



Risk Assessment and Mitigation Phase

(Chapter SCG-Risk-5)

Incident Involving an Employee

May 17, 2021

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RISK: INCIDENT INVOLVING AN EMPLOYEE

I. INTRODUCTION

The purpose of this chapter is to present SoCalGas's risk control and mitigation plan for the Incident Involving an Employee risk (IIE risk). Each chapter in this Risk Assessment Mitigation Phase (RAMP) Report contains the information and analysis that meets the requirements adopted in Decision (D.) 16-08-018 and D.18-12-014 and the Settlement Agreement included therein (the Settlement Decision).¹

SoCalGas has identified and defined RAMP risks in accordance with the process described in further detail in Chapter RAMP-B of this RAMP Report. On an annual basis, SoCalGas's Enterprise Risk Management (ERM) organization facilitates the Enterprise Risk Registry (ERR) process. The ERR process influenced how risks were selected for inclusion in this 2021 RAMP Report, consistent with the Settlement Decision's directives, as discussed in Chapter RAMP-C.

The RAMP Report's purpose is to present a current assessment of key safety risks and the proposed activities for mitigating those risks. The RAMP Report does not request funding. Any funding requests will be made in SoCalGas's General Rate Case (GRC) application. The costs presented in this 2021 RAMP Report are those costs for which SoCalGas anticipates requesting recovery in its Test Year (TY) 2024 GRC. SoCalGas's TY 2024 GRC presentation will integrate developed and updated funding requests from the 2021 RAMP Report, supported by witness testimony.² This 2021 RAMP Report is presented consistent with SoCalGas's GRC presentation, in that the last year of recorded data (2020) provides baseline costs and cost estimates are provided for years 2022-2024, as further discussed in Chapter RAMP-A. This 2021 RAMP Report presents capital costs as a sum of the years 2022, 2023, and 2024 as a three-year total; operations and maintenance (O&M) costs are only presented for TY 2024 (consistent with the GRC). Costs for each activity that directly address each risk are provided where those costs are available and within the scope of the analysis required in this RAMP Report.

¹ D.16-08-018 also adopted the requirements previously set forth in D.14-12-025. D.18-12-014 adopted the Safety Model Assessment Proceeding (S-MAP) Settlement Agreement with modifications and contains the minimum required elements to be used by the utilities for risk and mitigation analysis in the RAMP and GRC.

² See D.18-12-014 at Attachment A, A-14 ("Mitigation Strategy Presentation in the RAMP and GRC").

Throughout this 2021 RAMP Report activities are delineated between controls and mitigations, consistent with the definitions adopted in the Settlement Decision’s Revised Lexicon. A “control” is defined as a “[c]urrently established measure that is modifying risk.”³ A “mitigation” is defined as a “[m]easure or activity proposed or in process designed to reduce the impact/consequences and/or likelihood/probability of an event.”⁴ Activities presented in this chapter are representative of those that are primarily scoped to address SoCalGas’s IIE risk; however, many of the activities presented herein also help mitigate other areas.

As discussed in Chapters RAMP-A and RAMP-C, SoCalGas has endeavored to calculate a Risk Spend Efficiency (RSE) for all controls and mitigations presented in this risk chapter. However, for controls and mitigations where no meaningful data or SME opinion exists to calculate the RSE, SoCalGas has included an explanation why no RSE can be provided, in accordance with California Public Utilities Commission (CPUC or Commission) Safety Policy Division (SPD) staff guidance.⁵ Activities with no RSE value presented in this 2021 RAMP Report are identified in Section V below.

A. Risk Overview

At SoCalGas, the safety of employees is a core value. SoCalGas’s approach to safety is built on a tradition of providing safe and reliable service for 150 years and is captured in the Company’s seven Safety Values and summarized in SoCalGas’s Commitment to Safety statement (included in the annual Gas Safety Plans and Safety Management System (SMS) Plan), which is embraced and endorsed by every member of the senior management team:

SoCalGas’ longstanding commitment to safety focuses on three primary areas – employee/contractor safety, customer/public safety and the safety of gas delivery system. This safety focus is embedded in what we do and is the foundation for who we are – from initial employee training, to the installation, operation and

³ *Id.* at 16.

⁴ *Id.* at 17.

⁵ See Safety Policy Division Staff Evaluation Report on PG&E’s 2020 Risk Assessment and Mitigation Phase (RAMP) Application (A.) 20-06-012 at 5 (“SPD recommends PG&E and all IOUs provide RSE calculations for controls and mitigations or provide an explanation for why it is not able to provide such calculations.”) (November 25, 2020).

maintenance of our utility infrastructure, and to our commitment to provide safe and reliable service to our customers.⁶

To promote these principles and safety values throughout, and to foster a culture of continuous safety improvement, SoCalGas strives for a work environment where employees at all levels can raise concerns about pipeline infrastructure, customer safety, and employee safety and offer suggestions for improvement. SoCalGas encourages two-way formal and informal communication between its employees and management in order to identify and manage safety risks before incidents occur, as further described below in SCG-2-C7 and the RAMP Chapter on Safety Culture.

The IIE risk was included in SoCalGas's 2020 Enterprise Risk Registry and is defined as the risk of conditions and practices that may lead to an incident threatening employee health and safety caused by non-adherence to Company policies, procedures and programs, or by external factors. This IIE risk chapter focuses on controls and mitigations that address education, training, compliance, programs, behaviors, culture, and other internal procedural, process, and cultural enhancements. This safety focus is embedded in everything the Company does. SoCalGas's safety efforts start at the top with appropriate safety governance. SoCalGas's Board of Directors includes senior officers with extensive operational and safety experience specific to a natural gas utility and provides oversight at the highest level. As further described below, SoCalGas has an Executive Safety Council (ESC), which is chaired by the Chief Operating Officer, who is also the Chief Safety Officer. The ESC sets goals and direction, provides resources, and reviews results of direct feedback from the frontline employees.

While the Employee Safety risk scope is limited for purposes of this Chapter, it is important to note that the operational risks and cross-functional factors addressed in this RAMP Report can result in an incident where an employee is seriously injured, or a fatality occurs. Thus, the risk mitigation activities presented in other Chapters of this RAMP Report also address the Employee Safety risk. Following the Settlement Decision and SoCalGas's enterprise risk management methodology, a potential risk scenario of SoCalGas's Employee Safety risk is the risk of conditions and practices that may lead to an incident threatening employee health and

⁶ SoCalGas, *2020 Safety Management System Plan* (April 23, 2020) at 4, available at <https://sempra.sharepoint.com/sites/safety/Shared Documents/Forms/AllItems.aspx?id=/sites/safety/Shared+Documents/2020+Safety+Management+System+Plan.pdf&parent=/sites/safety/Shared+Documents>.

safety caused by non-adherence to Company policies, procedures and programs, or by external factors.

In addition to promoting employee safety within the Company, SoCalGas also seeks to supplement its workforce by using contractors who are equally committed to safety and the Company employs numerous mitigation measures to protect the safety of SoCalGas’s customers and the public at large. The contractor safety and customer and public safety mitigations are discussed in separate chapters of this RAMP report. While this chapter focuses on Employee Safety risk, many of the activities described herein also help to mitigate these other risks.

B. Risk Definition

For purposes of this RAMP Report, SoCalGas’s IIE risk is defined as the risk of conditions and practices that may lead to an incident that threatens the safety of a SoCalGas employee, contractor or the public caused by non-adherence to Company policies, procedures, and programs, or by external factors. The risk definition captures an incident either caused by employees harming themselves and/or other employees/contractors and/or the public as well as external factors that could harm employees.

C. Scope

Table 1 below provides what is considered in scope for the IIE risk in this RAMP Application.

Table 1: Risk Scope

In-Scope for purposes of risk assessment:	The risk of an employee safety incident that causes serious injuries ⁷ or fatalities while on duty.
Data Quantification Sources:	SoCalGas engaged internal data sources for the calculation surrounding risk reduction; however, if data was insufficient, Industry or National data was supplemented and adjusted to fit the risk profile associated with the operating locations and perimeter of the utilities. For example, when certain types of incident events have not occurred within the SoCalGas & SDG&E territory, SoCalGas considered industry data where said

⁷ As defined by Cal/OSHA, as “an injury or illness occurring in a place of employment or in connection with any employment which requires inpatient hospitalization for a period in excess of 24 hours for other than medical observation or in which an employee suffers a loss of any member of the body or suffers any serious degree of permanent disfigurement, but does not include any injury or illness or death caused by the commission of a Penal Code violation, except the violation of Section 385 of Penal Code, or an accident on a public street or highway.” ⁸ California Code of Regulations (CCR) § 330(h).

	<p>incident(s) have been recorded to provide an approximation to establish a baseline of risk and risk addressed by activities.</p> <p>See Appendix B for additional information.</p>
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II. RISK ASSESSMENT

In accordance with the Settlement Decision,⁸ this section describes the risk Bow Tie, possible Drivers, potential Consequences, and the risk score for the IIE risk.

