

PACIFIC GAS AND ELECTRIC COMPANY

GENERAL OPERATING INSTRUCTIONS

Issued By:
Gas Operations
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**SYSTEM GAS CONTROL
DISPATCHING MANUAL**



Pacific Gas and Electric Company
General Operating Instructions
Gas Operations
Rev. 4/67

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Note: Jurisdiction and Interpretation, Control and Terminal Stations, Division Load Control Centers, Special Orders for all Stations, Reporting to System Gas Control, and Emergencies--these sections have been rescinded and are now covered by Standard Practice Nos. 460.1-1 to 460.1-5. All item and page numbers have been changed as of April 1967 revision.

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1. FACILITIES:

- (a) All facilities affecting system gas supply excepting those out of operating condition under clearance, shall be available for immediate operation when called for by System Gas Control. This includes transmission mains, certain primary distribution mains used for transmission, storage holders, compressors, measurement and control facilities, and other auxiliary equipment. Clearance must be obtained as specified in 2(a) before taking any such facility out of service.
- (b) All facilities affecting the distribution of gas within their jurisdictions shall be available for immediate operation when called for by the Division Gas Load Centers. Clearances must be obtained as specified in 2(b) before taking any such facility out of service.
- (c) All designated stations shall be named and all valves within a station shall be numbered. A schematic flow diagram shall be maintained at each station. Upon completion of any changes in station facilities, it shall be the responsibility of the station's supervisor to correct the diagram and to arrange for a new station diagram to be prepared and issued to each interested party promptly.
- (d) All transmission main block valves shall be designated by mileage location. Blow-off valves shall be designated by letters.
- (e) All valves on distribution feeder mains and field collection mains shall be designated by number.
- (f) All taps on transmission mains shall be designated by mileage location number.
- (g) All valves and taps under (d), (e), and (f) above shall be suitably marked with the identifying number or letter painted on or attached to the valve. In addition, transmission block valves shall be marked with aerial-type pipeline markers in areas where the line is patrolled by air.
- (h) The functioning of all facilities hereunder shall be tested by actual operation at suitable intervals; in no event shall these tests be made less frequently than twice a year.
- (i) Maximum pressure limitations shall be established for all transmission and distribution mains and facilities by the Manager, Gas System Design. These limiting pressures shall be posted at each designated station for the mains entering and leaving the station and for those mains and facilities over which the station has jurisdiction.

2. CLEARANCES:

- (a) Except under emergency conditions as specified in S.P. 460.1-5, clearance must be obtained from System Gas Control:

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- (1) Before shutting down any transmission main, gathering main, primary distribution main used for transmission or gas storage facility.
 - (2) Before operating any valve or control device that may affect the flow through any transmission main, gathering main, or to any primary distribution feeder main supplied from transmission.

Exception: Routine maintenance procedures may be carried out on metering, control or odorizer facilities without clearance, providing by-pass facilities are used so that there is no flow interruption.
 - (3) Before taking any gas facility out of service, except distribution facilities not specified herein.
 - (4) Before operating any standby gas manufacturing plant or taking such plant out of service.
 - (5) Before rendering any essential compressor facility inoperative.
 - (6) Before welding on any transmission main in service or placing new or reactivated taps from these mains into operation.
- (b) Except under emergency conditions as specified in S.P. 460.1-5, clearance must be obtained from the Division Gas Load Center having jurisdiction:
- (1) Before shutting down any primary distribution feeder main.
 - (2) Before plugging off any control fitting for the purpose of shutting down a portion of a distribution feeder main.
 - (3) Before operating any valve, regulator, or control device that may affect the flow through any distribution feeder main.

Exception: Routine maintenance procedures may be carried out on metering, control, or regulator facilities without clearance, providing by-pass facilities are used without flow interference.
 - (4) Before opening any closed valve that separates two portions of any distribution system, which normally operates at different pressures.
 - (5) Before welding on any primary distribution feeder main or placing new or reactivated major taps into operation.
- (c) During any shutdown (either scheduled or emergency) of any facility that requires a clearance, a progress report shall be made to the System Gas Control or Division Gas Load Center involved at suitable intervals not exceeding two hours unless otherwise stipulated in the clearance. Upon completion, notification shall be given at once.

