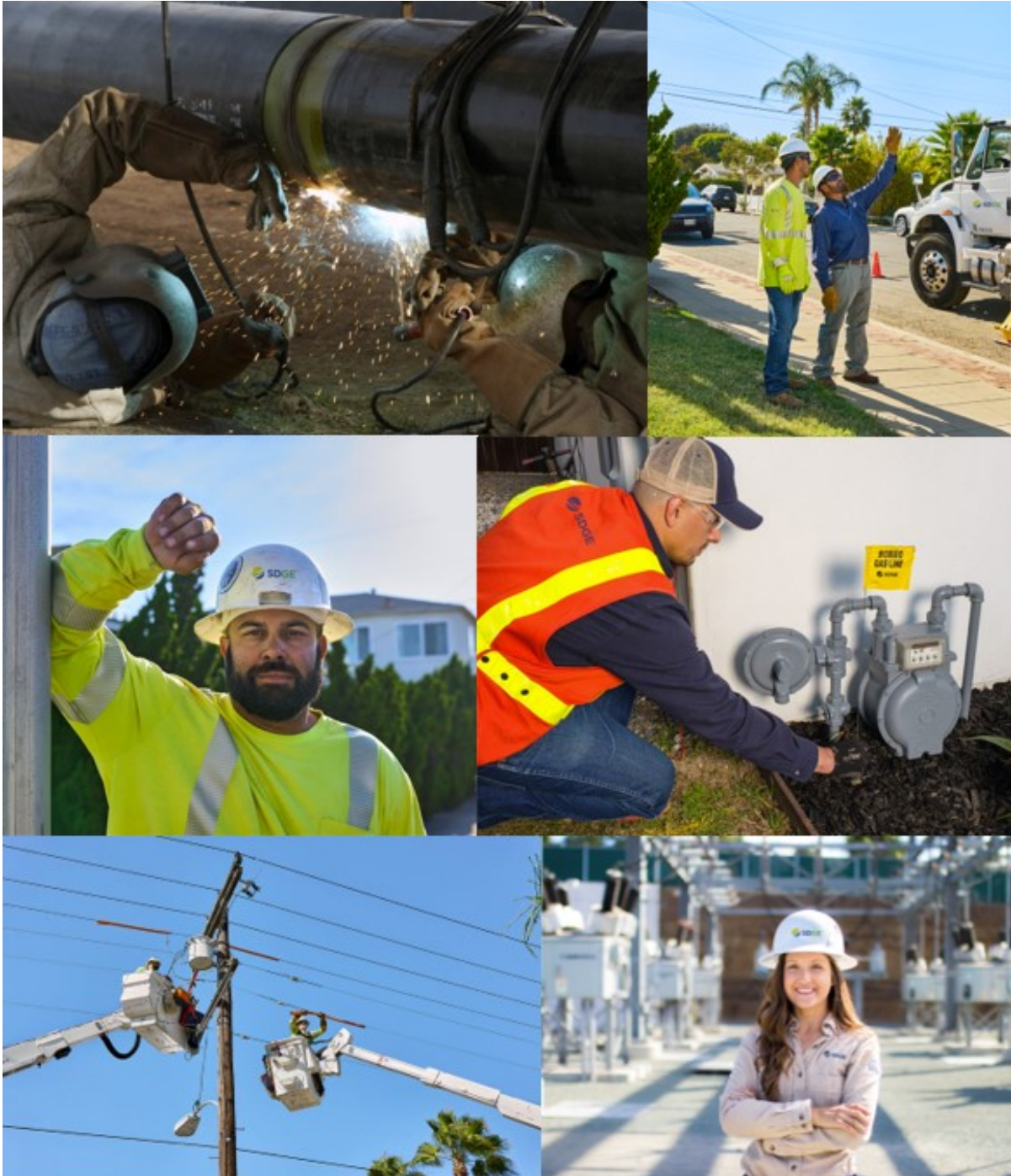




2023 Gas Safety Plan



March 15, 2023



Kevin C. Geraghty
Chief Safety Officer & Chief Operating Officer
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March 15, 2023

Mr. James Zhang, Utilities Engineer
Safety and Enforcement Division
California Public Utilities Commission
505 Van Ness Avenue, 2nd Floor
San Francisco, CA 94102

RE: San Diego Gas & Electric Company 2023 Gas Safety Plan

Dear Mr. Zhang:

San Diego Gas & Electric Company (SDG&E) is pleased to submit its 2023 Gas Safety Plan. The Gas Safety Plan summarizes our overarching strategy and approach to safety and affirms SDG&E's commitment to the safety of our system, customers, employees/contractors, and the communities we serve.

At SDG&E, safety is a core value and is at the foundation of everything we do. This commitment to safety is embedded in our culture and dedicated employees who safely operate the gas system and serve our customers.

SDG&E's safety culture fosters a work environment where employees at all levels, across all work locations and departments are empowered to continuously improve the safety of how we operate. Just as importantly, our culture and practices encourage employees to raise safety concerns and "stop the job" if someone is ever uncomfortable with a situation. Very simply, our employees take pride in their work and ownership for safety.

While a strong safety culture exists today, SDG&E is committed to continuously enhancing the maturity of our culture. To that end, SDG&E embraces a safety management system (SMS) approach for comprehensively managing risk and safety and is expanding the integration of the SMS framework outlined in American Petroleum Institute Recommended Practice 1173 (API RP 1173). SDG&E's ongoing enhancement of its SMS is reflected in this Gas Safety Plan.

Additions and updates to the 2022 Gas Safety Plan are summarized in the table attached to this letter. Please contact Alex Hughes at (949) 697-2539 or AHughes@SoCalGas.com if you have any questions regarding our submission.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Geraghty", is written over a faint, light blue circular stamp.

Summary of New or Changed Elements

The table below summarizes the portions of the 2023 Gas Safety Plan that are new or have changed, and are included with this submission:

Chapter	New or Changed Element
Chapter 1: Introduction	<ul style="list-style-type: none"> Updated Introduction section; added footnotes Updated Purpose section Updated Safety Management System section Updated Figure 1, 2, & 3
Chapter 2: Senior Management Team Commitment to Safety	<ul style="list-style-type: none"> Updated Introduction section Updated Policy Principles and Performance Expectations section Updated Goals and Objectives section
Chapter 3: Plan Development & Implementation	<ul style="list-style-type: none"> Updated Employee Safety Plan Contribution Process section Updated External Stakeholder Safety Plan Contribution Process section
Chapter 4: Safety Systems	<ul style="list-style-type: none"> Updated Safety Systems and California Public Utilities Code § 961 -(d)(1) and (d)(2) section Updated Transmission Integrity Management Program section Updated Distribution Integrity Management Program section Updated Facilities Integrity Management Program section Updated Pipeline Safety Enhancement Plan section
Chapter 5: Emergency Response	
Chapter 6: State and Federal Regulations	<ul style="list-style-type: none"> Addition to Regulatory Oversight section Addition to Figure B for Gas Engineering
Chapter 7: Continuing Operations	<ul style="list-style-type: none"> Updated Gas Operations Training section
Chapter 8: Emerging Issues	<ul style="list-style-type: none"> Updated SDG&E and Emerging Issues section Updated Collaboration with the California Public Utilities Commission section
Appendix: Safety Policy Documents	<ul style="list-style-type: none"> Updated Gas Safety Plan Policy Document Matrix

Table of Contents

I.	INTRODUCTION	6
1.	PUBLIC UTILITIES CODE SECTIONS 961, 963, 956.7 AND CPUC DECISION 12-04-010	6
2.	PURPOSE.....	7
3.	GAS SAFETY PLAN STRUCTURE	7
4.	SAFETY MANAGEMENT SYSTEM.....	8
5.	PROGRAM REVIEW AND MODIFICATIONS	11
II.	SENIOR MANAGEMENT TEAM COMMITMENT TO SAFETY.....	12
1.	INTRODUCTION	12
2.	POLICY PRINCIPLES AND PERFORMANCE EXPECTATIONS.....	12
3.	GOALS AND OBJECTIVES.....	13
III.	PLAN DEVELOPMENT AND IMPLEMENTATION	14
1.	STATE DIRECTIVES TO SUPPORT WORKFORCE PARTICIPATION	14
2.	EMPLOYEE SAFETY PLAN CONTRIBUTION PROCESS	14
3.	EXTERNAL STAKEHOLDER SAFETY PLAN CONTRIBUTION PROCESS	16
IV.	SAFETY SYSTEMS	18
1.	SAFETY SYSTEMS AND CALIFORNIA PUBLIC UTILITIES CODE § 961 -(d)(1) and (d)(2)	18
2.	TRANSMISSION INTEGRITY MANAGEMENT PROGRAM (TIMP)	19
3.	DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM.....	20
4.	FACILITIES INTEGRITY MANAGEMENT PROGRAM	21
5.	OPERATION AND MAINTENANCE PLAN	21
6.	PIPELINE SAFETY ENHANCEMENT PLAN.....	22
7.	SAFETY MANAGEMENT SYSTEM.....	23
V.	EMERGENCY RESPONSE	24
1.	EMERGENCY RESPONSE AND CALIFORNIA PUBLIC UTILITIES CODE § 961 -(d)(5), (d)(6) and (d)(8) 24	
2.	THE GAS EMERGENCY MANAGEMENT PREPAREDNESS AND RESPONSE POLICY	24
a.	Mutual Assistance Support	27
VI.	STATE AND FEDERAL REGULATIONS	29
1.	STATE AND FEDERAL REGULATIONS AND CALIFORNIA PUBLIC UTILITIES CODE § 961- (d)(7), (d)(9) and (c)	29
2.	REGULATORY OVERSIGHT	29
3.	COMPLIANCE WITH GENERAL ORDER 112-F.....	30
VII.	CONTINUING OPERATIONS	34
1.	CONTINUING OPERATIONS AND CALIFORNIA PUBLIC UTILITIES CODE §§ 963 (b)(3), 961 (d)(3), (d)(4), and (d)(10)	34

2.	SAFETY IS A CORE VALUE.....	34
3.	SAFE AND RELIABLE TRANSPORTATION	35
4.	SDG&E WORKFORCE SIZE, TRAINING AND QUALIFICATIONS	36
a.	Workforce Size	36
b.	Gas Operations Training	37
c.	Qualification of Pipeline Personnel.....	38
5.	DRUG AND ALCOHOL MISUSE PREVENTION PLAN	39
6.	ADDRESSING THE COVID-19 PANDEMIC	39
VIII.	EMERGING ISSUES	41
1.	EMERGING ISSUES AND CALIFORNIA PUBLIC UTILITIES CODE § 961(d)(11)	41
2.	SDG&E AND EMERGING ISSUES	41
3.	COLLABORATION WITH THE CALIFORNIA PUBLIC UTILITIES COMMISSION	41
	GAS SAFETY PLAN APPENDIX.....	45
	Policy Document – Gas Safety Plan Matrix.....	46

I. INTRODUCTION

This Gas Safety Plan conveys the safety commitment of San Diego Gas and Electric Company's (SDG&E) Senior Management Team, sets forth the overarching safety plans, programs, policies, standards, and procedures that are designed to support that commitment, and describes the Company's comprehensive Safety Management System (SMS) framework. The Gas Safety Plan and the SMS Governance Plan are the foundational documents that communicate SDG&E's gas safety commitment. SDG&E defines safety as the presence of controls for known hazards, actions to anticipate and guard against unknown hazards, and the commitment to continuously improve our ability to recognize and mitigate hazards. SDG&E's SMS further expands this definition of safety to include heightened focus on public, asset, system, cyber and psychological safety in addition to employee and contractor safety. Safety requires strong ongoing leadership commitment and active engagement and ownership from all employees. SDG&E's safety focus includes public safety,¹ system safety,² employee safety,³ and contractor safety.⁴ This Gas Safety Plan and the SMS Governance Plan detail SDG&E's practice to advance and enhance a comprehensive approach to safety through risk and hazard identification, hazard and risk controls and mitigations, continuous learning and improvement, leadership commitment, and employee engagement.

1. PUBLIC UTILITIES CODE SECTIONS 961, 963, 956.7 AND CPUC DECISION 12-04-010

California Senate Bill 705 was signed into law on October 7, 2011 and codified as California Public Utilities Code sections 961 and 963. Section 961 requires that each gas corporation in California develop a plan for the safe and reliable operation of its gas pipeline facility and requires that the California Public Utilities Commission (Commission or CPUC) accept, modify, or reject the plan by year-end 2012. Section 963, among other things, establishes that it is the policy of the State that the Commission and each gas corporation place safety of the public and gas corporation employees as the top priority.

On April 19, 2012, the Commission approved Decision (D.)12-04-010, which amended the scope of the Commission's Pipeline Safety Rulemaking (R.) 11-02-019 to include complying with the requirements of Public Utilities Code sections 961 and 963. The Commission directed each of the State's gas corporations to submit a proposed natural gas system operator safety plan (Gas Safety Plan), with documentation of the workforce comment process described in the decision, by June 29, 2012.

In addition to Public Utilities Code sections 961 and 963, this Gas Safety Plan addresses the

¹ Safety systems and processes focused on protection of our customers' and the public (i.e., Emergency Management, Environmental Safety, Customer Data Privacy, Accessibility, and protection of the public from harm caused by our operations or our assets).

² Safety systems and processes associated with the design, construction, operation, inspection and maintenance of SDG&E's assets, facilities or infrastructure.

³ Safety systems and processes focused on the health and safety of our employees. This includes safety policies, programs and training.

⁴ Safety systems and processes focused on the safety and protection of our contractors and subcontractors who provide services to support SDG&E assets and operations.

requirements of Assembly Bill 56, chaptered on October 7, 2011, which codified Public Utilities Code section 956.5. Section 956.5 requires operators to review, at least once each calendar year, emergency contingency plans with local fire departments having jurisdiction over the area where intrastate transmission and distribution lines are located.

2. PURPOSE

According to the Commission, “the rationale for developing a gas safety plan is to motivate a gas utility to reflect upon its existing methods and for it to change, to optimize, or to enhance the existing methods... and the lessons learned from the San Bruno incident, as appropriate, to ensure that the gas utility has a prudent plan in place to protect public safety and worker safety.”⁵ The gas system operator safety plans are to convey the “Executive Officer’s” safety performance expectations, policy principles, and goals/objectives for a gas utility’s safety performance.

SDG&E has designed this Gas Safety Plan to satisfy each of these directives, and to implement “the policy of the state that the commission and each gas corporation place safety of the public and gas corporation employees as the top priority.”⁶ The Gas Safety Plan also addresses the ongoing implementation of SDG&E’s company-wide SMS framework. SDG&E’s implementation and ongoing measurement and review of its SMS seeks to continually improve its safety culture and safety performance.

3. GAS SAFETY PLAN STRUCTURE

Public Utilities Code Sections 961 and 963 require that the gas system operator safety plans establish how the utility will achieve certain specified goals, and the Commission has organized these goals into five overall categories: (1) safety systems, (2) emergency response, (3) state and federal regulations, (4) continuing operations, and (5) emerging issues. This Gas Safety Plan follows this organizational structure as outlined by the Commission and is divided into sections corresponding to these five categories, with each section representing a required Gas Safety Plan element or other significant element or aspect of the Gas Safety Plan. The requirements of section 956.5 are addressed within the category of emergency response.