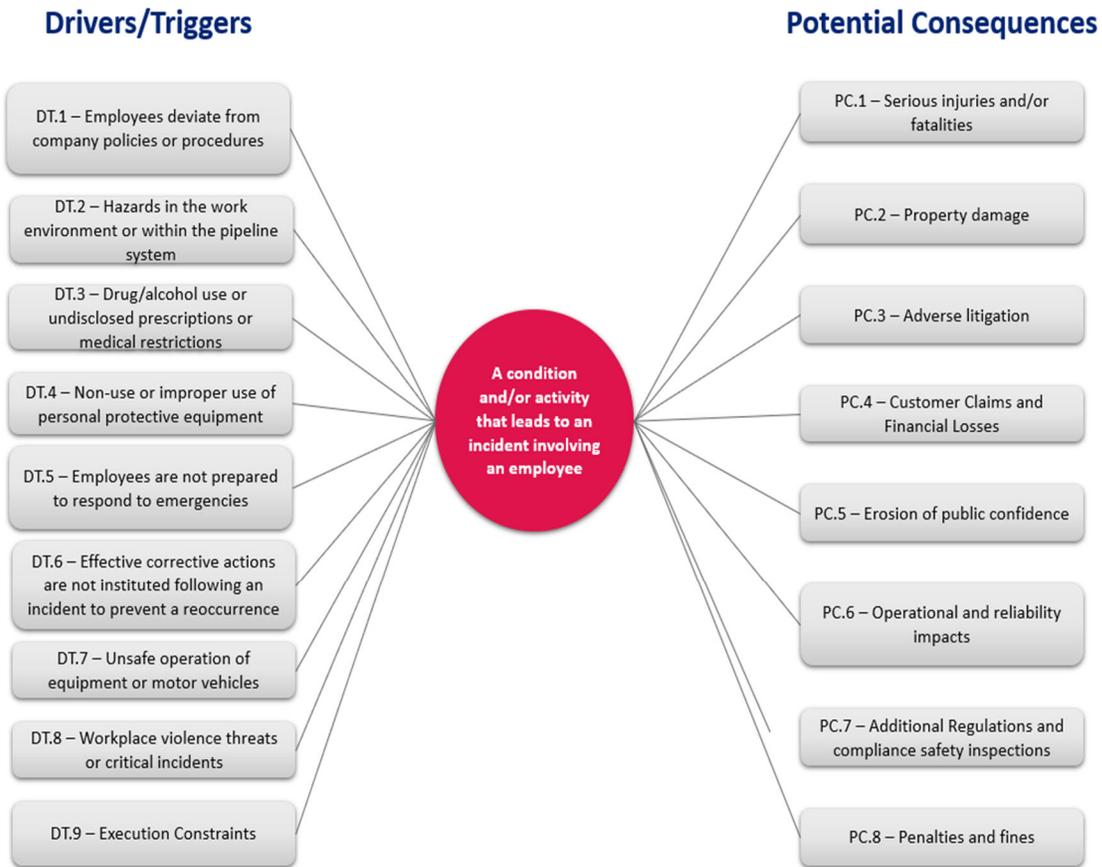
A. Risk Bow Tie and Risk Event Associated with the Risk

The risk bow tie is a commonly used tool for risk analysis, and the Settlement Decision⁹ instructs the utility to include a risk bow tie illustration for each risk included in RAMP. As illustrated in the risk bow tie shown below in Figure 1, the risk event (center of the bow tie) is a condition and/or activity that leads to an IIE, the left side of the bow tie illustrates drivers/triggers that lead to the IIE, and the right side shows the potential consequences of the IIE. SoCalGas applied this framework to identify and summarize the information provided in Figure 1. A mapping of each mitigation to the element(s) of the risk bow tie addressed is provided in Appendix A.

⁸ D.18-12-014 at 33 and Attachment A, A-11 (“Bow Tie”).

⁹ Id. at Attachment A, A-11 (“Bow Tie”).

Figure 1: Risk Bow Tie



B. Cross-Functional Factors

There is one overarching factor and four cross-functional factors that impact the IIE risk. They are the overarching Safety Culture factor, and the SMS, Emergency Preparedness and Response and Pandemic, Asset and Records Management, and Workforce Planning / Quality Workforce cross-functional factors. Each of these factors, if poorly managed can become a potential driver adversely impacting the safety of employees. On the other hand, successfully managing each of these factors can help in preventing incidents and ensuring the safety of employees. As such, many of the activities, associated with these cross-functional factors are included in this risk, but by reference only to avoid duplication.

C. Potential Drivers/Triggers¹⁰

The Settlement Decision¹¹ instructs the utility to identify which element(s) of the associated risk bow tie each mitigation addresses. When performing the IIE risk assessment, SoCalGas identified potential leading indicators, referred to as drivers or triggers. These include, but are not limited to:

- **DT.1 – Employees deviate from Company policies or procedures:** SoCalGas’s policies and procedures are defined in Gas Standards. Similarly, the Company’s general safety rules are defined in the Employee Responsibilities section of the Illness and Injury Prevention Program (IIPP). An employee not adhering to such Company safety policies and procedures could result in a safety-related event.
- **DT.2 – Hazards in the work environment or within the pipeline system:** Unsafe work environments, including work locations, roadways and parking places, customer premises, gas equipment condition, lead from paint, asbestos, or fumigation chemicals, for example, could lead to a safety event.
- **DT.3 – Drug/alcohol use or undisclosed prescriptions or medical restrictions:** Unknown drug/alcohol use while on the job or medical restrictions can impede the safe conduct of work which could lead to a safety event.
- **DT.4 – Non-use or improper use of personal protective equipment:** Safety equipment serves to protect employees and contractors from avoidable injuries. Failure to wear personal protection and safety equipment can lead to a safety incident.
- **DT.5 – Employees are not prepared to respond to emergencies:** Failure to respond accordingly during an emergency may increase the likelihood of serious injuries and/or fatalities.
- **DT.6 – Effective corrective actions are not instituted following an incident to prevent a reoccurrence:** Lessons learned, and the appropriate follow-up actions or training, can help prevent future safety events from occurring. The failure to

¹⁰ This refers to an indication that a risk could occur. It does not reflect actual or threatened conditions.

¹¹ D.18-12-014 at Attachment A, A-11 (“Bow Tie”).

implement corrective actions following an event can lead to the recurrence of safety events.

- **DT.7 – Unsafe operation of equipment or motor vehicles:** Non-adherence to motor vehicle laws or not utilizing equipment according to safety standards could result in serious injuries and/or fatalities.
- **DT.8 – Workplace violence threats or critical incidents:** Workplace violence incidents can increase the likelihood of employees being seriously injured or killed.
- **DT.9 – Execution constraints:** Events (excluding those covered by outside force damages) that impact the Company’s ability to perform as anticipated. Examples include but are not limited to: materials and operational oversight, delays in response and awareness, resource constraints, and/or inefficiencies and reallocation of (human and material) resources, unexpected maintenance, or regulatory requirements.

D. Potential Consequences of Risk Event

Potential consequences¹² are listed to the right side of the risk bow tie illustration provided above. If one or more of the drivers/triggers listed above were to result in an incident, the potential consequences, in a reasonable worst-case scenario, could include:

- PC.1 – Serious injuries¹³ and/or fatalities
- PC.2 – Property damage
- PC.3 - Adverse litigation
- PC.4 - Customer claims and financial losses
- PC.5 - Erosion of public confidence
- PC.6 - Operational and reliability impacts
- PC.7 - Additional regulations and compliance safety inspections
- PC.8 - Penalties and fines

¹² D.18-12-014 at 16 and Attachment A, A-8 (“Identification of Potential Consequences of Risk Event”).

¹³ 8 CCR § 330(h).

These potential consequences were used in the scoring of an IIE that occurred during the development of SoCalGas’s 2020 Enterprise Risk Registry.

E. Risk Score

The Settlement Decision requires a pre- and post-mitigation risk calculation.¹⁴ Chapter RAMP-C of this RAMP Report explains the Risk Quantitative Framework which underlies this Chapter, including how the Pre-Mitigation Risk Score, Likelihood of Risk Event (LoRE), and Consequence of Risk Event (CoRE) are calculated.

Table 2: Pre-Mitigation Analysis Risk Quantification Scores¹⁵

	LoRE	CoRE	Risk Score
Incident Involving an Employee (IIE)	553.09	5	2,667

Pursuant to Step 2A of the Settlement Decision, the utility is instructed to use actual results, as well as available and appropriate data (e.g., Pipeline and Hazardous Materials Safety Administration data).¹⁶

For this risk, SoCalGas utilized a combination of internal and external data sources to develop the pre-mitigation risk score.

The evaluation of employees’ injuries, illnesses, and fatalities utilized historical internal Occupational Safety and Health Administration (OSHA)-reportable employee injury rates to estimate the likelihood of an event occurring. The safety consequence assessment utilized internal safety consequence data and severe injury report data from OSHA. The financial consequence assessment utilized data from the Center for Disease Control, National Safety Council.

The evaluation of vehicular incidents utilized historical internal vehicular incident rate data to estimate the likelihood of an event occurring and the financial assessment utilized internal financial consequence data.

¹⁴ D.18-12-014 at Attachment A, A-11 (“Calculation of Risk”).

¹⁵ The term “pre-mitigation analysis,” in the language of the S-MAP Settlement Agreement Decision (Attachment A, A-12 (“Determination of Pre-Mitigation LoRE by Tranche,” “Determination of Pre-Mitigation CoRE,” “Measurement of Pre-Mitigation Risk Score”)), refers to required pre-activity analysis conducted prior to implementing control or mitigation activity.

¹⁶ *Id.* at Attachment A, A-8 (“Identification of Potential Consequences of Risk Event”).

The evaluation of workplace violence incidents utilized data from the Bureau of Labor Statistics to estimate the likelihood of an event occurring. The safety consequence assessment utilized data from the Federal Bureau of Investigation and the financial consequence assessment utilized data from the National Institute of Occupational Safety and Health. See Appendix B for more information.

III. 2020 CONTROLS

This section “[d]escribe[s] the controls or mitigations currently in place” as required by the Settlement Decision.¹⁷ The activities in this section were in place as of December 31, 2020. Controls that will continue as part of the risk mitigation plan are addressed in Section IV.

A. Control 1-Employee Health and Safety Programs and Standardized Policies

SoCalGas’s employees receive extensive training because SoCalGas believes safety starts with proactive upstream measures to prevent a safety incident from occurring. SoCalGas’s Mandatory Employee Health and Safety Programs and Standardized Policies comprise the following elements, as required by the California Code of Regulations (CCR):

Injury & Illness Prevention Program (IIPP): In California, every employer is required by law to provide a safe and healthful workplace for its employees.¹⁸ Further, Title 8 of the California Code of Regulations¹⁹ requires every employer to have an effective IIPP. SoCalGas’s IIPP is a written plan for preventing injury and illness that includes procedures. The plan is comprehensive and covers all aspects of employee health and safety requirements and expectations of the workforce. The elements included in SoCalGas’s IIPP are:

- Management commitment/assignment of responsibility;
- Safety communication system with employees;
- System for assuring employee compliance with safe work practices;
- Scheduled inspections/evaluation system;
- Accident investigation;
- Procedures for correcting unsafe or unhealthy conditions;
- Safety and health training instruction;

¹⁷ S-MAP Settlement Agreement Decision, D.18-12-014 at 33.

