



**SMUD**

SACRAMENTO MUNICIPAL UTILITY DISTRICT  
The Power To Do More.<sup>SM</sup>

P.O. Box 15830, Sacramento, CA 95852-1830; 1-888-742-SMUD (7683)

January 20, 2009  
DPG 09-027

Mary Dyas  
California Energy Commission  
Energy Facilities Siting and Environmental Protection Division  
1516 9th Street, MS-2000  
Sacramento, CA 95814-5512

**Re: SMUD Cogeneration Pipeline Project (92-AFC-2PC)  
Campbell Cogen Measurement & Regulation Station Improvement Project**

Dear Mrs. Dyas:

The Sacramento Municipal Utility District (SMUD) plans to upgrade the pipeline facilities that meter and regulate natural gas flow and pressure from SMUD's Line 700B to the Sacramento Power Authority (SPA) Campbell Cogeneration facility in South Sacramento. New equipment and electronics will improve the safety and reliability of pipeline operations. It has become problematic to obtain spare parts and support for the existing station electronics. All station improvements are on SMUD property within the existing station fence line. Construction of the station improvements is scheduled to commence on or about April 14, 2009 to coincide with a scheduled outage at the SPA Campbell Cogen facility.

The following information is provided to address 20 CCR Section 1769 for post certification changes to the project.

**A. Project Description**

See the attached Design Basis Memorandum and drawings. No changes to Conditions of Certification or Verifications are needed, nor proposed.

**B. Project Necessity**

The station improvements are designed to enhance pipeline operations, safety, and reliability.

**C. Certification Proceedings**

The planned station improvements are not based on information known at the time of the pipeline certification proceedings.

**D. Effects on CEC Decision**

To SMUD's knowledge, information associated with the planned station improvements does not undermine the assumptions, rationale, findings, or other bases of the CEC's final decision.

**E. Analysis of Environmental Impacts**

No significant environmental impacts are anticipated. Minor excavation and shallow trenching for new or relocated pipe footings/supports, new control building pad, and wiring conduit will be limited to the area (approximately 40 feet x 100 feet) within the fenceline of the existing gas pipeline station. The minor excavation and trenching will occur in ground that was disturbed during prior pipeline construction activities. Hence, SMUD concludes that cultural resource monitors are not required for this project since the ground has already been disturbed. New station piping will be strength (i.e., pressure) tested with inert gas and/or water. If strength testing with water is necessary, wastewater from hydrostatic testing will be discharged to land in accordance with Regional Water Quality Control Board requirements or discharged to the sewer in accordance with the Regional Sanitation District requirements. One new outdoor light, equivalent to a porch light, will be installed on the new control building.

**F. Impact of Modification on Facility's Ability to Comply with Applicable Laws, Ordinances, Regulations, and Standards**

The planned station improvements are not expected to adversely impact SMUD's ability to comply with applicable laws, ordinances, regulations, and standards.

**G. Effects on Public**

The planned station improvements are expected to positively affect the public by enhancing pipeline operations, safety, and reliability.

**H. List of Nearby Property Owners Potentially Affected**

Campbell Soup Company  
Union Pacific Railroad

**I. Potential Effects to Nearby Property Owners, Public, and Parties to Application Proceedings**

SMUD does not expect that nearby property owners, the public, or other parties will be negatively affected by the station improvements. Construction access to the project will be through the adjacent SMUD transmission substation.

Based on the information provided, SMUD believes that the planned station improvements are an administrative project change and do not constitute a change in design, operation, or performance of the pipeline or adjacent Campbell Cogeneration facility. Consequently, SMUD does not believe it is necessary to file a formal petition in accordance with 20 CCR Section 1769 of the Commission's siting regulations.

Please contact Roya Borman, Project Manager, at (916) 732-7132 or myself at (916) 732-6916 if there are any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Damon Smith". The signature is fluid and cursive, with a large initial "D" and a long, sweeping underline.

Damon Smith  
Regulatory Compliance Coordinator  
SMUD Power Generation

Attachments: Campbell Station Improvement, Design Basis Memorandum  
Drawings – 2009 Station Modifications, Campbell M&R Station

Mary Dyas, CEC  
DPG 09-027

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January 20, 2009

Bcc: Roya Borman  
Chris Moffitt  
DPG Chron (w/o attachments)  
Corporate Files

## **CAMPBELL SOUP STATION IMPROVEMENT DESIGN BASIS MEMORANDUM (DBM)**

### **1.1 Purpose of Design**

This DBM summarizes the design basis for the reconstruction of the natural gas pipeline facilities that meters and regulates the natural gas flow and pressure from the Sacramento Municipal Utility District (SMUD) 20-inch Line 700B natural gas pipeline to the Campbell Soup, cogeneration plant in Sacramento, CA.

