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September 22, 2023

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 Operation and Maintenance Inspection of San Diego Gas and Electric Company (SDG&E)'s Southern Distribution System** on June 19 through 23, 2023 and June 26, 2023. SED used the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety's "Inspection Assistant Form" as a reference guide to conduct the inspection. The inspection included a review of SDG&E's records from calendar years 2018 to 2022 and field inspections of selected pipeline facilities in the SDG&E's Beach Cities, Construction Metro, and Eastern Districts. SED's staff also reviewed the implementation of the Operator Qualification program, which included field observation of randomly selected individuals performing covered tasks.

SED's staff identified three (3) probable violation of GO 112-F, Reference Title 49 Code of Federal Regulations (CFR), Part 192, and noted three (3) areas of concern. Attached are SDG&E's written responses.

Please contact Alex Hughes at (213) 671-1344 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 Risk Mitigation Manager

CC:

Larry Andrews, SoCalGas
Gordon Kuo, SED/GSRB
Mahmoud Intably, SED/GSRB
Claudia Almengor, SED/GSRB

2023 SDG&E South Distribution Audit Response

Unsatisfactory Results

Maintenance and Operations: Gas Pipeline Maintenance (MO.GM))

1. Question Title, ID	Valve Maintenance Distribution Lines, MO.GM.DISTVALVEINSPECT.R
Question	7. Do records indicate proper inspection of each distribution system valve that might be required in an emergency at intervals not exceeding 15 months, but at least once each calendar year, and prompt remedial action to correct any valve found inoperable?
References	192.603(b) (192.747(a), 192.747(b))
Assets Covered	District South (87075 (46))
Issue Summary	<p>Title 49, CFR Part192, Section 192.605(a) states:</p> <p><i>"Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities..."</i></p> <p>SDG&E's Gas Standard (GS)D8167 - "Distribution Valves - Operation, Maintenance, and Inspection" §4.7.5 states:</p> <p style="padding-left: 40px;"><i>"SAP will automatically issue a quarterly inspection order until the valve is no longer classified as Hard to Operate and is identified as Satisfactory."</i></p> <p>Note: SAP (Systems, Applications, and Products in the data processing) is an Enterprise Resource Planning (ERP) system by SAP AG</p> <p>During records review of SDG&E's valve #6684, SDG&E identified the valve as "Hard to Operate" and was put on quarterly inspection on 5/8/19. SDG&E inspected the valve on 8/19/19, missed two inspections, and the next quarterly inspection was completed on 5/12/20. Therefore, SED found SDG&E in violation of General Order (G.O.) 112-F, Reference Title 49 Code of Federal Regulation, (CFR), §192.605(a) for not performing the quarterly inspections as required by SDG&E's GS D8167, §4.7.5.</p>

Response:

SDG&E acknowledges that valve #6684 missed two quarterly inspections due to the legacy manual process of creating 'follow-on' orders. Since then, SDG&E has implemented a system enhancement that automatically generates 'follow-on' orders, ensuring quarterly inspections are scheduled and completed as required by Gas Standard D8167.

Time-Dependent Threats: External Corrosion - CP Monitoring (TD.CPMONITOR)

1. Question Title, ID	Correction of Corrosion Control Deficiencies, TD.CPMONITOR.DEFICIENCY.R
Question	13. Do records adequately document actions taken to correct any identified deficiencies in corrosion control?
References	192.491(c) (192.465(d))
Assets Covered	District South (87075 (46))

