



**Alex Hughes**  
Pipeline Safety & Risk Mitigation Manager  
1775 Sampson Ave – ML8064  
Corona, CA 92879  
949-697-2539  
Ahughes@SoCalGas.com

May 6, 2022

Mr. Terence Eng, P.E.  
Program Manager, Gas Safety and Reliability Branch  
Safety and Enforcement Division  
California Public Utilities Commission  
505 Van Ness Ave, 2nd Floor  
San Francisco, CA 94102

Dear Mr. Eng:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission conducted a **General Order (G.O.) 112-F comprehensive and full review and inspection of San Diego Gas and Electric Company (SDG&E)'s Operation and Maintenance Procedures and Emergency Plan (OME Procedures Inspection)** on January 10 through 14, 2022. SED staff reviewed SoCalGas' written OME procedures pursuant to G.O. 112-F, Reference Title 49, Code of Federal Regulations (CFR), Parts 191 & 192, and used the Pipeline and Hazardous Materials Safety Administration's (PHMSA) Inspection Assistance (IA) as a reference guide to conduct this inspection.

SED staff identified eight (10) areas of concern. Attached are SDG&E' written responses.

Please contact Alex Hughes at (949) 697-2539 if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Alex Hughes", is written over a light blue rectangular background.

Alex Hughes  
Pipeline Safety and Compliance Manager

CC:

Sann Naing, SED/GSRB  
Gwen Marelli, SoCalGas  
Kan Wai Tong, SED/GSRB  
Claudia Almengor, SED/GSRB  
Matthewson Epuna, SED/GSRB

**2022 SDG&E Operations and Maintenance Audit**  
**1/10/2022 to 1/21/2022**

**Concern(s)**

**1. Design and Construction: Construction Welding Procedures (DC.WELDPROCEDURE)**

Question Title, ID: Welding Procedures, DC.WELDPROCEDURE.WELD.P

Question: 1. Does the operator have written specifications requiring qualified welding procedures in accordance with 192.225?

References: 192.225

Assets Covered: SDG&E's Main Office Inspection - Transmission (88389 (53A))

Issue Summary: SDG&E Gas Standard (GS) G7803 -General Welding Requirements requires welding on its pipelines to be done by qualified welders using welding procedure specifications (WPS) qualified by SDG&E. However, Section 1.2 of the standard states "API 1104 is typically used to qualify welders and welding procedures for pipeline applications where there is a low exposure to cycling or thermal stresses." On January 13, 2022, SED held a meeting with SDG&E's process owner of this GS, and learned that while the verbiage was accurate, SDG&E's WPSs are qualified by API 1104 as a rule. SED thus recommends SDG&E to strengthen the language in GS G7803 to precisely cite its usage of API 1104 or any other industry standard approved by 49 CFR Part 192 and its particular process to qualify WPSs.

On February 8, 2022, SDG&E provided additional information via an email that stated the GS G7803 is currently undergoing extensive revisions and will review SED recommendations. SED requests SDG&E to elaborate upon its corrective action(s) and outline the key points of its revisions if the updated version has not published.

**SDG&E Response:**

SDG&E GS G7803 Section 1.2 states that API 1104 procedures are "typically" used. CFR Part 192.225 allows for the use of procedures qualified under API 1104. Most of the time, SoCalGas utilizes procedures under API 1104. However, it also uses procedures qualified under ASME Section IX (procedures for mechanized orbital welding). Welding procedures are qualified in accordance with API 1104 or ASME Section IX, as applicable, by destructive testing (tensile tests, nick breaks, and bend tests).

**SDG&E Corrective Action:**

The gas standard is undergoing revisions will be published by October 1st, 2022. Revisions will be made to provide clarification of welding instructions for field personnel, as well as inspection language in accordance with new company standard requirements. A sentence will be added in Section 1.2 to indicate that the only allowable ASME procedures are the mechanized welding procedures mentioned above.

## 2. Design and Construction: Design of Pipe (DC.DP)

Question Title, ID: Steel Pipe Design Factor, DC.DP.PIPEDESFACTOR.P

Question: 7. Does the operator have written procedures for determining the Design Factor to be used for steel pipe as required by 192.111?

