

Natural Gas Supply

6.1 Introduction

This section discusses the natural gas supply for the Vernon Power Plant (VPP). Subsection 6.2 describes the proposed natural gas supply pipeline route. The gas supply pipeline construction methods and metering station are described in Subsection 6.3. Pipeline operations are described in Subsection 6.4.

Natural gas will be provided to the City of Vernon from a Southern California Gas Company (SoCalGas) transmission pipeline (Line 765), east of the project site at S. Downey Road (see Figure 6.1-1). A new connection to Line 765 will be constructed at the H. Gonzales City Gate Meter Yard, on the southwest corner of Downey Road and 50th Street. From the City Gate Meter Yard, a 20-inch-diameter pipeline will be constructed by the City to the proposed plant site. At the plant site, the natural gas will flow through gas scrubber/filtering equipment, booster compressors (when required), and a fuel gas heater prior to entering the combustion turbines. "Will serve" letters from the City of Vernon and SoCalGas are provided in Appendix 6A.

6.2 Proposed Route

The proposed pipeline is approximately 1 mile long. From the H. Gonzales City Gate Meter, a new 20-inch-diameter pipeline will be constructed along 50th Street to the VPP site. Construction primarily will be open trench. Because of the short distance and direct route, no alternative routes were considered.

6.3 Construction Practices

6.3.1 Gas Pipeline

The natural gas pipeline will be constructed with a minimum of one crew working continuously along the road right-of-way (franchise) or pipeline right-of-way (ROW), with construction of the entire pipeline requiring a peak workforce of approximately 28 workers. Workers will park their vehicles in the construction parking areas near the VPP site or along the ROW. The ROW will be accessed over existing roads. Most major pieces of construction equipment will remain along the ROW during construction. Besides providing worker parking, the construction parking/laydown areas (see Figure 2.2-7) will serve as the location for storing pipe and other pipeline construction materials. Additional storage locations will be in existing paved areas along the pipeline route. Pipeline construction will take approximately 6 months and is expected to begin toward the middle of project construction.

During construction along the roadway, one lane will be blocked and traffic control will be required. Excavated earth material will be stored on the side of the road. When work is not in progress, trench plates will cover the exposed trench so that traffic can proceed in both

lanes. If necessary, additional material-storage locations may be located along the ROW. The line pipe will be of carbon steel in accordance with the American Petroleum Institute (API) specification for line pipe. The pipe will have factory-applied corrosion protection coating. Joints will be welded and inspected using X-ray.

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

1. **Trenching** width depends on the type of soils encountered and requirements of the governing agencies. The optimal trench will be approximately 36 inches wide and 5 to 10 feet deep depending on the location of existing utilities in the road, especially where 50th Street intersects with Downey Road, Alcoa Avenue, and Soto Street. With loose soil, a trench up to 8 feet wide at the top and 3 feet wide at the bottom may be required. The pipeline will be buried to provide a minimum cover of 36 inches. The excavated soil will be piled on one side of the trench and used for backfilling after the pipe is installed. The pipeline will be installed through trenching at all locations.
2. **Stringing** consists of trucking lengths of pipe to the ROW and laying them on wooden skids beside the open trench.
3. **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 will be made using a cold bending machine or shop-fabricated as required for 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. 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.
4. **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.
5. **Plating** consists of covering open trenches 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 to ensure public safety. Plates will be removed at the start of each workday. Efforts will be made to minimize the length of open trench along the ROW.
6. **Boring/horizontal directional drilling (HDD)** method may be used for moderately short crossings under roads, canals, and sensitive habitats, or where it would be environmentally unsound to use the open-cut method. Boring pits will be dug on each side of the crossing. The HDD method may be used when a longer crossing is required.
7. **Hydrostatic testing** consists of filling the pipeline with fresh water, venting all air, increasing the pressure to the specified code requirements, and holding the pressure for a period of time. Stainless steel piping will be tested with demineralized water, while carbon steel piping will be pressure-tested using either demineralized water or potable water. Demineralized water will be trucked in until the water treatment plant is operational. After hydrostatic testing, the test water will be chemically analyzed for contaminants and discharged to the sanitary sewer system under permit from the Sanitation Districts of Los Angeles County (LACSD), unless the analysis shows that the water is contaminated, in which case the water will be trucked to a disposal facility.

Temporary approvals for test water use and permits for discharge will be obtained by the construction contractor, as required.

8. **Cleanup** consists of restoring the surface of the roadway or ROW by removing construction debris, grading to the original grade and contour, and revegetating or repairing where required.
9. **Commissioning** consists of cleaning and drying the inside of the pipeline, purging air from the pipeline, and filling the pipeline with natural gas.
10. **Safety** consists of using SoCalGas' standard safety plan and the Department of Transportation Minimum Federal Safety Standards for the project, or, if constructed by others, the contractor will prepare a safety plan. These plans will address specific safety issues, traffic control, working along traveled county streets, and other areas, as required by permits.

6.3.2 Metering Station

A gas-metering station will be required at the VPP site to measure and record gas volumes. In addition, facilities will be installed to regulate the gas pressure and to remove liquids or solid particles. The metering station will require a minimum area of approximately 50 feet by 75 feet.

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

6.4 Pipeline Operations

The proposed natural gas supply pipeline will be designed, constructed, and operated in accordance with 49 Code of Federal Regulations (CFR 192) and California Public Utilities Commission General Order No. 112. Specifically, the pipeline will be designed in accordance with the standards required for gas pipelines in proximity to populated areas, based on actual population densities along the proposed pipeline route. It will be installed a minimum of 36 inches deep, as required by Federal Code.

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

Isolation block valves will be installed at both ends of the pipeline. These valves will be manually controlled, lockable, gear-operated ball valves. A pipeline Supervisory Control and Data Acquisition (SCADA) system will provide flow rate and pressure data to SoCalGas, the City, and VPP. Communication with SoCalGas pipeline operations will be by dedicated telephone lines or other means, such as Cellular Digital Pocket Data (CDPD).

