This Customer Service Support (CSS) procedure supplements UO standard S6434, "*Gas Leak and Odor Response.*"

1. OVERVIEW

In an effort to ensure customer and public safety, Field Service employees shall conduct an appropriate gas leak investigation when performing **any** of the following field activities:

- Gas leak and/or odor complaints
- Gas pressure complaints
- Accident investigations
- Energy cost inquiry (ECI) complaints * (* When entry is required)

2. "CRITERIA" FOR DETERMINING APPROPRIATE GAS LEAK INVESTIGATION METHOD

A. Field Service employees have options when determining which method to use for investigating a gas leak. **When any of the conditions below exist**, the procedures outlined in **Section 4** [Full Gas Leak Investigation] shall be followed, otherwise, the procedures outlined in **Section 5** [Modified Gas Leak Investigation] may be followed:

1. Customer cannot identify the source of the odor.
2. Responding Field Service employee cannot identify the source of the odor.
3. Buried gas houseline on the premises.
4. Prior gas leak call at the premises, as determined by Order History and/or dialog with customer.
5. Odor is present a multiple appliances and/or locations.
6. Over pressuring condition is present (i.e. higher than usual pilot flame observed when appliance is on).
7. Meter spot check indicates excessive gas flow.

3. "SELECTING" A GAS LEAK INVESTIGATION METHOD

A. The following additional information is required to assist with determining how the gas leak investigation shall be conducted:

1. Read the entire field order. Remarks section may indicate second request or cannot locate odor or other pertinent information. The service history section may list prior service calls at premises.

a) If the field order is dispatched by telephone or radio, ask the Service Operator for the field order "remarks" and service "history" information.

2. Attempt to gain cooperation from the customer in an effort to obtain additional information. Probe the customer by asking the following questions:

   a) Can you identify the source of the odor?

   b) Have you called Pacific Gas and Electric Company (the Company) in the past to investigate a gas leak?

   c) Is the odor restricted to one location or is the smell in the general area?

   d) Did you notice if the range burners flared up (delayed ignition) when they were turned on?

   e) Do you have a spa, swimming pool, gas barbecue or gas light on the premises?

3. Observe premises conditions.

   a) Can a spa be seen? Does the spa have a buried house line to the heater?

   b) Does the customer have knowledge of construction in a tract that has buried houselines from the gas meter to the house?

B. **Select** an appropriate gas leak investigation method that ensures customer and public safety.

4. "FULL GAS LEAK INVESTIGATION (GAS METER CLOCK TEST)

A. When a full gas leak investigation is required Field Service employees shall:

1. Go to the gas meter location and check for gas flow.

2. Explain the gas leak procedure to the customer and enlist their help in locating all gas burning appliances.

   a) Close all pilot and burner valves on connected appliances and leave the main gas shut-off valve open.

   b) Soap test all upstream fittings and eliminate leaks as outlined in **Section 6** (Gas Leak Found). Field Service employees are not required to shut off 100% Automatic Shut Off Valves.

3. Observe the gas meter test hand to ensure that all gas appliances are off.

4. If excessive flow is detected, it may be due to a missed appliance or high volume leak. If a high volume leak is suspected the meter may be shut-off prior to checking for missed appliances or high volume leak.

5. Determine gas pressure as outlined in *the CSS Gas Pressure Determination Procedure*.

6. Perform any meter set upgrades including required regulator changes or scheduled meter change as outlined in the *CSS Gas and Electric Meter Changes and Removals Procedure* and *CSS Gas Regulator Servicing Procedure*.

7. Soap test the gas meter set for leakage as outlined in **Section 15** (Soap Test). Eliminate gas leakage as outlined in **Section 6** (Gas Leak Found).

8. Perform a gas meter clock test for leakage as outlined in **Section 14** (Gas Meter Clock Test). If leakage is detected, follow the procedure outlined in **Section 6** (Gas Leak Found).

   a) If the sub meter does not have a test hand and swivels exist, temporarily substitute the Company meter for the meter clock test. If the sub meter does not have a test hand or swivels, temporarily install the Company meter, and utilize the quick-change device for the meter clock test.

   Note: Appliance valves may be turned off when attempting to isolate leakage.

9. As appliances are relighted, soap test all exposed fittings downstream of the pilot and burner valves. Eliminate any gas leaks as outlined in **Section 6** (Gas Leak Found).

10. Correct faulty adjustments in accordance with the *CSS Gas Burning Appliance and Equipment Inspection/Servicing Procedure*.

5. "MODIFIED" GAS LEAK INVESTIGATION (NO GAS METER CLOCK TEST)

A. Upon arrival at the customer's premises, Field Service employees shall:

   1. Inspect the suspected appliance and determine if the pilot is out.

   2. Conduct a soap test of exposed fittings, houseline and gas meter assembly. Utilize the combustible gas leak detector to identify and isolate the suspected leak.