References: 192.111 (192.103, 192.105, 192.107, 192.109, 192.112, 192.115, 192.121, 192.123, 192.125, 192.303, 192.305, 192.307)

Assets Covered: SDG&E's Main Office Inspection - Transmission (88389 (53A))

Issue Summary: Per review of SDG&E GS G9105 – Design Factors for Steel Piping Systems, SED identified a table within Section 4.2 of the standard (Table 1), which had duplicate lines for "uncased crossing of railroad right of way". The first line referring to this scenario, second in order from the top, had unadjusted design factor values for Class 1 and 2 locations ("0.72", "0.60"). The second line with the correct values can be found on the seventh row (second from the bottom). SDG&E stated the table values will be revised by removing the first entry.

During SED's follow-up correspondence with the SoCalGas' Pipeline Safety Compliance team, SDG&E determined that the duplicate line had been present since 1998 which was when the first Document Library version of the Gas Standard was uploaded digitally. Further review found the duplicate line had been present in GS G9105 since 1992. The current Document Library in use was created in 1998. While this error is present in the current GS, SDG&E stated that the DDS Manager planning tool references the correct derating values during pipe design and construction activities and provided supporting evidence. According to SDG&E this tool was implemented in the mid-1990s. In addition to the DDS Manager, SDG&E also stated that Gas Engineering currently reviews and approves pipeline installations for Part 192 compliance.

SoCalGas completed its revision and removed the erroneous derating factor as of February 2, 2022.

SED accepts SoCalGas' proposed corrective actions. However, SED recommends notifying SDG&E's Integrity Management and other appropriate work groups the possible impact on uncased Class 1 and 2 pipeline crossings with railroad right of way due to this erroneous derating factor in the previous versions of this gas standard. In addition, SED may revisit this matter in subsequent inspections.

### **SDG&E Response:**

The gas standard (GS G9105) was revised to remove the row with the editorial error. The editorial revision was completed on February 2nd, 2022. As previously stated, the gas standard still contained the correct design factors for "*Uncased crossing of railroad right-of-way*" despite this editorial error. This minor error would not have impacted the design and installation of uncased pipeline railroad crossings in Class 1 and 2 locations.

As recommended by SED, Integrity Management has been notified of this editorial error.

Multiple business controls were in place to verify that the proper design factors were being used prior to, and during, the period that this editorial error existed. These include the

following design policies and procedures:

### **1. Design Data Sheet Manager**

The Design Data Sheet (DDS) Manager software program was used since the mid-1990s as a planning tool for pressure tests of pipeline installations to verify Part 192 code compliance and would have identified proper application of the Design Factors for crossings. The program contains information from relevant gas standards, including G9105, to assist in the planning of pipeline projects. The program automatically assigns the correct design factors from G9105 when an uncased pipeline crossing installation in a railroad right-of-way is selected for a specific Class Location.

### **2. Engineering review and approval of Design Data Sheets for projects**

Pipeline Engineering reviews and approves railroad crossing designs prior to the project going into construction. This review includes verifying that the design pressure of the components considering Class Location meets the DL/MAOP of the pipeline system. As shown in the Company Form Instruction 3222 from 1975, this review and approval practice has been in place for over 46 years.

### **3. Loading evaluations with PC-Pisces**

Piping projects that cross a railroad required a review by Pipeline Engineering. The review includes verifying that the proposed depth of cover for the pipeline is sufficient for the anticipated railroad loading. SoCalGas has utilized the PC-Pisces program, which was created prior to 1992 and evaluates the railroad loading over a pipeline, to confirm the combined loading from the railroad, soil, and internal pressure are within the allowable stress limits.

Based on the above assessments, the railroad crossings should not have presented any safety concerns due to this previous editorial error in the Gas Standards.

### **SDG&E Corrective Action:**

As noted above the gas standard (GS G9105) was revised to remove the row with the editorial error. The editorial revision was completed on February 2nd, 2022.

## **3. Emergency Preparedness and Response: Emergency Response (EP.ERG)**

1. Question Title, ID: Emergency Plan Review, EP.ERG.REVIEW.P

Question: 1. Does the process include a requirement to review the manual at intervals not exceeding 15 months, but at least once each calendar year?

References: 192.605(a)

Assets Covered: SDG&E's Main Office Inspection - Transmission (88389 (53A))

Issue Summary: a.