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- (d) When any section of a main is shutdown, "Man On Line" tags shall be attached to the block valves and shall not be removed until the work is completed and then only by specific order of the man in charge of the work. He shall first ascertain that the line is clear before ordering the tag removed. In case the location is left unattended, the valve shall be locked in the position required.

3. GENERAL OPERATION

- (a) The primary responsibility that shall guide all operating decisions shall be that of maintaining in a safe and efficient manner, satisfactory service first to firm customers and second to interruptible customers, including company plants.
- (b) All operations shall be carried out at the time and in the manner directed.
- (c) All orders received by telephone shall be repeated back exactly as received and shall be acknowledged as correct before being executed.
- (d) All orders received by teletype will be acknowledged prior to execution.
- (e) Operators carrying out an order to maintain a designated pressure or rate of flow shall hold to the order as closely as possible.
- (f) Operating pressures for distribution mains and facilities shall be determined by the Division Gas Superintendent having jurisdiction. Such operating pressures shall not exceed the maximum specified in order 1(1).
- (g) At attended stations, operators shall observe pressures and volume meter gages on each line at least once every 30 minutes while on shift.
- (h) At attended stations, recording pressure gages are to be maintained in continuous operation on each line entering and leaving the station.
- (i) At any point other than a regularly attended location whenever a valve is to be operated that may affect the flow through any transmission main or to any tap distribution main, indicating pressure gages shall be installed up and downstream and shall remain in service until normal operation is restored except where gages are permanently installed.
- (j) Whenever any section of any important distribution main is to be shutdown or any facility is to be operated that may affect the supply to any distribution area, indicating pressure gages shall be installed in such manner that full supervision of pressure is maintained through the job.
- (k) Valves, regulators, or other facilities shall be operated only by authorized employees of the Operating Department, except under emergency conditions specified in S.P. 460.1-5.

Exception: In the case of minor distribution main extensions, General Construction personnel may be authorized to operate valves or control fittings by prior arrangement with the Division Gas Superintendent.

- (l) All valves at unattended locations, the operation of which could affect the flow through any line or to any area, shall be locked in normal position. (The locking of a pit shall meet this requirement, but the locking of a gate in a fenced area shall not.)
- (m) Pressure alarms shall be set in accordance with established orders and shall be tested at least once per shift.
- (n) Closed valves separating portions of a primary or secondary distribution system that operate at different pressures shall be tagged "Closed Valve--Do Not Open Without Clearance".

Exception: By-pass valves in regulator pits, the operation of which does not otherwise require a clearance, also, see "Exceptions", page 2.

- (o) At points of intersection within a distribution system where there is a block valve between two sections that normally operate at the same pressure, this block valve shall normally be left in an open position.
- (p) At the junction of any tap line with a transmission main or at the junction of two distribution mains wherever connections are provided on both sides of a normally open block valve, each connection (yoke) shall normally be left in an open position.

4. CURTAILMENT OF GAS USE:

- (a) Except in the event of a local supply shortage, the curtailment of gas use by company plants and customers shall be directed by System Gas Control.
- (b) Orders for the curtailment of company plant use shall be issued by System Gas Control as follows:
 - (1) Electric Generating Plants to the Electric System Dispatcher.
 - (2) Other company plants to the Division Gas Load Centers.
- (c) Orders for the curtailment of interruptible customers shall be issued by System Gas Control to the Division Gas Load Centers.
- (d) In the event of a local supply shortage, the curtailment of interruptible customers within the local area affected may be ordered by the Division Gas Load Center with notification to System Gas Control as soon as possible.
- (e) The reduction in the use of gas by firm customers, if necessary, shall be carried out under the plan explained in Mr. E. H. Fisher's letter of January 11, 1966 (file 460.1) and subsequent issues.