Within its Safety Management System, SDG&E has numerous safety programs, plans, and procedures in place that address specified infrastructure or areas of company activity. The intent of the Gas Safety Plan is to provide an overview that encompasses all the plans, programs, and policies, as well as, affirm SDG&E’s commitment to safety and to advancing a comprehensive SMS framework.

The Appendix provides a listing of the safety program components discussed in the Gas Safety Plan.

⁵ D.12-04-010 at 19.

⁶ Pub. Util. Code section 963.

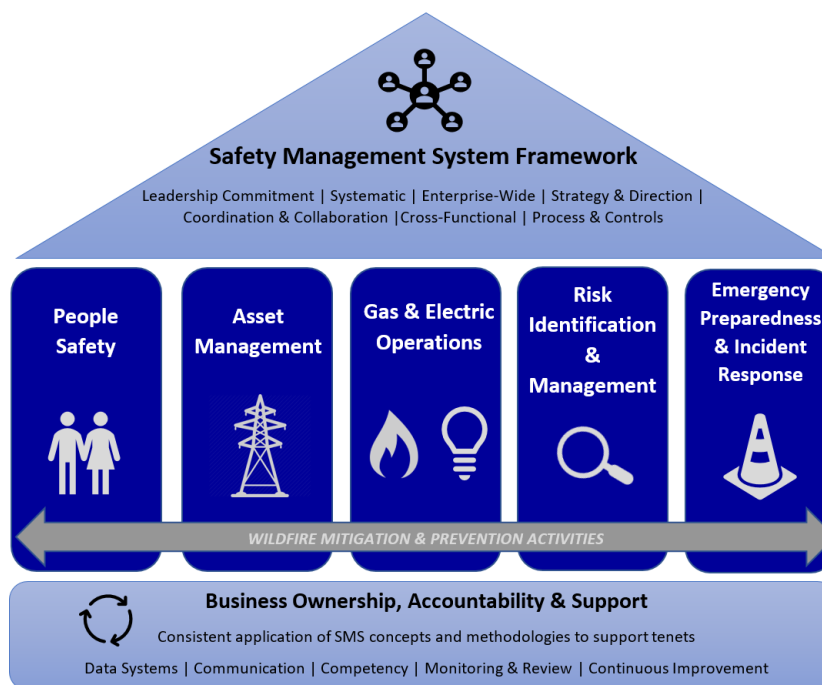
4. SAFETY MANAGEMENT SYSTEM

SDG&E began operating within an enterprise-wide Safety Management System framework in 2020. SDG&E's SMS is a systematic framework to collectively manage risk and safety to promote continuous improvement. The SMS builds risk management and safety into everything we do and is foundational to who we are – from initial engineering and design to employee training, to the installation, operation, and maintenance of our utility infrastructure, to the safe and reliable delivery of service to our customers – following the Plan-Do-Check-Act Cycle of continuous improvement.

SDG&E's SMS is a collection of structured, company-wide processes and systems that provide effective risk-based decision-making for daily business functions. Using API 1173 as a general standard for operational safety for gas and electric operations requires alignment of risk management (based on ISO 31000), asset management (based on ISO 55000), and emergency management (based on the Incident Command System), with traditional views of safety management (based on OSHA) to support development of a comprehensive and proactive safety program that produces ever-improving levels of employee, contractor, and public safety.

SDG&E's SMS decentralized organizational structure is a cross-functional team including business leaders from SDG&E's gas operations, electric operations, employee safety, contractor safety, customer safety, public safety, asset management, risk management, and emergency management departments who comprise a centralized governance team representing the Five Pillars of Safety within the SMS Framework (Figure 1, below).

Figure 1
SDG&E's Safety Management System Framework

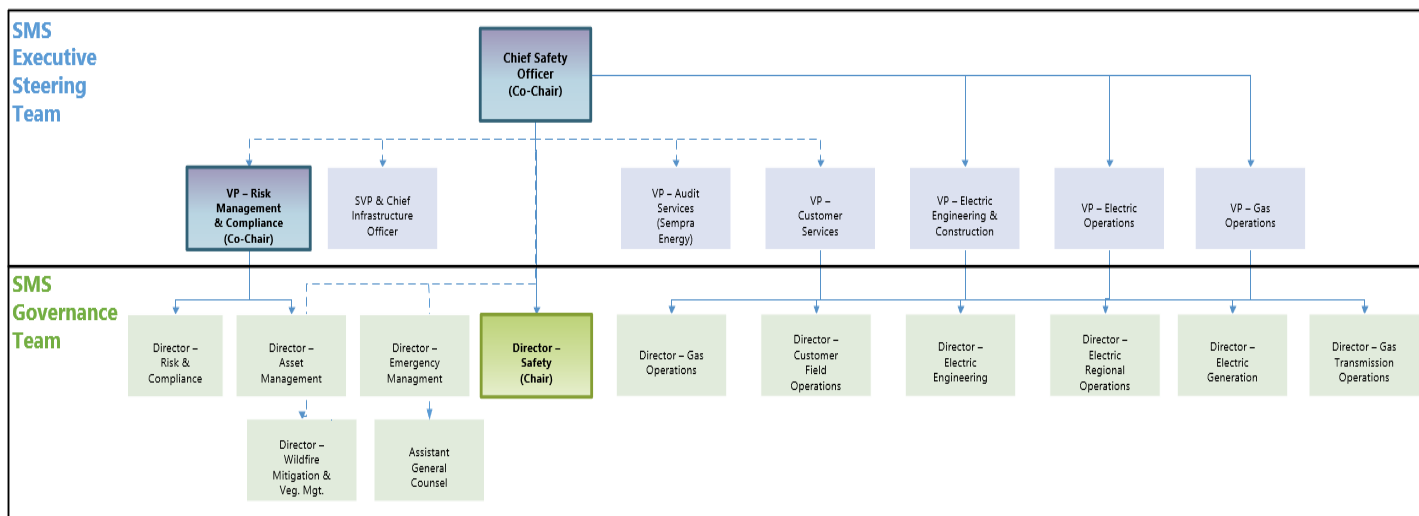


These pillars are the core of an integrated, comprehensive, and risk-informed approach to managing safety under the SMS, in line with basic safety principles and a broader process safety management focus. Activities to effectively manage the risks SDG&E faces are integrated throughout the SMS Framework.

SDG&E's SMS governance structure comprises three teams that oversee, lead, and are responsible for the successful implementation of an enterprise-wide SMS: (1) SMS Executive Steering Team, (2) SMS Governance Team, and (3) SMS Program Management Team. This decentralized organizational structure provides cross-functional governance teams to assess risk and safety issues Company-wide, while retaining risk ownership and accountability at the operational levels. The teams within the SMS governance structure actively engage SDG&E's operational employees to solicit input, insight, and feedback on safety issues. The SMS Governance Team raises and addresses issues regarding the scope, project plan, implementation, ongoing management, data analytics, and continuous improvement of SMS and makes decisions within the scope and authority of this SMS Governance Plan as a collective, cohesive unit.

SDG&E's Chief Safety Officer has ultimate responsibility and accountability for safety. The SMS Executive Steering Team is co-chaired by SDG&E's Chief Safety Officer and Chief Compliance Officer. The SMS Governance Team is chaired by SDG&E's Director – Safety, who reports directly to the Chief Safety Officer. See Figure 2, below.

Figure 2
SDG&E's SMS Governance Structure



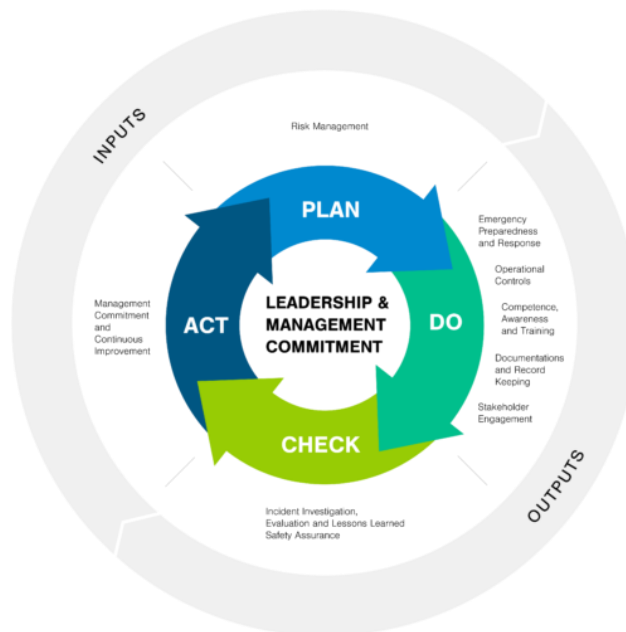
The SMS Executive Steering Team provides oversight, guidance, direction and resources to the SMS Governance Team for the development, implementation, ongoing maintenance, and continuous improvement of the SMS. The Executive Steering Team also has the responsibility to establish high-level performance measures to help assess the effectiveness of the SMS, and to

conduct the annual management review of the SMS. The SMS Governance Team represents centralized authority, accountability, and responsibility to support the execution of the SMS throughout the organization, including designing, developing, implementing, and continuously improving the SMS which is founded on the ten essential elements of API 1173:

1. Leadership and Management Commitment
2. Stakeholder Engagement
3. Risk Management
4. Operational Controls
5. Incident Investigation, Evaluation, and Lessons Learned
6. Safety Assurance
7. Management Review and Continuous Improvement
8. Emergency Preparedness and Response
9. Competence, Awareness, and Training
10. Documentation and Record Keeping

These ten essential elements of SDG&E's SMS are actualized through the Plan-Do-Check-Act model depicted below in Figure 3. The SMS is about being more deliberate and intentional about integrating our safety systems and processes. The Company's goal is to continuously strengthen our safety culture by living these values.

Figure 3
SDG&E's Integrated Plan-Do-Check-Act Model



SDG&E's journey towards a company-wide SMS began more than a decade ago when it first implemented a management system related to safety and environmental compliance, SDG&E's Environmental & Safety Compliance Management Program (ESCMP). ESCMP is conceptually

INTRODUCTION**SDG&E: SP.1-SD**

based on the International Standards Organization (ISO) 14001 Environmental Management Systems standard and includes safety components that are unique to SDG&E. SDG&E's integrity management programs are another element of SMS that were instituted to manage and enhance the integrity of our pipeline system.

These programs have been refined, improved, matured and are in place companywide. SDG&E has leveraged this knowledge and experience to create its SMS to further enhance safe operations, strengthen our safety culture, and improve our safety performance toward the goal of reducing risk to the public, our personnel, and our system and our overarching goal of zero safety incidents.

5. PROGRAM REVIEW AND MODIFICATIONS

Public Utilities Code section 961 establishes that gas corporations shall periodically review and update their gas system operator safety plans. This Gas Safety Plan shall be reviewed at an annual frequency period not to exceed 15 months. The program owners must provide justification for any deviation from this review schedule.

All components of this Gas Safety Plan must be reviewed and updated per the schedule below:

Document Type	Review Cycle
Gas Safety Plan	Annually (not to exceed 15 months)
Gas Standards	At least every 5 years
TIMP O&M Control Room Management	At least annually
DIMP FIMP	At least every 5 years At least every 5 years
Form Instructions	Every 5 years
Environmental	Every 5 years
Information Bulletins	At least annually

If changes are needed, they shall be made as soon as practicable through the Request to Publish⁷ process, and not deferred until the next scheduled review.

⁷ PP01.040 Submitting a Revised Company Operations Standard for Publication

II. SENIOR MANAGEMENT TEAM COMMITMENT TO SAFETY

1. INTRODUCTION

At SDG&E, our safety focus includes employee and contractor safety, customer and public safety, and the safety of the gas delivery system. Our Safety focus is the foundation of our business and our fundamental core value. Our tradition of safety spans more than 130 years and is the basis for company programs, policies, procedures, guidelines and best practices.

SDG&E has a culture where leadership sets the example and demonstrates safe behaviors expected of employees. SDG&E's leadership team is committed to championing people, doing the right thing, shaping the future, and executing on operational excellence; for example, SDG&E has created a Safety Committee of the Board of Directors to provide for greater oversight of safety issues impacting the company. SDG&E executives assigned as an Officer in Charge of the Emergency Operations Center (EOC) receive foundational Incident Command System (ICS) training including FEMA ICS 100, 200, 700, as well as the State of California's Standardized Emergency Management Systems Overview training. Supervisors also engage in 3-hour safety leadership training of all new Supervisors as part of Essentials of Supervision.

Management's safety expectations can best be described by the following Commitment to Safety statement that every member of our Senior Management Team wholeheartedly endorses:

SDG&E's longstanding commitment to safety focuses on three primary areas – employee/contractor safety, customer/public safety and the safety of our gas and electric delivery systems. 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 maintenance of our utility infrastructure, and to our commitment to provide safe and reliable service to our customers.

-- SDG&E's Commitment to Safety

Further commitment of SDG&E's leadership in operating a safe utility is demonstrated with its voluntary implementation of SMS. One of the frameworks that will be adopted is the safety elements and principles and adoption of the safety principles embodied in American Petroleum Institute Recommended Practice 1173 (API 1173). SDG&E takes a broad, holistic view to safety management and will adopt and apply other SMS frameworks as applicable.

2. POLICY PRINCIPLES AND PERFORMANCE EXPECTATIONS

SDG&E's safety-focused culture and supporting organizational structure allow the company to be proactive and accountable in the safe delivery of natural gas and supporting services. The company continuously strives for a work environment where employees at all levels and its

contractors can raise pipeline infrastructure, customer safety, and employee safety concerns and offer suggestions for improvement through multiple platforms such as “Stop the Job”, local Safety Committees, the Executive Safety Committee and the implementation of a reporting app for near misses and close calls.

SDG&E’s safety performance is regularly monitored and evaluated in accordance with all state and federal regulations and additional performance metrics are evaluated to foster a culture of continuous safety improvement. These performance metrics are reviewed and communicated in accordance with the schedules identified in the specific policy, program, plan or other document incorporated as part of the Gas Safety Plan.

In addition, SDG&E monitors the U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) website for new regulations and advisory bulletins and act upon any applicable regulations and bulletins in a timely manner and verify that changes in regulations are reflected in policies, standards, procedures and employee training.

SDG&E regularly assesses its safety culture and encourages two-way communication between employees and management as a means of identifying and managing safety risks. In addition to the reporting of pipeline and occupational safety incidents, management created multiple methods for employees to report and share close calls/near misses to promote continuous learning.

At SDG&E, safety is a core value, so we provide all employees with the training, awareness and competence, necessary to safely perform their job responsibilities. We also reinforce this value with our contractors through our Contractor Safety Management activities. We continually monitor contractor safety performance to ensure they remain focused on employee safety, public safety, and the safety of our gas and electric delivery systems. Through these activities, contractors are kept current on all relevant operational, regulatory, and procedural changes affecting their work. Sharing between contractor and Company is encouraged in order to receive feedback on contractor-identified safety issues and to review lessons learned from root cause analysis related to near miss events and incidents.