Title 49 CFR Part 192, §192.605(a) 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 once each calendar year....”*

SDG&E’s Gas Emergency Response Plan (ER-1SD), Section 8. Plan Maintenance states:

*“The documents and Company Procedures referenced in Appendix A provided the detailed steps that are followed by Company personnel to meet emergency response requirements that are reviewed each calendar year as part of the Operations and Maintenance plan review.”*

SED recommends SDG&E revise this section to be consistent with the language stated in the regulation including *“at intervals not exceeding 15 months, but at least once each calendar year”* to avoid potential misleading and misunderstanding, and to be precise with code language.

On February 8, 2022, SDG&E provided additional information via an email that states it has republished the ER-1SD to include *“at intervals not exceeding 15 months, but at least once each calendar year”* and provided the revised version. SED has reviewed updated publication and accepts the corrective action that it has articulated and implemented.

SDG&E stated that its GS G8221 - Gas Incident Notification was cancelled, effective 10/19/2020 because processes for incident notifications and reporting is outlined in other applicable standards SDDSD1020 - Message Center Reporting (MCR) & G8222 - Pipeline Incident Reports to CPUC and PHMSA; National Transportation Safety Board (NTSB) Accident Investigation.

However, G8221 was referenced in the following current gas standards:

1. G8204 - Emergency Response Procedures for Gas Incidents – Distribution - Last O&M review on 8/22/2021
2. G8202 - Field Guidelines - Emergency Incident Distribution / Customer Service – Last O&M review on 8/22/2021
3. Gas Emergency Response Plan (ER-1SD) - Last O&M review on 10/5/2021

SDG&E must ensure that during its O&M annual reviews, the gas standard procedures are updated as needed providing correct and up-to-date references and information to specific procedures so that its operation locations where operations and maintenance activities are conducted will follow or reference up-to-date procedures when their pipeline system operations and maintenance activities commence.

**SDG&E Response:**

SDG&E has revised the gas standard ER-1SD to remove the reference to the canceled gas standard G8221 and replaced it with a reference to applicable active gas standard G8222. The editorial revision was completed on January 30<sup>th</sup>, 2022. SDG&E will also update the aforementioned standards, G8202 and G8404, to remove a reference to the canceled document G8221 and provide correct, up-to-date references.

**SDG&E Corrective Action:**

SDG&E is in the process of implementing a new document library system which is slated to go live at the end of 2022. When a gas standard is canceled, this new library system will notify all impacted responsible persons for every gas standard with reference to a canceled document.

2. Question Title, ID: Emergency Response, EP.ERG.READINESS.P

Question: 9. Does the process include procedures for ensuring the availability of personnel, equipment, tools, and materials as needed at the scene of an emergency?

References: 192.615(a) (192.615(a)(4))

Assets Covered: SDG&E's Main Office Inspection - Transmission (88389 (53A))

Issue Summary: Title 49 CFR Part 192, §192.615 Emergency plans states in part:

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

*(1)...(4) The availability of personnel, equipment, tools, and materials, as needed at the scene of an emergency.”*

SDG&E stated that its GS G8206- Emergency Materials List for Gas Incidents addresses the availability of equipment and tools during emergency response as well. SDG&E also stated that the supporting common document in the OEM that also addresses the availability of equipment and tools is document 06.050-COM - Emergency Materials - Pico Rivera.

SED reviewed both aforementioned documents and found that current verbiage in both documents did not align with §192.615(a)(4) to include equipment and tools as well. The standards mostly address materials, but not the procedures for availability of equipment and tools. SED recommends SDG&E to review its standards that address §192.615(a)(4) and revise them to address the items in the language as prescribed in the code.

**SDG&E Response:**

To meet code section requirements, SDG&E currently has the following procedures to address the availability of equipment, tools, and materials, as needed at the scene of an emergency: G8206 - *Emergency Materials List for Gas Incidents*, 06.010-SD – *Emergency Equipment*, and 06.020-SD – *Pressure Control Equipment*. These standards include a list of equipment, tools, and materials that would be utilized in emergency response.

**SDG&E Corrective Action:**

SDG&E will update its Gas Standard, ER-1SD - *Gas Emergency Response Plan* to add a reference to the aforementioned documents which provide guidance on tools and equipment available to support emergency response.

**4. Maintenance and Operations: Gas Pipeline MAOP (MO.GOMAOP)**

Question Title, ID: Normal Operations and Maintenance Procedures, MO.GOMAOP.MAOPLIMIT.P

Question: 2. Does the process include requirements for starting up and shutting down any part of the pipeline in a manner to assure operation with the MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices?