¹⁸ Cal. Labor Code § 6400.

¹⁹ 8 CCR § 8350.

- Recordkeeping and documentation; and
- Safety programs.

Employee Safety Standards: The employee safety standards are a collection of information, instructions, policies, and procedures intended to promote safe work practices. The purpose of the Health and Safety policies and procedures is to guide and direct all employees to work safely and prevent injury to themselves and others.

Safety standards are specifications designed to promote the safety of work activities or processes. Standards are rules that describe the methods that employers use to protect their employees from hazards. They are used to communicate policy to the workforce as well as key stakeholders and others at SoCalGas.

Industrial Hygiene Program: SoCalGas has a robust Industrial Hygiene program in compliance with Cal/OSHA regulations. Industrial Hygienists are responsible for monitoring changes in employee safety and health regulations, developing internal safety policies and procedures to promote compliance with the applicable regulations, and managing Company-wide implementation of key industrial hygiene programs, such as Hazard Communications, Hearing Conservation, Respiratory Protection, Mold, Asbestos, and Lead Exposure Management.

B. Control 2-Drug and Alcohol Testing Programs

SoCalGas has implemented an employee drug and alcohol testing program managed in accordance with state and federal regulations. SoCalGas's Substance Abuse Prevention policy prohibits the use and/or possession of alcohol during working hours or reporting to work with alcohol, illegal drugs, or impairing prescribed controlled substances in the system. All employees are responsible for knowing and complying with Company policy. Violations are cause for disciplinary action up to and including termination of employment.

In compliance with the Drug-Free Workplace Act of 1988²⁰ (which requires SoCalGas, as a federal contractor and grant recipient, to implement a comprehensive drug and alcohol-free workplace policy (DAFWP)), SoCalGas has a longstanding commitment to provide a safe and productive work environment for employees, and safe and efficient service for customers and the public. Because alcohol and drug abuse pose a threat to the health and safety of SoCalGas employees, the public, and to the security of the Company's equipment and facilities,

²⁰ 41 United States Code Service (U.S.C.) § 81.

SoCalGas is committed to providing a drug and alcohol-free workplace. The use of illegal drugs, impairing prescribed controlled substances, and the misuse of alcohol is contrary to these high standards. All employees in non-safety-sensitive and safety-sensitive positions are subject to the Company's DAFWP. Testing under this policy is limited to pre-employment and reasonable cause, return-to-duty, and follow-up testing (when applicable). Under the DAFWP, SoCalGas tests for additional (*e.g.*, generally prescribed) impairing drugs not tested for under the Department of Transportation (DOT) testing program. This policy also requires employees to pre-duty disclose their use of impairing medications that may affect their ability to safely perform safety-sensitive duties.

In addition, SoCalGas also complies with the DOT drug and alcohol program requirements²¹ and has implemented a Drug and Alcohol Misuse Prevention Plan and Policy (DAMPPP) for employees in safety-sensitive positions, subject to these regulations and testing requirements. The purpose of the DAMPPP is to reduce accidents and injuries that may result from the use of illegal drugs, impairing prescribed controlled substances, and misuse of alcohol, thereby reducing fatalities, injuries, and property damage, and to comply with federal and state regulations. To comply with the DOT regulations, the Company implemented two random testing pools as required by 49 Code of Federal Regulations (CFR) Part 199 (Drug and Alcohol Testing Procedures and regulations for PHMSA-covered employees) and Part 382 (Drug and Alcohol Testing Procedures for FMCSA-covered employees (applicable to Commercial Motor Vehicle Drivers)). PHMSA-covered employees are those employees who perform operations, maintenance, or emergency response functions associated with gas pipeline or liquified natural gas facilities and are regulated by 49 CFR Part 192, 193, and 195. FMCSA-covered employees are commercial motor vehicle drivers required to hold a commercial Class A, Class B, or commercial C driver's license. Each of these agencies has established its own additional testing policies and regulations to comply with 49 CFR Part 40 testing procedures and set their testing rates annually. For example, PHMSA requires random testing for drugs (current annual test rate for 2021 is 50% of the pool), while FMCSA requires testing for both drugs and alcohol (current annual test rate for 2021 is 50% of the pool for drugs and 10% for alcohol). In addition to random testing, both agencies require testing (as needed) for: pre-employment/pre-assignment,

²¹ 49 CFR Part 40.

reasonable cause, post-accident, return-to-duty, and follow-up testing, as well as require a drug and alcohol background history check be conducted prior to placing employees in safety-sensitive functions.

C. Control 3- Employee Wellness Programs

SoCalGas's Employee wellness program objective is to design comprehensive "Wellbeing" programs that reflect the Company's commitment to employees and their social communities. Further, the wellness program builds a culture of health and safety at work and in personal life. It also has a positive impact on SoCalGas's medical plan population morbidities and creates an understanding of the incremental impact that a collective wellbeing program presence can have on helping SoCalGas continue its high performance and achievement of organizational goals.

SoCalGas's Wellbeing Program goals are to:

- increase employee awareness of personal health and safety;
- empower and educate employees about making healthy lifestyle choices; and
- improve employee and their social communities' quality of living.

According to the CDC, preventable chronic conditions are a major contributor to the costs of insurance premiums and employee medical claims and lost productivity. Effective worksite wellness programs can result in significant, positive outcomes such as:

- Better employee health;
- Less absenteeism and sick leave;
- Higher job performance and productivity;
- Lower health insurance costs;
- Fewer safety incidents and workers' compensation claims; and
- Happier, more satisfied employees.

The Company Wellbeing programs strive to offer programs under the following wellness pillars:

- Move More (Physical Fitness and Activity);
- Eat Right (Healthy Eating and Weight Management);
- Prevent It. Manage It. (Disease Prevention and Mgmt., Biometric Screenings);
- Stress Less. Focus More. (Mental/Emotional Wellbeing);

- My Money (Financial Wellbeing and Saving);
- My Community (Giving Back – Engagement, Volunteerism and Awareness);
- At Your Fingertips (Interactive Tools, Guides & Resources); and
- Achieve It! (Incentives and recognition).

In addition, based on medical plan utilization and experience, educational programs target the following areas:

- Diabetes;
- Cancer;
- Heart Disease;
- Obesity;
- Stress;
- Coronary Arterial Disease (CAD);
- Asthma and Chronic Obstructive Pulmonary Disease (COPD); and
- Tobacco Cessation.

D. Control 4- Employee Safety Training and Awareness Programs

Training, education, and awareness are elements of a strong Injury and Illness Prevention Program. As stated above in SCG-2-1, SoCalGas employees receive extensive training because SoCalGas believes safety starts with proactive upstream measures to prevent a safety incident from occurring. Front-line employees are trained in behavior-based safety programs. At SoCalGas, safety is a core value, so the Company provides all employees with the training necessary to safely perform their job responsibilities.

A strong safety culture requires the right people at the right job with the right skills. The Human Resources function, with support from the operating organizations and the Safety Management System (SMS) organization at SoCalGas, supports SoCalGas's safety culture by attracting, developing, training, and retaining employees who have the skills and abilities to perform their jobs safely and operate and maintain a safe and reliable system. To achieve the accountability of enhancing the safety culture, the SMS organization, the operating organizations, and the Human Resources function are responsible for performance management, organizational effectiveness, and safety. SoCalGas develops training plans by job classification that include courses required to perform certain work, meet Company objectives, and satisfy

required compliance training. Training plans are maintained in SoCalGas's Learning Management System (cornerstone) and accessed by supervisors and employees through the MyInfo application. Each department is responsible for maintaining training plans and ensuring employees complete initial and periodic refresher training requirements. Contractor compliance, maintenance of DOT-required programs, improving driver safety via training, and in-vehicle instruction are also top priorities for SoCalGas.

In addition, SoCalGas deploys a "Safety Essentials for Supervisors" training program which is a one-day workshop developed for new and existing supervisors to provide a comprehensive understanding about safety culture and leadership for supervisors to effectively manage safety programs at their respective work location. This training is mandatory for all new supervisors and is offered as a refresher to existing supervisors. Safety Department and Employee Assistance Program (EAP) & Wellness Department execute these programs to maintain employee safety.

SoCalGas also has a Safety-First program. This program involves the rollout of safety committee member training to prepare safety committee members to better influence the safety culture. The focus of this training is to enhance the skills of safety committee members, so safety improvement projects and person-to-person interaction are more effective. SoCalGas seeks to enhance the mindset that employees are "one-another's keeper" when it comes to safety. SoCalGas provides initial and refresher safety leadership training to safety committee members. The safety committee members include union employees, and in the operating organizations, the safety committees typically consist of mostly union employees. The training is available to all job classifications. These individuals are safety advocates and are in safety leadership roles. They help define and instill the safety culture at their respective work location.

SoCalGas uses an Environmental and Safety Compliance Management Program (ESCMP) to track and document completion of the above-noted training courses, as well as compliance requirements, awareness, goals, monitoring, and verification related to all applicable environmental, health and safety laws, rules and regulations, and Company standards. SoCalGas's annual ESCMP certification process involves submittal of information into a database used to collect and record employee and facility compliance. For this submittal, two types of checklists are available and completed in the online system: an employee-based checklist and a facility-based checklist. Through this process, the Environmental and Safety

departments can review submittals in the online system and confirm required inspections were completed, assigned training was done, and all corrective actions were addressed.

E. Control 5- Safe Driving Programs

SoCalGas's safe driving programs aim to increase driver safety awareness to prevent and minimize the risk of motor vehicle incidents. With senior management's commitment and employee involvement, SoCalGas is driving a safety culture committed to safe driving. This commitment includes written policies and procedures and the following program elements:

Alert Driving Program: FleetDefense® by AlertDriving is a state-of-the-art online Driving Safety Program designed to increase skills that will help keep employees safe and reduce traffic incidents. The FleetDefense® web-based training uses targeted defensive driving courses to assess employees' safe driving behaviors and evaluate drivers' defensive skills using actual footage of near-collision situations. The training features an online hazardous driving assessment called the Hazard Perception Evaluation (HPE). Once the HPE is completed, each driver is assigned monthly online training modules.

