and therefore, Southwest Gas no longer believes remediation is necessary. The shield, used to ensure integrity of the pipe wrap against potential metal contact, was originally installed on that section of the pipe in the observed orientation due to the pipe touching the metal hoop containment bar in that location. For the span of the bridge, the pipe rests on non-conductive rollers and is not

locked down to the support brackets but is contained within metal hoop bars to keep the pipe generally located within the bracket support system.

Southwest Gas notes that at some of the other pipe support bracket locations, the FRP shields are oriented off the 180-degree position to accommodate the pipe meeting the metal hoop bar and maintain integrity of the pipe wrap. At the location in question, Southwest Gas confirmed the pipe wrap is intact and verified satisfactory cathodic protection (CP) reads for the pipe span segment.

Southwest Gas will increase patrolling of the span to four times per year to monitor pipe wrap integrity, pipe orientation at each support bracket, and CP reads to ensure the integrity of the pipe.

**SED's Conclusion:**

SED has reviewed the response and accepted the same.

## **B. Pipeline Field Inspection: Pipeline Inspection (Field) (FR.FIELDPIPE)**

**Question Text** Are meters and service regulators being located consistent with the requirements of 192.353?

**References** 192.351 (192.353(a), 192.353(b), 192.353(c), 192.353(d))

**Assets Covered** Dist (Barstow, Victorville, Big Bear) (89837 (32))

**Issue Summary** During the field inspection on September 25, 2019, SED observed a meter set assembly located at 152 Maple Lane, Big Bear, (Facility ID 13DOL0000003) in direct contact with natural earth/debris. SED recommended that SWG take corrective action to clear the debris. SWG took corrective action by removing rock and dirt revealing the meter set assembly is set on a cement block. SWG provided a photo on September 26, 2019, documenting this corrective action.

During the field inspection on September 30, 2019, SED observed a meter set assembly located at 13238 Sandia Circle, Victorville, (Leak Survey ID 12L3Y0001060) not protected from vehicular damage. SED recommended that SWG take corrective measures to protect the meter set assembly from vehicular damage. SWG provided a follow-up that it has been remediated.

During the field inspection on September 30, 2019, SED observed a meter set assembly located at 13228 Sandia Circle, Victorville, (Leak Survey ID 12L3Y0001060) not protected from vehicular damage. SED recommended that SWG take corrective measures to protect the meter set assembly from vehicular damage. SWG provided a follow-up that it has been remediated.

During the field inspection on September 30, 2019, SED observed a meter set assembly located at 13235 Eastview Lane, Victorville, (Leak Survey ID 12L3Y0001060) not protected from vehicular damage. SED recommended that SWG take corrective measures to protect the meter set assembly from vehicular damage. SWG provided a follow-up that it has been remediated.

During the field inspection on September 30, 2019, SED observed a meter set assembly located at 13225 Eastview Lane, Victorville, (Leak Survey ID 12L3Y0001060) not protected from vehicular damage. SED recommended that SWG take corrective measures to protect the meter set assembly from vehicular damage. SWG reassessed it and determined that a meter guard is not required due to inadequate space for a vehicle to attempt entry.

**SWG's Response:**

Southwest Gas confirms the remedial actions taken, and the reassessment of the meter set assembly at 13225 Eastview Lane, Victorville, as described by SED above.

**SED's Conclusion:**

SED has reviewed the response.

**Question Text** Are meters and service regulators being protected from damage consistent with the requirements of 192.355?

**References** 192.351 (192.355(a), 192.355(b), 192.355(c))

**Assets Covered** Dist (Barstow, Victorville, Big Bear) (89837 (32))

**Issue Summary** During the field inspection on September 30, 2019, SED observed a service regulator located at 13245 Eastview Lane, Victorville, (Leak Survey ID 12L3Y0001060) with a missing vent screen. SED recommended that SWG take corrective measures to address the issue. In a follow-up SWG confirmed that it has been remediated.

During the field inspection on September 30, 2019, SED observed a service regulator located at 13225 Eastview Lane, Victorville, (Leak Survey ID 12L3Y0001060) with a regulator vent very close to the building vent. SED recommended that SWG take corrective measures to ensure the regulator vent be located at a place where gas from the vent can escape freely into the atmosphere and away from any opening into the building. SWG took corrective action by directing the regulator vent away from the building vent. SWG provided a photo on October 4, 2019, documenting this corrective action.

**SWG's Response:**

Southwest Gas confirms the remedial actions, as described by SED above.

**SED's Conclusion:**

SED has reviewed the response.

**Question Text** Are meters and service regulators being installed consistent with the requirements of 192.357?

**References** 192.351 (192.357(a), 192.357(b), 192.357(c), 192.357(d))

**Assets Covered** Dist (Barstow, Victorville, Big Bear) (89837 (32))

**Issue Summary** During the field inspection on September 30, 2019, SED observed a meter set assembly located at 13238 Sandia Circle, Victorville, (Leak Survey ID 12L3Y0001060) with a bent riser increasing anticipated stresses on the connecting piping and meter. SED recommended that SWG take corrective measures to minimize the stresses on the connecting piping and meter. In a follow-up SWG reported that it was assessed and determined not to be bent, it was concreted in a slightly leaning position. No further follow up action is required.

**SWG's Response:**

Southwest Gas confirms the remedial actions, as described by SED above.

**SED's Conclusion:**

SED has reviewed the response.

**Question Text** Is sampling of combustible gases adequate using an instrument capable of determining the percentage of gas in air at which it becomes readily detectable?