References: 192.605(a) (192.605(b)(5))

Assets Covered: SDG&E’s Main Office Inspection - Transmission (88389 (53A))

Issue Summary: SDG&E GS G8147 Planning Shutdowns on High Pressure Gas Facilities lists the Title 49 CFR Part 192, §192.605(b)(5) to be the code that impacted the standard (i.e. the standard satisfies this code section).

§192.605 Procedural manual for operations, maintenance, and emergencies states in part:

*“... (b) Maintenance and normal operations. 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)... (5) Starting up and shutting down any part of the pipeline in a manner designed to assure operation within the MAOP limits*

*prescribed by this part, plus the build-up allowed for operation of pressure-limiting and control devices.”*

GS G8147 does not explicitly mention MAOP limits as prescribed by code even though the standard implies the safe shutting down operations for completion. SDG&E should amend this procedure to include the language prescribed by this code to explicitly state that, during starting up and shutting down, the pressure of the pipeline stays within the MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices if it does not reference any other procedures within its Operations and Maintenance Plan (O&M Plan) that meet these code section requirements.

On February 8, 2022, SDG&E provided additional information via an email that stated the G8147 will be revised and republished on May 1, 2022. SED requests SDG&E to elaborate upon its corrective action(s) and outline the key points of its revisions if the updated version has not been published.

**SDG&E Response:**

To meet code section requirements, SDG&E will amend GS G8147 to explicitly state that during start up and shut down operations the pressure of the pipeline must stay within MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices.

**SDG&E Corrective Action:**

SDG&E updated sections 4.3.4 and 4.3.5 (see language below) of GS G8147 to incorporate the pipeline start-up and shutdown requirements from Title 49 CFR Part 192, §192.605(b)(5). This update was published on May 5<sup>th</sup>, 2022 in accordance with SDG&E publishing requirements.

The update is as follows:

*“Procedure for starting up or shutdown of any part of the pipeline in a manner to assure operation within the MAOP limits plus the build-up allowed for operation of pressure-limiting and control devices.”*

**5. Assessment and Repair: Repair Criteria (O and M) (AR.RCOM) & Time-Dependent Threats: Internal Corrosion - Preventive Measures (TD.ICP)**

Question Title, ID: Repair of Corroded Pipe, AR.RCOM.REPAIR.P (also presented in: TD.ICP)

Question: 1. Does the process give sufficient guidance for personnel to repair or replace pipe that has corroded to an extent that there is no longer sufficient remaining strength in the pipe wall?

References: 192.605(b)(2) (192.487(a), 192.487(b), 192.489(a), 192.489(b), 192.491(c))



Assets Covered: SDG&E's Main Office Inspection - Distribution (88390 (53B))

Issue Summary: SDG&E GS G8023 - Predicted Failure Pressure Analysis for Corrosion Metal Loss", Section 1.6 states, "distribution pipe ... where uniform corrosion or closely grouped corrosion pitting results in large areas of pipe where the remaining wall thickness is less than 30% nominal wall, should be repaired or replaced". Section 3.9 defines "should" as "a recommendation that is desirable to follow whenever possible. Deviating from the recommendation does not require documentation or approval." and Section 3.8 defines "shall" as "a requirement that must be followed or its exception must be approved and documented in accordance with Section 5 of this standard."

§192.487 states in part:

“...distribution line pipe with a remaining wall thickness less than that required for the MAOP of the pipeline, or a remaining wall thickness less than 30 percent of the nominal wall thickness, must be replaced. However, corroded pipe may be repaired by a method that reliable engineering tests and analyses show can permanently restore the serviceability of the pipe.”

SED interprets the particular verbiage, particularly between "should" and "shall", to be less stringent than Part 192 requirements.

On January 21 and February 8, 2022, SDG&E provided additional information via emails that stated the GS G8023 is not applicable for distribution pipelines with a remaining wall thickness less than 30% of the nominal wall and that Section 1.6 will be revised. SDG&E also stated that the reader will be directed to GS G8021- Inspection of Exposed Pipe for remediation guidance.

SED has reviewed SDG&E GS G8021, Section 4.3.1.5.1, which States, "Replace each segment of generally corroded pipe when the depth of the corrosion 70% or more of the nominal wall thickness. See GS G8146, *Replacement Criteria for Distribution Mains and Services*.”