DMV Drivers' License Pull Program: The California DMV Pull Notice Program allows SoCalGas to monitor the driver's license records of employees who drive on the Company's behalf. SoCalGas is enrolled in the Class A Pull Notice Program, which also enrolls the employee in the random alcohol and drug testing program, per Company policy, which is managed by the Employee Care Services department. The ability to monitor driving records assists the Company in improving employee and public safety and helps minimize overall risk and liabilities. The program automatically sends a notice when an employee has an action against his or her license, such as a suspension or a DUI. This information also helps to reveal problem drivers or driving behavior through notice of accidents and failures to appear.

Commercial Drivers' License Program: In accordance with the FMCSA Drug and Alcohol Testing Regulations,²² SoCalGas's EAP and Wellness department must subject the Company's commercial drivers who operate a commercial motor vehicle (*i.e.*, vehicles with a GVWR of 26,001+ pounds, or are placarded for hazardous materials) to random drug and alcohol testing. Details of this program are outlined under the Drug and Alcohol Testing section above (*see*, SCG-2-C2). To manage this pool, the EAP and Wellness department collaborates

²² 49 CFR Part 382.

with the Gas Systems Integrity Staff and Programs department (which manages the DMV Pull Notice Program) to determine that each commercial driver in the random testing pool has a valid commercial driver's license and medical card. In addition, this group also provides information on new drivers that need to be added to the pool, or inactive drivers that need to be removed from the pool. The EAP and Wellness team closely monitors this pool by gathering monthly driver data from the DMV Pull Notice department, and prior to the next month's random selection, to determine that the pool is not diluted with inactive drivers and/or that new employees are promptly added to the pool. EAP and Wellness also conducts required DOT drug and alcohol history background checks for all new drivers that enter the CMV driver pool. Effective January 4, 2020, FMCSA will require that the Company also register with their FMCSA Driver National Clearinghouse. The EAP and Wellness team is required to check the Clearinghouse for drug and alcohol violations prior to hiring new drivers, and thereafter on an annual basis. The team must also report violations to this Clearinghouse within three days of any driver drug and alcohol program violations.

F. Control 6- Personal Protective Equipment (PPE)

The purpose of SoCalGas's PPE Program is to protect employees from the risk of injury by creating a barrier against workplace hazards. The PPE Program addresses eye, face, head, foot, and hand protection. OSHA standards require employers to conduct and certify workplace hazard assessments for the use of PPE at facility locations that are representative of the types of ongoing work operations. SoCalGas does not have to perform a hazard assessment at each location, but if a hazard assessment is performed, for example, at a transmission facility, then that assessment is representative of other similar transmission facilities and would also apply to those locations. SoCalGas provides its employees with the PPE required to safely perform work (e.g., flame-retardant suits, eye protection, and gloves). The Company maintains processes and procedures so that employee hearing and respiratory functions are not impaired due to exposure to harmful environmental conditions. When work is performed that could expose customers or the public to injury, controls are implemented to mitigate risk. The costs associated with equipment and specific occupational safety programs are included in this category.

G. Control 7- Near Miss, Stop the Job, and Jobsite Safety Programs

All SoCalGas employees, regardless of rank or title, are given the authority to "stop the job" at any time if they identify a safety hazard, and are encouraged to raise a red flag whenever

they feel it is needed. SoCalGas recognizes the importance of learning from close calls and near-misses to reduce the potential for a serious incident or injury in the future.²³ SoCalGas encourages employees to report close calls. The information is submitted to Safety Management for review and is shared with other employees on a weekly basis, so they understand and benefit from lessons learned. Front-line employees are trained to “Stop the Job,” a SoCalGas safety best practice that empowers employees to stop the job at any time, without fear of retaliation, if they see a condition that might be unsafe. Following invocation of “Stop the Job,” the job can only resume once all concerns have been addressed and safety precautions have been taken.

SoCalGas also maintains a quality assurance program to assess the work quality of many of its field personnel. Job observations and field rides are conducted by management personnel based upon behavior-based safety principles. SoCalGas’s job observation program is a proactive approach to safety and health management, focusing on principles that recognize at-risk behaviors as a frequent cause of both minor and serious injuries. The purpose of the job observation and field ride process is to reduce the occurrence of at-risk behaviors by modifying an individual’s actions through observation, feedback, and positive interventions aimed at developing safe work habits. Employees are also provided feedback and coaching so that their work conforms to policy and procedure.

H. Control 8- Safety Culture Programs

SoCalGas promotes a vigilant focus among all employees by investing in regular events on safety issues and facilitating discussion of safety practices. Safety meetings are important to SoCalGas and, therefore, are scheduled on a regular basis. These meetings include: weekly reviews of relevant policies and procedures; safety tailgates to discuss workplace hazards, work plans, and responsibilities; safety stand-downs to discuss safety incidents, close calls, bulletins or other safety topics; safety committee meetings to develop and present material on various safety topics; annual safety stand-downs at SoCalGas’s operating districts; annual safety congresses for employees and contractors; and dialogue meetings with Company and department leadership.

Safety and Health Congress: Since 1999, SoCalGas has held annual Safety and Health Congresses to provide a forum for safety committee members (composed of represented

²³ The National Safety Council describes a close call or near-miss as an unplanned event that did not result in injury, illness, or damage, but had the potential to do so.

employees) to share and exchange safety information and ideas. Recipients of the Individual and Committee Safety Excellence Awards are announced at the events, recognizing safety standouts who embrace the safety culture and demonstrate safety leadership. Historically, there have been two congress events scheduled every year principally benefiting the transmission, distribution, customer services, underground and aboveground storage and other operating organizations.

Beginning in 2019, SoCalGas added an additional safety congress event for the benefit of the multitude of staffing/office organizations located at SoCalGas's Gas Company Tower in Los Angeles. This inaugural milestone event took place in September 2019. Due to the restrictions of the COVID-19 pandemic in 2020, these safety congress events were all combined and offered virtually. Safety and health congresses are expected to further improve the safety awareness and ownership amongst office employees and help reduce ergonomic and other office related injuries and incidents.

Executive Safety Council (ESC): The ESC has been in place for well over a decade and its purpose is to provide safety oversight and executive interactions with employees over safety matters. The ESC is led by the Chief Safety Officer of SoCalGas and includes all executives with operations responsibilities and the Chief Risk Officer. The ESC meets on a quarterly basis at various operating locations to engage with represented employees, supervisors, and managers associated with an operating district or a region. Unique and separate employee dialogue sessions are held to provide a forum for employees to share their candid feedback on what is going well in safety and what needs to be improved. Issues brought up are discussed and resolved during the dialogue session or carried forward as action items for later resolution. These sessions, which have been well-received by employees, enable executives and employees to share their perspectives on safety successes, challenges, and opportunities.

Beginning in 2019, SoCalGas expanded the frequency of these interactions from quarterly to monthly to enable reaching out to more operating districts and more employees in the Company. The four quarterly sessions are continuing as is, but the supplemental monthly sessions are less structured and more integrated with local safety stand-downs managed by each operating district. In the monthly sessions, executives actively participate in the operating district's routine safety stand-down activities. The primary goal with the monthly interactions is to demonstrate support by executives for front-line employees (management and represented) and local safety committees to learn how executives can better support safety. In 2020, due to

the restrictions of the COVID-19 pandemic, the monthly sessions were curtailed, but will resume at a normal frequency, once the pandemic risk is safely mitigated.

Safety Culture Survey: SoCalGas regularly assesses its safety culture and encourages two-way communication between employees and management as a means of identifying and managing safety risks. SoCalGas conducts and invites/encourages all employees to participate in the National Safety Council (NSC) Barometer Survey every two to three years (Safety Culture Survey). The first survey was conducted in 2013, followed by two more surveys in 2016 and 2018. Safety Culture Survey results are shared with all employees, improvement opportunities are identified, corrective actions implemented, and progress measured by comparing results from survey to survey. SoCalGas strives to continually improve its safety program and culture using a variety of means, including using the Safety Culture Surveys.

Safety Stand-downs: A Safety Stand-down is a voluntary event for employers to talk directly to employees about safety. These events provide an opportunity to discuss hazards, protective methods, and the Company's safety policies, goals, and expectations. SoCalGas has about five dozen operating districts and each district typically conducts a safety stand-down every year. The purpose of these safety stand-downs is to bring district employees together to raise awareness about safety, health, and wellness. Local management and the local safety committees select topics of interest to the district and the topics change from year to year. This practice has been in place for more than a decade.

Safety Tailgates: Safety tailgate talks are short informational meetings held with employees to discuss work-site related safety. The purpose of a tailgate is to inform employees of specific hazards associated with a task and the safe way to do a job. Tailgate talks also serve as a reminder to employees of what they already know while establishing the supervisor's credibility and conscientiousness about his or her role related to safety and work oversight.

Safety Meetings: The main objective of a safety meeting is to remind employees of safe practices they have already learned or to introduce and build awareness of new techniques, new equipment, or new regulations that must be observed.

I. Control 9- Utilizing Industry Best Practices and Benchmarking

SoCalGas collaborates through participation in various industry groups to benchmark with other utilities, industries, and leaders in safety performance. SoCalGas benefits from

building relationships with other safety leaders, accessing best practices on employee and contractor safety, and benchmarking on leading indicators and key safety program elements.

SoCalGas participates in safety benchmarking forums to compare health and safety processes and performance with others to learn how to reduce incidents, improve compliance, and discuss best management practices as efforts to improve the safety and health of the Company. Our end goal is to send every employee home safely every day. Some of the key organizations the Company benchmarks against are the American Gas Association (AGA), Western Energy Institute (WEI), and American Petroleum Institute.

Additionally, SoCalGas attends the California Independently Owned Utility (IOU) and Municipality group meetings to discuss employee and contractor safety. This dedicated forum is a utility benchmarking initiative addressing new regulations, legislation, best management practices, and other safety topics of interest.

