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October 09, 2019

Mr. Dennis Lee
Program and Project Supervisor
Safety and Enforcement Division
California Public Utilities Commission
320 W. Fourth Street, Suite 500
Los Angeles, CA 90013

Dear Mr. Lee:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission conducted a G.O. 112, Operation and Maintenance Inspection of Southern California Gas Company's (SoCalGas') and San Diego Gas and Electric Company's (SDG&E's) Control Room Management Program (CRM) on August 23-25, 2019 and inspected related records for calendar years 2016-2018.

SED staff identified 2 areas of concern. Attached are SoCalGas and SDG&E's written responses.

Please contact Troy A. Bauer at (909) 376-7208 if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Troy A. Bauer', with a stylized flourish extending to the right.

Troy A. Bauer

CC:
Michelle Wei, SED/GSRB
Kan Wai Tong, SED/GSRB
Matthewson Epuna, SED/GSRB
Claudia Almengor, SED/GSRB

**2019 Sempra Control Room Management
8/23/2019 to 8/29/2019**

Dates of Inspection: August 23-25, 2019
Operator: SCG and SDG&E
Operator IDs: 18484 (primary) 18112
Inspection Systems: Control Room Management Program
Assets (Unit IDs): GI-2019-07-SEM-40-10 (88388 88389)
System Type: GT
Inspection Name: Sempra CRM
Lead Inspector: Michelle Wei
Operator Representative: Alex Hughes, Pipeline Safety and Compliance

Unsatisfactory Results

No Preliminary Findings.

Concerns

CRM, SCADA, and Leak Detection: Fatigue Management (CR.CRMFM)

Question Text	Are there scheduled periods of time-off that are at least one hour longer than 8 hours plus commute time or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?
References	192.631(d)(1)
Assets Covered	GI-2019-07-SEM-40-10 (Sempra CRM)
Issue Summary	One controller has a 1.5-2-hour commute which would not provide him 8 hours of continuous sleep plus some personal time as recommended in this section. SED discussed this issue with SCG and SDG&E and was informed that the controller has been trained and is well-aware of his limits and has used available resources in the past to mitigate fatigue. SED has discussed this issue with PHMSA and agreed that this controller has the knowledge to balance the long commute and long work hours. However, SED recommends that SCG and SDG&E should make two changes to the control room practices. First, going forward, SCG and SDG&E should require that a newly hired controller does not live more than an hour away from the control room. Second, and more importantly, SCG and SDG&E should require controllers to document fatigue countermeasures when they are used. This is not to say that every time a controller stands up or gets coffee they need to record it, but any time they are using any of the fatigue countermeasures to actively combat sleep they should make a record of when and what they did. In the future this will allow the operator to determine if their fatigue mitigation training is effective and being implemented. Also, to evaluate specific cases like these to see if the long commute has an effect on the controller's ability to perform his tasks adequately.

SoCalGas and SDG&E Response:

In response to the SED recommendation to require that new controllers not live more than one hour away from the control room, SoCalGas alternatively proposes that a formal notification be provided to prospective new controllers where they will be required to acknowledge and meet SoCalGas' Control Room fatigue mitigation plan requirements. SoCalGas will also enhance its fatigue mitigation program to mitigate the SED concern.

SoCalGas recognizes the benefit of including in our Control Room Management Plan the policy to make applicants who are applying for a controller position aware of the 49 CFR Part 192.631 Control Room Management Fatigue Mitigation requirements prior to their

employment at SoCalGas' Gas Control department. These prospective controllers will be formally notified of the requirements of 49 CFR 192.631 (d) Fatigue Mitigation along with the applicable sections of PHMSA's Control Room Management FAQ's 01/16/2018 and SoCalGas' obligation to meet those requirements prior to employment. Prospective controllers will be required to acknowledge they can meet these requirements. This notification process will be added to the SoCalGas Control Room Management Plan.

However, a requirement to only hire controllers that live no more than one hour from the SoCalGas Control Room provides potential ambiguity for employees given the complexity of the local area traffic patterns. Making prescribed firm geographic one-hour boundaries is unnecessary since it is feasible for controllers to make alternative living arrangements to limit commute time and achieve sufficient rest while they are on their off-duty period, prior to starting a shift.

SoCalGas Controllers are responsible to come to work fit for duty and are educated on fatigue mitigation strategies and how off duty activities contribute to fatigue. SoCalGas has established shift lengths and schedule rotations that provide controllers off-duty time sufficient to achieve eight hours of continuous sleep. Controllers work a 12-hour shift which provides them off-duty time sufficient to achieve eight hours of continuous sleep between shifts. Controllers are able to decline shifts should they feel they have not obtained sufficient off-duty sleep to perform their job. SoCalGas's control room environment, shift rotation strategies, personnel assignments, and training / education programs are fatigue countermeasures and are all components of Gas Control's Fatigue Mitigation Plan. Fatigue Mitigation Program Metrics in the SoCalGas Control Room Management Plan identify key factors to monitor the effectiveness of its program.

In response to the SED recommendation to record fatigue mitigation activities, SoCalGas will implement further means of monitoring the effectiveness of its program by recording and reviewing fatigue mitigation measures taken by controllers. This will be accomplished by establishing a process and implementing a system where controllers can record fatigue mitigation measures taken during their shift. These items will be added to the SoCalGas Control Room Management Plan.

CRM, SCADA, and Leak Detection : Training (CR.CRMTRAIN)

Question Text	Do records indicate that training exercises were adequate and involved at least one qualified controller?
References	192.631(h)(6)
Assets Covered	GI-2019-07-SEM-40-10 (Sempra CRM)
Issue Summary	Team training exercises are intended to have a focus on practicing effective communication while in a stressful situation. These exercises are to include all parties that would reasonably be expected to collaborate with control room personnel during an abnormal operating condition. SED has reviewed the training records provided by the operator and believes that it addresses emergency response, but do not sufficiently address exercise or effective communication strategies. Please provide response how the control room group intends to address the requirements of this code section going forward.

SoCalGas and SDG&E Response:

SoCalGas agrees with the SED's recommendation. SoCalGas will update its Control Room Management Plan to require annual training that addresses effective communication strategies and additional exercises that are sufficiently complex to challenge the team's collective decision-making skills which will satisfy the team training exercise requirement.