"Valve Maintenance Record" Instructions

General Information

Ensure that all natural gas block valves (2"and greater for gas transmission district-maintained facilities) requiring maintenance per this work procedure and ball or plug valve regulators have a completed "Valve Maintenance Record" form. For gas transmission district-maintained valves smaller than 2", use the "Technical Maintenance Equipment Card."

Instructions for preparing the "Valve Maintenance Record" Form

1. Copy the Form onto white, 67-pound weight card stock.
2. Copy Page 1 ("General Information") of the "Valve Maintenance Record" Form onto one sheet of paper.
3. Copy Page 2 ("Service History") of the Form onto a separate sheet of paper so that the Service History more than 5 years old can be discarded without losing the general valve information.
4. If a sketch is required, attach it to the Form.
5. Fill out the "Valve Maintenance Record" **in permanent ink**

Explanation of "Valve Maintenance Record" Entries

1. General Information (Page 1 of the "Valve Maintenance Record")

A. **Division/District:** List the name of the division or district that is maintaining the valve.

B. **Valve No.:** This is the unique number assigned to the valve. This number must be consistent with the Operating Map, Operating Diagram, Division Station Sketch or Division Plat Sheet.

C. **SAP WM No.:** This is the unique number used by the work-scheduling program to identify the maintenance required on the specified valve.

D. **Location:** This refers to the physical location of the valve. If a location sketch is necessary, provide a sketch on a separate sheet of paper. For valves not shown on a Station Operating Diagram, Operating Map, Division Station Sketch, or Division Plat Sheet, a location sketch is required. Station valves must always be shown on either an Operating Diagram or a Division Station Sketch.

E. **Transmission or Distribution:** Insert an "X" in the box to signify whether the valve is a:

- Gas Transmission 'Emergency Valve' or 'Other Valve'.
- Gas Distribution 'Station Valve' or 'Critical Main Valve'

F. Maintenance personnel must prepare a "Valve Maintenance Record" for each new valve and verify that the proposed (prior to construction) and final (after construction) Operating Diagram, Operating Map, Division Station Sketch, or Division Plat Sheet have been issued and are accurate.

2. Valve Data

Fill out the information in the "Valve Data" section. The Serial Number field is optional but should be filled out if the information is available. Plastic valves do not have serial numbers so put "N/A" in the "**SERIAL NO**." space.

Complete the information on the recommended valve lubricant/sealant and the required frequency of lubrication and/or inspection. Manually–operated ball valves do not require lubrication, however; they are required to be operated at least once annually. The following Table 1 summarizes the recommended seat lubricant/sealant and stem packing for the various makes of valves.

Table 1. Recommended Seat Lubricant/Sealant and Stem Packing Summary

Manufacturer	Type	Seat Lubricant/Sealant	Stem Packing
Rockwell/ Nord (not DB)	Plug	Rockwell 1033	Rockwell 909
Rockwell/Nord (DB)	Plug	Rockwell 1033	NA
Walworth	Plug	Rockwell 1033	Walworth 630 (909)
Resun	Plug	Contact GT&D Engineering	Contact GT&D Engineering
Serck Audco	Plug	Rockwell 1033	Rockwell 909
Becker Ball Valve Regulator	Ball	Sealweld 911	See Note 1
Grove	Ball	Sealweld 911	See Note 1
KF	Ball	Sealweld 911	See Note 1
PBV-USA	Ball	Sealweld 911	Sealweld 5050
Delta	Ball	Sealweld 911	Sealweld Equa-Lube 80
Orbit	Ball	NA	Orbit GP-6
Cameron	Ball	Sealweld 911	Sealweld 911
Rockwell (pre 1974)	Ball	Rockwell 1033	Rockwell 950 (5050)
Rockwell (post 1973)	Ball	Sealweld 911	NA
TK	Ball	Sealweld 911	See Note 1
WKM	Ball	Rockwell 1033	WKM 107
Grove	G-4 Gate	Sealweld 911	See Note 1
Grove	G-3, G-9 Gate	NA	See Note 1
Grove	G-5 Gate	NA	NA

Note 1. Use 80/90 weight gear oil for a minor leak. If the leak does not stop and a large buttonhead fitting is furnished for the stem sealant injection, use Sealweld 911. If the leak still does not stop, use Rockwell 950 or Sealweld 5050 as a last option.

If the valve has an enclosed gearbox operator, document whether the gearbox:

- Has a Bettis breather installed on top of the gearbox, and
- Is filled with oil.

Subsequently, if the oil is ever drained, indicate this action on the Form. It is acceptable not to refill the gearbox. See Section 3.B.2 ("Manually Operated Valves"), on page 4 of the main work procedure, for use of Selig grease.

If the valve is buried and has a high–head extension, document whether the extension has a vent installed. The vent can indicate whether or not the entire valve stem seal on a buried valve has failed.

Use the "Comment" section to provide any additional maintenance information or notes. Note if Sealweld 5050 has been used in the valve. Note if a plug adjustment has been made (plug valves only).

Note: If a gearbox or a high-head extension does not have a Bettis breather, put a note on the Form to install a breather.