Of equal importance are outreach activities with local first responder agencies, county coordinators (emergency management), and other public officials which occur on a yearly basis, focusing on how the Company can partner with first responders, agencies, and officials during an emergency incident response. This includes a review of infrastructure location information, hazard awareness and prevention, leak recognition and response, emergency preparedness and communications, damage prevention, and integrity management. In addition, SoCalGas partners with these stakeholders throughout the year on joint drills, exercises, tabletops, and preparedness fairs to enhance our coordination and response during emergencies. SoCalGas has also established liaisons with appropriate fire, police, and other public officials across its service territory, which includes over 100 fire agencies. Examples of this include SoCalGas's deployment of emergency response services to northern and southern California following weather-related events, as well as assistance to the Boston area following a pipeline overpressure occurrence.

J. Control 10- Workplace Violence Prevention Programs

SoCalGas considers workplace violence to be a violent incident related to the workplace, resulting in emotional or physical harm to an employee(s) or third parties. Emotional harm or distress includes, but is not limited to, mental distress, mental suffering, or mental anguish. Physical harm refers to physical injury to the body, including an injury that caused, either temporarily or permanently, partial or total physical disability, incapacity, or disfigurement.

SoCalGas classifies this as part of the IIE risk because it affects people, an incident can occur in any department, and is a function of employee or former employee conduct. The United States Department of Labor outlines the components of an effective workplace violence program, including:

- Work Environment – creating a professional, healthy, and caring work environment
- Security – maintaining a secure and physically safe workplace
- Education – communicating awareness regarding workplace violence
- Performance/Conduct Indicators – identifying conduct that may present warning signs
- Employee Support Services – assisting employees in dealing with personal/professional issues

SoCalGas’s workplace violence mitigation program addresses each of these components as described below.

1. Physical Security Systems

Physical security are the systems and activities that maintain the safety of employees, contractors, vendors, the public, SoCalGas facilities, and infrastructure, through people, processes, and technology. The three primary categories of physical security are described as follows:

- People – employees, contractors, vendors, their skill and expertise which implement and support physical security.
- Process – goals, regulations, guidelines, and instructions establishing actions for risk management (plans, policies, procedures, training, awareness, etc.)
- Technology – hardware and software of the physical security system designed to deter, delay, detect, assess, communicate, and respond to potential physical threats (barriers, CCTV system, access management system, video analytics, electronic keys, etc.)

Physical security systems provide protection enhancements to facilities or infrastructure to improve access control, intrusion detection, and interdiction capabilities to deter, detect, delay, assess, communicate, or respond to undesirable events. Examples include, but are not limited to:

- Physical Barriers – Physical barriers are natural and man-made structures that physically and psychologically deter and delay adversaries, and channel traffic through specified entry/exit points. Types of barriers include berms, fences, walls, gates, vehicle anti-ramming measures (bollards, engineered planters and benches, landscaping boulders, etc.) window barriers, ravines, drainage ditches, security doors, etc.
- Access Control System - Access control systems limit or detect access to facilities and are commonly integrated across all security layers. They provide separation between common areas and higher security areas or critical assets. Access controls are typically found in the form of the electronic control systems (proximity card readers or electronic keys) and mechanical locks/keys.
- Intrusion Detection System (IDS) - IDS are an array of sensors, surveillance devices, and associated communication systems used to increase the probability of detection and the assessment of potential unauthorized access to facilities. The technologies used in IDS systems range from electrical contact mechanisms, tamper sensors, motion, heat, sound, or vibration sensors, radar, duress alarms, video analytics, and other devices.
- Closed Circuit Television (CCTV) – CCTV is a self-contained surveillance system comprising of cameras, recorders, control equipment, and displays for monitoring activities in real time. The function of the CCTV system is intended to be an overt deterrent, used to assess real time security events, and as forensic tool for investigations following an incident.

2. Contract Security

In addition to physical security systems, SoCalGas employs contract security (security guards) to secure and protect assets and people. Security personnel are located at critical facilities and other work locations. Security personnel are used to complement and supplement existing security measures. Security personnel can also provide increased security capabilities as an overt deterrence during security incidents, or emergencies. Security personnel may be deployed permanently at a facility based on criticality, facility population, compliance, etc. or temporarily based on the threat environment, criminal activity, and/or past incidents.

3. Corporate Security Planning, Awareness, Risk Management, and Incident Management

Planning, awareness, risk management, and incident management are the product of corporate security projects and programs to prevent, mitigate, or respond to security incidents. This control also includes a case management system which is used to track security incidents and investigations. The control incorporates services provided by Corporate Security, including:

Training

The Company offers a variety of training opportunities to employees to increase awareness regarding the identification and response to criminal activity, including workplace violence. Active Shooter Training has been provided to thousands of employees and focuses on the actions employees should take during an active shooter scenario. The training was developed by Corporate Security and is based upon the Department of Homeland Security (DHS) training titled “Run, Hide, Fight.” Through interactive discussion, this training provides basic awareness of an active shooter situation and how to respond accordingly. Topics include:

- Active Shooter Definition
- Active Shooter Incidents
- Active Shooter Characteristics and Triggers
- Run, Hide, Fight Concepts
- Last Resort Survival Measures
- Police Arrival

Additionally, Workplace Violence Training is provided every two years to Corporate Security, Human Resources (HR), and Legal representatives by a board-certified forensic psychologist who consults to numerous federal, state, and local law enforcement agencies. This training instructs on the use of Workplace Assessment of Violence Risk (WAVR-21), a screening tool used by workplace violence mitigation teams.

Investigations

Corporate Security works closely with Legal, HR, affected business units, and, when necessary, law enforcement, to thoroughly investigate allegations of workplace violence, including unfriendly incidents. This process assists with gathering or validating information needed for decision makers to act accordingly.

Risk Management and Intelligence Analysis

Corporate Security has established a Risk Management and Intelligence Analysis program to collect, analyze, and disseminate intelligence that assists with decision making regarding energy operations and security planning. An intelligence program helps anticipate, identify, and assess threats that could harm the Company, its employees, guests, or assets, and provides actionable strategic and tactical intelligence to mitigate risk. The program develops and maintains regular contact with local, national, and international law enforcement and intelligence community partners on a regular basis. The program also creates a risk management process to prioritize and mitigate threats, vulnerabilities, and consequences. As part of intelligence analysis, the Company uses social media monitoring services for emergency notifications, incident updates, threat identification, and to identify the misuse of branding. In a security setting, these tools can provide real-time updates to incidents, which may affect the safety or security of employees. These tools also can provide insight into emerging or imminent threats to Company employees or infrastructure.

Incident/Case Management System

Corporate Security maintains an incident/case management system to track incidents and investigations, such as, burglary, theft, vandalism, and workplace violence. The system provides data necessary for analysis of security programs and assists with strategic planning to improve security and safety of Company facilities, employees, and the public.

4. New Hire Screening Processes

The country's electric and natural gas transmission and distribution systems have an interdependent role with life/safety, emergency response, and national security issues, thereby providing a basis for heightened security and identity verification processes for new hires. SoCalGas performs a criminal background check in accordance with federal, state, and local laws prior to beginning on-boarding for persons offered employment.

5. Workplace Violence Mitigation Team (WVMT)

The Workplace Violence Mitigation Team (WVMT), formed in 2011, is a joint team of Manager, Director, and Officer level representatives within Corporate Security, HR, and Legal. The team is specifically trained to assess and respond to the threat posed by an individual that may be prone to violence. The WVMT is responsible for developing and executing an

effective Workplace Violence Prevention program that includes, but is not limited to:

- Training supervisors and employees to detect early warning signs of possible workplace violence
- Investigating and mitigating potential workplace violence incidents
- Responding appropriately to threat-related emergencies
- Identifying and enlisting the assistance of qualified professionals in workplace violence assessment, security, and incident management
- Documenting all activities related to workplace violence prevention and control.

The WVMT uses various threat management tools provided by outside professional resources or developed and adapted by the WVMT. These tools are intended to guide the WVMT in data collection and decision making throughout the management of a case. The tools may be used in conjunction with appropriate degrees of professional threat management consultation. The WVMT meets as needed when an individual displays signs that he/she may be prone to violence or engages in violent action on Company property.

IV. 2022-2024 CONTROL & MITIGATION PLAN

This section contains a table identifying the controls and mitigations comprising the portfolio of mitigations for this risk.²⁴ Controls and mitigations in the Employee Incident risk have the same risk profile; thus, they are not further tranced.

Activities discussed in Section III above are expected to continue during the TY 2024 GRC. For clarity, a current activity that is included in the risk mitigation plan may be referred to as either a control and/or a mitigation. For purposes of this RAMP Report, a control that will continue as a Mitigation will retain its control ID unless that the size and/or scope of that activity will be modified, in which case that activity's control ID will be replaced with a mitigation ID. The table below shows which activities are expected to continue.

²⁴ See D.18-12-014, Attachment A at A-14 ("Mitigation Strategy Presentation in the RAMP and GRC")

Table 3: Control and Mitigation Plan Summary

Line No.	Control/Mitigation ID	Control/Mitigation Description	2020 Controls	2022-2024 Plan
1	C1	Employee health and safety programs and standardized policies	X	X
2	C2	Drug and alcohol testing programs	X	X
3	C3	Employee wellness programs	X	X
4	C4	Employee safety training and awareness programs	X	X
5	C5	Safe driving programs	X	X
6	C6	Personal protection equipment (PPE)	X	X
7	C7	Near Miss, Stop the Job, and jobsite safety programs	X	X
8	C8	Safety culture programs	X	X
9	C9	Utilizing industry best practices and benchmarking	X	X
10	C10	Workplace violence prevention programs	X	X
11	M1	OSHA construction certification training	No	X
12	M2	Industrial hygiene program refresh	No	X
13	M3	Proactive monitoring for indoor air quality and chemicals of concern	No	X
14	M4	Creation of a safety video library	No	X
16	M5	Expanded Safety Culture Assessments	No	X
17	M6	Industrial Hygiene program expansion	No	X
18	M7	Workplace Violence Prevention Program Enhancements	No	X

For activities SoCalGas plans to perform that remain unchanged, refer to the description in Section III. If changes to the various activities are anticipated, such modifications are further described in this section below.