3. GOALS AND OBJECTIVES

SDG&E Leadership and all levels of management have the authority, accountability, and responsibility to appropriately support, implement, and oversee the elements of safety throughout the organization. This includes all aspects of safety relevant to SDG&E’s business, including employee and contractor safety, customer and public safety, and the safety of the gas delivery system. They demonstrate leadership commitment to enhancing safety performance by communicating and modeling to their organizations the importance of safety, SDG&E’s safety values, and responsibility to enhance our approach to safety.

This Gas Safety Plan is Company policy. Each SDG&E officer embraces and endorses the Company’s commitment to safety and supports the Gas Safety Plan.

III. PLAN DEVELOPMENT AND IMPLEMENTATION

1. STATE DIRECTIVES TO SUPPORT WORKFORCE PARTICIPATION

In D.12-04-010, the Commission identified the topic of workforce participation in plan development to meet the requirements of California Public Utilities Code section 961(e). This section requires that the gas safety plan achieve the following:

The commission and gas corporation shall provide opportunities for meaningful, substantial, and ongoing participation by the gas corporation workforce in the development and implementation of the plan, with the objective of developing an industry wide culture of safety that will minimize accidents, explosions, fires, and dangerous conditions for the protection of the public and the gas corporation workforce.

To comply with Section 961(e) directives and General Order 112-F Subpart G Section 301, the Commission has explained that natural gas system operators need to take the following actions:

1. The operator must make its safety plan available to its workforce, and provide for comments and suggestions from the workforce;
2. Gas system operators shall retain a log of the comments and suggestions, including the disposition of the comment or suggestion, with a summary of the rationale for the disposition;
3. Gas system operators shall also inform their employees that any employee who perceives a breach of safety requirements may inform the Commission of the breach, and that the Commission will keep the identity of the employee confidential; and
4. Each gas operator shall provide its workforce with the address of the Director of the Commission's Consumer Protection and Enforcement Division and the designation "Safety Breach Notification from Gas System Operator Employee-Confidentiality Requested" to seek confidential treatment.

2. EMPLOYEE SAFETY PLAN CONTRIBUTION PROCESS

When it comes to safety, we all have a role to play. All SDG&E employees are important internal stakeholders. Communication begins with senior management through our leadership commitment and cascades to all employee levels. The five pillars and ten essential elements that are the foundation of our SMS include a specific value dedicated to employee and stakeholder engagement, which is critical to providing clarity to employees, so that policies, goals, objectives, and procedures are understood.

Employees play a critical role in SDG&E's safety and have been an important contributor to developing this Gas Safety Plan. Employees raising concerns to management and making recommendations for safety are necessary for continuous improvement as this enables the

Company to gather safety-related input from those closest to the work.

To promote a culture of trust and increase the likelihood of reporting known safety risks, the Company is committed to enabling its employees to participate in the continuous improvement of this Gas Safety Plan. The Gas Safety Plan is posted on the Company intranet site for ready access by all employees and is reviewed and updated annually. The intranet site includes a summary of the plan content, a link to the document, hotline phone number and address for direct notification to the CPUC, and an electronic form for submitting pipeline and occupational safety risks and ideas for improvement. One of the main purposes of the site is to provide employees a venue for reporting issues outside of the typical supervisor-reporting hierarchy. Employees can also make reports anonymously.

Periodic employee updates are made through Company communication channels to remind employees of the site's availability and the importance of reporting known issues and improvement ideas. The importance of reporting safety risks is included in employee training course materials.

The following outlines SDG&E's process management for the gathering and analysis of employee input regarding pipeline safety:

- Meetings with employees are regularly scheduled to gather input so that we are addressing issues or concerns related to our commitment to safety.
- Regular employee safety council meetings, including executive safety councils, are held.
- Annual Safety Congress.
- To ensure the continuous improvement of our processes, a comprehensive post-incident After-Action Review program has been developed to solicit input from key internal stakeholders. The after-action report includes an improvement plan that is reviewed quarterly with executive leadership to ensure action.
- Employees can submit their suggestions via written notification, on-line, or by phone.
- Reporting and sharing of near misses with employees.
- A Safety Observation and Reporting (SOAR) tool to report non-emergency safety observations or concerns as it relates to our assets, data and policies for employees working directly on our gas pipelines.
- When a suggestion is received, it is assigned to the advisor who reviews the submittal and assigns the suggestion to the appropriate department for thorough evaluation and resolution. SDG&E takes the receipt of input very seriously and acts with a sense of urgency in the investigation of all input received.
- The target timeframe for initially reviewing and assigning a suggestion is as soon as

PLAN DEVELOPMENT & IMPLEMENTATION	SDG&E: SP.3-SD
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possible and no longer than 5 business days. During evaluations, employees are often contacted for additional clarification and to determine the appropriate follow-up actions.

- This follow-up may simply include discussions with the employee who submitted the input to explain how the company is currently meeting or exceeding the objective of their suggestion. The follow-up could also entail the re-training of field personnel or the revision of training materials, best practices and/or gas standards.
- SDG&E strives to determine disposition of all evaluations as quickly as possible; however, the ultimate goal is to complete a thorough evaluation which means that an issue will not find closure for several weeks as enhancements are planned and implemented. Every suggestion is reviewed to determine how it improves the safety of our system and processes, which assists meeting all regulatory requirements and industry best practices while maintaining optimal operating efficiencies for our customers.
- Employees will be periodically reminded and encouraged through various communication channels to submit their input through this process to support the company's goal in capturing all ideas and suggestions related to pipeline safety.

The online Gas Safety Plan is available to all employees and is published online, reviewed and updated annually.

3. EXTERNAL STAKEHOLDER SAFETY PLAN CONTRIBUTION PROCESS

To promote a culture of trust and increase the likelihood of reporting known pipeline or occupational safety risks, SDG&E is committed to enabling its contractors and the public to participate in the continual improvement of the Gas Safety Plan.

Contact and communication with external stakeholders (e.g., public, first responders, public officials) is managed via the Public Awareness Plan. Also, for larger projects and programs, a specific outreach and communication plan has been created to gather input, including safety related feedback, from the community and other stakeholders.

The Contractor Safety Management program includes feedback from contractors regarding occupational and pipeline safety risks at SDG&E. Contractors are trained on the reporting policy and procedure. The contractor management program is the way SDG&E is moving its focus on contractors to a single source (Contractor Safety Program Standard G8308 for SDG&E and the Class 1 Contractor Safety Manual for contractors) holding all Business Units and Class 1 Contractors to the same requirements. Internal construction-focused Business Units such as Portfolio and Project Management, Design and Construction Management, and Vegetation Management, also have field safety oversight of all construction work performed by contractors working for those respective groups. This oversight includes instituting safeguards that all contracted work is built in accordance with SDG&E standards, state and federal agency

regulations, applicable laws, and Commission Orders.

The following outlines SDG&E's process management for the gathering and analysis of contractor and external stakeholder input regarding pipeline safety:

- Public Awareness Plan.
- Quarterly Contractor Safety Meetings and Annual Contractor Safety Summit.
- To ensure the continuous improvement of our processes, a comprehensive post-incident After-Action Review program has been developed to solicit input from key external stakeholders. The after-action report includes an improvement plan that is reviewed quarterly with executive leadership to ensure action.
- Reporting and sharing of near misses with contractors.
- A Safety Observation and Reporting (SOAR) tool to report non-emergency safety observations or concerns as it relates to our assets, data and policies for contractors working directly on our gas pipelines.

IV. SAFETY SYSTEMS

1. SAFETY SYSTEMS AND CALIFORNIA PUBLIC UTILITIES CODE § 961 - (d)(1) and (d)(2)

In D.12-04-010, the Commission identified the topic of safety systems to meet the requirements in California Public Utilities Code sections 961(d)(1) and (d)(2). These sections require that the gas safety plan achieve the following:

- Identify and minimize hazards and systemic risks in order to minimize accidents, explosions, fires, and dangerous conditions, and protect the public and gas corporation workforce. Section 961(d)(1).
- Identify the safety-related systems that will be deployed to minimize hazards, including adequate documentation of the commission-regulated gas pipeline facility history and capability. Section 961(d)(2).

SDG&E has a number of plans and programs that identify and minimize hazards and systemic risks in pipeline infrastructure and promote personnel, system, environmental, and public safety. These plans and programs are an integral part of our approach to safety including the following:

- Transmission Integrity Management Program (TIMP)
- Distribution Integrity Management Program (DIMP)
- Facilities Integrity Management Program (FIMP)
- Operation and Maintenance Plan
- Pipeline Safety Enhancement Plan (PSEP)
- Control Room Management Plan

In addition, SDG&E implemented its Pipeline Safety Enhancement Plan (PSEP) to address requirements for transmission infrastructure. SDG&E is also in the process of implementing an enterprise-wide SMS that encompasses each of the above-listed plans and programs.

The SMS is a continuous improvement framework. Each of these programs are subject to ongoing review and continual improvement efforts and when warranted, changes are made to further protect the public and SDG&E workforce.

Pipeline integrity risk evaluations are designed to improve pipeline safety performance and are conducted per the schedule listed in the TIMP and DIMP programs. Included in these risk assessments are lessons learned from internal and external gas pipeline incidents. Risk assessments are reviewed at least annually, and updated as warranted, using data and information gained from operations and maintenance, inspection and testing, integrity-related work, and incident investigations. Operational risk related to loss of experienced and knowledgeable employees is managed through working with local management to develop succession planning for critical job functions and is further discussed in Chapter VII, section 4 - SDG&E Workforce Size, Training and Qualifications.

2. TRANSMISSION INTEGRITY MANAGEMENT PROGRAM (TIMP)

Through the Transmission Integrity Management Program (TIMP), per 49 Code of Federal Regulations (CFR) § 192, Subpart O, SDG&E is federally mandated to identify threats to transmission pipelines in High Consequence Areas (HCAs), determine the risk posed by these threats, schedule prescribed assessments to evaluate these threats, collect information about the condition of the pipelines, take actions to minimize applicable threat and integrity concerns to reduce the risk of a pipeline failure, and report findings to regulators. SDG&E operates approximately 175 HCA miles out of 215 miles of transmission pipelines as defined by the United States Department of Transportation (DOT).

The TIMP was developed in 2004 in accordance with the requirements of the DOT Pipeline and Hazardous Materials Safety Administration (PHMSA), Subpart O – “Gas Transmission Pipeline Integrity Management” of Part 192 of Title 49 of the Code of Federal Regulations and is an ongoing program. SDG&E’s TIMP is designed to meet these objectives by continually reviewing, assessing, and remediating pipelines operating in HCAs and non-HCAs.

The TIMP is designed to provide assessments and integrity improvements on transmission pipelines by outlining responsible parties, timelines for each process element, incorporating lessons learned, and a best practices methodology. Processes are aimed at identifying threats through data gathering and routine testing, assessing materials integrity, and determining remediation, preventive, and mitigation steps for those threats.

As part of TIMP, information concerning the pipeline infrastructure, such as its operating, environmental, and performance history, is integrated into a broad evaluation of the pipeline and its environment. This information is analyzed for each pipeline segment being assessed and used to develop specific integrity-related work plans.

The risk evaluations for DOT-Transmission segments in the scope of the TIMP are designed to improve safety performance and are conducted per the schedule in TIMP risk assessment requirements. Pursuant to Subpart O, SDG&E may use several pipeline integrity management activities to assess and evaluate pipelines in its system, including in-line inspections (ILI), pressure testing, and direct assessment. These pipeline evaluations enhance the efficiency of the processes in place to maintain the safe operation of the transmission pipeline, including corrosion control and the damage prevention programs.

SDG&E implements TIMP in accordance with our written plan: a collection of internal policy documents that detail how safety, and the integrity of our transmission pipeline system is managed, enhanced, and improved. The written TIMP plan also outlines procedures and processes to address each required program element and referenced industry standards (e.g., API RP 1173, ASME B31.8S and NACE SP0502-2008). The written plan and its related procedures identify and prescribe activities to minimize systemic transmission risks and

PHMSA’s final rule amending 49 C.F.R. Parts 191 and 192 (“Safety of Gas Transmission Pipelines: MAOP Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments”) took effect on July 1, 2020 and in response to the changes of 49 CFR Part 192, Subpart O, SDG&E enhanced the TIMP accordingly. Additionally, under the TIMP, SDG&E has expanded assessments to additional outside-of-High Consequence Area (HCA) segments in accordance with 49 C.F.R. § 192.710 and developed a Material Properties & Attributes Verification Plan in accordance with 49 C.F.R § 192.607 to support new pipeline analysis requirement. “Pipeline Safety: Requirement of Valve Installation and Minimum Rupture Detection Standards” was published on 04/08/2022 and took into effect on October 5, 2022. This will involve new notification processes of “potential ruptures”, installation requirements of “Rupture Mitigation Valves”, and annual risk analysis not to exceed 15 months. “Safety of Gas Transmission Pipelines: Repair Criteria, Integrity Management Improvements, Cathodic Protection, Management of Change, and Other Related Amendments” includes amendments to 49 CFR Part 192, Subpart O, (§ 192.917, § 192.923, § 192.927, § 192.929, § 192.933, § 192.935, and § 192.941) and was published August 24, 2022 and will take into effect on May 24, 2023.

3. DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM

The Distribution Integrity Management Program (DIMP) is designed to create a safe and reliable natural gas supply and delivery system by maintaining gas distribution system integrity. Continuous improvement elements are integrated into the program using data and risk identification to drive prioritization of activities. It is an ongoing program that was developed in accordance with the requirements of the Department of Transportation’s (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), Subpart P – “Gas Distribution Pipeline Integrity Management” of Part 192 of Title 49 of the Code of Federal Regulations, which became effective February 12, 2010. The program’s purpose is to improve safety by having operators identify and reduce pipeline integrity risks on distribution pipelines.

SDG&E’s DIMP focuses on the continuous identification and evaluation of existing and potential threats using a data driven and risk-informed approach to develop measures designed to reduce both the likelihood and consequences of pipeline failures. Specifically, it gathers system knowledge, evaluates and ranks risk, implements programs to address risk, measures performance, monitors results, evaluates the effectiveness of risk reducing programs or activities, conducts periodic evaluation, implements improvements, and reports results.

SDG&E’s DIMP plan requires the integration of data from many sources for analysis, as well as subsequent action based upon that analysis. The written plan and related procedures identify and prescribe activities to enhance safety by minimizing systemic and localized risks to SDG&E’s distribution system and documenting relevant system information. In 2022 DIMP implemented improvements to its safety-based vintage pipeline replacement program addressing specific threats on distribution medium pressure mains; corrosion for steel mains and construction defect, material failure/defect, natural cause, prior pinch, and tree root damage for plastic mains. The program now utilizes a segment-specific quantitative risk analysis, moving from a relative risk analysis, using a combination of internal SoCalGas datasets and external publicly available data sources.

SDG&E's DIMP is reviewed, at minimum, every five calendar years as part of the periodic improvement process, with modifications being made whenever necessary.