SED accepts SDG&E's corrective plan that it has articulated. However, SED may review the records of the corrective action during future inspections.

**SDG&E Response:** No response required.

**SDG&E Corrective Action:** No response required.

## 6. Design and Construction: Construction Welding Procedures (DC. WELD PROCEDURE)

### 1. Question Title, ID: Welding Procedures, DC. WELD PROCEDURE.WELD.P

Question: 1. Does the process require welding to be performed by qualified welders using qualified welding procedures and are welding procedures and qualifying tests required to be recorded in detail?

References: 192.225(a) (192.225(b))

Assets Covered: SDG&E's Main Office Inspection - Distribution (88390 (53B))

Issue Summary: SDG&E GS G7803 - General Welding Requirements requires welding on its pipeline to be done by qualified welders using welding procedure specifications (WPS) qualified by SDG&E. However, Section 1.2 of the standard states "API 1104 is typically used to qualify welders and welding procedures for pipeline applications where there is a low exposure to cycling or thermal stresses." On January 13, 2022, SED held a meeting with SDG&E's process owner of this GS, and learned that while the verbiage was accurate, SDG&E's WPSs are qualified by API 1104 as a rule. SED thus recommends SDG&E to strengthen the language in GS G7803 to precisely cite its usage of API 1104 or any other industry standard approved by 49 CFR Part 192 and its particular process to qualify WPSs.

On February 8, 2022, SDG&E provided additional information via an email that stated the GS G7803 is currently undergoing extensive revisions and will review SED recommendations. SED requests SDG&E to elaborate upon its corrective action(s) and outline the key points of its revisions if the updated version has not published.

#### **SDG&E Response:**

SDG&E GS G7803 Section 1.2 states that API 1104 procedures are "typically" used. CFR Part 192.225 allows for the use of procedures qualified under API 1104. Most of the time, SoCalGas utilizes procedures under API 1104. However, it also uses procedures qualified under ASME Section IX (procedures for mechanized orbital welding). Welding procedures are qualified in accordance with API 1104 or ASME Section IX, as applicable, by destructive testing (tensile tests, nick breaks, and bend tests).

#### **SDG&E Corrective Action:**

The gas standard is undergoing revisions and will be published by October 1st, 2022. Revisions will be made to provide clarification of welding instructions for field personnel, as well as inspection language in accordance with new company standard requirements. A sentence will be added in Section 1.2 to indicate that the only allowable ASME procedures are the mechanized welding procedures mentioned above.

### 2. Question Title, ID: ID Miter joints, DC.WELDPROCEDURE.MITERJOINT.P

Question: 4. Does the process prohibit the use of certain miter joints as required by 192.233?

References: 192.303 (192.233(a), 192.233(b), 192.233(c))

Assets Covered: SDG&E's Main Office Inspection - Distribution (88390 (53B))

Issue Summary: SED reviewed SDG&E GS D7303 – General Requirements – Steel Distribution System and G7821 – Angles and Bends in Steel Piping. In D7303, Section 4.4.2, it states in part, “miter joints are permitted on steel mains...”. However, G7821 Section 4.4.1 states in part, “... Mitters are not allowed in steel piping.”.

On February 8, 2022, SDG&E provided additional information via an email that stated the responsible persons for the respective gas standards (D7303 and G7821) are working with the necessary SDG&E work groups in reviewing the gas standards and the gas standards will be reviewed and published to resolve this discrepancy. SED requests SDG&E to elaborate upon its corrective action(s) and outline the key points of its revisions if the updated versions has not published.

**SDG&E Response:**

The Responsible Persons for the respective gas standards (D7303 and G7821) are working with the necessary SDG&E work groups in reviewing the gas standards. The planned revisions to address the noted concern of the discrepancy is to transfer the miter requirements from D7303 to G7821. This will eliminate the discrepancy between the two documents and have the miter policy in G7821. G7821 will permit the limited use of miter bends for distribution piping (i.e. mains, services, and risers) within 192.233. The target date for publication of the two gas standards is July of this year.

**SDG&E Corrective Action**

As noted above the planned revisions to address the noted concern of the discrepancy is to transfer the miter requirements from D7303 to G7821. This will eliminate the discrepancy between the two documents and have the complete miter policy in G7821. G7821 will permit the limited use of miter bends for medium pressure distribution piping within 192.233.