A. Changes to 2020 Controls

SoCalGas’s comprehensive employee safety program consists of efforts all aimed to reduce the risk of a safety event involving an employee. Given the vast number of activities SoCalGas performs to mitigate employee safety risk, SoCalGas grouped similar activities with similar risk profiles into mitigation programs. Since all employees have the potential for serious

safety injuries and fatalities, and each of the safety risk controls and mitigations have the same goal of reducing the frequency and consequence of safety events involving employees, all controls and mitigations have the same risk profile and are not further tranced.

B. 2022 – 2024 Mitigations

1. Mitigation 1 - OSHA Construction Certification Training

OSHA 10-hour and 30-hour construction training are part of OSHA’s Outreach Training Program, a voluntary training program OSHA started in 1971. According to OSHA, its purpose is to promote workplace safety and health and to make workers more knowledgeable about workplace hazards and their rights. The OSHA Outreach Training Program alone does not, however, fulfill the training requirements found in OSHA standards. For example, there are separate OSHA standards for energy isolation programs (*i.e.*, Lock-out and Tag-out programs), the confined space program, the lead standard, and the asbestos standard. There are specific compliance training requirements for employees who are involved in these activities. The Outreach 10-hour and 30-hour training covers many of those hazards, but it is considered non-mandatory training and is over and above the compliance training mandated by OSHA standards. Therefore, employers are responsible for providing additional training for their employees on the specific hazards of their job, as noted in many OSHA standards. OSHA’s Outreach Training Program provides training on the recognition, avoidance, abatement, and prevention of workplace hazards. Through its national network of OSHA Training Institute (OTI) Education Centers, qualified individuals become authorized OSHA Outreach trainers and deliver 10-hour and 30-hour outreach classes to workers. According to OSHA, between FY 2012 and FY 2016, more than 3.94 million workers were trained in job hazard recognition and avoidance through the program.

SoCalGas plans to add this new training for employees directly involved in and overseeing construction jobs performed by Company employees. This mitigation would provide the 10-hour training to management employees overseeing construction activities and 30-hour training to field supervisors and field represented employees directly involved in construction and operations activities [*e.g.*, Gas Operations, Gas Transmission Operations, Customer Services Field, Storage Operations, Construction Projects/Programs (like PSEP, MHP, PI, and TIMP/DIMP/SIMP)]. The purpose of providing employees with this new training is to further enhance their skills in hazard identification and help them gain certification that is recognized by

regulatory agencies nationwide. By becoming better at identifying hazards, employees are expected to contribute to reducing the risk of injuries.

2. Mitigation 2 - Industrial Hygiene Program Refresh

An important component of the industrial hygiene program is to conduct exposure assessments for issues of concern to employee health and safety and to establish appropriate mitigation measures and controls. SoCalGas has been conducting such assessments for over three decades, in conjunction with the various industrial hygiene programs, to promote employee health and safety as well as compliance with various Cal/OSHA regulations.

An important component of conducting exposure assessments is to review these assessments and periodically refresh or update them to confirm that they still support the decisions made on mitigation controls to promote employee health and safety. There are no specific regulatory requirements defining the frequency at which the initial assessments should be reviewed and updated, except when the conditions of exposure have significantly changed. SoCalGas recognizes the need to review all past records and identify records that are older than ten years or more to assess whether those assessments need to be refreshed and updated.

In addition, SoCalGas plans to take a proactive approach in conducting additional assessments in areas where regulations may become more stringent in the future and gradually work towards achieving compliance prior to new requirements coming into play. For example, noise generating equipment and machinery at many facilities have changed since SoCalGas originally conducted noise surveys for employees to assure compliance with the Hearing Conservation Program. Obtaining more current data through implementation of this program will help to document the noise levels for employee job tasks and alert SoCalGas to any new areas of concern. It should also be noted that noise dosimetry monitoring technology has also significantly advanced, improving the accuracy of the data collected and method of documentation. Implementation of this program will include a re-sampling that will assist us in ensuring Company data has been collected and documented in sync with best practices.

As another example, Cal/OSHA is proposing regulation changes for occupational lead exposure. One of the changes will be a lower Permissible Exposure Limit (PEL): down to 10 ug/m³ from 50 ug/m³, and a lower Action Limit (AL): down to 2 ug/m³ from 30 ug/m³. Most of our industrial hygiene exposure assessment data for lead removal tasks was gathered before 2012 and was based on complying with the current exposure limits. Employee tasks will need

to be monitored again to determine if they comply with the proposed lower exposure limits. The tasks may need to be modified or deleted depending on the air monitoring results.

3. Mitigation 3 - Proactive Monitoring for Indoor Air Quality and Chemicals of Concern

SoCalGas treats indoor air quality (IAQ) issues that are raised by employees as safety concerns. Such issues have been addressed in the past at large headquarters facilities, where employees work indoors on a full-time basis. To evaluate and address IAQ concerns, SoCalGas adopted a new Proactive Monitoring program to conduct annual IAQ assessments at the six large headquarters facilities in its service territory. This mitigation measure, in combination with other existing and new mitigation measures, is expected to reduce SoCalGas's occupational injury rates based on the last five years' historical trend.

4. Mitigation 4 - Creation of a Safety Video Library

SoCalGas has a safety video library comprised of training videos on a variety of safety topics. The collection consists of several hundred titles covering around 50 primary safety topics, with typically a single copy available for physical checkout by SoCalGas employees. The collection is outdated with virtually all titles available only in a format that is no longer useful, and the video check-out and check-in process is cumbersome, disincentivizing its use.

To streamline the library, SoCalGas plans to subscribe to a third-party online streaming service provider to get access to the latest safety training materials from a reputable training source. Having 24/7 ready access to relevant and updated safety training materials to use during safety stand-downs, daily morning safety meetings, daily tailgate meeting for field crews, and other safety events will help SoCalGas employees and supervisors tremendously.

5. Mitigation 5 - Expanded Safety Culture Assessments

As stated above (SCG-2-C8), since 2013, SoCalGas has retained the National Safety Council to use its Safety Barometer Survey to engage our employees to provide input on safety, gain benchmarking insight, and identify improvement opportunities (Safety Culture Survey). SoCalGas has now completed three cycles of the Safety Culture Survey (2013, 2016, and 2018) and has ranked consistently high, above the 90th percentile of 580 similarly surveyed companies. More important than the ranking, the Safety Culture Survey has helped to identify safety areas of alignment and strength as well as opportunities for potential improvement.

Moving forward, SoCalGas plans to expand the assessments to include focus group discussions, employee interviews, and field observations of employee job activities to view safety culture in action and further supplement the feedback received from the Safety Culture Surveys. SoCalGas also plans to tap into grass-roots activities of its local safety committees and integrate that insight into safety culture assessment. The purpose of these additional methods and approaches is to gain further insight in areas of success and potential weakness within the safety management system or programs and identify more relevant and specific opportunities of improvement. This mitigation measure, in combination with other existing and new mitigation measures, is expected to reduce SoCalGas's occupational injury rates based on the last five years' historical trend.

6. Mitigation 6 - Industrial Hygiene Program Expansion

SoCalGas is planning to expand its' Safety Department staff by increasing the number of certified industrial hygiene professionals available to support the continued expansion of this role as further described below in managing safety during normal business operations and during responses to emergencies. The demand has particularly increased for responding to emergency incidents and associated new regulatory requirements.

The Safety Department is part of the Safety Management System organization and is responsible for positioning SoCalGas employees to lead healthy, safe, and productive lives. The services provided by this department include, but are not limited to, safety and industrial hygiene education and compliance, and incident prevention, analysis, and reporting. The Safety Department is responsible for ensuring SoCalGas is, at a minimum, in compliance with all required safety and health regulations (*e.g.*, Department of Transportation (DOT) and Cal/OSHA), as well as being responsible for positively influencing the SoCalGas safety culture and working closely with SoCalGas personnel to provide education and training to support an incident-free workplace.

Ensuring employees are prepared to respond to emergencies is another SoCalGas effort the Safety Department supports. Being prepared to respond effectively during an emergency decreases the likelihood of serious injuries, illnesses, and/or fatalities. Safety Management has supported major natural disasters and emergencies throughout the Company's service territory. In the past couple of years, the Safety Department has supported multiple wildfire incidents by monitoring the Air Quality Index in the affected areas and being a part of the Company's

Incident Command System (ICS) when incidents trigger the activation of the Company's Emergency Operations Center (EOC). The Safety and Health group is also present in the field during incidents to provide frontline supervisors and employees with safety support. The Safety and Health group provides safety guidance and conducts observations of work performed in the field during emergencies focusing on Company safety best practices and ensuring Company safety policies are being followed. New emergency regulations were put into place by Cal/OSHA to respond to increased exposure to wildfire related smoke. Safety Department developed a new safety standard addressing these requirements and provided training and appropriate PPE for use during wildfire incidents. The Safety Department also supported the Montecito mudslide response, and has provided in-person mutual aid to other utilities in the United States (SDG&E, PG&E and Columbia Gas). Most recently, Since 2020, the Safety Department has supported the COVID-19 pandemic Company effort. The Safety Department monitors and examines guidelines and directions from the Center for Disease Control and Prevention (CDC) as well as other city and county guidelines including the California Department of Public Health (CDPH) and Cal/OSHA. The Safety Department continues to work closely with other internal Company departments such as Human Resources and has established internal Company guidelines and protocols to prevent the spread of the COVID-19 virus in the workplace. Some of these COVID-19 Company guidelines and protocols include:

- Physical Distancing Guidelines
- Temperature and Health in-person screening by medically trained professionals
- Self-screening guidelines before coming into work
- Face Covering, Surgical Mask, and N95 Respirator guidelines
- Disinfection guidelines
- Hand Sanitizer Safety
- Face to face meeting and gathering guidelines
- Single Person per Vehicle Safety Protocol
- Safety Signage requirements
- Ergonomics at Home

The Safety Department also established the COVID-19 Safety Observation Program to ensure the guidelines and protocols in place are effective and being followed. The group also works closely with contractors to ensure they have established COVID-19 protocols and adhere

to SoCalGas's protocols when working at Company sites and interacting with SoCalGas employees.

