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Natural Gas Supply

Stanton Energy Reliability Center (SERC) will require construction of an offsite transmission pipeline to supply natural gas to the site. The proposed 12-inch- or 16-inch-diameter, natural gas supply pipeline for SERC will tap into existing urban Southern California Gas Company (SoCalGas) gas pipeline network via connecting to pipelines either 2.75 miles north along Dale Avenue to SoCalGas's transmission Line 1014 in La Palma Avenue or 1.78 miles south along Dale Avenue to SoCalGas's Transmission Line 1019 in Lampson Avenue (see Figure 1.3-1). The new pipeline will become part of the existing utility service infrastructure using the utility's existing franchise and utility right-of-way agreements with the local governmental agencies. It is expected that SoCalGas will construct, own, and operate the new pipeline.

The pipeline itself will be constructed of alloyed carbon steel in accordance with the American Petroleum Institute (API) specification for gas pipeline. The pipe will typically have factory-applied corrosion-protection coating. Joints will be welded, inspected using x-ray or other nondestructive testing method, and wrapped with a corrosion-protection coating. The manufacturing and installation of the pipeline will follow all applicable local, state, and federal pipeline construction standards. The new construction of SoCalGas utility infrastructure is primarily regulated by the California Public Utilities Commission (CPUC) up to the exit flange of the new SoCalGas meter set assembly.

4.1 Construction

The natural gas pipeline will consist of the following construction elements:

- Trenching approaches used will depend on the local field conditions, subsurface constraints, type of soils encountered, local utility standards, and the requirements of the governing agencies. Trenching approaches will account for the soil type encountered to ensure the safety of construction personnel and installed equipment. Box trench construction is expected based on route space constraints, typically 24 to 48 inches in width based on substructures and actual field conditions. The pipeline will be buried to provide a minimum cover as required by local utility standards and governing agencies, with minimum cover typically at 48 inches. The excavated soil will be piled on one side of the trench and used for backfilling when appropriate. Traveled roadway areas may require concrete slurry backfill with finish matching the existing surface. The pipeline will be installed through trenching at all locations.
- Stringing consists of trucking lengths of pipe to the right-of-way and laying them on wooden skids beside the open trench. Because the new pipeline's path may be in a high-traffic urban area, the actual stringing plan will account for traffic plan requirements.
- Installation consists of bending, welding, and coating the weld-joint areas of the pipe after it has been strung, padding the ditch with sand or fine spoil, and lowering the pipe string into the trench. Bends, if required, will be made using a cold bending machine or will be shop fabricated as required for various changes in bearing and elevation. Welding will meet the applicable API standards and will be performed by qualified welders. Welds will be inspected in accordance with API Standard 1104 (API, 1999) and all applicable CPUC standards. Welds will undergo 100 percent radiographical inspection by an independent, qualified radiography contractor. All coating will be checked for holidays (i.e., defects) and will be repaired before lowering the pipe into the trench.
- Backfilling consists of returning spoil back into the trench around and on top of the pipe, ensuring that the surface is returned to its original grade or level. The backfill will be compacted to protect the stability of the pipe and to minimize subsequent subsidence. As noted above, concrete slurry backfill may be used in traveled roadway areas.

- Plating consists of covering any open trench in areas of foot or vehicle traffic at the end of a workday. Plywood plates will be used in areas of foot traffic, and steel plates will be used in areas of vehicle traffic. Plates will be removed at the start of each workday.
- Hydrostatic testing consists of filling the pipeline with potable water, venting all air, increasing the pressure to the specified code requirements, and holding the pressure for a period of time. After hydrostatic testing, the test water will be analyzed for water quality and either discharged in accordance with regulatory requirements or trucked to an appropriate treatment or disposal facility. The construction contractor will obtain all necessary approvals for test water use and disposal.
- Cleanup consists of restoring the surface of the ground by removing any construction debris, grading to the original grade and contour, and revegetating or repairing where required.
- Commissioning consists of cleaning and drying the inside of the pipeline, purging air from the pipeline, and filling the pipeline with natural gas.

4.2 Metering Station

A gas metering station will be located at SERC's interconnection point with the pipeline to measure and record gas volumes. Additionally, facilities will be installed to remove any liquids or solid particles as required. The meter set will be owned and operated by SoCalGas.

Construction activities related to the metering station will include grading a pad and installing above- and belowground gas piping, metering equipment, gas conditioning, and possibly pigging facilities. A distribution power line will also be installed to provide power for metering station operation lighting and communication equipment.

Construction of the SoCalGas meter set, up to the exit flange, will be conducted according to the regulatory requirements and oversight of the CPUC. An isolation washer will separate the SoCalGas meter set from the SERC "house line." The SERC house line will be constructed according to the regulatory requirements of the California Energy Commission.

SoCalGas will be responsible for the operations and maintenance of its pipeline system up to the exit flange of its meter set assembly. SERC will be responsible for the operations and maintenance of the receiving pipeline system downstream of the exit flange. The isolation washer between the two system flanges is the separation point between the two pipeline systems.

Likewise, the isolation washer separates the cathodic protection of the two pipeline systems. Each party is independently responsible for ensuring the long-term corrosion fitness of its pipeline system, which may or may not include voltage regulating and maintenance equipment. Each party will independently evaluate the local soil conditions and determine its cathodic protection requirements.

SoCalGas design standards require new customers to install an on-off valve directly downstream of the exit flange of the SoCalGas meter set. This requirement typically involves an aboveground 90-degree turn on-off ball valve. This allows customers to self-manage receiving gas when needed.

4.3 Pipeline Operations

The proposed natural gas supply pipeline will be designed, constructed, operated, and maintained in accordance with Title 49, Code of Federal Regulations (CFR) Section 192 and CPUC GO-112. Specifically, the pipeline will be designed in accordance with the standards required for gas pipelines in populated areas. The pipeline will be installed with a minimum of 36 inches of cover as required by the CFR.

SoCalGas's standard operations and maintenance plan will be in place, addressing both normal procedures and conditions and any upset or abnormal conditions that could occur. Periodic leak surveys and cathodic protection surveys will be performed along the pipeline, as required by Title 49 CFR Section 192. The pipeline will be continuously protected by a cathodic protection system. SoCalGas's standard emergency plan will provide for prompt and effective responses to upset conditions detected along the pipeline or reported by the public. This plan is reviewed with local agencies annually.

SoCalGas will own and operate the metering facility to measure the gas supply to SERC. A pipeline Supervisory Control and Data Acquisition System will provide flow rate and pressure data to SoCalGas' Gas Control management center and SERC. Communication with SoCalGas gas line operations will be by dedicated telephone lines or other radio means such as Cellular Digital Packet Data.

4.4 References

American Petroleum Institute (API). 1999. *Welding of Pipelines and Related Facilities*. ANSI/API 1104, 19th edition. September.

California Public Utilities Commission (CPUC). General Order No. 112: Design, Construction, Testing, Maintenance and Operation of Utility Gas Gathering, Transmission and Distribution Piping Systems.