   3. Correct faculty adjustments in accordance with the *CSS Gas Burning Appliance and Equipment Inspection/Servicing Procedure*.

B. If a **gas leak if found**, follow the work method outlined in **Section 6** (Gas Leak Found).

C. If a **gas leak is not found** and the odor still exists, seek out other sources of leakage and/or odors as outlined in **Section 9** (Gas Main or Service Leak) and **Section 4** (Full Gas Leak Investigation).

D. Perform a meter spot check for gas flow.

   1. If gas flow is normal, record clock test finding "actual pilot flow" on the field order.

   2. If the gas flow is not normal, conduct a gas meter clock test of the customer's houseline as outlined **Section 4** (Full Gas Leak Investigation).

   3. Be aware of a possible does not register (DR) meter. DR meters during a meter spot check will not indicate known pilot flow, appliance main burner load or flow created by loosening the meter outlet connection to induce a small flow.

E. Advise customer of any required action.

6. GAS LEAK FOUND

A. Permanent Leak Repair:

1. Field Service employees shall attempt to permanently eliminate gas leakage found at an appliance valve, control, exposed houseline, or adjacent fittings as follows:

   a) Tighten any loose fittings.

   b) Remove, dope and re-tighten fittings.

   c) Re-flare leaking tubing, replace ferrules and tighten screws and bolts.

2. Advise customer of any required action.

B. Temporary Leak Repair

1. When assessing the need to discontinue gas service or disconnect a gas appliance, Field Service employees shall be aware of the customer's business activity and personal health and safety.

   a) Gas service may be left on if a practical, effective, temporary repair can be made. Thoroughly advise the customer of their responsibilities and the Company's responsibilities. Explain any action taken to temporarily repair the gas leak and allow time for a permanent repair. Advise the customer how they can expedite the permanent repair (i.e. calling a plumber or appliance dealer).

   b) Issue a follow up Multipurpose Customer Service Order to verify that required repairs have been made. Inform the customer that a follow up service visit shall be conducted to determine if the leak condition has worsened.

   c) Advise the customer that if repairs are not made, gas service may be discontinued or the appliance disconnected to ensure customer and public safety.

   d) If a temporary repair is not practical or effective, follow the procedures outlined in **Section 6C** (Hazardous Gas Leak - "Cannot" Eliminate by Permanent or Temporary Repair) or **Section 6D** (Non-Hazardous Gas Leak - "Cannot" Eliminate by Permanent or Temporary Repair).

C. Hazardous Gas Leak - "Cannot" Eliminate by Permanent or Temporary Repair (2 CFH or more; less, if the Field Service employee deems the level a threat to life or property)

1. Field Service employees shall:

   a) Explain to the customer what the gas leak investigation revealed and what required action is needed to correct the hazardous condition. Advise the customer how they can expedite the permanent repair [i.e. calling a plumber or an appliance dealer].

   b) Explain to the customer that disconnecting the hazardous appliance or house line can eliminate the gas leakage.

c) If the customer grants permission, disconnect the appliance or houseline segment.

d) If the customer does not approve of the appliance or houseline disconnect, explain that isolation of the leaking appliance/houseline is done to ensure safety without interrupting gas service.

e) If the customer still refuses to allow isolation of the problem, advise the customer that it is the Company's responsibility to protect customer and public safety and that gas service shall be discontinued to the premises.

f) Discontinue gas service and seal the meter as outlined in the *CSS Discontinuing Gas Service Procedure*.

Note: When sealing the meter is required, protect the meter against over pressuring should a plumber perform a houseline pressure test (e.g. solid swivels or other appropriate measure).

g) Issue a Hazard Notice.

D. Non-Hazardous Gas Leak - "Cannot" Eliminate by Permanent or Temporary Repair

1. Field Service employees shall:

a) Explain to the customer what the leak investigation revealed and what required action is needed to correct the non-hazardous gas leak. Advise the customer how they can expedite the permanent repair [i.e. calling a plumber or an appliance dealer].

b) Leave the gas service on. No follow-up service visit is required.

7. ADMITTANCE "CANNOT" BE GAINED (CGI) - GAS METERS ARE ACCESSIBLE

A. Field Service employees shall:

1. Perform a meter spot check for gas flow.

2. If the gas flow is not normal, shut the gas meter off and record actual pilot flow on the field order.

3. If the flow is normal, leave the gas meter on and record actual pilot flow on the field order.

Note: Be aware of potential sources of leakage or odors, including leakage in mains and services and in other units in multiple unit buildings.

4. Leave a Service Report advising the customer of the gas leak condition and any required action [e.g., call the Company at 1-800-743-5000 to arrange for access to the premises].