4. FACILITIES INTEGRITY MANAGEMENT PROGRAM

SDG&E is developing a Facilities Integrity Management Program (FIMP) to provide a comprehensive, systematic, and integrated approach for managing and enhancing the safety and integrity of facilities and associated equipment. This program includes equipment at Transmission facilities such as compressor stations and pressure limiting stations, renewable natural gas facilities, and natural gas vehicle fueling stations. The FIMP is based on principles published by the Canadian Energy Pipeline Association (CEPA) and the Pipeline Research Council International (PRCI).

The FIMP differs from other integrity management programs as the type of equipment covered by the program varies substantially (for example, vessels, tanks, piping of different materials/grades, electrical equipment, rotating equipment such as pumps and compressors). Through FIMP, the Company will develop and implement comprehensive inspection programs and incorporate integrity management principles and industry best practices to facilities' equipment to reduce risks and promote safety, sustainability and operational excellence. SDG&E proposed FIMP as a new program in the 2024 GRC. Pilot activities, currently underway, will be folded into and expanded from 2024 onwards.

5. OPERATION AND MAINTENANCE PLAN

SDG&E's Operation and Maintenance (O&M) plan is a compendium of over 175 policies designed to comprehensively address the safe operation and maintenance of our facilities pursuant to the requirements of 49 C.F.R. § 192.605 "Procedural manual for operations, maintenance, and emergencies." This O&M plan includes policies that address:

- Operating, maintaining, and repairing the pipeline and its components;
- Controlling corrosion;
- Availability of construction records, maps, and operating history;
- Start up and shut down of the pipeline;
- Maintenance and operation of compressor stations;
- Review of procedures to determine effectiveness and adequacy;
- Safety procedures for excavation; and
- SoCalGas Control room management.

The O&M plan is reviewed annually to verify that the included policies and procedures remain in compliance with the requirements of the relevant sections of Title 49 of the Code of Federal Regulations. These policies and procedures are updated throughout the year in response to new information or regulations, technology, or other items that drive improvement.

Individual documents referenced by the O&M plan undergo full functional reviews at least every five years. Training programs are reviewed in the same timeframe as associated gas standards, so employees are aware of and perform tasks safely and according to the current

requirements. To help employees remain safe and knowledgeable of critical policies and procedures, including those related to safety, SoCalGas provides annual review training for all operations employees.

The documents referenced by the O&M plan comprehensively address the safe operations and maintenance of our facilities, identify and prescribe activities whose purpose is to minimize risks, and document its history through meeting and documenting code/regulation compliance, promoting safety and operational excellence, and minimizing the potential for and consequences associated with unplanned events such as equipment failure or operator error.

6. PIPELINE SAFETY ENHANCEMENT PLAN

On September 9, 2010, a 30-inch diameter natural gas transmission pipeline ruptured and caught fire in the city of San Bruno, California. As a response, the CPUC issued a rulemaking (R.11-02-019) and a subsequent decision, D.11-06-017 (later codified as Public Utilities Code Sections 957 and 958), which ordered all California natural gas transmission pipeline operators to prepare and file implementation plans to replace or pressure test all transmission pipelines that have not been adequately tested or for which reliable records are not available.

In 2011, SoCalGas and SDG&E submitted their Pipeline Safety Enhancement Plan (PSEP). The PSEP is a systematic effort to test or replace transmission pipelines that do not have sufficient documentation of a pressure test to at least 1.25 times the Maximum Allowable Operating Pressure (MAOP). PSEP employs a risk-based prioritization methodology and includes replacement of pre-1946 pipe that cannot be assessed using in-line inspection tools, and enhancement of valve infrastructure.

The primary objectives of the PSEP are to: (1) enhance public safety; (2) comply with Commission directives; (3) minimize customer impacts; and (4) maximize the cost effectiveness of safety investments.

PSEP's key elements include:

- Criteria (Decision Tree) to determine whether to test or replace transmission pipelines that do not have sufficient documentation of a pressure test to at least 1.25 times the Maximum Allowable Operating Pressure (MAOP)
- A two phased approach and prioritization of pipelines operated in more populated areas (Phase 1) ahead of pipelines in less populated areas (Phase 2)
- Replacement of pipelines installed prior to 1946 that cannot be assessed using in-line inspection tools, i.e., "non-piggable" pipelines (Phase 1B)
- Interim safety enhancement measures
- Enhancement of valve infrastructure through the retrofit of existing valves and installation of additional remote control and automated shutoff valves.

The PSEP also includes measures to enhance the pipeline system beyond those required by the Commission through retrofitting pipelines and valves with existing and emerging technologies to provide advance warning of potential pipeline failure and decrease the time to identify, investigate, prevent, remedy, or manage the effects of such an event.

7. SAFETY MANAGEMENT SYSTEM

As described in Section I.4, above, SDG&E collectively manages risk and safety within its Safety Management System. SDG&E's SMS is a process-based, integrated, continuous improvement framework aimed to reduce risk, further enhance the Company's safety culture, and prevent safety incidents. The collective efforts at the business unit and enterprise levels become greater aligned, integrated, and systematic within the SMS framework (see Figure 1, above). SDG&E's SMS provides a standardized approach for managing risk and safety across all assets and operations by implementing processes and risk assessment methodologies that can be consistently applied enterprise wide. The SMS framework creates an integrated approach and a Company-wide resource to guide our actions, decisions, and behaviors, so that risk is efficiently and effectively managed and our safety culture and safety performance continually improves.

SDG&E's SMS aligns with the American Petroleum Institute's (API) Recommended Practice for Pipeline Safety Management System (API 1173). While API 1173 was developed for natural gas pipeline operators, SDG&E adapted this recommended practice for broader electric and gas utility application. Accordingly, absent an electric industry-equivalent, SDG&E applies this adapted version of API 1173 to its electric operations. For example, SDG&E added elements specific to wildfire mitigation that are not found in API 1173 throughout its SMS. SDG&E's SMS also incorporates elements of the following guidelines and standards:

- CPUC: Office of Safety Advocate 2018 Annual Report;
- International Standards Organization (ISO) 31000: Risk Management;
- ISO 55000: Asset Management: Overview, principles, and terminology;
- ISO 55001: Asset Management: Management systems – Requirements;
- ISO 22320 and the Incident Command System: Emergency Management; and
- OSHA Occupational Safety Standards: Employee and Contractor Safety.

These integrated elements together support the development of a comprehensive and proactive safety program that produces ever-improving levels of safety.

V. EMERGENCY RESPONSE

1. EMERGENCY RESPONSE AND CALIFORNIA PUBLIC UTILITIES CODE § 961 - (d)(5), (d)(6) and (d)(8)

In D.12-04-010, the Commission identified the topic of emergency response to meet the requirements of Public Utilities Code sections 961(d)(5), (d)(6) and (d)(8). These sections require the Gas Safety Plan to:

- “Provide for appropriate and effective system controls, with respect to both equipment and personnel procedures, to limit the damage from accidents, explosions, fires, and dangerous conditions.” Section 961(d)(5).
- “Provide timely response to customer and employee reports of leaks and other hazardous conditions and emergency events, including disconnection, reconnection, and pilot-lighting procedures.” Section 961(d)(6).
- “Prepare for, minimize damage from, and respond to, earthquakes and other major events.” Section 961(d)(8).

In addition, the Gas Safety Plan addresses the requirements of Assembly Bill 56, chaptered on October 7, 2011, which codified Public Utilities Code section 956.5 that states:

- Owners and operators of intrastate transmission and distribution lines, at least once each calendar year, shall meet with each local fire department having fire suppression responsibilities in the area where those lines are located to discuss and review contingency plans for emergencies involving the intrastate transmission and distribution lines within the jurisdiction of the local fire department.

SDG&E has several programs, policies, standards and procedures in place so that the company and its employees are prepared to respond to emergencies. These activities are intended to limit damage from accidents and provide timely response to customer and employee reports of leaks, hazardous conditions, and emergency events such as earthquakes and establish an effective Incident Command System (ICS) or Unified ICS with first responder agencies.

2. THE GAS EMERGENCY MANAGEMENT PREPAREDNESS AND RESPONSE POLICY

The Gas Emergency Management Preparedness and Response Policy (ER-1) is designed to create a framework for the protection of our employees, contractors, the public, and our system in the event of a major emergency related to gas pipeline operations safety, health, and environmental protection processes.

The ER-1 documents how SDG&E aligns with the emergency response requirements specified by SMS and complies with the Public Utilities Code sections 961(d)(5), (6) and (8), as well as the emergency response procedures required by 49 C.F.R. section 192.615. It also documents how the

EMERGENCY RESPONSE	SDG&E: SP.5-SD
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Company prepares and responds to emergencies by using the Plan-Do-Check-Act (PDCA) cycle for continuous improvement of our processes. This plan covers the following emergency response elements:

- SDG&E's Emergency Response Organization, including positions and responsibilities of the Emergency Operations Centers, identification of response resources and interfaces, including local emergency responders.
- Emergency preparedness/Exercises;
- Field Services Emergency Plans;
- After Action Review Program;
- Business Resumption Planning;
- Emergency Action and Fire Prevention Plans;
- Natural Disasters or Major Emergencies;
- Off-Hour Management Coverage
- Mutual assistance; and
- Plan maintenance.

The policy incorporates by reference SDG&E procedures and documents that collectively comply with the various requirements of 49 C.F.R. § 192.615:

- The responsibility of customer contact centers, which receive customer reports of emergencies and leaks;
- The responsibility of dispatch offices, which act as the central point for receiving and recording information on reportable incidents, emergencies, and natural disasters affecting the company, and which also process internal gas incident notifications.
- The Emergency Incident Tracking System that is used to record reports of damage to SDG&E pipelines or facilities and to log, track, and notify field personnel and others within the company about emergency situations; and
- Establishing and maintaining liaison with appropriate fire departments.

The Gas Emergency Management Preparedness and Response Policy is designed to provide for the safety of customers, employees and communities and the protection of property in the event of a major emergency related to gas pipeline operations safety, health, and environmental protection processes.

SDG&E prepares and maintains written plans and standards that address emergency or disaster situations, including earthquake response. As part of these plans and standards, employees are trained and equipped to respond promptly; direct their actions toward protecting people first and then property; maintain gas service to customers where possible; and restore the affected pipeline system and company operations to normal status following an emergency or disaster.

These plans and standards may include written gas handling plans, alternative gas handling plans and various considerations when performing gas handling/pressure control, including the operation of critical valves, control equipment and instrumentation. Employees are to adhere to these plans and standards when performing these duties and to take precautions to prevent outages, over pressurization, errors in mapping or planning and other safety concerns. Employees performing specified tasks must be trained on the policies and procedures to complete their duties

EMERGENCY RESPONSE	SDG&E: SP.5-SD
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safely. Business Resumption plans address continuity planning to ensure organizational stability in the event of a major business disruption so that critical functions can continue during and after a disaster with minimal disruption.

Plans for coping with a major emergency include provisions for training; response and recovery; specific responsibility for on-call schedules and duties; inter-organizational assistance; coordination with, and notification of, governmental agencies; media contact; assignments to governmental emergency organizations; and activation of the company's regional Gas Emergency Center.

SDG&E's emergency management organization is modeled after the Standardized Emergency Management System (SEMS), which allows for a multi-level emergency response organization. This means that the severity of the incident determines the level of support and resources that are necessary to respond to the event.

SDG&E has three levels of emergency management support:

- Construction and Operations Center Field Level response for routine local emergencies or incidents involving a small number of customers;
- a Gas Emergency Center at the Greencraig facility, which is activated for larger emergencies that involve repair and restoration efforts as well as technical support, logistics, and communications activities; depending on the nature of emergency and assets affected Gas Emergency Center may coordinate responses with the Southern California Gas Company's (SoCalGas) Gas Control Center;
- an Emergency Operations Center, which is for large scale events that may involve a large number of customers across regions or an event that may require the coordination and communication with multiple internal and/or external organizations (such as significant earthquakes).

During major emergencies, SDG&E regional Gas Emergency Center coordinates responses with SoCalGas' Emergency Operations Center, and SDG&E Emergency Operations Center staffed with trained personnel to respond to and recover from major emergencies. SDG&E also has a backup Emergency Operations Center in the event the main center becomes inoperative.

SDG&E maintains and tests its emergency response plan and structure by conducting regular emergency preparedness drills and exercises to promote employee proficiency in emergency assignments and to validate the effectiveness of its emergency plans. These training exercises include external agencies and cover a wide range of threats to employee, public, and pipeline safety. Adequacy of response is evaluated during these emergency exercises, lessons learned are identified and corrective actions are taken, which may include plan or process revisions.

Emergency response plans and procedures are also evaluated as a component of an incident investigation, with lessons learned incorporated into plan or process revisions as needed.

SDG&E has developed and integrated a Utility-based Incident Command System (ICS) into the company's field response structure, Emergency Operations Center and Department Operations Centers. The Incident Command System is a standardized approach to incident management

EMERGENCY RESPONSE	SDG&E: SP.5-SD
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that provides all responders an integrated organizational structure that matches the complexities and demands of the incident and can expand or contract to meet incident needs. This integrated organizational structure outlines communication standards for inter-functional (i.e., Transmission, Distribution, etc.) and interagency (i.e., fire service, law enforcement, Caltrans, etc.) cooperation during an emergency incident and responsibilities within the company.

In addition to Incident Command System training, the company provides “First Responder” training for field management personnel that may respond to emergencies.

Plans for routine emergencies differ from a major emergency in that Company personnel respond and address the emergency with no or minimal interaction with other agencies. The Company responds immediately to all emergencies. In addition to the immediate response to emergencies, other potentially hazardous conditions reported to the Company are scheduled dependent upon the specific information reported to the Utility. Response times of less than four hours, less than 14 hours and same day have been established for these non-emergency conditions.

a. Mutual Assistance Support

Mutual assistance is an essential part of a utility restoration process and contingency planning. Mutual assistance agreements (MAAs) and other types of arrangements to provide assistance before, during, and after an emergency event facilitate the rapid mobilization of personnel, equipment, and supplies. Participation in MAAs is seen as an important component of the federal National Incident Management System (NIMS), which is intended to provide a systematic approach to guide governments at all levels, non-governmental organizations, and the private sector in collaborative emergency preparedness and response activities.⁸ The mutual assistance network is a cornerstone of a utility’s operations during emergencies.

The Company maintains an agreement for mutual assistance with various non-profit organizations, utilities and certain municipalities such as the California Utilities Emergency Association (CUEA), Western Regional Mutual Aid Group (WRMAG) and the American Gas Association (AGA).

These Agreements cover the rights and obligations of those who respond to requests for assistance, as well as guidelines concerning control of the work of personnel involved in the response.

A requesting utility having a major emergency and in need of the Company’s assistance, may make a request for assistance. Emergency Management will facilitate and coordinate the activation of mutual assistance with the approval of the Executive Officer On-Call, Incident Commander, the Chief Operations Officer, and/or an authorized Officer of the Company.

The Emergency Management department maintains checklists and other documents for

⁸ U.S. Dept. of Homeland Security. National Incident Management System (December 2008).