The intent of the Campbell Soup station improvement project is to replace the obsolete equipment and electronics with new and more reliable solutions.

### **1.2 Overview**

Fuel gas for the gas turbine power plant at the Campbell Soup cogeneration plant is delivered to the site by the SMUD Line 700B, a 20-inch natural gas pipeline. Line 700B originates at the Morrison Creek Cross Tie, where it receives gas from the PG&E Winters inter-tie at SMUD's Line 700A. Line 700A cross ties at Morrison Creek with SMUD line 700B that extends northerly to supply fuel gas to the Campbell Soup and Procter & Gamble cogeneration plants.

The attached schematics show the high level design basis for the pipeline and the following Sections 1.3–1.7 describe the design basis for reconstruction of the Campbell Soup natural gas measurement and regulator (M&R) station.

Presently, fuel gas to the plant is supplied solely by PG&E from the 36-inch Line 400 pipeline near Winters, California. The gas supplied by PG&E comes from Canada. It is dried and adequately odorized prior to custody transfer so dehydration and odorization facilities by SMUD are not necessary.

The pipelines 700A/700B and their associated M&R stations were designed, built, tested, and commissioned in 1995 in accordance with the Federal Pipeline Safety Standard, 49CFR Part 192, California Energy Commission approval documents, and SMUD's Engineering Standards. The pipelines 700A/700B facilities were designed by Ford, Bacon & Davis.

The Campbell Soup natural gas M&R Station is located approximately on the northwest corner of the Campbell Soup property.

### **1.3 Gas Pressure & Flow Design Basis**

The design pressure of the regulator station is limited to 285-310 psig, required by the operations of the Siemens Gas Turbines. For the improvements that are being proposed, the maximum pressure that will be experienced at the inlet of the Campbell Soup Meter Station will be 720 psig. However, the maximum gas

pressure that is delivered to the Campbell Soup plant is 285-310 psig. This is achieved by two runs (Lead/Lag) of Mooney regulator/working monitor arrangement

The maximum flow for this design basis to the Campbell Soup Co-Generation facility is based on 158-175 MWH electric generation which correspond to 29.75 -32.94 MMSCF per day.

#### 1.4 Campbell Soup Energy Metering & Regulating Stations Proposed Modifications

- a. Install a new gas chromatograph.
- b. Install a new ultrasonic gas meter with a flow conditioner, designed and constructed in accordance with AGA Recommended Practice 9. The meter will be provided with a bypass. The flow meter will include a spool piece and flow conditioner.
- c. Modify the existing gas flow computer to work with the new electronics.
- d. Install valve control module in the gas flow computer to operate the ESD valve V300.
- e. Redesign the gas regulator and monitor regulator/their associated piping to accept/allow for the dissipation of the ultrasonic noise which could effect the accuracy of the meter.
- f. Install new underground conduits, new wiring, new junction boxes
- g. Install a new control building.
- h. Relocate the MLV-4 and Campbell RTUs and terminal blocks inside the new control building, and tie-in the field instrumentation wiring from the newly installed junction boxes into the RTUs and the terminal blocks.
- i. Relocate station electrical panel and its associated disconnects inside the new control building.
- j. Field test and function test the valve V-300 and the electronics to ensure reliable operations.
- k. Program the RTU and field electronics.
- l. Start-up the station electronics with the equipment vendors.

#### 1.5 Specialty Items and Equipment

The following items of equipment are specified for purchase from the indicated manufacturer to conform to other existing stations, including the Consumes

Power Plant, in order to simplify operation and maintenance of the facility and the training required for operating and maintenance personnel.

Devices and Instrument

Manufacturer

Ultrasonic Meter

Instroment

Flow computer modules

ABB Totalflow

Gas Chromatograph

ABB

Valves

Fisher/ Cameron/Grove

1.6 Design Pressures

All valves, regulators, meters, and other specialty gas items shall be designed for ANSI class 600.

All station piping shall be designed for a minimum of 812.5 psig with schedule 80XS rating.

1.7 Codes & Regulations

All engineering equipment, fabrication, and construction shall meet all applicable industry Standards, Codes & Specifications, including but not limited to the following:

- |   |                 |
|---|-----------------|
| a. Federal Pipeline Safety Regulations      | 49 CFR Part 192 |
| b. American Society of Mechanical Engineers | ASME B31.8      |
| c. American Petroleum Institute             | API 1104        |
| a. National Electrical Code                 | NFPA 70         |
| b. California Title 24                      |                 |
| c. Ultrasonic Metering Standard             | AGA RP-9A       |

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