5. COMMUNICATIONS:

- (a) Calls concerning emergency operations shall have top priority at all times.
- (b) Calls for the purpose of issuing dispatching orders or to report abnormalities shall be next in priority.
- (c) Calls for the purpose of making regular scheduled reports to System Gas Control or to Division Gas Load Centers shall be third in priority.
- (d) Taking the Line for Operation: Any person may request the line for operation if necessary to complete a call for the purpose included in (a), (b), and (c). Any person using the line for a lower priority call shall yield it at once on request. No person shall request the line for operation except to complete a call under (a), (b), and (c).
- (e) Certain telephone channels are operated by the Gas Department, others by the Electric Department. All stations and personnel shall be familiar with the respective jurisdiction of the circuit affecting their areas. Troubles shall be reported as detailed in S.P. 470.01-2 and PLO S.P. 470.01-A.
- (f) Telephone lines shall be tested in each direction at least once each shift by actually ringing and talking over each circuit.
- (g) Except where protective equipment is installed, employees must not use nor come in contact with any telephone instrument, extension, bell, switch, plug, or other piece of equipment connected to telephone circuits exposed to hazards from electric circuits over 4500 volts without first insulating themselves from other conducting surfaces or using adequate insulating devices.
- (h) Clearances on telephone circuits exposed to hazards from electric circuits over 4500 volts must be handled the same as on any line in the electric system.
- (i) Approval of System Gas Control must be obtained before any telephone circuit used by System Gas Control is taken out of service. Approval of the Electric System Dispatcher must also be obtained where required outside of normal working hours. Otherwise, the standard practices referred to in (e) above are to be followed.
- (j) Communication channels used for remote control or signal system by the Gas Department must not be interrupted except after obtaining clearance from the Electric System Dispatcher and System Gas Control or the Division Gas Load Center involved.
- (k) Telephone circuits shall be worked on only by authorized employees.
- (l) Each Division shall establish for each operating station, alternate routes of communication to contact such station in case of communication failure.

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6. METERING AND CONTROL FACILITIES:

- (a) Metering and control facilities shall be worked on only by qualified employees.
- (b) Such facilities shall be tested and maintained in accordance with established procedures and instructions.
- (c) Telemetering and remote signal systems shall be tested for proper operation at least once each shift and immediately following any electrical circuit trouble.
- (d) Electric clocks on all time-pressure controllers shall be reset following power failures.

7. EMPLOYEES:

- (a) Employees must be mentally and physically fitted for the work assigned and must be thoroughly instructed by competent personnel before being assigned any new responsibility. Instruction of new operators shall, as far as possible, include actual operation of equipment.
- (b) Each employee shall leave his address and telephone number with the person in charge and shall keep him informed of any change.
- (c) Any employee becoming ill or incapacitated while on shift shall immediately notify his supervisor.
- (d) Accidents shall be reported through proper channels.

8. OTHER INSTRUCTIONS AND RULES:

- (a) Facilities that are damaged shall be inspected to ascertain whether or not damage has also occurred at remote points. Gas Service pipe should be cut and tested at the main.
- (b) For further instructions and rules, refer to the following for application to the work at hand:
 - (1) Accident Prevention Manual
 - (2) Accident Prevention Rule Book
 - (3) Fire Prevention Manual
 - (4) Customer Service Standard Practices
 - (5) Gas Operations Standard Practices
 - (6) Public Utilities Commission General Order Nos. 58-A, 94, 112-A.
 - (7) State Department of Industrial Relations Safety Rules and Orders issued by Division of Industrial Safety:

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- a. Air Pressure Tank Safety Orders
- b. Boiler Safety Orders
- c. Construction Safety Orders
- d. Electrical Safety Orders
- e. General Industry Safety Orders
- f. Liquefield Petroleum Gases Safety Orders
- g. Painting Safety Orders
- h. Petroleum Industry Safety Orders, Refining, Transportation,
and Handling
- i. Trench Construction Safety Orders