EMERGENCY RESPONSE	SDG&E: SP.5-SD
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requesting and responding to requests for mutual assistance.

The individual procedures, policies and programs associated with this chapter are listed in the Appendix.

The appropriate level of leadership participates in and reviews the scheduling and findings of emergency preparedness activities. Emergency preparedness activities are conducted per the schedule published by Emergency Services.

VI. STATE AND FEDERAL REGULATIONS

1. STATE AND FEDERAL REGULATIONS AND CALIFORNIA PUBLIC UTILITIES CODE § 961- (d)(7), (d)(9) and (c)

In D.12-04-010, the Commission identified the topic of State and federal regulations to meet the requirements of Public Utilities Code sections 961(c), (d)(7) and (d)(9). These sections require that the Gas Safety Plan developed, approved, and implemented pursuant to PUC section 961(b) must:

- Be consistent with best practices in the gas industry and with federal pipeline safety statutes as set forth in Chapter 601 (commencing with Section 60101) of Subtitle VIII of Title 49 of the United States Code and the regulations adopted by the United States Department of Transportation pursuant to those statutes. Section 961(c);
- Include appropriate protocols for determining maximum allowable operating pressures on relevant pipeline segments, including all necessary documentation affecting the calculation of maximum allowable operating pressures. Section 961(d)(7); and
- Meet or exceed the minimum standards for safe design, construction, installation, operation, and maintenance of gas transmission and distribution facilities prescribed by regulations issued by the United States Department of Transportation in Part 192 (commencing with Section 192.1) of Title 49 of the Code of Federal Regulations. Section 961(d)(9).

This chapter describes how SDG&E safely designs, constructs, installs, operates, and maintains gas transmission and distribution facilities in compliance with these directives.

2. REGULATORY OVERSIGHT

SDG&E's transmission and distribution pipelines and facilities are operated and maintained primarily pursuant to PHMSA regulations at the federal level, and Commission regulations and requirements at the state level. The Commission is a state partner of PHMSA and is certified by PHMSA for the intrastate regulatory, inspection, and enforcement responsibilities of the transportation of natural gas.

California's rules governing the design, construction, testing, operation, and maintenance of gas transmission and distribution piping systems are specified in the Commission's General Order 112-F.

Title 49 of the Code of Federal Regulations (49 CFR), Parts 191, 192, 193, and 199, which govern the design, construction, testing, operation, and maintenance of Gas Piping Systems are incorporated into the Commission's General Order 112-F.

SDG&E's gas standards, including O&M procedures, are developed to maintain and continuously improve safety, and comply with federal and State pipeline safety regulations. To meet new laws, rules, and regulations, the departments of Pipeline Safety and Compliance and Integrity

STATE AND FEDERAL REGULATIONS	SDG&E: SP.6-SD
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Management and Strategic Planning collectively work to monitor and track changes to legislation and regulatory requirements. When new regulations are adopted, the department coordinates the implementation of new requirements and documents them so that policies, standards, practices, and training materials are updated, as appropriate.

SDG&E stays current with regulations and requirements by monitoring legislative and regulatory activities and participating in industry associations, such as the American Gas Association (AGA). As an example, some of the past and current activities SDG&E has initiated from its participation in industry organizations can be seen in Figures A and B, at the end of this chapter.

The Company also updates procedures, standards and audit programs and keeps required documentation (e.g., leak survey records, patrols, cathodic protection reads, meter and regulation inspection forms, test data, and other documents) for a specified time period to demonstrate compliance.

SDG&E will continue to comply with applicable regulations and requirements with a focus on continuing to reduce the overall system risk through a process of continuous safety enhancements by identifying, evaluating, and reducing pipeline integrity risks for its gas system.

3. COMPLIANCE WITH GENERAL ORDER 112-F

In accordance with General Order 112-F and, by incorporation, 49 CFR Part 192, SDG&E has implemented and follows policies, procedures, and programs that govern the design, construction, testing, installation, operation, maintenance, and determination of maximum allowable operating pressure for gas transmission and distribution facilities. These policies, procedures, and programs are updated in a timely manner as appropriate in response to changes in regulation, safety advisories, and other safety information.

The individual policies, procedures and programs associated with this Section are listed in the Appendix.

These policies, procedures and programs have been developed to promote safety and comply with the code requirements and are summarized as follows:

- 3.1 Design: 49 CFR Part 192, Subparts B, C, and D specify the minimum requirements for the material selection and design of pipe and pipeline components. SDG&E's transmission and distribution pipelines and facilities are designed with approved materials that have sufficient wall thickness and/or adequate protection to withstand anticipated external pressures and loads that will be imposed on the pipe after installation. The pipelines and facilities are also designed with materials of sufficient strength to contain internal pressures plus appropriate design and/or safety factors. Components, including valves, flanges, and fittings meet the minimum prescribed requirements specified in the regulations. The design also includes pressure relief or other protective devices to prevent accidental over-pressurization as further described in the maintenance section. SDG&E implements defined procurement processes that facilitate materials traceability.
- 3.2 Construction: 49 CFR Part 192, Subparts E, F, G and J specify the minimum requirements for the construction and testing of transmission and distribution facilities, including the

STATE AND FEDERAL REGULATIONS	SDG&E: SP.6-SD
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welding and joining of pipe and components as well as the protection of pipe and facilities from hazards such as unstable soil, landslides, and other hazards that may cause the pipe to move or sustain abnormal loads. SDG&E's transmission and distribution pipelines and facilities are to be constructed in accordance with these requirements.

- 3.3 Installation: 49 CFR Part 192, Subpart H specifies the minimum requirements for the installation of distribution service lines, service regulators, and customer meters. These requirements include specifications pertaining to the location of this infrastructure, protection from damage, and valve requirements. SDG&E's service lines, service regulators, and customer meters are to be installed in accordance with these requirements.
- 3.4 Maintenance: 49 CFR Part 192, Subparts M and I specify the minimum requirements for the maintenance of transmission and distribution pipe facilities along with the associated corrosion protection facilities. Maintenance activities include the patrolling of pipeline, performing leakage surveys, monitoring performance of corrosion protection systems, making repairs, inspection and testing of pressure limiting and regulating equipment, and valve and vault inspection and upkeep. SDG&E maintains its pipelines and facilities in accordance with these requirements.
- 3.5 Operations: 49 CFR Part 192, Subparts L and K specify the minimum requirements for the operation of transmission and distribution pipeline facilities. Operational activities are included in the O&M plan described in Chapter 4 and included the Emergency Response Plan described in Chapter 5 of this Gas Safety Plan. The operation of the pipeline also includes requirements for a public awareness program, damage prevention program, control room management procedures, odorization of gas, identification of changes in population density along certain transmission lines, and the determination of maximum allowable operating pressure, including requirements for increasing the maximum allowable operating pressure.

a. BEYOND STATE AND FEDERAL REGULATIONS

SDG&E stays current on emerging issues within the industry through active participation in industry associations to identify continuous improvement opportunities and enhance safety beyond current regulatory requirements.

Table 1 identifies a non-exhaustive list of industry groups in which SDG&E participates.

Table 1 – Industry Participation

The following list contains several of the groups in which SDG&E participates:

- American Gas Association
- American National Standards Institute
- The American Petroleum Institute
- The American Society of Mechanical Engineers technical committees (B31Q, B31.8, B31)
- California Regional Common Ground Alliance

STATE AND FEDERAL REGULATIONS	SDG&E: SP.6-SD
<ul style="list-style-type: none"> • California Utilities Emergency Association • Common Ground Alliance • Dig Alert (Southern California one-call) • The Gas Technology Institute • Inter-Utility Coordination Committee • Inter-Utility Working group • The Association for Materials Protection and Performance • NYSEARCH – National Gas RD&D • USA North (Northern California and Nevada one-call) • Pipeline Research Council International • Pipeline SMS • The Western Energy Institute • Western Gas Measurement Short Course 	

Figure 4 contains activities that SDG&E is in the process of implementing, which is a result of its participation in industry groups, including the American Gas Association (AGA) and others.

Figure 4 – Current Activities

Current Activities	
Industry Actions	Implementation Type & Responsible Organization
Develop technology to electronically track leak survey routes and map the location of found leaks with spatial coordinates and link other data such as level of leakage found.	In progress Gas Operations - Policies Tools & Strategies
Implement a system that links geographic information systems (GIS) with locate and mark data from KorTerra (a ticket management software) to rank the highest risk Underground Service Alert (USA) tickets for prioritized routing and monitoring.	In progress Gas Operations - Policies Tools & Strategies
Remote methane sensing pilot program to use SDG&E's Smart Meter communications system to provide alarming and other notification when measured methane-in air-concentration levels exceed pre-set acceptable limits at a monitoring site.	In progress PSEP
Research and development project to evaluate the feasibility of using small unmanned aircraft systems (drones), to conduct various pipeline/facilities inspections and/or survey on difficult-to- access pipeline segments.	In progress Research and Materials Strategic Programs

Figure 5 contains activities that SDG&E has implemented, which is the result of its participation in industry groups, including the American Gas Association (AGA) and others. Most of the activities are processes that have been initiated and implemented as a regular and routine element. Activities noted as “adopted,” mean that the company has incorporated them as part of the normal course of business. The other activities are one-time events that were completed and are noted as “completed.”

Figure 5 – Implemented Activities

Implemented Activities	
Industry Actions	Implementation Type & Responsible Organization
Review and revise as necessary established construction procedures to provide for appropriate (risk-based) oversight of contractor installed pipeline facilities.	Adopted Gas Operation Services
Under DIMP, evaluate risk associated with trenchless pipeline techniques and implement initiatives to mitigate risks	Adopted Sewer Lateral Inspection Program Gas Operations
Under DIMP, identify distribution assets where increased leak surveys may be appropriate	Adopted Pipeline
Integrate applicable provisions of AGA's emergency response white paper and checklist into emergency response procedures	Adopted Emergency
Extend Operator Qualification program to include tasks related to new main & service line construction	Adopted Pipeline Safety & Compliance
Expand EFV installation beyond single family residential homes	Adopted Pipeline
Incorporate an Incident Command System (ICS) type of structure into emergency response protocols	Adopted Emergency
Extend transmission integrity management principles outside of HCAs using a risk-based approach	Adopted Pipeline
Implement applicable portions of AGA's technical guidance documents: 1) Oversight of new construction tasks to ensure quality; 2) Ways to improve engagement between operators & excavators	Adopted Gas Operations Services
Begin risk-based evaluation on the use of ASVs, RCVs or equivalent technology on transmission block valves in HCAs	Adopted Gas Engineering
Implement appropriate meter set protection practices identified through the Best Practices Program	Adopted Gas Infrastructure Protection Program (GIPP) Gas Operations Support
Upgrade aging equipment used to locate underground pipelines and facilities has been purchased and deployed. The standardized training has been developed and completed.	Adopted Gas Operations Services
Install Optical Pipeline Monitoring on all new or replacement pipelines one-mile or more in length, at least 12 inches in diameter and intended to operate at or above 20 percent of their specified minimum yield strength. Will allow for remote monitoring of potential leaks in real time, identification of non-native ground movements and 3rd party intrusions.	Adopted Gas Engineering

VII. CONTINUING OPERATIONS

1. CONTINUING OPERATIONS AND CALIFORNIA PUBLIC UTILITIES CODE §§ 963 (b)(3), 961 (d)(3), (d)(4), and (d)(10)

In D.12-04-010, the Commission identified the topic of “continuing operations” to meet the requirements in Public Utilities sections 963(b)(3) and 961 (d)(3), (d)(4), and (d)(10). These sections require that SDG&E’s Gas Safety Plan achieve the following:

- It is the policy of the state that the commission and each gas corporation place safety of the public and gas corporation employees as the top priority. The commission shall take all reasonable and appropriate actions necessary to carry out the safety priority policy of this paragraph consistent with the principle of just and reasonable cost-based rates. Section 963(b)(3).
- Provide adequate storage and transportation capacity to reliably and safely deliver gas to all customers consistent with rules authorized by the commission governing core and noncore reliability and curtailment, including provisions for expansion, replacement, preventive maintenance, and reactive maintenance and repair of its commission-regulated gas pipeline facility. Section 961(d)(3).
- Provide for effective patrol and inspection of the commission-regulated gas pipeline facility to detect leaks and other compromised facility conditions and to effect timely repairs. Section 961(d)(4).
- Ensure an adequately sized, qualified, and properly trained gas corporation workforce to carry out the plan. Section 961(d)(10).

2. SAFETY IS A CORE VALUE

SDG&E considers the health and safety of all employees, contractors and the general public to be its core value. This core value is demonstrated through the following statements that describe our approach to safety at SDG&E:

- Individual health and safety and the safety of others is not compromised. Safe work habits are the responsibility of every employee and the foundation of job performance evaluations.
- Occupational injuries and illnesses can be prevented. Identification and reporting of workplace hazards and potential hazards are the responsibility of every employee of SDG&E. Job observations are implemented as part of our program to confirm that employees comply with safe and healthy work practices.
- Management takes an active role in implementing SDG&E’s health and safety programs as stated in the Injury Illness Prevention Program (IIPP) and staying aware

CONTINUING OPERATIONS**SDG&E: SP.7-SD**

of related workplace injuries, near misses, and at-risk behaviors.

- SDG&E performs formal investigations with root cause analysis and follow up on lessons learned for significant Company incidents and near misses. As part of its Incident Investigation, Evaluation, and Lessons Learned, SDG&E maintains a procedure for investigating incidents and near misses that led, or could have led, to an incident with serious consequences. These processes are incorporated into the Company's implementation of SMS, specifically the tenet on Incident Investigation, Evaluation and Lessons Learned.
- Management is responsible for providing a safe workplace and creating a safety culture that promotes safe behaviors and safeguards to prevent accidents and injuries to employees, contractors and the public. Employees work together to use equipment in accordance with job training and safety instructions.
- Safety culture is a key component in establishing a safe work environment. SDG&E has implemented Behavior Based Safety which encourages safe behaviors by performing field observations. The Gas Safety Sub-Committee creates opportunities as an open forum to address employee safety concerns to management. SDG&E periodically assesses its safety culture to confirm the effectiveness of its safety programs. SDG&E seeks to engage all levels of employees through surveys and employee Key Performance Indicators to continually identify areas to improve our safety culture and performance.
- SDG&E complies with applicable federal, state, and local occupational health and safety regulations and implements these through training, company standards, the IIPP, and safety lesson plans. Both pipeline and occupational safety are at the forefront of priorities for SDG&E. Safety is a component of employee training programs and performance appraisals.

3. SAFE AND RELIABLE TRANSPORTATION

SDG&E has designed its integrated gas transmission system to meet design standards established by the Commission for core and noncore customer service. The SDG&E gas system is designed to provide service to core customers during a 1-in-35-year peak day condition, under which noncore transportation service is curtailed. The system is also designed to provide for continuous forecast noncore transportation service under a 1-in-10-year cold day condition. SDG&E utilizes detailed hydraulic models of the gas system to evaluate its capacity to meet these design standards and identify improvements as necessary. Both design standards are expected to occur during the winter operating season when core customers' gas usage is the greatest.