**References** 192.625(a) (192.625(c), 192.625(d), 192.625(e), 192.625(f))

**Assets Covered** Dist (Barstow, Victorville, Big Bear) (89837 (32))

**Issue Summary** SWG has an "Odorization Tools and Equipment" Procedure, effective date of July 31, 2018, in their Operations Manual. During the field inspection on September 25, 2019, SED observed an odorant test conducted at 152 Maple Lane, Victorville, (Facility ID 13DOL0000003) and a second test on October 3, 2019, conducted at 2700 Barstow Road, Barstow, (Facility ID

11DOL0000001).

"Odorization Tools and Equipment" Procedure, Section 3.3 is for the Heath Odorator Odorometer purchased after 2004 (used in these odorant tests). Section 3.3.2 requires the modification of values to reflect the change in air density due to increased elevation. Step 6 of Section 3.3.2 provides a table entitled, "Actual % Natural Gas (Methane) Correction Chart for Increased Elevation". Actual % gas values must be interpolated from the table. There is an example of interpolation following the table. In both cases, the technician did not interpolate actual % gas values correctly. It should be noted that the other steps (Step 1, 2, 3, 4, and 5) were performed correctly.

SED recommends that SWG take corrective measures to retrain employees in the use of "Odorization Tools and Equipment" Procedure, with specific attention to interpolating values in Section 3.3.2, Step 6.

**SWG's Response:**

Southwest Gas agrees with SED' s recommendation and will complete refresher training on the use of the odorization test procedure, with attention to interpolating values, for the Southern California Division technicians by December 31, 2019. In addition, the table of values in section 3.3.2, utilized in Step 6, will be visually enhanced to improve the ease of use based on feedback received from the technician. The update will be published as part of the next manual release, currently scheduled for June 2020.

**SED's Conclusion:**

SED has reviewed the response and accepted the same.

Question Text Are line markers placed and maintained as required?

References 192.707(a) (192.707(b), 192.707(d), CGA Best Practices, v4.0, Practice 2-5, CGA Best Practices, v4.0, Practice 4-20)

Assets Covered Dist (Barstow, Victorville, Big Bear) (89837 (32))

Issue Summary During the field inspection on September 24, 2019, SED observed a line marker located at the east intersection of First Street and Holcomb Valley Road, north of California Highway 18, North Shore Drive, San Bernardino County, (Facility ID 13DCP0000073) with wording which was not legible. SED recommended that SWG take corrective action to replace the marker. SWG took corrective action by creating Maintenance Work Order WR#3923141, to replace the line marker. SWG provided a photo on September 26, 2019, documenting the replaced line marker.

During the field inspection on September 30, 2019, SED observed a line marker located on the northwesterly side of Sixth Street between D Street and E Street, behind the building at 16838 D Street, Victorville, (Facility ID 12DCP0000086) with wording which was not legible. SED recommends that SWG take corrective action to replace the marker. SWG took corrective action by replacing the line marker. SWG provided a photo on October 4, 2019, documenting the replaced line marker.

**SWG's Response:**

Southwest Gas confirms the remedial actions, as described by SED above.

**SED's Conclusion:**

SED has reviewed the response.

Question Text Are field or bench tests or inspections of regulating stations, pressure limiting stations or relief devices adequate?

References 192.739(a) (192.739(b))

Assets Covered Dist (Barstow, Victorville, Big Bear) (89837 (32))

#### Issue Summary

The field tests of regulating stations and pressure limiting stations are done according to Southwest Gas (SWG) procedures. However, it was observed that the inlet and outlet fire valves are not exercised before doing the regulator maintenance. This applies to both Transmission and Distribution regulator stations. It is a safety concern since if some Abnormal Operating Conditions (AOCs) occur during the regulator maintenance and the need arises to turn off gas at the inlet/outlet valves, there is possibility that these may not be operable. SED understands that these valves are maintained by different crew, however, the schedule of exercising the valves may be different from that for the regulating stations. This will create a safety hazard for the SWG employees and public. SWG should take appropriate action to address this.

Two possible solutions are either allowing crew who does regulator station maintenance to exercise fire valves also at the same station (SED understands that they hold OQs for emergency maintenance of the fire valves), and another option is that if two different crews are used, the schedule of maintenance of fire valves and regulator stations be aligned so that these are done at the same time.

#### **SWG's Response:**

Southwest Gas' Measurement & Control (M&C) technicians are qualified to operate regulator station and inlet and outlet valves (fire valves). They are also qualified in emergency response and can cycle the valves if called upon to do so in an emergency. M&C Technicians do not exercise inlet and outlet block valves during regulator station maintenance as valve maintenance is performed by the Company's Construction Technicians. Southwest Gas structures its annual valve maintenance activities under the Construction Department for all underground valves, essential valves (including regulator station inlet and outlet block valves) and service line shut-off valves.

#### **SED's Conclusion:**

SED has reviewed the response and understands SWG's policy. However, for safety reasons, SED emphasizes the need for operating inlet and outlet fire valve together with maintenance of regulator station. The concern is that, in case of emergency during the regulator station maintenance, if the crew want to turn off these valves, these may be inoperable because something might have occurred between the time these valves were exercised and the maintenance of regulator station. Therefore, either of the two options mentioned earlier will be helpful to avoid such unsafe conditions; specially for second option you can still use two different crews but just align the schedule for maintenance of regulator stations and related fire valves. SED would let SWG to make a decision based on sound judgement considering safety as a priority; SED will get an update on this during the next audit.