7. Mitigation 7 - Workplace Violence Prevention Program Enhancements

The program controls outlined in Section 4 above related to workplace violence will continue to be performed in the proposed plan to maintain the current residual risk level. In addition, SoCalGas is proposing, beginning in 2021 and onwards, to expand or add the following mitigations.

SoCalGas proposes to continue supporting the use of physical security systems and contract security personnel. The purpose of these activities is to reduce the likelihood of a workplace violence event by increasing protective measures at Company facilities that have employees. Similarly, the presence of security guards increases protection with the aim of reducing the likelihood of an event. SoCalGas will be adding Physical Security System upgrades that will replace end of life equipment, improve integration, reduce nuisance alarms, and embrace recent industry security technology enhancements. Security enhancements to facilities and infrastructure improve access control, intrusion detection, and interdiction capabilities to deter, detect, delay, communicate, and respond to undesirable events. Currently, an electronic key system to replace mechanical keys is being implemented. The electronic key system will provide logging and audit capabilities, can be placed in remote locations without a network connection, and can be disabled by an administrator or set to disable after a period of time.

SoCalGas also proposes to replace the incident/case management system. The current incident/case management system manages security incidents by capturing information from investigations and providing historical querying capability. This system is over ten years old. With the increase of requests for information and data calls from state and federal regulatory entities, SoCalGas recommends that this system be upgraded or replaced. The current system does not allow for querying of data at the appropriate level of detail. Simple changes that may provide some additional functionality to assist with querying will be expensive and may only provide some of the necessary upgrades. It is possible alternate systems already used by Sempra may provide suitable incident/case management services to meet this increased need. Costs of upgrading the existing system are currently being compared to other options. This mitigation

measure, in combination with other existing and new mitigation measures, is expected to reduce SoCalGas’s occupational injury rates based on the last five years’ historical trend.

V. COST, UNITS, AND QUANTITATIVE SUMMARY TABLES

The tables in this section provide a summary of the risk control and mitigation plan, including the associated costs, units, and the RSEs, by tranche. When an RSE could not be performed, an explanation is provided. SoCalGas does not account for and track costs by activity or tranche; rather, SoCalGas accounts for and tracks costs by cost center and capital budget code. The costs shown were estimated using assumptions provided by SMEs and available accounting data.

**Table 4: Risk Control and Mitigation Plan - Recorded and Forecast Dollars Summary²⁵
(Direct After Allocations, In 2020 \$000)**

ID	Control/Mitigation Name	Recorded Dollars		Forecast Dollars			
		2020 Capital ²⁶	2020 O&M	2022-2024 Capital (Low)	2022-2024 Capital (High)	TY 2024 O&M (Low)	TY 2024 O&M (High)
C1	Employee Health and Safety Programs and Standardized Policies	0	882	0	0	838	1,015
C2	Drug and Alcohol Testing Programs	0	498	0	0	473	572
C3	Employee Wellness Programs	0	2,648	0	0	2,516	3,045
C4	Employee Safety Training and	0	438	0	0	416	504

²⁵ Recorded costs and forecast ranges are rounded. Additional cost-related information is provided in workpapers. Costs presented in the workpapers may differ from this table due to rounding. The figures provided are direct charges and do not include Company loaders, with the exception of vacation and sick. The costs are also in 2020 dollar and have not been escalated to 2021 amounts. The capital presented is the sum of the years 2022, 2023, and 2024, or a three-year total. Years 2022, 2023 and 2024 are the forecast years for SoCalGas’s Test Year 2024 GRC Application.

²⁶ Pursuant to D.14-12-025 and D.16-08-018, the Company provides the 2020 “baseline” capital costs associated with Controls. The 2020 capital amounts are for illustrative purposes only. Because capital programs generally span several years, considering only one year of capital may not represent the entire activity.

ID	Control/Mitigation Name	Recorded Dollars		Forecast Dollars			
		2020 Capital ²⁶	2020 O&M	2022-2024 Capital (Low)	2022-2024 Capital (High)	TY 2024 O&M (Low)	TY 2024 O&M (High)
	Awareness Programs						
C5	Safe Driving Programs	0	1,179	0	0	1,120	1,356
C6	Personal Protection Equipment (PPE)	0	1,139	0	0	1,082	1,309
C7	Near Miss, Stop the Job and jobsite safety programs	0	438	0	0	416	504
C8	Safety Culture Programs	0	810	0	0	814	977
C9	Utilizing Industry Best Practices and Benchmarking	0	1,066	0	0	1,012	1,225
C10	Workplace Violence Prevention Programs	1,296	1,357	3,328	4,068	1,196	1,447
M1	OSHA Construction Certification Training	0	0	0	0	0	0
M2	Industrial Hygiene Program Refresh	0	0	0	0	961	1,262
M3	Proactive Monitoring for Indoor Air Quality and Chemicals of Concern	0	0	0	0	59	78
M4	Creation of a Safety Video Library	0	0	0	0	50	65
M5	Expanded Safety Culture Assessments	0	0	0	0	45	60
M6	Industrial Hygiene Program Expansion	0	0	0	0	149	195

ID	Control/Mitigation Name	Recorded Dollars		Forecast Dollars			
		2020 Capital ²⁶	2020 O&M	2022-2024 Capital (Low)	2022-2024 Capital (High)	TY 2024 O&M (Low)	TY 2024 O&M (High)
M7	Workplace Violence Prevention Program Enhancements	0	0	658	950	0	0

Table 5: Risk Control & Mitigation Plan - Units Summary

ID	Control/Mitigation Name	Units Description		Recorded Units		Forecast Units			
		Capital	O&M	2020 Capital	2020 O&M	2022-2024 Capital (Low)	2022-2024 Capital (High)	TY 2024 (Low) O&M	TY 2024 (High) O&M
C1	Employee Health and Safety Programs and Standardized Policies	FTEs		0	18	0	0	17	21
C2	Drug and Alcohol Testing Programs	FTEs		0	6	0	0	6	7
C3	Employee Wellness Programs	FTEs		0	6	0	0	6	7
C4	Employee Safety Training and Awareness Programs	FTEs		0	18	0	0	17	21
C5	Safe Driving Programs	FTEs		0	18	0	0	17	21
C6	Personal Protection Equipment (PPE)	FTEs		0	18	0	0	17	21
C7	Near Miss, Stop the Job and jobsite safety programs	FTEs		0	18	0	0	17	21
C8	Safety Culture Programs	FTEs		0	18	0	0	17	21
C9	Utilizing Industry Best Practices and Benchmarking	FTEs		0	18	0	0	17	21
C10	Workplace Violence Prevention Programs	FTEs		2	30	6	6	28	32

ID	Control/Mitigation Name	Units Description		Recorded Units		Forecast Units			
		Capital	O&M	2020 Capital	2020 O&M	2022-2024 Capital (Low)	2022-2024 Capital (High)	TY 2024 (Low) O&M	TY 2024 (High) O&M
M1	OSHA Construction Certification Training	Attendees		0	0	0	0	50	65
M2	Industrial Hygiene Program Refresh	FTEs		0	0	0	0	19	25
M3	Proactive Monitoring and Indoor Air Quality and Chemicals of Concern	FTEs		0	0	0	0	6	8
M4	Creation of a Safety Video Library	FTEs		0	0	0	0	1	1
M5	Expanded Safety Culture Assessments	Survey		0	0	0	0	1	1
M6	Industrial Hygiene Program Expansion	FTEs		0	0	0	0	2	3
M7	Workplace Violence Prevention Program Enhancements	FTEs		0	0	3	3	0	0

**Table 6: Risk Control & Mitigation Plan - Quantitative Analysis Summary
(Direct After Allocations, In 2020 \$000)**

ID	Control/Mitigation Name	Forecast			
		LoRE	CoRE	Risk Score	RSE
C1	Employee Health and Safety Programs and Standardized Policies	See Table 7			
C2	Drug and Alcohol Testing Programs	548	4.8	2653	29
C3	Employee Wellness Programs	552	4.8	2662	2
C4	Employee Safety Training and Awareness Programs	547	4.8	2648	44
C5	Safe Driving Programs	518		2654	11
C6	Personal Protection Equipment (PPE)	See Table 7			
C7	Near Miss, Stop the Job and jobsite safety programs	551	5.1	2649	41
C8	Safety Culture Programs	552	4.8	2661	7
C9	Utilizing Industry Best Practices and Benchmarking	553	4.8	2662	5
C10	Workplace Violence Prevention Programs	553	4.3	2362	498
M1	OSHA Construction Certification Training	553	4.82	2666	33
M2	Industrial Hygiene Program Refresh	553	4.82	2667	0.4
M3	Proactive Monitoring	553	4.82	2667	17
M4	Creating of a Safety Video Library	553	4.82	2666	22
M5	Expanded Safety Culture Assessments	553	4.82	2667	9
M6	Industrial Hygiene Program Expansion	552	4.81	2658	60
M7	Workplace Violence Prevention Program Enhancements	553	4.82	2665	19

Table 7: Risk Control & Mitigation Plan - Quantitative Analysis Summary for RSE Exclusions

ID	Control/Mitigation Name	RSE Exclusion Rationale
C1	Employee Health and Safety Programs and Standardized Policies	Employee Health and Safety Programs are a foundational aspect of how SoCalGas creates a safe and healthy workplace environment for its employees. No data exists either internally or externally that directly relates this activity to the reduction in incident rates or the consequences thereof. Additionally, no SME could establish a quantifiable value for the effectiveness of this control activity.
C6	Personal Protection Equipment (PPE)	The procurement and usage of Personal Protection Equipment (PPE) is a fundamental aspect of how SoCalGas conducts operations and maintains the safety of its employees. No data exists, neither internally or externally, that directly relates this activity to reduction in incident rates or the consequences thereof. Additionally, no SME could establish a quantifiable value for the effectiveness of the control activity.

VI. ALTERNATIVES

Pursuant to D.14-12-025 and D.16-08-018, SoCalGas considered alternatives to the Risk Mitigation Plan for the IIE risk. SoCalGas typically analyzes alternatives when implementing activities to obtain the best result or product for the cost. The alternatives analysis for this risk mitigation plan also took into account modifications to the plan and constraints, such as budget and resources.