In accordance with Commission Decision D.02-11-073, SDG&E provides its system capacity twice per year to the Commission's Energy Division (the most recent filing may be referenced to obtain SDG&E's capacity to serve customer demand during both the winter and summer operating seasons). SDG&E does not have any physical storage assets on its system. Pursuant to Commission Decision D.07-12-019, SoCalGas handles gas procurement for SDG&E's bundled core customers through a combined SoCalGas/SDG&E core procurement portfolio.

CONTINUING OPERATIONS**SDG&E: SP.7-SD**

Information about transportation capacity is available through the ENVOY electronic bulletin board. The link to the ENVOY bulletin board is located at: socalgas-envoy.com

In accordance with SDG&E's policies, the Gas Transmission Planning and Region Engineering departments continuously monitor customer demand on SDG&E's transmission and distribution system, using both actual customer service requests and our long-term demand forecast. Any changes in customer demand are evaluated against the appropriate CPUC-mandated design standards for service to ensure adequate capacity is available. Depending upon the customer class, SDG&E has a variety of Commission-approved means to address any capacity deficiencies. When a deficiency is identified, possible solutions are considered, evaluated, and implemented according to SDG&E gas rules and tariffs. For example, a facility improvement that is required to serve a single noncore customer and which provides no benefit to other customers is funded entirely by that customer.

Finally, the SDG&E gas system is continuously monitored to meet current customer demand. As part of the integrated gas transmission system with SoCalGas, the integrity of the SDG&E system falls under the responsibility of the Utility System Operator. Per SoCalGas Rule 41, Utility System Operation, the mission of the Utility Gas System Operator is to maintain system reliability and integrity. This rule provides information on the responsibilities performed to maintain system reliability by each of the SoCalGas departments that contribute to the System Operator function.

SDG&E will continue to perform operating and maintenance activities and make capital investments to support the company's pipeline system and comply with all applicable regulations.

4. SDG&E WORKFORCE SIZE, TRAINING AND QUALIFICATIONS

a. Workforce Size

SDG&E determines appropriate staffing levels by taking into consideration multiple factors to preserve the safety and integrity of its pipeline system. Associated with this process, SDG&E addresses elements of a resource mitigation plan through workforce planning, knowledge transfer, training and succession planning.

Annual baseline employee staffing levels are determined during the annual planning process and contracts are maintained with qualified service providers to complete work and address variability in work demand throughout the year. As part of the planning process management reviews its projected workforce to adequately fulfill safety, compliance, maintenance, and construction obligations. If local management cannot fulfill these obligations, they raise the need as part of the resource allocation and funding process. During the year, as resource vacancies occur or as work levels significantly change, local management reassesses the need for the workforce and submits a request to fill the vacancies or add to staff. Resource allocation decisions consider employee levels and contractor availability.

CONTINUING OPERATIONS**SDG&E: SP.7-SD**

Verification of appropriate staffing levels is determined by monitoring specified performance metrics and workloads. These performance metrics include: meeting emergency response goals (Priority 1 response within 60 minutes) and compliance with distribution pipeline leakage code response times consistent with Company policy. The performance metrics used are reviewed monthly by Senior Management. If SDG&E falls below performance goals, appropriate resource adjustments would be made.

Employees in safety-sensitive positions are trained and qualified to handle emergencies. Employees are cross-trained as needed in various assignments to perform a variety of duties that allow a flexible workforce to meet sudden changes in work demands. The company assesses its workforce requirements on an ongoing basis (such as an annual planning exercise) to develop hiring and development plans and budgets to supplement or replenish the workforce as necessary to sustain the safety and integrity of the pipeline system.

The Company uses contractors, as necessary and in compliance with collective bargaining agreements, so that sufficient overall resources are deployed to address maintenance and construction. SDG&E shall continue to require that contractor employees undergo training and meet specific compliance requirements to perform work on company pipelines and facilities. Contractors shall be monitored to see that they perform their responsibilities consistent with company standards and contract requirements.

b. Gas Operations Training

Safety is rooted in all phases of training provided by Gas Operations Training. It starts with the formalized training that employees receive when they begin their career, emphasized on the job, and then re-emphasized during training they receive as they advance to new jobs.

Training courses are delivered to each function/classification in all field job progressions and vary from two to seven weeks for entry-level positions. Courses are taught utilizing various training methods and are foundationally rooted on our Gas Standards and procedures. The courses are delivered by a centralized Gas Operations Training team with most of the instructors having gained practical experience on the job. These instructors convey consistent safety messages and confirm understanding of the classroom training by observing employees perform in simulated field situations.

Integrated in the training courses are the Operator Qualification tasks, as required by 49 CFR Part 192 regulations. The documentation for these qualifications and records are closely monitored and employees are re-trained, re-qualified or updated whenever significant changes occur in a task regulation or when they are required to re-qualify as prescribed by PHMSA.

Emergency response is covered within the training courses for classifications that have any activities or functions in this area. The classifications include Working Foreman,

CONTINUING OPERATIONS**SDG&E: SP.7-SD**

Welder, Gas Technician B, Gas Technician A, Service Technician, Meter Service Person, Locator, Laborer, Regulator Technician, Instrument Technician, Cathodic Protection Technician, and Gas Patroller. Employees are required to annually review policies and procedures so that they understand emergency response guidelines and procedures, including when to contact Corporate Security to address certain threats.

SDG&E has a training curriculum that tests employees' skills in identifying and repairing gas leaks and other real-life emergency situations through simulation exercises. These exercises are also included in first responder training. In addition, the company implemented a technical skills training class to help employees new to management become more effective in addressing these situations as supervisors and managers.

As part of the Company's continuing education effort, supervisors and managers are trained on the application of a flexible, scalable, sustainable, and measurable scene management process that is ICS-compatible in response to emergency incidents.

SDG&E participates in industry forums, validates that training activities are consistent with regulatory requirements, and identifies when new training opportunities exist.

Training course materials are updated on a regular basis. Root causes of safety incidents, findings and near miss investigations are a significant part of course discussion/instruction to sustain and improve overall employee and system safety.

c. Qualification of Pipeline Personnel

All gas pipeline operators are required to have a written Operator Qualification program to establish compliance policies for the DOT Operator Qualification Program as required by 49 Code of Federal Regulations, Subpart N – Qualification of Pipeline Personnel, to qualify employees and contractors performing DOT-covered tasks. The Company's Operator Qualification Program applies to all individuals who perform covered tasks, whether they are employed by the Company, a contractor, a sub-contractor or any other entity performing covered tasks on behalf of the Company. Such programs are reviewed by the Operator Qualification department prior to performing work on pipelines or pipeline facilities.

The Operator Qualification Program requires that employees are trained, initially qualified and subsequently re-qualified every three or five years depending on the task. SDG&E's training frequency conforms to these requirements and the results of the evaluations are recorded -- demonstrating employees' knowledge, skills and abilities of the job requirements and that they are qualified to perform the required tasks. If employees don't pass, they are not allowed to perform that activity until they have been successfully re-trained and re-qualified. Essentially, any employee who performs a covered task -- ranging from customer services field to distribution and transmission personnel -- need to be qualified to perform Operator Qualification tasks.

CONTINUING OPERATIONS**SDG&E: SP.7-SD**

The Operator Qualification Program also requires that contractors' knowledge, training, and skills conform to the job requirements and that they are qualified to perform the required tasks. An external vendor, who is one of the nation's leaders in regulatory compliance for Operator Qualification, has been retained to provide training, testing, Operator Qualification, and record retention for our pipeline contractors.

Veriforce is a third-party vendor who offers comprehensive solutions for Operator Qualification (OQ), Drug & Alcohol (D&A), Training, Auditing, and Consulting programs to Operators and contractors nationwide. Beginning in 2012, SDG&E has partnered with Veriforce to manage all gas contractors' OQ and D&A programs using the Veriforce electronic database. The Veriforce partnership allows SDG&E to improve the overall OQ program for gas contractors by requiring them to abide by a common OQ program and tracks their D&A status to maintain compliance. Some key features of using the Veriforce system are: the ability for contractors to have proof of qualifications on the job site; the ability to track qualification failures; and visibility to the D&A status of each contractor company and its employees.

5. DRUG AND ALCOHOL MISUSE PREVENTION PLAN

The purpose of the Drug and Alcohol Misuse Prevention Plan is to prevent accidents that could result from the use of controlled substances and misuse of alcohol, thereby reducing fatalities, injuries and property damage. The Company's plan and policies are designed to comply with state and federal law.

If performing DOT-covered functions, employees undergo pre-employment drug and alcohol testing and are entered into the random drug testing program. Contractors shall also have an Drug and Alcohol Misuse Prevention Program or work with a third-party to enforce the program in compliance with DOT regulations, specifically, 49 CFR Part 40, Part 199 and/or Part 382. Contractors shall ensure their employees have a negative pre-employment test on file before their first performance of safety-sensitive functions and are entered in their (contractor's) random testing pool.

6. ADDRESSING THE COVID-19 PANDEMIC

Using the ICS concept and setting clear objectives, SDG&E was able to effectively develop and implement updated health & safety policies and procedures based on Federal, State, and Local Pandemic guidelines. COVID-19 Emergency Orders have been lifted but SDG&E will reinstate enhanced protocols as necessary to address potential future pandemic or public health emergencies. SDG&E's COVID-19 policies and procedures consisted of: Quarantine and Notification protocols, COVID-19 Prevention Program, Onsite Temperature Screening and Questions, Face Covering Requirements, Social Distance Guidance, Safety Practices for Construction Sites and, Entered Work Orders. These safety policies and procedures mitigated risk and enhanced the safety of our employees, contractor, and communities we serve.

Additional reinforcement of COVID-19 health and safety protocols included safety messages and signage throughout each facility. This signage highlights the importance of self-screening for



GAS SAFETY PLAN

CONTINUING OPERATIONS	SDG&E: SP.7-SD
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symptoms and exposure, physical distancing, wearing face coverings, handwashing, personal hygiene, and the location of safety supplies. All facilities have additional supplies available, including disposable face coverings and hand sanitizer. The company has implemented various enhancements to its mechanical systems (HVAC) to mitigate the potential for pathogen propagation due to a pandemic event. Specifically, MERV-13 (Minimum Efficiency Rating Value) air filters were installed throughout our HVAC systems and air circulation has also been optimized to maximum capacity. Lastly, enhanced cleaning occurs at every occupied facility, and additional supplies are available to clean individual workstations and equipment.

VIII. EMERGING ISSUES

1. EMERGING ISSUES AND CALIFORNIA PUBLIC UTILITIES CODE § 961(d)(11)

In D.12-04-010, the Commission identified the topic of emerging issues to meet the requirements Public Utilities section 961(d)(11). This section requires that the gas safety plan include any additional matter that the commission determines should be included in the plan.

2. SDG&E AND EMERGING ISSUES

SDG&E stays current on emerging issues within the industry through active participation in industry associations, review of PHMSA advisory bulletins, and open communication with legislative, regulatory groups as well as news and trade publications. Chapter 6 of this Gas Safety Plan identifies on-going safety enhancement actions and SDG&E's targeted date of implementation.

SDG&E is continuing to address the emerging issues of the grandfathering of provisions in Title 49 of the Code of Federal Regulation (49 CFR) Part 192 as discussed in Chapter 4 of this Gas Safety Plan, along with the newly implemented requirements for MAOP reconfirmation, repair criteria, Integrity Management improvements, cathodic protection, management of change, and rupture mitigation, under the Gas Transmission Safety Rule.

3. COLLABORATION WITH THE CALIFORNIA PUBLIC UTILITIES COMMISSION

SDG&E will continue to work in collaboration with the Commission and other regulatory authorities and stay abreast of industry best practices, to address those emerging issues that are not yet covered by this Gas Safety Plan. Emerging issues include:

- Safety Culture Order Instituting Rulemaking (OIR), R.21-10-001
- Senate Bill 1371 "Natural Gas Leakage Abatement"
- Risk Management
- Climate Change Adaptation and Resiliency
- Proposed Federal Pipeline Safety Regulations
- Joint Application to Establish Hydrogen Blending Projects, A.22-09-226

a. Safety Culture OIR

In October of 2021, the CPUC issued Order Instituting Rulemaking 21-10-001 to develop and adopt a safety culture assessment framework and identify the structure, elements, and process necessary to drive each regulated investor-owned electric and natural gas utility and gas storage operator to establish and continuously improve their organization-wide safety culture. Accordingly, this OIR provides guidance on the form and content of the safety culture assessments for regulated electric and natural gas investor-owned utilities (IOU) and gas storage operators, provides a venue for a review of their safety culture as an organization, and will determine a process for ongoing review and refinement of their safety culture assessments in future years. SDG&E looks forward to continuing collaborating with the CPUC and interested parties in addressing this important issue that could have a significant impact on utilities and

EMERGING ISSUES	SDG&E: SP.8-SD
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operators in the state.

b. Senate Bill 1371 “Natural Gas Leakage Abatement”

Senate Bill (SB) 1371 requires the adoption of rules and procedures to reduce methane emissions from Commission-regulated natural gas pipeline facilities consistent with Public Utilities Code section 961(d) and 49 CFR sections 192.703(c). SDG&E’s Leak Abatement Compliance Plan and accompanying Advice Letter were approved, by the Commission, in 2020. Implementation of the activities for each best practice, outlined in the Compliance Plan, began in January 2021 and will continue through 2022. On February 21, 2023, SDG&E submitted Advice Letter 3071-G-A to provide forecasted costs for 2023, 2024, and associated best practices.⁹

SDG&E is an industry leader in the development of new methods and use of new technologies that enable the company to reduce natural gas emissions. Some of these include:

- Improving the accuracy of emissions estimations and reporting;
- Development of Company-Specific emissions factors;
- Use of infrared cameras to check for leaks after new pipelines are installed;
- Special fiber optic cable that detects methane leaks and third-party damage to pipelines;
- Infrared “point” sensors that can detect leaks before they can be smelled by people;
- Use of aerial platforms such as helicopters and drones equipped with advanced emission detection technologies to spot emissions from above;
- Developing algorithms that use our Advanced Meter system to identify unusual levels of natural gas consumption that indicate a leak at customers’ homes or businesses; and
- Capturing natural gas released during pipeline replacement or safety maintenance and testing, allowing for gas to be saved for later use while eliminating emissions that would otherwise occur.

c. Risk Management

SDG&E continues to work with the CPUC to develop and enhance its process to manage risk. The Company strongly agrees that the implementation of SMS for its pipeline operations is a key step towards enhanced asset and risk management decision-making to ultimately improve safety performance. As such, SDG&E has established an enterprise-wide SMS framework, as further described above. SDG&E is an active participant in ongoing CPUC proceedings related to risk management.

SDG&E is committed to taking a risk-based decision-making approach to prioritizing our work and allocating our resources. SDG&E has a comprehensive, rigorous, and iterative system to manage its business risks across the enterprise, which encompasses employee, contractor, customer, public, and infrastructure safety risks. SDG&E has a dedicated organization, Enterprise Risk Management (ERM), whose role is to facilitate the identification, analysis, evaluation, and

⁹ AL 3071-G-A is currently pending before the Commission.

