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Finding Type [Internal, NOV, AOC]	Finding #	Finding	Response	Associated Attachment (File Name)		
NOV - PG&E's Internal Review Findings		At the start of the inspection, PG&E provided SED its findings from the internal review it conducted of the Division. Some of PG&E's internal review findings are violations of PG&E's standards, and are therefore violations of Title 49 Code of Federal Regulations (CFR), §192.605(a). SED is aware that PG&E corrected all of its findings prior to SED's inspection. Table 1 lists all of the violations from PG&E's internal review.	·	n/a		
NOV		Title 49 CFR §192.605 states in part: (a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response" (b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations. (1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part"	Please see below for responses to the violations.	n/a		
NOV	1.1	1.1. Valve Maintenance Title 49 Code of Federal Regulations §192.745 Valve maintenance: Transmission lines states: (a) Each transmission line valve that might be required during any emergency must be inspected and partially operated at intervals not exceeding 15 months, but at least once each calendar year. (b) Each operator must take prompt remedial action to correct any valve found inoperable, unless the operator designates an alternative valve. Title 49 Code of Federal Regulations §192.747 Valve maintenance: Distribution systems states: (a) Each valve, the use of which may be necessary for the safe operation of a distribution system, must be checked and serviced at intervals not exceeding 15 months, but at least once each calendar year. (b) Each operator must take prompt remedial action to correct any valve found inoperable, unless the operator designates an alternative valve. SED made following observations: (i) Valve, V-T-16.09, Clement Taps and Atkins Rd.: The valve maintenance took place on 7/8/13 and 11/17/14; this exceeded allowed time interval of 15 months. (ii) The history and/or maintenance card was missing for following valves and therefore SED was unable to verify prior records: - Hazelton & California V-520 History and Valve Card Missing; New history started 2/28/15. - Thornton Rd E/O Lodi Energy Plant V-2 New Card made in 4/29/15 due to missing card.	and not recorded on the valve card. The valve card was updated in November 2014. Please see attachment "NOV1-1 - V-T-16-09 SAP Record_CONF.pdf" and "NOV1-1 - V-T-16-09 Valve Card_CONF.pdf". PG&E disagrees that the valve was not maintained within 15 months, however, PG&E acknowledges that the valve card was not signed off per PG&E procedures. (ii) Valve V-520, Hazelton & California: While PG&E could not produce the paper valve card, the valve was maintained from 2009 to present as documented in SAP. Please see attachment "NOV1-1 - V-520 SAP Record_CONF.pdf." A new valve card was created in February 2015 to replace the missing valve card.	NOV1-1 - V-T-16_09 SAP Record_CONF.pdf NOV1-1 - Valve V-T-16_09 - Valve Card_CONF.pdf NOV1-1 - V-520 SAP Record_CONF.pdf NOV1-1 - V-2 T Lodi SAP Record_CONF.pdf		
NOV		Designating Alternate Means of Control for Valves: PG&E procedure TD-4430P-04, Rev. 1, section 4.3. states: "Perform the tasks below upon discovery of any inoperable transmission emergency, distribution critical main, distribution station, or inlet and outlet station isolation (fire) valve prior to 15 months from the last successful operation of a valve that is NOT promptly repaired: 1. Complete Gas Utility Form TD-4430P-04-F03, "Inoperable Valves—Alternate Means of Control (AMC)." SED found following non-compliances: (i) Pressure Limiting Station V-21.41 (End of Brandt Rd.): Valve, V-A was reported non-operational on 7/30/14. The request for the designation of Alternate Means of Control (AMC) was filed on 2/11/15 which is more than 15 months after 7/26/13 when it was last properly operated. (ii) Pressure Limiting Station V21.42: Valve V-C was reported non-operational on 7/30/14. The request for the designation of Alternate Means of Control (AMC) was filed on 2/11/15 which is more than 15 months after 7/26/13 when it was last properly operated.	(ii) Valve V-C, Pressure Limiting Station V-21.42: The valve has been restored back to service through the performance of corrective maintenace; flushed	NOV1-2_i V-A PLS V-21_41 - Valve Card AMC_CONF.pdf NOV1-2_ii V-C PLS V-21_42 - Valve Card AMC_CONF.pdf NOV1-2_ 1-3_Tailboard.pdf		

