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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 961 (d)(1) and (d)(2). These sections require that the safety plan achieve the following:

- § 961(d)(1) 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.

- § 961(d)(2) 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.

The following plans and programs are in place to identify and minimize hazards and systemic risks in the pipeline infrastructure, and promote public safety and property protection.

- Transmission Integrity Management Program
- Distribution Integrity Management Program
- Operation and Maintenance Plan

In addition, SDG&E has filed its Pipeline Safety Enhancement Plan (PSEP) with the Commission to address requirements for transmission infrastructure that are beyond current federal requirements and GO 112-E.

Each of these programs is subject to continuous improvement efforts and changes are made when warranted to further protect the public and SDG&E workforce.

2. TRANSMISSION INTEGRITY MANAGEMENT PROGRAM (TIMP)

The Transmission Integrity Management Program (TIMP) is an ongoing program that was developed in accordance with the requirements of the Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), specifically Title 49 Code of Federal Regulations Part 192, Subpart O - Gas Transmission Pipeline Integrity Management.

The TIMP written plan describes how SDG&E complies with the requirements of CFR 192 subpart O. The written plan outlines the approach to implementing the requirements of the Rule and the referenced industry standards, including ASME B31.8S and NACE SP 0502-2008. The document includes a description of each required Program element and identifies or references the procedures and processes for completing those requirements. The TIMP written plan has sixteen chapters that are the policy documents for compliance with the gas transmission pipeline integrity requirements.

The TIMP is designed to provide assessments and integrity improvements on transmission pipelines by outlining responsible parties, timelines for each process element, 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 the program, information concerning the pipeline infrastructure, operating environment 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 specific integrity-related work plans are developed.

SDG&E employs the following pipeline integrity management activities to assess and evaluate pipelines in the system: in-line inspections, pressure testing and direct assessment. Where operationally feasible, the preferred assessment method for transmission pipelines is in-line inspections. These evaluations address the efficacy of the systems in place to maintain the safe operation of the transmission pipeline including corrosion control and damage prevention programs.

Since the filing of SDG&E's Safety Plan on June 29, 2012, Commissioner Florio issued the following directive:

> By letter dated July 10, 2012, California Assembly Member Jerry Hill expressed concern regarding coordination and supervision of in-line inspection contractors to California natural gas utilities. I share the Assembly Member's concerns and therefore I am directing the utilities that employ in-line inspection tools towards assessing for metal loss to amend their Safety Plans to address these concerns no later than August 24, 2012.[1]

These concerns arise from a July 10, 2012 NTSB report on the July 2010 crude oil pipeline rupture in Marshall, Michigan. The NTSB highlighted three key causes for the incident:

1. The ILI tool tolerance was not understood.
2. The contractor's analyst originally classified the crack correctly, but that person's supervisor disagreed and classified it incorrectly.
3. There did not appear to be a close interaction between the ILI contractor and the pipeline operator, resulting in the contractor's lack of understanding of how the operator would respond to different anomaly classifications.

SDG&E has procedures that are included in the TIMP governing the in-line inspection process that address the concerns of Assembly Member Hill and Commissioner Florio. These procedures

[1] R.11-02-019, Assigned Commissioner's Ruling dated July 20, 2012, at 1.

are set forth in the appendix to this Plan, and are followed by our employees and contractors who perform the in-line inspection activities. Gas Standards G8180, *In-line Inspection (ILI) Procedure* and G8161, *In-Line Inspection Surveys Standard* include technical requirements for ILI tools, reporting requirements for the ILI contractor, and performance assessments of the inspection which in combination address ILI tool tolerances and validation of anomaly classification. These standards also define the communication requirements between SDG&E and the ILI contractor throughout each in-line inspection.

The TIMP written plan is reviewed each calendar year as part of the continual improvement process, with modifications being made as necessary.

The TIMP and the related and referenced procedures identify and prescribe activities to minimize transmission systemic risks and document its history and capability.

3. DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM

The Distribution Integrity Management Program (DIMP) is an on-going program that was developed in accordance with the requirements of the DOT and PHMSA, specifically Title 49 Code of Federal Regulations Part 192, Subpart P – Distribution Pipeline Integrity Management. SDG&E published its DIMP written plan in August 2011. The program's purpose is to improve pipeline safety by having operators identify and reduce pipeline integrity risks on distribution pipelines.

SDG&E's DIMP focuses on potential threats and measures designed to reduce the likelihood and consequences of pipeline failures. Specifically, it addresses system knowledge; threats; evaluation and ranking of risk; measures to address risks; performance measurement; results monitoring; effectiveness evaluation; periodic evaluation and improvement; and results reporting. SDG&E's written DIMP plan has nine chapters and requires the integration of data from many sources for analysis and subsequent action based upon the analysis.

The DIMP includes certain activities SDG&E has routinely performed in the past, and it requires the development of a more formal and structured approach toward the company's traditional core regulatory pipeline integrity-related obligations.

New regulatory reporting requirements have also been added in Subpart P of our DIMP written plan that include the reporting of above-ground leak repairs, hazardous leaks resulting from mechanical fitting failure, the number of excavation tickets, the number of excess flow valves installed, and other safety performance information.

The DIMP written plan and related and referenced procedures identify and prescribe activities to minimize systemic and localized risks to the Distribution system, and document relevant system information.

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

4. OPERATION AND MAINTENANCE PLAN

SDG&E's Operation and Maintenance (O&M) plan is a compendium of 119 policies that meet the requirements 49 CFR 192.605 "Procedural manual for operations, maintenance, and emergencies". This plan includes policies that address:

- Operating, maintaining, and repairing the pipeline and 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
- Control room management

The O&M plan is reviewed annually to verify that the referenced documents containing policies and procedures remain in compliance with the requirements of the relevant sections of 49 CFR regulations. The policies and procedures referenced are updated throughout the year in response to new information or regulations, technology or other items that drive improvement to the policy.

Individual documents referenced by the O&M plan undergo full functional reviewed 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 according to the current requirements. To help employees remain knowledgeable of the critical policies and procedures, including those related to safety, SDG&E provides annual review training for all operating employees.

The documents referenced by the O&M plan identify and prescribe activities to minimize pipeline systemic risks and document its history.

5. PIPELINE SAFETY ENHANCEMENT PLAN

SDG&E submitted its Pipeline Safety Enhancement Plan (PSEP) with the Commission in August of 2011 in response to the Commission's directive that all gas corporations subject to the Commission's jurisdiction develop and implement a plan to replace or pressure test all transmission pipelines that have not been tested to modern standards. The Commission also required that gas corporations include in their safety enhancement plans proposals for automating shutoff valves.

The PSEP's key elements include:

- A two-phased approach and prioritization process for the pressure testing or replacement of transmission pipeline segments that were not tested to modern standards.

- Criteria for determining whether to pressure test or replace pipeline segments.

- A proposal for enhancing SDG&E's valve infrastructure. This proposal includes installing additional remote control and automated shutoff valves, and installing supporting equipment and system features on transmission pipelines.

All testing, replacement, valve work and other infrastructure activities completed as part of the PSEP shall be completed in accordance with this Safety Plan.

PSEP also offers proposals to enhance the pipeline system beyond measures required by the Commission through retrofitting pipelines 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, and it includes alternatives that can be adopted by the Commission that are designed to reduce costs for customers.

# NATURAL GAS SYSTEM OPERATOR SAFETY PLAN - DRAFT

**REDLINE**

| SAFETY SYSTEMS | SDG&E: | SAFETY-PLAN.4 |
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