EMERGING ISSUES**SDG&E: SP.8-SD**

prioritization of risks. Effective risk management practices help to reinforce a strong and positive safety culture. SDG&E has undertaken a thoughtful and measured approach to the adoption of risk management structures and processes at all levels, to further the development of a risk-aware culture.

The ERM organization provides governance over and facilitates the development of risk policies and procedures. The operating business organizations manage risks every day for our employees, contractors, the public, and infrastructure. These include safety management programs that are mandated by federal and state occupational, health and safety, and other applicable laws and regulations. These programs are managed at the local level and are further described in this chapter.

SDG&E's ERM organization works annually to refresh Risk Registries at the Enterprise level. The Enterprise Risk Registry is a starting point for the RAMP and feeds into the Company's risk-informed decision-making framework processes. Additionally, SDG&E leverages the operating unit risk registries to inform internal asset management strategies and integrity management to continue the integration of risk and asset management.

d. Climate Change Adaptation and Resiliency

Under the broad umbrella of risk management, SDG&E is addressing certain risks that have emerged as industry-specific issues, such as climate change adaptation. SDG&E is focused on safety initiatives to address climate change issues including drought, wildfires, and mudslides. SDG&E is working with the California Energy Commission and the CPUC on climate change adaptation. SMS encourages operators to use the results of their risk assessments to continue to drive down the likelihood of asset-related safety incidents and events—this approach is being implemented as the risk management processes are matured and improved. The Company views climate change as a driver and/or trigger to some of the top-identified safety risks and the results of the maturation of risk management is being integrated into the SoCalGas and SDG&E RAMP and GRC filings. For example, to address the risk of climate change, the 2021 RAMP Report focuses on the drivers of climate change and the potential resulting impacts, which in turn yielded the adaptation assessment and mitigation efforts presented in the risk chapters of this 2021 RAMP Report. SDG&E continues to conduct research to understand the impacts to all the Utility systems in recent extreme events such as the wildfires in California as well as hurricanes and floods throughout the country to better identify vulnerabilities and opportunities to enhance resiliency for the natural gas infrastructure.

e. Proposed Federal Pipeline Safety Regulations

As significant new pipeline safety regulations are being developed by the Pipeline and Hazardous Material Safety Administration (PHMSA), SDG&E continues to provide input to help ensure effective implementation and desired outcomes. Examples of significant regulations on the horizon include:

- “Safety of Gas Transmission Pipelines: MAOP Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments”

EMERGING ISSUES	SDG&E: SP.8-SD
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- PHMSA published its final rule in October 2019 and the amendments within address integrity management requirements and other requirements, and they focus on the actions an operator must take to reconfirm the maximum allowable operating pressure of previously untested natural gas transmission pipelines and pipelines lacking certain material or operational records, the periodic assessment of pipelines in populated areas not designated as “high consequence areas,” the reporting of exceedances of maximum allowable operating pressure, the consideration of seismicity as a risk factor in integrity management, safety features on in-line inspection launchers and receivers, a 6-month grace period for 7-calendar-year integrity management reassessment intervals, and related recordkeeping provisions.
- “Safety of Gas Transmission Pipelines: Repair Criteria, Integrity Management Improvements, Cathodic Protection, Management of Change, and Other Related Amendments”
 - This rulemaking will address the following proposals:
 1. Repair criteria (HCA and non-HCA)
 2. Inspections following extreme events
 3. Safety features on ILI launchers and receivers
 4. Management of change
 5. Corrosion control
 6. Integrity management clarifications
 7. Strengthened assessment requirements

f. Joint Application to Establish Hydrogen Blending Demonstration Projects, A.22-09-006

On September 8, 2022, SDG&E, SoCalGas and Southwest Gas submitted a Joint Application to Establish Hydrogen Blending Projects. This Application, currently pending before the Commission, proposes the creation of live hydrogen blending demonstration projects by each utility. The projects would consist of blending hydrogen in (1) isolated polyethylene plastic, and (2) isolated mixed material (steel and plastic) distribution systems within each Applicants’ respective service territories. The proposed hydrogen blending demonstration projects, if approved, will generate crucial information and knowledge with the ultimate goal of informing on a safe hydrogen injection standard for the state. Additionally, “live blending” into the gas network is the best way for SDG&E to understand and learn how to safely measure, manage, design, operate, observe, assess, analyze, and mitigate risks associated with the behavior of hydrogen in a blended gas system.

GAS SAFETY PLAN APPENDIX

1. In Decision (D.)12-04-010, the Commission stated gas operator safety plans “may reference existing components or include Exhibits or Attachments that cross-reference to other existing utility documentation[.]” Id. at 19. SDG&E has numerous existing safety programs, plans, and procedures in place that address specified infrastructure or areas of company activity. This Gas Safety Plan provides an overview that encompasses the plans, programs, and policies referenced in this document and affirm SDG&E’s commitment to safety. The following matrix is a guide to the documents making up these plans, programs, and policies. Documents have been identified by their policy number and title and cross-referenced to the Gas Safety Plan chapter.

Policy Document – Gas Safety Plan Matrix

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
190SD	Operator Qualification Task Change Communication	X		X	
2110SD	Management of Change for Gas Standards Related to Integrity Management Programs	X			
2111SD	Management of Change - Request & Approval	X			
2112SD	Pipeline Database Update	X			
3084SD	Corrosion Tests General Data Sheet	X			
3222SD	Design Data Sheet (DDS)	X		X	X
3506SD	Notice of Shutdown / Operational Deviation	X			
40-00	Polyethylene Pipe and Tubing	X			
4090SD	100mV Polarization Form	X			
4091SD	Wax Casing Data Collection Form	X			
50-15	Pipe Nipples	X			
52-80	Couplings - Electrofusion, Polyethylene	X			
52-81	Fittings, Socket & Saddle, Polyethylene Heat Fusion	X			
52-82	Fittings, Butt Type, Polyethylene Heat Fusion	X			
56-40	Stop Cocks	X			
56-50	Steel to Plastic Transition Fittings	X			
56-70.1	Risers - Service, Anodeless	X			
56-70.16	Riser - Service Head Adapter	X			
58-10	Valves – Thermoplastic	X			
58-82	Valves - Ball, Steel, Trunnion Mounted	X			
677-1SD	Pipeline Condition and Maintenance Report	X			
76-72	Odorant - 50/50 TBM/THT	X			
76-73	Thiophane Odorant	X			
78-02AM	Meters – Rotary				X
78-03AM	Meters – Turbine				X
ACF-SD	Assessment Completion Form	X			
C5050	Order Completion and Priority Scheduling	X	X	X	
C5140	Shutting-Off Gas Meters	X			
C5150	Pardon the Interruption		X		
C5160	Gas Meter Turn-On Procedure	X		X	
C5190	Emergency Response Procedures for Gas Incidents	X	X	X	



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
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Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
C5200	Restoration of Service Due to Gas Outage	X	X	X	
C5260	Locking and Blanking of a Gas Meter Set	X		X	X
C5370	Large Meters - Houseline Testing				X
C5390	Gas Curb Meter and Atmospheric Corrosion Inspection and Maintenance	X		X	X
C5450	Pressure Regulation - Residential and Commercial	X		X	
C5460	Fumigation Shut-Off and Back-On Orders				X
C5480	Purging Service Risers	X		X	X
C5490	Working in the Presence of Escaping Gas	X	X	X	X
C5500	Reportable Gas Incidents	X	X	X	
C5510	Leak Investigation	X	X	X	X
C5520	Houseline Leakage on Master-Metered Systems	X		X	X
C5540	Setting Gas Meters				X
C5580	Re-Insulating Gas Meters				X
C5630	Power Outage Notification		X		
C5640	Verify Customer Generator Operation (VGEN)		X		
C5660	Purging Gas Meters and Customer Houseline's	X		X	X
C5665	Odor Conditioning of New Customer-Owned Pipelines - Size (AC630) Meters and Larger				X
C5700	Service Policy				X
C5710	Back Flow Protection - Regulators and Check Valves			X	X
CRMP6SD	Gas Control Management of Change	X		X	
D7103	Gas Meter Location	X		X	
D7109	Gas Service Location	X		X	
D7110	Abandonment of Gas Service and Gas Light Tap Assemblies	X		X	X
D7113	Evaluation and Disposition of Inactive Services	X		X	
D7115	Barricades for Gas Meter Sets	X		X	
D7119	Earthquake Valves on Meter Sets				X
D7123	Service Regulator Vent Extensions	X		X	
D7125	Service Regulators in Curb Meter Boxes	X		X	
D7127	Curb Meter Box Excavation and Riser Replacement	X		X	



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
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Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
D7203	Polyethylene (PE) Pipe and Fittings – General Application Requirements	X		X	
D7211	Handling and Storage of Polyethylene (PE) Material	X		X	
D7213	Polyethylene Heater - Temperature Measurement and Adjustment	X			X
D7216	Mechanical Tapping Tee Inspection				X
D7221	Socket Fusion for Polyethylene	X		X	X
D7222	PE Saddle Fusions	X		X	X
D7225	Tapping/Stopping Polyethylene (PE) Fittings	X		X	X
D7227	Butt Fusion Polyethylene	X		X	X
D7233	Electrofusion for Polyethylene			X	
D7237	Transition Fittings			X	
D7247	Service Risers for Polyethylene (PE) Installations	X		X	
D7248	Service Riser Integrity Observation and/or Inspection	X		X	
D7249	Valve Installation and Valve Box Assemblies for Polyethylene	X		X	
D7252	Service Head Adapter - 3/4 INCH			X	X
D7255	Casing Assemblies - Plastic Carrier Pipe	X		X	X
D7257	Tracer Wire Installation for Polyethylene (PE) Pipe Installations			X	
D7265	Pneumatic Test Requirements for Pipelines Operating at 60 PSIG or Less	X		X	X
D7275	Polyethylene (PE) Pipe Repair	X		X	X
D7279	Squeezing Polyethylene Pipe - 1/2" through 8"				X
D7293	Qualification Requirements for Polyethylene Fitters			X	X
D7303	General Requirements - Steel Distribution System			X	
D7321	Service Connections to Steel Pipelines			X	
D7325	Service Punch Tee	X		X	X
D7341	Raising or Repairing 3/4 Inch and 1 Inch Steel Risers				X
D7371	Leak Repair Methods for Steel Distribution Pipelines	X		X	X
D7373	Pipe Cold Squeezer Huskie PS-45				X



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
D7381	Abandonment or Inactivation of Gas Distribution Pipelines	X		X	X
D7382	Requirements for Hot/Cold Squeezing of Steel Pipelines				X
D7383	Steel Pipe Squeezer 6" through 12"	X			X
D7385	RFS of 3/4 Inch and 1 Inch Service Nipples on Mains to be Upgraded				X
D7403	Underground Distribution (UD) Trenches and Utility Positioning			X	X
D7411	Trench Excavation Requirements for 60-400 PSIG MAOP Distribution Mains			X	X
D7412	Excavation Requirements for Trench with Two Distribution Mains			X	
D7427	Standard Gas Main Positions for Distribution Mains			X	
D7428	Gas Trench Only (GTO) Specifications for San Diego County				
D7461	Gas Facilities Box (Inside Dimensions 2' X 3')			X	
D7465	Prefabricated Vaults - Design and Selection Guide			X	X
D7705	Regulator Station Installation Procedures				X
D7711	Regulator Station Design and Planning			X	X
D7715	Control Piping			X	X
D7905	Minimum Requirements for Pressure Control Operations on Distribution Pipeline Systems	X		X	X
D7907	Qualification Requirements Distribution Pressure Control				X
D7911	Purging of Distribution Gas Lines of 60 PSIG	X		X	X
D7912	Purging and Locking Service Risers	X		X	X
D7919	Changing a 3/4 Inch and 1 Inch Stopcock				X
D7927	Mueller 'D-4' and 'D-5' Tapping Machine Instructions				X
D7929	Mueller Line Stopper Unit No. 1				X
D7931	Mueller 'E-4' and 'E-5' Tapping Machine				X
D7933	Stopping Off Procedure for Service Ys				X
D7955	Pressure Control - 2" Top Half Fitting				X
D7956	Pressure Control - 3" and 4" Top Half Fitting				X
D7957	2-Inch Service Tee for Gas Mains 60 psig or Less				X



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
D8146	Replacement Criteria for Distribution Mains and Services	X		X	
D8147	Services - Repair vs. Replace Decisions	X			
D8164	Pressure Monitoring of Distribution Systems	X		X	X
D8167	Valve Inspection and Maintenance - Distribution	X		X	X
D8189	Temporary LNG Facility	X			X
D8194	Sensit G2 Multigas Detector and SMART-CAL Operation and Maintenance Procedures				X
D8305	Trenchless Construction Methods	X		X	X
D8306	Prevention of Sewer Lateral Intrusions and Damage				X
D8310	Polyethylene (PE) Pipe Inserted in Metal Casings			X	
D9102	Gas Mapping and Records	X		X	
D9103	Terms and Definitions			X	
D9131	Design of Polyethylene Services			X	
D9135	Mains: Fittings and Fitting Selection			X	
D9157	Meter Selection and Spacing Requirements	X		X	
D9183	Excess Flow Valve and Service Pipe Sizing			X	
DIMP1	Introduction	X			
DIMP2	System Knowledge	X			
DIMP3	Threat Identification	X			
DIMP4	Evaluate and Rank Risk	X			
DIMP5	Identify and Implement Measures to Address Risk	X			
DIMP6	Measure Performance, Monitor Results and Evaluate Effectiveness	X			
DIMP8	Periodic Evaluation and Improvement	X			
DIMP9	Report Results	X			
DIMPA	Terms, Definitions and Acronyms	X			
ER-1SD	Gas Emergency Response Plan				
ESHSD-0000	Phone Numbers				X
ESHSD-1100	Rule 1100 - Injury and Illness Prevention Program				X
ESHSD-1200	Rule 1200 - General Safety and Health Rules				X
ESHSD-1300	Vehicle and Forklift Safety				X



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
ESHSD-1400	Office Safety				X
ESHSD-1500	Fire Prevention				X
ESHSD-1600	Emergency Action Plan (EAP)				X
ESHSD-1700	Workplace Security				X
ESHSD-1800	Incident and Injury Reporting				X
ESHSD-2100	General Construction, Maintenance and Operation Safety Rules				X
ESHSD-2200	Aerial Lift Equipment				X
ESHSD-3100	Electric - General Safety Rules				X
ESHSD-3300	Electric Substation and Maintenance				X
ESHSD-3400	Overhead Electric - Distribution and Transmission				X
ESHSD-3600	Underground Electric - Distribution and Transmission				X
ESHSD-3800	Electrical Safety Hazards				X
ESHSD-4100	Gas Distribution and Transmission				X
ESHSD-9999	Definitions				X
F17-1SD	Annual Performance Measures	X			
F4-1SD	Threat Evaluation Form	X			
F8-1SD	Baseline Assessment Plan Revisions Log	X			
G7008	Material Evaluation and Implementation	X			
G7011	Standard Specification for Natural and Substitute Fuel Gases	X		X	
G7013	Qualification of New Construction Contractors	X			X
G7017	Hydrogen Sulfide (H ₂ S) Management	X		X	
G7022	Welding Inspector Operator Qualification	X		X	X
G7313	Steel Pipe Yield, Design Properties and Design Pressure Tables	X			
G7314	Steel Pipe - Selection Requirements	X		X	X
G7316	Identification of Steel Pipe and Butt Weld Fittings	X		X	X
G7321	Steel Butt-Weld Fittings - Selection Guide	X		X	X
G7345	Application of Mueller and TDW M Stop Control Fittings				X
G7350	Casing Assemblies - Steel Carrier Pipe	X		X	X
G7351	Wear Pads and Bands for Steel Gas Piping	X		X	X
G7353	Branch Connection, Steel - Selection Guide	X		X	X
G7355	Holiday Detector Operation				X