Issue Summary	<p>Title 49, CFR Part192, §192.465(d) states:</p> <p><i>"Each operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring."</i></p> <p>SDG&E's procedure G8020 "Cathodic Protection Test Orders - Monitoring Isolated Facilities" §5.1.2 states:</p> <p style="padding-left: 40px;">"The remediation process for Isolated Facilities (Ten Percenters – 10%) shall be addressed in the same manner as they are annual reads and the variation is expected to be corrected within 15 months form the time it was discovered in accordance with GGS 8019, Operation and Maintenance of Cathodic Protection Facilities."</p> <p>During records review of SDG&E's separately protected short sections of main and service lines (CP10s), SED found the following CP10s that were not remediated within the 15 months from the time they were discovered.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">District</th> <th style="text-align: left;">Equipment #</th> <th style="text-align: left;">Initial Down Date</th> <th style="text-align: left;">Remediated Date or Pending</th> </tr> </thead> <tbody> <tr><td>CONSTRUCTION METRO</td><td>600401831</td><td>9/25/2017</td><td>Pending Completion</td></tr> <tr><td>CONSTRUCTION METRO</td><td>600404245</td><td>3/13/2020</td><td>Pending Completion</td></tr> <tr><td>CONSTRUCTION METRO</td><td>600387844</td><td>3/28/2020</td><td>Pending Completion</td></tr> <tr><td>EASTERN</td><td>600409667</td><td>8/15/2020</td><td>Pending Completion</td></tr> <tr><td>EASTERN</td><td>603808913</td><td>8/15/2020</td><td>Pending Completion</td></tr> <tr><td>CONSTRUCTION METRO</td><td>603808961</td><td>8/18/2020</td><td>Pending Completion</td></tr> <tr><td>CONSTRUCTION METRO</td><td>602844860</td><td>8/18/2020</td><td>Pending Completion</td></tr> <tr><td>CONSTRUCTION METRO</td><td>600432453</td><td>3/19/2020</td><td>5/6/2022</td></tr> <tr><td>CONSTRUCTION METRO</td><td>600440067</td><td>1/14/2020</td><td>4/10/2023</td></tr> <tr><td>CONSTRUCTION METRO</td><td>600390895</td><td>9/16/2020</td><td>8/18/2022</td></tr> </tbody> </table> <p>Therefore, SED found SDG&E in violation of G.O. 112-F, Reference Title 49 of CFR, §192.605(a) for failure to remediate the CP10s within 15 months of discovery as required by SDG&E's GS G8020, §5.1.2.</p>	District	Equipment #	Initial Down Date	Remediated Date or Pending	CONSTRUCTION METRO	600401831	9/25/2017	Pending Completion	CONSTRUCTION METRO	600404245	3/13/2020	Pending Completion	CONSTRUCTION METRO	600387844	3/28/2020	Pending Completion	EASTERN	600409667	8/15/2020	Pending Completion	EASTERN	603808913	8/15/2020	Pending Completion	CONSTRUCTION METRO	603808961	8/18/2020	Pending Completion	CONSTRUCTION METRO	602844860	8/18/2020	Pending Completion	CONSTRUCTION METRO	600432453	3/19/2020	5/6/2022	CONSTRUCTION METRO	600440067	1/14/2020	4/10/2023	CONSTRUCTION METRO	600390895	9/16/2020	8/18/2022
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Response:
SDG&E acknowledges that remediation for the above ten CP10s was not completed within 15 months from the time of discovery, as required by SDG&E's Gas Standard G8020. As we actively work to improve corrective efforts, six of the pending seven sites have been remediated as of 8/29/2023.

District	Equipment #	Initial Down Date	Remediated Date or Pending as of the date of Letter	Status as of 9/1/2023
CONSTRUCTION METRO	600401831	9/25/2017	Pending Completion	Due to permitting, easement delays from various jurisdictions, and environmental and cultural agencies to remediate the project by Q1 2024.
CONSTRUCTION METRO	600404245	3/13/2020	Pending Completion	Remediation activities complete
CONSTRUCTION METRO	600387844	3/28/2020	Pending Completion	Remediation activities complete

EASTERN	600409667	8/15/2020	Pending Completion	Remediation activities complete
EASTERN	603808913	8/15/2020	Pending Completion	Remediation activities complete
CONSTRUCTION METRO	603808961	8/18/2020	Pending Completion	Remediation activities complete
CONSTRUCTION METRO	602844860	8/18/2020	Pending Completion	Remediation activities complete
CONSTRUCTION METRO	600432453	3/19/2020	5/6/2022	No further action required
CONSTRUCTION METRO	600440067	1/14/2020	4/10/2023	No further action required
CONSTRUCTION METRO	600390895	9/16/2020	8/18/2022	No further action required

Corrective Actions:

To ensure compliance with G8020, SDG&E is actively working to create monthly and quarterly reports, highlighting any CP10s that require remediation activities to ensure that appropriate corrective actions are completed within the required timeframe.