**7. Emergency Preparedness and Response: Emergency Response (EP.ERG)**

Question Title, ID: Emergency Response, EP.ERG.READINESS.P

Question: 4. Does the process include procedures for ensuring the availability of personnel, equipment, tools, and materials as needed at the scene of an emergency?

References: 192.615(a) (192.615(a)(4))

Assets Covered: SDG&E's Main Office Inspection - Distribution (88390 (53B))

Issue Summary: Title 49 CFR Part 192, §192.615 Emergency plans states in part:

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

*(1)...(4) The availability of personnel, equipment, tools, and materials, as needed at the scene of an emergency.”*

SDG&E stated that its GS G8206- Emergency Materials List for Gas Incidents addresses the availability of equipment and tools during emergency response as well. SDG&E also stated that the supporting common document in the Operation Emergency Manual (OEM), 06.050-COM - Emergency Materials - Pico Rivera also addresses the availability of equipment and tools.

SED reviewed both aforementioned documents and found that current verbiage in both documents did not align with §192.615(a)(4) to include equipment and tools as well. The standards mostly address materials, but not the procedures for availability of equipment and tools. SED recommends SDG&E to review its standards that addresses §192.615(a)(4) and revise it to address the items as prescribed in the code.

**SDG&E Response:**

To meet code section requirements, SDG&E currently has the following procedures to address the availability of equipment, tools, and materials, as needed at the scene of an emergency: G8206 - *Emergency Materials List for Gas Incidents*, 06.010-SD – *Emergency Equipment*, and 06.020-SD – *Pressure Control Equipment*. These standards include a list of equipment, tools, and materials that would be utilized in emergency response.

**SDG&E Corrective Action:**

SDG&E will update its Gas Standard, ER-1SD - *Gas Emergency Response Plan* to add a reference to the aforementioned documents which provide guidance on tools and equipment available to support emergency response.

**8. Maintenance and Operations: Gas Pipeline MAOP (MO.GOMAOP)**

Question Title, ID: Normal Operations and Maintenance Procedures,  
MO.GOMAOP.MAOPLIMIT.P

Question: 3. Does the process include requirements for starting up and shutting down any part of the pipeline in a manner to assure operation with the MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices?

References: 192.605(a) (192.605(b)(5))

Assets Covered: SDG&E's Main Office Inspection - Distribution (88390 (53B))

Issue Summary: SDG&E GS - G8147 Planning Shutdowns on High Pressure Gas Facilities lists the Title 49 CFR Part 192, §192.605(b)(5) to be the code that impacted the standard (i.e. the standard satisfies this code section).

§192.605 Procedural manual for operations, maintenance, and emergencies states in part:

*“... (b) Maintenance and normal operations. 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)... (5) Starting up and shutting down any part of the pipeline in a manner designed to assure operation within the MAOP limits prescribed by this part, plus the build-up allowed for operation of pressure-limiting and control devices.”*

GS G8147 does not explicitly mention MAOP limits as prescribed by code even though the standard implies the safe shutting down operations for completion. SDG&E should amend this procedure to include the language prescribed by this code to explicitly state that, during starting up and shutting down, the pressure of the pipeline stays within the MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices if it does not reference any other procedures within its Operations and Maintenance Plan (O&M Plan) that meet these code section requirements.

On February 8, 2022, SDG&E provided additional information via an email that stated that the G8147 will be revised and republished on May 1, 2022. SED requests SDG&E to elaborate upon its corrective action(s) and outline the key points of its revisions if the updated version has not been published.

**SDG&E Response:**

To meet code section requirements, SDG&E will amend GS G8147 to explicitly state that during start up and shut down operations the pressure of the pipeline must stay within MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices.

**SDG&E Corrective Action:**

SDG&E updated sections 4.3.4 and 4.3.5 (see language below) of GS G8147 to incorporate the pipeline start-up and shutdown requirements from Title 49 CFR Part 192, §192.605(b)(5). This update was published on May 5<sup>th</sup>, 2022 in accordance with SDG&E publishing requirements.

The update is as follows:

*“Procedure for starting up or shutdown of any part of the pipeline in a manner to assure operation within the MAOP limits plus the build-up allowed for operation of pressure-limiting and control devices.”*