A. Alternative 1 - Develop internal expertise for expanded safety culture assessments

SoCalGas considered adding two full-time internal resources to conduct periodic safety culture assessments as an alternative to utilizing a third-party consulting firm. SoCalGas concluded that the alternative of adding professionals with specialized expertise is just as expensive as the current option of using the National Safety Council but comes with less credibility and independence and lack of benchmarking abilities. SoCalGas also considered utilizing vendors other than the National Safety

Council who are generally competitive in their costs and concluded that the benefit of using the non-profit and nationally renowned National Safety Council with their extensive benchmarking capabilities outweighs the potential benefits of using other similar assessment methodologies. Therefore, SoCalGas is not seeking additional internal resources to conduct Safety Culture Surveys at this time but will continue to evaluate the cost and effectiveness of the use of the National Safety Council.

B. Alternative 2 - OSHA Voluntary Protection Program

The Federal and California Voluntary protection programs (Cal/VPP) is a labor-management-government cooperative program designed to recognize workplaces that manage outstanding health and safety management systems for protection of workers and go beyond minimal compliance with the Federal and Cal/OSHA Title 8 California Code of Regulations. OSHA's Voluntary Protection Programs²⁷ (VPP) recognize employers who have implemented effective safety and health management systems and maintain injury and illness rates below national BLS averages for their respective industries. In VPP, management, labor, and OSHA work cooperatively and proactively to prevent fatalities, injuries, and illnesses through a system focused on: hazard prevention and control; worksite analysis; training; and management commitment and worker involvement. To participate, employers must submit an application to OSHA and undergo a rigorous onsite evaluation by a team of safety and health professionals. VPP participants are re-evaluated every three to five years to remain in the programs.

Implementation of an OSHA VPP serves as a proactive approach to identify and address potential workplace safety and health hazards and therefore avoid potential consequences. OSHA's VPP assessments are a proactive way to identify strengths and opportunities for enhancing safety. VPP physical inspections, document reviews, and interviews are components in this process. Sites with VPP work together in partnership with Federal OSHA and Cal/OSHA to systematically identify and correct hazards. VPP assessments provide insight into baseline safety and health hazards to establish initial levels of exposures for comparison to future levels so change can be identified. Implementing findings/results and acting on results helps move safety from its current "as is" state to the desired future state.

²⁷ United States Department of Labor, *Voluntary Protection Programs*, available at <https://www.osha.gov/dcsp/vpp/>.

SoCalGas is not proposing implementation of a VPP program as part of its Risk Mitigation Plan included herein but may present this program in a future GRC. SoCalGas is in the initial stages of its assessment of this program and will weigh the anticipated costs and benefits before deciding to move forward with implementation of this program.

C. Alternative 3 – Workplace Violence Prevention Training Alternative

SoCalGas considered alternatives to the proposed mitigations as it developed the incremental mitigation plan for the Workplace Violence risk. Typically, alternatives analysis occurs when implementing activities, and with vendor selection in particular, to obtain the best result or product for the cost. The alternatives analysis for this risk plan also took into account modifications to the proposed plan and constraints, such as budget and resources. The following represents alternatives for training and for physical security. The viability of this alternative was determined through discussions with stakeholders.

A potential alternative for training is to outsource training or develop computer-based training. Although this alternative may have an increased cost in the short term (*i.e.*, to hire the outside agency or develop the training), it would generally reduce costs in the future. Current training uses Corporate Security agents as instructors. Ideally, it is best to use Corporate Security agents as they provide greater insight into Company employees, history, locations, and operations. Accordingly, this alternative was dismissed. However, as demand increases for security-related training, it may be necessary to further explore this alternative.

**Table 8: Alternate Mitigation Plan - Forecast Dollars Summary²⁸
(Direct After Allocations, In 2020 \$000)**

ID	Alternate Mitigation Name	Forecast Dollars			
		2022-2024 Capital (Low)	2022-2024 Capital (High)	TY 2024 O&M (Low)	TY 2024 O&M (High)
A1	Develop internal expertise for expanded safety culture assessments	0	0	200	250
A2	OSHA Voluntary Protection Program	0	0	300	400
A3	Workplace Violence Prevention Training Alternative	0	0	45	65

Table 9: Alternate Mitigation Plan - Units Summary

ID	Control/Mitigation Name	Units Description		Forecast Units			
		Capital	O&M	2022-2024 Capital (Low)	2022-2024 Capital (High)	TY 2024 (Low) O&M	TY 2024 (High) O&M
A1	Develop internal expertise for expanded safety culture assessments	FTEs		0	0	2	2
A2	OSHA Voluntary Protection Program	FTEs		0	0	1	1
A3	Workplace Violence Prevention Training Alternative	Program		0	0	1	1

**Table 10: Alternate Mitigation Plan - Quantitative Analysis Summary
(Direct After Allocations, In 2020 \$000)**

ID	Control/Mitigation Name	Forecast			
		LoRE	CoRE	Risk Score	RSE
A1	Develop internal expertise for expanded safety culture assessments	553	4.82	2667	2
A2	OSHA Voluntary Protection Program	553	4.82	2662	15
A3	Workplace Violence Prevention Training Alternative	553	4.82	2667	16

APPENDIX A: SUMMARY OF ELEMENTS OF THE RISK BOW TIE

APPENDIX A: SUMMARY OF ELEMENTS OF THE RISK BOW TIE

Incident Involving an Employee (IIE): Summary of Elements of the Risk Bow Tie

ID	Control/Mitigation Name	Elements of the Risk Bow Tie Addressed
C1	Employee health and safety training programs and standardized policies	DT.1, DT.2, DT.4 - DT.9 PC.1 - PC.8
C2	Drug and alcohol testing program	DT.3 PC.1 - PC.8
C3	Employee wellness programs	DT.2, DT.3, DT.8 PC.1
C4	Employee safety training and awareness programs	DT.1 - DT.9 PC.1 - PC.8
C5	Safe driving programs	DT.1 - DT.3, DT.6, DT.7 PC.1 - PC.3, PC.8
C6	Personal protection equipment (PPE)	DT.1, DT.2, DT.4, DT.6 PC.1, PC.8
C7	Near Miss, Stop the Job, and jobsite safety programs	DT.1 - DT.9 PC.1 - PC.8
C8	Safety culture programs	DT.1 - DT.9 PC.1 - PC.8
C9	Utilizing industry best practices and benchmarking	DT.2, DT.8, DT.9 PC.1, PC.2, PC.6, PC.7
C10	Workplace violence prevention programs	DT.8 PC.1
M1	OSHA construction certification training	DT.2, DT.4, DT.5, DT.7 PC.1, PC.2
M2	Industrial hygiene program refresh	DT.1, DT.2 PC.1, PC.8
M3	Proactive monitoring for indoor air quality and chemicals of concern	DT.1, DT.2 PC.1, PC.8
M4	Creation of a safety video library	DT.1, DT.2, DT.4, DT.5, DT.7 PC.1, PC.2
M5	Expanded safety culture assessments	DT.1 - DT.9 PC.1 - PC.8
M6	Industrial Hygiene Program Expansion	DT.1, DT.2, DT.4, DT.5, DT.6, DT.8, DT.9 PC.1 - PC.8
M7	Workplace violence prevention program enhancements	DT.8 PC.1

APPENDIX B: QUANTITATIVE ANALYSIS SOURCE DATA REFERENCES

APPENDIX B: QUANTITATIVE ANALYSIS SOURCE DATA REFERENCES

The Settlement Decision directs the utility to identify potential consequences of a risk event using available and appropriate data.²⁸ The list below provides the inputs used as part of this assessment.

OSHA Reportable Incident Rate and Safety Consequences
Source: Historic SoCalGas employee injuries, fatalities

Vehicular Incident Rates and Claims
Source: Historic SoCalGas motor vehicle incident data

Workplace Violence Incident Rate
Agency: Bureau of Labor Statistics
Link: <https://www.bls.gov/iif/oshcfoi1.htm>

Workplace Violence Injuries and Fatalities
Agency: Federal Bureau of Investigation
Link: <https://www.fbi.gov/about/partnerships/office-of-partner-engagement/active-shooter-resources>

Medically Consulted Injury Financial Impact
Agency: National Safety Council
Link: <http://www.injuryfacts.nsc.org/work/costs/work-injury-costs/>

Serious Injury Associated Financial Impact
Agency: Center for Disease Control
Link: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6438a5.htm?s_cid=mm6438a5_w

Emergency Department Injury Associated Financial Impact
Agency: Center for Disease Control
Link: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6438a5.htm#Tab1>

Workplace Violence Associated Financial Impact
Agency: National Institute of Occupational Safety and Health
Link: <https://www.cdc.gov/niosh/index.htm>

Severe Injury Assumption:
Agency: Occupational Safety and Health Administration (OSHA)
Link: <https://www.osha.gov/severeinjury/index.html>;

Drug and Alcohol - Related Injury Incident Rate

²⁸ D.18-12-014, Attachment A at A-8 (Identification of Potential Consequences of Risk Event).

Agency: National Council on Alcoholism and Drug Dependence
Link: www.ncadd.org

Drug and Alcohol - Related Vehicular Incident Rate

Agency: National Highway Traffic Safety Administration

Link: [http://www.nhtsa.gov/Driving+Safety/Research+&+Evaluation/Impaired+driving+\(drug-related\)+reports](http://www.nhtsa.gov/Driving+Safety/Research+&+Evaluation/Impaired+driving+(drug-related)+reports)

Quality Assurance Effectiveness

Source: Internal Quality Management Data

Private Sector Workplace Violence Statistics

Agency: Department of Justice

Link: <https://www.bjs.gov/content/pub/pdf/wvage9411.pdf#7>

Online Training Effectiveness Assumption

Agency: Proceedings of the National Academy of Sciences of the United States of America

Link: <https://www.pnas.org/content/110/16/6313>

Workplace Hygiene and Air Quality

Agency: National Library of Medicine

Link: <https://pubmed.ncbi.nlm.nih.gov/26593933/>