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
G7361	Pipeline Testing Requirements	X		X	X
G7365	Pneumatic Test Requirement for Pipelines Operating Above 60 PSIG	X		X	X
G7369	Hydrostatic Test Requirements	X		X	X
G7371	Repair of Defects in Steel Pressure Piping	X		X	X
G7372	Repair of Defects on an Operating Pipeline by Grinding	X			X
G7373	Repair of Non-Leaking Defects on an Operating Pipeline with a Band or Sleeve	X			X
G7374	Repair of Defects on Operating Pipelines Using Abandon Nipple				X
G7375	Approved Protective Coatings for Below Ground Corrosion Control	X		X	X
G7376	Field Tape Wrapping Requirements	X		X	X
G7377	Field Application of Fusion Bonded Epoxy to Joints and Field Repair of Fusion Bonded Epoxy Coating	X		X	X
G7379	External Surface Preparation and Field Applied Coatings for Buried Pipelines	X		X	X
G7380	Field Application of Grease Coating	X		X	X
G7381	External Surface Preparation and Coating Application for Steel Tanks and Vessels (New & Refurbished)	X		X	
G7382	Surface Preparation and Coating for Above Ground Piping and Steel Components	X			X
G7383	Internal Coating of Tanks, Vessels, & Drip Legs	X		X	
G7385	External Surface Preparation and Shop-Applied Coating for High Corrosion Service areas	X		X	X
G7402	Notification of Excavation and Construction Activities - Assembly Bill Number 1937/ PUC Code 955.5			X	X
G7408	Hand Backfill and Compaction Method			X	X
G7409	Imported or Native Backfill				X
G7410	Slurry Backfill				X
G7450	General Construction Requirements for Distribution Mains				X
G7451	Prevention of Damage to Subsurface Installations	X			
G7453	General Excavation Requirements			X	



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
G7460	General Construction Requirements for Distribution Service Lines				X
G7505	General Procedures for Field As-Builts			X	
G7506	Archiving of High-Pressure Records in PDMS	X			X
G7507	Map Maintenance Requirements for High Pressure Gas Lines	X			
G7520	Requirements for Designing Pipelines to Accommodate Smart Pigs	X			
G7603	Valve Usage and Selection Guide	X		X	X
G7605	Valving Responsibility - Distribution				X
G7615	Replacement and Raising of Valve Boxes			X	X
G7636	Lubrication of Plug Valves				X
G7643	Excess Flow Valve (EFV) - Installation and Operation	X		X	X
G7649	2 Inch Ball Valve Assembly for Drilling Through Pressurized Pipelines			X	
G7665	Flanges - Selection, Torque and Installation Requirements	X		X	X
G7803	General Welding Requirements	X		X	X
G7805	Welding Field Guide	X		X	X
G7809	Qualification and Re-Qualification of Welders	X		X	X
G7815	Inspection and Testing of Welds on Company Steel Piping	X		X	X
G7817	Radiographic Examination API 1104			X	X
G7821	Angles and Bends in Steel Piping			X	X
G7909	Purging Pipelines and Components	X		X	X
G7910	Purging Pipelines Using Air Movers for Cold Tie Operations	X		X	X
G7951	Drilling 4 Inch, 6 Inch and 8 Inch Ball Valves				X
G7955	4 Inch Ball Valve Assembly for Hot Tapping to 800 PSIG			X	
G7959	Tapping Through a 2 Inch Ball Valve				X
G7963	2 Inch Drilling Assembly for Drilling Existing 400 And 800 PSIG Pipelines			X	
G7967	Drilling Through A 2 Inch Mueller PCF With A "DH-5" Drilling Machine on Mains Above 60 PSIG				X



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
G7971	Stopping Off A 2 Inch Mueller PCF With A "DH-5" Drilling Machine on Mains Operating Above 60 PSIG				X
G7979	Line Stopper Units 3SW-500 And 4SW				X
G7980	Pressure Control: Mueller EH-5 Drilling Machine	X		X	
G8001	Criteria for Cathodic Protection	X		X	
G8002	100mV Polarization Criteria	X		X	X
G8003	Design and Application of Cathodic Protection	X		X	X
G8006	Connect Copper Wire to Steel Pipe - Pin Brazing, Thermite Welding and Braze Welding Processes				X
G8009	Electrical Test Stations & Bond Assembly	X		X	X
G8013	Cathodic Protection - Mixed Piping Systems	X		X	X
G8014	Magnesium Anodes for Corrosion Control	X		X	X
G8015	Selection and Installation of Rectifiers and Impressed Current Anodes	X			X
G8019	Operation and Maintenance of Cathodic Protection Facilities	X		X	X
G8021	Cathodic Protection - Inspection of Exposed Pipe	X		X	X
G8022	Atmospheric Corrosion (ACOR) - Inspection of Meter Set Assemblies	X		X	X
G8023	MAOP Evaluation of Corroded Pipe	X		X	X
G8024	Measurement of Remaining Wall Thickness	X			
G8025	Internal Corrosion Management Plan	X		X	X
G8026	External and Internal Transmission Pipeline Inspection	X		X	X
G8027	Cathodic Protection - Electrical Isolation	X		X	X
G8028	Cathodic Protection - Casings	X		X	X
G8029	Record Keeping - Corrosion Control	X		X	X
G8031	Internal Corrosion Design and Construction Considerations	X		X	X
G8035	Interference - Stray Electrical Current	X		X	X
G8037	Induced High Voltage Alternating Current (HVAC) on Pipelines				X
G8041	Cathodic Protection - Instruments and Testing Equipment	X			
G8042	Copper Sulfate Electrode	X			



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
G8043	Corrosion Control of Underground Hazardous Substance Storage Tanks				X
G8107	Aboveground Survey Plan	X			X
G8108	Alternating Current Attenuation Survey	X			X
G8109	Close Interval Survey	X			X
G8110	Voltage Gradient Survey	X			
G8111	Soil Resistivity Survey	X			
G8112	Inspection of Cased Pipe	X			
G8113	Operator Qualification Program	X		X	X
G8114	Self-Audit Guidelines - Pipeline Integrity Program	X			
G8115	Changing Maximum Allowable Operating Pressure and Maximum Operating Pressure	X		X	X
G8116	Pipeline and Related Definitions	X		X	X
G8121	Class Location - Determination and Changes	X		X	X
G8122	Prevention of Excavation Damage to Company Facilities	X		X	X
G8123	Underground Service Alert and Temporary Marking	X		X	
G8129	Odorization	X		X	X
G8130	Operation of Odorator				X
G8133	ODORIZATION-YZ NJEX Odorant Injection System Maintenance				X
G8135	Leak Classification and Mitigation Schedules	X		X	X
G8137	Leak Investigation - Distribution		X		X
G8138	Optical Methane Detector Operation and Maintenance				X
G8139	Company Facility Odor Assessment		X		X
G8140	Pipeline Patrol and Unstable Earth Inspections	X		X	X
G8141	Pipeline Markers	X		X	X
G8142	Inspection of Pipelines on Bridges and Spans	X		X	X
G8145	Leakage Surveys	X		X	X
G8147	Planning Shutdowns on High Pressure Gas Facilities	X	X	X	
G8159	Distribution Pressure Regulating and Monitoring Station & Vault - Inspection, Maintenance and Settings	X		X	X
G8160	Pipeline Cleaning Standard	X			



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
G8161	In-Line Inspection Surveys Standard	X			
G8162	Assessment of Pipeline Integrity Using Guided Wave UT	X			
G8163	GPS Control Survey	X			
G8164	Global Positioning System (GPS) Process	X			
G8166	Scheduling Remediation	X			
G8168	Immediate Repair Conditions - Transmission Pipelines	X	X	X	X
G8169	Prevention of Accidental Ignition of Natural Gas	X	X	X	
G8170	Procedure for HCA Segment Identification	X			
G8171	CPUC and PHMSA Notification of Major New and Upgraded Pipelines and Pressure Test Failures of Pipelines	X			
G8172	Data Gathering and Integration	X	X	X	X
G8173	Threat Identification	X			
G8174	Risk Assessment of High Consequence Areas	X			
G8177	TIMP Risk Algorithm	X			
G8178	Baseline and Reassessment Plan	X			
G8179	External Corrosion Direct Assessment Procedure	X			
G8180	In-Line Inspection Procedure	X	X		
G8184	Bellhole Inspection Requirements	X		X	X
G8185	Casing Wax Fill	X		X	X
G8186	Preventive and Mitigative Measures	X			
G8187	Continual Evaluation	X			
G8188	Stress Corrosion Cracking Direct Assessment Procedure	X			
G8192	RMLD - Remote Methane Leak Detector				X
G8198	Field Sampling and Analysis of Liquids and Solids/Sludge	X			
G8202	Field Guidelines - Emergency Incident Distribution / Customer Service	X	X	X	X
G8204	Emergency Response Procedures for Gas Incidents - Distribution	X	X	X	X
G8205	Emergency Response Procedures for Gas Incidents - Transmission	X	X	X	X
G8206	Emergency Materials List for Gas Incidents	X	X	X	



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
G8208	Natural Disaster or Major Emergency - Employee Instructions	X	X	X	
G8210	Contact with Fire and Police Departments and Public Agencies	X	X	X	
G8215	Field Services (Distribution) On-duty Supervisor Responsibilities		X	X	X
G8216	Incident Command System (ICS) for Emergency Incidents	X	X	X	
G8217	Supplemental Data Determination	X			
G8222	Pipeline Incident Reports to CPUC and PHMSA; National Transportation Safety Board (NTSB) Accident Investigation	X	X		X
G8223	Pipeline Safety Reports and Notifications to CPUC and PHMSA	X	X	X	X
G8225	Investigation of Gas Incidents	X	X	X	
G8229	Reports of Safety-Related Pipeline Conditions	X	X	X	X
G8237	Restoration of Service Policy and Responsibilities	X	X	X	
G8241	Responsibilities for Maintenance of the Downtown San Diego Emergency Curtailment Map	X	X	X	
G8308	Contractor Safety Program	X			
G8315	Confined Space Operations			X	X
G8316	Incident Evaluation Process on Gas Systems		X		X
G8320	Working in Flammable Atmospheres	X		X	
G8345	Hot Work Permit Program			X	
G8356	Silica Dust Exposure Control Plan'	X		X	
G8365	Respiratory Protection Program	X		X	
G8366	Heat Illness Prevention for Outdoor Work				X
G8373	Wildfire Smoke Protection Program	X		X	
G8603	Designs for Pipelines in Bridges	X		X	X
G8605	Request for Pipeline Engineering Assistance	X		X	X
G8704	Environmental Training	X			
G8706	Environmental Inspections, Search Warrants, Subpoenas, and Internal Notifications	X			
G8717	Industrial Waste Discharges to the Sanitary Sewer				X
G8719	Hydrostatic Test Water Management			X	X



GAS SAFETY PLAN

APPENDIX – SAFETY POLICY DOCUMENTS	SDG&E: Appendix-SD
---	-------------------------------

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
G8736	Proposition 65 Compliance		X		X
G9103	Pressure Terminology and Establishment of Pressure Levels for Piping	X		X	X
G9105	Design Factors for Steel Piping Systems	X		X	X
G9109	Electrical Facilities in Hazardous Areas			X	X
G9125	Valve Automation	X		X	X
G9165	Requirements for Installing Gas Pipelines in or adjacent to Sloping Terrain	X		X	X
GC1SD	Gas Control Emergency Plan	X		X	X
PA-1SD	Public Awareness Plan		X		X
PP01.002SD	Management of Company Operations Standards - Definitions		X		X
SDSD1020	Message Center Reporting (MCR)	X			
SMS-A1B	Employee Safety Incident Notification Process	X			
SMS-A5G	Process to Utilize Incident Evaluation Findings and Lessons Learned	X			
SMS-B1B	Process for Employees and Contractors to Raise Risk and Safety Concerns	X			
SMS-SWA	Stop/Pause Work Authority Process	X			
T7303	General Construction Requirements - Steel Transmission System			X	X
T7375	Repair of Transmission Pipelines	X		X	X
T7381	Abandonment, Conversion and Reinstatement of Transmission Pipelines	X		X	X
T7413	Minimum Trench Requirements for Transmission Pipelines	X		X	X
T8129	Supplemental Odorization of Gas at Border Stations	X		X	
T8144	MAXIMO - Transmission	X			
T8147	Gas Detectors in Gas Compressor Stations	X		X	X
T8148	Testing and Maintaining Compressor Station Emergency Shutdown Systems	X		X	X
T8149	Compressor Station Relief Valves	X		X	X
T8151	Compressor Station Equipment: Isolation and Hold-Out Procedures for Maintenance or Alterations	X		X	
T8155	Fire Prevention and Protection - Transmission	X		X	
T8165	Gas Transmission System Relief Valves	X		X	X

Gas Safety Plan Chapter					
Policy	Title	4	5	6	7
T8166	Identification Numbers for Pipeline Valves - Transmission	X		X	
T8167	Valve Inspection and Maintenance - Transmission	X		X	X
T8170	Failure Analysis Process for Gas Systems	X		X	X
T8171	Abnormal Operations - Transmission	X	X	X	
T8172	Inspection Schedule - Regulator Station, Power Generating Plant Regulation Equipment Requirements	X		X	
T8173	Pressure Relief/ Pressure Limiting Devices Testing / Inspection	X		X	X
T8206	Tap Requirements	X		X	X
TIMP.0	Table of Contents	X			
TIMP.1	Introduction	X			
TIMP.10	Remediation	X			
TIMP.11	Minimizing Environmental and Safety Risks	X			
TIMP.12	Preventive and Mitigative Measures	X			
TIMP.13	Continual Evaluation	X			
TIMP.14	Management of Change	X			
TIMP.15	Quality Assurance Plan	X			
TIMP.16	Record Keeping	X			
TIMP.17	Performance Plan	X		X	
TIMP.19	Communications Plan	X			
TIMP.20	Regulatory Interaction	X			
TIMP.3	HCA Identification	X			
TIMP.4	Data Gathering and Integration	X			
TIMP.5	Threat and Risk Assessment	X			
TIMP.8	Baseline Assessment Plan	X			
TIMP.9	Integrity Assessments	X			
TIMP.A	Terms, Definitions and Acronyms	X			