3. Service History

Use this portion of the "Valve Maintenance Record" to document the maintenance performed on the valve, as well as to document any required repairs and action taken. If a valve is found to be inoperable, notify the maintenance supervisor immediately. Retain the valve maintenance service history for a minimum of 5 years.

Date/Initial/LAN ID: Enter the Date, your Initials and LAN ID after the "DATE" field for each new valve maintenance data entry.

VERIFY VALVE NO: Verify the number on the valve tag against the Operating Map, Operating Diagram, Division Station Sketch, or Division Plat Sheet, and on the Valve Maintenance Record.

i.) If they do not match, notify the maintenance supervisor immediately.

ii.) For any changes required on an Operating Diagram or Operating Map, submit revisions to the GT&D Principal Mapper, per the requirements of S4460, Attachment 1.

INSPECT: See "Inspection Procedures" in Section 4, on Page 5 of the main work procedure.

LUBE: (If required). **Note:** "If required" refers to the need to lubricate all plug valves and all ball valves having power actuation. Gate valves do not require lubrication.

OPERATE: Check the box to show that the valve has been operated. Identify if the valve was partially or fully operated.

VALVE POSITION: Log the "As Found" and "As Left" positions as C (closed), O (open), or T (throttling). After operating a valve, return it to the "As Found" position.

i.) If a valve is found in the wrong position according to a diagram or maintenance record, investigate the system operation to determine in which position the valve should be left. Notify the appropriate personnel (supervisor, GSO, planning engineer) to validate any valve position change prior to correcting valve position.

ii.) Log that change on the Valve Maintenance Record along with the reason for the change. Redline local diagrams as needed.

iii.) For any changes required on an Operating Diagram or Operating Map, submit revisions to the GT&D Principal Mapper, per the requirements of S4460, Attachment 1.

Upon completion of maintenance on a valve, the maintenance supervisor must:

a. Critically review *each* "Valve Maintenance Record" to ensure that it is accurate and complete. Return the "Valve Maintenance Record" to the person that performed the maintenance to correct errors and omissions.

b. During the review required above, check to see if any erasures, obliterations, or other document changes have been made.

- **Write "Valve Maintenance Record" information in permanent black or blue ink** with NO white-outs.
- Review the "Valve Maintenance Record" with the person that performed the maintenance to ensure compliance with these requirements.
- Enter your "LAN ID" and initial and date the "REVIEWED DATE" field for each new valve maintenance entry to indicate that the information has been reviewed and is correct.

Pacific Gas and Electric Company

F4430-04-1
Rev. 3/09

VALVE MAINTENANCE RECORD FORM

(make all entries in black or blue permanent ink)

DIVISION_____ DISTRICT_____ **VALVE NO.** _____

LOCATION (SKETCH ON BACK IF REQUIRED)_____ SAP WM NO._____

LINE/STATION NAME_____ TRANSMISSION: ☐ EMERGENCY ☐ OTHER

OPER. OR WALL MAP_____ OPER. DIAG. OR PLAT_____ BLK._____ DISTRIBUTION: ☐ STATION ☐ CRITICAL MAIN

VALVE DATA

SIZE _____ MAKE/MODEL_____ TYPE_____ (Ball, Plug, Gate) PRESS RATING_____ (PSIG) SERIAL NO._____ USE_____ (MLV, BTU, Zone, Station, etc.)

RECOMMENDED LUBRICANT/SEALANT_____ (Brand/Type or NA) LUBE/INSPECT FREQ._____ (Annual, Monthly, Other) Gearbox Breather (Bettis) Installed? ☐ YES ☐ NO ☐ NA

RECOMMENDED STEM PACKING MATERIAL_____ (Brand/Type or NA) High-Head Extension Vent Installed? ☐ YES ☐ NO ☐ NA

ACTUATOR TYPE_____

Manual Lever, Exposed Gearing (no gearbox), Enclosed Gearing*, Power Actuated

* Manual gearbox filled with oil? ☐ YES Drained? ☐ YES

☐ 90 WT ☐ NO

☐ Grandslam

☐ NO

☐ 90 WT

COMMENTS_____

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VALVE MAINTENANCE RECORD FORM **Line / Station Name:**_____ F4430-04-1

(make all entries in black or blue permanent ink) **Valve Number:** _____ Rev. 3/09

SERVICE HISTORY (see notes)

DATE MM/DD/YY	INITIAL ------- LAN ID	VERIFY VALVE NUMBER Y/N	INSPECT Y/N	LUBE (If req'd) Y/N or N/A	OPERATE Y/N ---------- F/P	VALVE POSITION As Found / As Left	REPAIRS REQUIRED (If any)	ACTION TAKEN (If required)	REPAIRED DATE MM/DD/YY ---------- INITIAL – LAN ID	REVIEWED DATE MM/DD/YY ---------- INITIAL – LAN ID

NOTES: 1) Use Y/N for yes/no to indicate item performed and completed. 2) "LUBE" pertains to lubrication of the ball or plug. 3) "OPERATE" means to partially operate as a minimum.
4) Use F/P to indicate Full or Partial Operation