Equipment 600401831 is pending remediation by the end of Q1 2024 due to continued easement delays from various jurisdictions, and environmental and cultural agencies.

Training and Qualification: OQ Protocol 9 (TQ.PROT9)

1. Question Title, ID	Covered Task Performance, TQ.PROT9.TASKPERFORMANCE.O
Question	2. Verify the qualified individuals performed the observed covered tasks in accordance with the operator's procedures or operator approved contractor procedures.
References	192.801(a) (192.809(a))
Assets Covered	District South (87075 (46))
Issue Summary	<p>Title 49, CFR Part192, Section 192.605(a) states:</p> <p>"Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities..."</p> <p>SDG&E's procedure G8169 - "Prevention of Accidental Ignition of Natural Gas" §1.3.2 states:</p> <p><i>"During pressure control or gas handling operations, where the potential for the release of natural gas exists, the atmosphere must be monitored using a multi-gas indicator (CGI) prior to entering the excavation and continuously while the employee is in the excavation."</i></p> <p>During a field inspection on June 23, 2023, SED observed SDG&E's employees ██████, ██████, and ██████ conducting an inspection on Metering and Pressure Regulating (M&R) station #1507. SDG&E's employees bleed out gas through the valves while CGIs monitoring the gas levels within the vaults. Partway through the inspection, one of the CGIs detected a certain level of gas inside one of the vaults and the alarm went off. However, SDG&E's employees continued working and failed to address the CGI's alarm. SED inquired about the CGI's alarm and why SDG&E's employees did not follow the GS to address the alarm when it went off, which they stated that they had reset the CGI, which was still beeping. SED checked the CGIs a few minutes later and found the CGIs were not monitoring the gas levels within the vaults, despite the employees continuing to work and bleed off gas within the vaults. Therefore, SED found SDG&E in violation of G.O. 112-F, Reference Title 49 CFR, §192.605(a) for not continuously monitoring the gas levels within</p>

	the vaults during pressure control of gas handling operations as required by SDG&E's GS G8168, §1.3.2.
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Response:

SDG&E acknowledges that Field Technicians did not appropriately utilize the Combustible Gas Indicator (CGI) nor acknowledge the alarm while monitoring gas levels within the vault, as required by Gas Standard G8169.

Corrective Actions:

SDG&E's Pipeline Operations leadership has performed a review of applicable standards with the Field Technicians, reiterating the importance and appropriate usage of the CGI equipment during Regulator Station Inspections, as required by Gas Standard G8169.

Concern(s)

Facilities and Storage: Facilities General (FS.FG)

1. Question Title, ID	Vault Inspection, FS.FG.VAULTINSPECT.O
Question	4. Are inspections of selected vaults with internal volume =200 cubic feet (5.66 cubic meters) housing pressure regulating/limiting equipment adequate?
References	192.749(a) (192.749(b), 192.749(c), 192.749(d))
Assets Covered	District South (87075 (46))
Issue Summary	<p>Title 49, CFR Part192, Section 192.749(a) states:</p> <p><i>"Each vault housing pressure regulating and pressure limiting equipment, and having a volumetric internal content of 200 cubic feet (5.66 cubic meters) or more, must be inspected at intervals not exceeding 15 months, but at least once each calendar year, to determine that it is in good physical condition and adequately ventilated."</i></p> <p>SDG&E Gas standard (GS) G8159 "Distribution Pressure Regulating and Monitoring Station & Vault - Inspection, Maintenance and Settings", §6.3 states:</p> <p><i>"Inspect pits, vaults, fixed ladders and station piping supports for general condition and ground settlement."</i></p> <p>During the field inspection on June 21, 2023, SED observed vaults housing M&R station #1027 had large cracks and crushed concrete. SED requests SDG&E to contact the Mechanical, Civil and Structural Design Group in Engineering Design to assess the vaults' condition and take the necessary steps to ensure compliance with G.O. 112-F, Reference Title 49, CFR Part 192, §192.749(a).</p> <p>On July 7, 2023, SDG&E informed SED that Work Order #300000588782 was issued with a target completion date due by the end of Q1 2024. SED may review the corrective actions taken by SDG&E during future inspection. No further response is required by SDG&E.</p>