5. Notify the local dispatch office of field conditions and action taken. Note the field order.

8. ADMITTANCE "CANNOT" BE GAINED (CGI) - GAS METERS NOT ACCESSIBLE

A. Field Service employees shall:

1. If there is **no indication of gas leakage** [e.g., odor, main or service leakage], leave a Service Report at the premises, advising the customer of the field condition.

2. If a **hazardous leak is suspected:**

a) Notify the local dispatch office and request additional assistance [e.g., crew, leak surveyor, supervisor, public agency - fire, police]

b) Take corrective action[s] to safeguard the property and public safety while assistance is enroute (e.g., evacuating building, ventilating buildings, investigating main and service leakage, shutting off curb valves, securing the site from foot traffic).

9. GAS MAIN OR SERVICE LEAK

A. Field Service employees shall be observant of gas main and service leak indicators on all service visits.

1. Check for gas main and service leakage when:

a) Odor persists following a thorough (full) leak investigation, which included a meter clock test.

b) Gas odor is detected outdoors, regardless of the original nature of the service visit.

c) Visual evidence of service or main leakage (i.e. dead shrubs or grass; bubbling in wet soil) exists.

d) Service visit is for an area odor.

e) Service visit is for outdoor leakage or leakage at the gas meter.

2. Field Service employees may squeeze off (pinch off) ruptured plastic gas service lines, which are visible (and can be accessed safely to protect life and property, and may affix dead end fittings as outlined in their job definition. Refer to the Gas Information Bulletin #130 for grounding plastic pipe.

10. GAS LEAK TEST USING A COMBUSTIBLE GAS MEASUREMENT INSTRUMENT

A. Field Service employee shall:

1. Check building ventilation openings, water meter boxes, gas meter locations, gas services, and sewer vents (if practical to do so) for the presence of gas.

2. Refer non-hazardous gas main and gas service line leaks to a crew for repair by notifying the local dispatch office. Record gas leak referral on field order (i.e.. gas leak referred to Gas Operations, Maintenance and Construction (OM&C) for repair).

3. If the gas leak is hazardous, or could become hazardous, notify the local dispatch office immediately if additional resources are needed (e.g.., send a crew, leak surveyor, supervisor or public agency fire, police). Field Service employees may need to take further immediate actions to safeguard life and property [e.g., evacuating building, ventilating buildings, shutting off curb valves, securing the site from foot traffic].

11. AREA ODOR

A. Field Service employees shall:

1. Attempt to determine the source of the odor, (e.g., mains, services, garden sprays, lumber preservatives, excessive gas odorant, etc.). Notify the local dispatch office of the findings and if further action is warranted. Record pertinent information on field order as outlined in **Section 13** (Field Order Information).

2. Odor complaints whose source is identified as garden sprays, lumber preservatives, etc. require no further action. Note the field order.

12. OTHER UTILITIES GAS MAIN OR SERVICE LEAK

A. When the gas leakage source is identified as another utilities gas main or service, Field Service employees shall notify the local dispatch office or the Field Service supervisor immediately.

13. FIELD ORDER INFORMATION

A. Field Service employees shall include the following information on the field order:

1. Gas meter number, index reading, results of pressure determination (when required). This also includes meter information from a sub-meter.

2. Location of the gas leak(s), the volume of leakage and corrective action taken in the filed.

14. GAS METER CLOCK TEST

A. Field Service employee shall:

1. Clock test for gas leakage by observing the gas meter test hand on the upsweep after all pilot and burner valves have been shut off, with only the main appliance shut-off valves on and the gas meter has been checked for ability to register small flow.

2. Meter clock test for leakage for at least the following time periods:

¼	cu.ft.	Test hand	2 minutes
½	cu.ft.	Test hand	2 minutes
1	cu.ft.	Test hand	2 minutes
2	cu.ft.	Test hand	3 minutes
5	cu.ft.	Test hand	5 minutes

3. If no test hand movement is noted after specified time, gas service may be left on.

4. If test hand movement is noted, follow the Gas Leak Investigation procedure (appropriate work steps) outlined in **Section 3**.

B. Small Flow Time Requirements

TEST HAND DIAL SIZE	MINIMUM OBSERVATION TIME AFTER DIAL GEARS ARE ENGAGED
¼	10 seconds
½	15 seconds
1	15 seconds
2	25 seconds
5	25 seconds

15. SOAP TEST

A. Field Service employee shall:

1. Perform a soap test for gas leakage on all meter set assemblies, houseline or gas appliance connections that have been loosened, disconnected or reconnected during the course of work or suspected of leakage by customer

2. When a gas leakage complaint indicates a suspected gas leak at a specific appliance, and the clock test indicates no gas leakage, fittings downstream of the main burner and pilot valves shall be soaped [if accessible].

3. On manifold installations, the soap test shall include any adjacent meter(s) and from the service riser valve inlet to the manifold.

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Signed,

[redacted]
Senior Manager
Customer Service Planning and Support