Time-Dependent Threats: Atmospheric Corrosion (TD.ATM)

1. Question Title, ID	Atmospheric Corrosion Monitoring, TD.ATM.ATMCORRODEINSP.O
Question	5. Do field observations indicate that pipe exposed to atmospheric corrosion is properly coated?
References	192.481(b) (192.481(c), 192.479(a), 192.479(b), 192.479(c), 192.481(d))
Assets Covered	District South (87075 (46))

Issue Summary	<p>Title 49 CFR, Part 192, §192.481(c) states:</p> <p style="text-align: center;"><i>"If atmospheric corrosion is found during an inspection, the operator must provide protection against the corrosion as required by § 192.479."</i></p> <p>Title 49 CFR, Part 192, §192.479(a) states in part:</p> <p style="text-align: center;"><i>"Each operator must clean and coat each pipeline or portion of pipeline that is exposed to the atmosphere,"</i></p> <p>During a field inspection on June 23, 2023, SED observed an aboveground pipeline exposed to atmospheric corrosion that had rust and pitting. SED requested from SDG&E to take the appropriate actions to address the atmospheric corrosion.</p> <p>On July 7, 2023, SDG&Es provided SED with WO #51000960891 and photos of the pipeline showing that the WO was completed, and the pipeline was coated to prevent atmospheric corrosion to the aboveground pipeline. SED accepts the corrective actions taken by SDG&E but may review and revisit the site during future inspection. <u>No further response is required by SDG&E.</u></p>
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Generic Questions: Generic Questions (GENERIC.GENERIC)

1. Question Title, ID	Generic Question, GENERIC.GENERIC.GENRECORD.R
Question	3. Generic question - please provide context in result notes.
References	N/A
Assets Covered	District South (87075 (46))
Issue Summary	<p>Title 49, CFR Part192, Section 192.605(a) states:</p> <p style="text-align: center;"><i>"Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities..."</i></p> <p>SDG&E's procedure G8159 "Distribution Pressure Regulating and Monitoring Station & Vault - Inspection, Maintenance, and Settings" §6.20 & §6.21 states:</p> <p style="text-align: center;"><i>"Verify that regulator operates and strokes smoothing and shuts off within the expected and accepted limits"</i></p> <p style="text-align: center;"><i>"If equipment does not perform or operate acceptably, determine cause of malfunction and adjust, repair or replace necessary components."</i></p> <p>SDG&E's GS G8159 "Distribution Pressure Regulating and Monitoring Station & Vault - Inspection, Maintenance, and Settings" Table A states:</p> <p style="text-align: center;"><i>"If the regulator setting is greater than 100 psig, Lock-up difference should be less than or equal to x 2.5 percent plus 2.5 psig"</i></p> <p>Note: The setting for this regulator was 375 psig. Thus $(0.025 \times 375) + 2.5 = 11.875$ psig Lockup difference.</p> <p>During records review of M&R Station 1507's WO #51-834452 dated September 9, 2021, SED found that the "as left" lockup difference for regulator #401 was documented as 13 psig. This is higher than the required lock up deference of 11.875 psig stated in Table A. SED recommends SDG&E review the employees' qualification and take the necessary actions to ensure that the employees follow the GS G8159 when conducting the M&R inspection.</p>

Response:
SDG&E acknowledges that the 'as left' lockup pressure for regulator 0401 at regulator station 1507 was not documented in accordance with Gas Standard G8159.

Corrective Actions:

SDG&E's Pipeline Operations leadership has performed a review of applicable standards with the Field Technicians, reiterating the importance of verifying that the regulator operates and strokes smoothly and shuts off within the acceptable lockup limits, as required by Gas Standard G8159.

SDG&E is in the process of updating Gas Standard G8159. This update will include a table of different lock-up pressure values for different pressure regulator settings, in addition to the lock-up pressure calculation formulas. Providing this visual aid for the Field Technicians to easily determine acceptable lock-up pressures mitigates the risk of errors during manual calculations.

SDG&E is actively working to implement a system enhancement that will prevent lock-up pressures outside the acceptable limits from being submitted into the system of record, as set forth in Gas Standard G8159.