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NOV	1.3	PG&E procedure TD-4540P-02, section 2.4. states: "Test bypass regulators for ability to control pressure and lock up" SED found that no maintenance for bypass regulators was performed for the years 2014 and 2015 for following facilities: - ST-HP-24: Navy Drive E/o Fresno Street - ST-HP-36: Airport Way & Zephyr Street	While the documentation does not explicitly indicate that the bypass regulator was maintained in 2014 and 2015, the standard practice is to check lock-up and set points on the bypass regulator before maintaining the primary regulator. PG&E has determined this to be a variation in how the technicians document the bypass maintenance; by specifically identifying the bypass or as a component of the "Single Run." To prevent recurrence, the supervisor tail boarded the Instrument and Regulation personnel to reinforce the requirement to document the reg station maintenance and to complete AMC's per PG&E procedures. Please see attachment "NOV1.2, 1.3 - Tailboard.pdf."	NOV1.2, 1.3 - Tailboard.pdf
NOV	1.4	PG&E procedure TD-4540P-01, section 6.1. states: "Complete paper records as outlined below OR enter information on company mobile platform developed for documenting regulator station maintenance 4. Review data sheets during each inspection AND update as needed" SED observed that following records were in error: (i) Friant Dr. and Saratoga Rd District Regulator Station (TYHP 02): Datasheet showed outlet MAOP as 5000 psig (ii) Station MAHP-55 (Airport and Louise Reg. station) The datasheet showed valves 11, 12 and 13 as Inlet and Valves 1, 2 as outlet. In fact, as per station diagram, 11, 12 and 13 are outlet valves and 1 and 2 are inlet valves. PG&E staff confirmed the same and made a change.	PG&E recognizes these observations and has taken the following corrective actions: (i) Friant Dr. and Saratoga Rd District Regulator Station (TYHP 02): The outlet MAOP as 5000 psig was a data entry error. The data sheet was updated to show the outlet pressure of 500 psig. Please see attachment "NOV1-4 - TYHP-02 Data Sheet_CONF.pdf." (ii) Station MAHP-55 (Airport and Louise Reg. station): The incorrect valve labeling was a data entry error. The valves were updated on the data sheet to reflect the inlet and outlet valves on the station diagram. Please see attachment "NOV1-4 - MAHP-55 Data Sheet_CONF.pdf."	NOV1-4 - TYHP-02 Data Sheet_CONF.pdf NOV1-4 - MAHP-55 Data Sheet_CONF.pdf
NOV	1.5	PG&E procedure D-4540S, Rev 0, Table 2 Maintenance Schedule outlines the frequency intervals for regulating stations. According to this table Class A Inspection of customer meterset assemblies should be performed at least once every 5-calendar years and large volume customer regulator set at least once each calendar year, at intervals not to exceed 15 months. SED found that the following assets missed the maintenance at the required timeframe (although some of them have maintenance done only recently). In addition, datasheets were incomplete, station diagram were not up-to-date and other issues as noted below. Please provide an update on maintenance of these facilities, completion of datasheets, station diagrams, other observations mentioned below and any other changes made to make the records complete. Large Volume Customers: Musco Olive Primary 17950 via Nicolo, Tracy - Granite Construction Primary, 10500 Harlan Road, Lathrop - Teichert Primary, 36314 S Bird, Tracy - R&B Foods Primary (Ragu), Waterloo and D street, - Ameron Primary, 10100 Linne Road, Tracy — the folders showed comments such as fire valve needs to be dig up, datasheet needs to be typed and diagram created. There were no relief capacity calculations present - Sutter Home Winery Primary, 18667 N Jacob Brack Rd Unit 1 Lodi - Granite Construction Primary - 34700 Bird Road, Tracy — datasheet had no relief pressure set points, and relief capacity calculations were not present Meterset Assemblies: (a) lone Minerals, Calcine Plant # 1, Jackson - The datasheet did not provide required information on stage 1 and stage 2 pressures so that it could be verified with those on the maintenance sheet. This needs to be resolved (b) Specialty Granules, 1900 HWY 104 W, Ione - There was discrepancy between metering pressure on datasheet and maintenance sheet, the customer is currently billed at 10 psig, whereas maintenance sheet shows metering pressure 20 psig. This needs to be resolved.		NOV1-5 - LVC MSA_CONF.pdf NOV1-5 - MO Maintenance_CONF.pdf NOV1-5 - GP- Harlan - French Camp Maintenance_CONF.pdf NOV1-5 - TP Maintenance_CONF.pdf NOV1-5 - RB - Rg - Maintenance_CONF.pdf NOV1-5 - Am Valve Card_CONF.pdf NOV1-5 - Am Primary Data Sheet - Ops Diagram_CONF.pdf NOV1-5 - Am Primary Relief Calcs_CONF.pdf NOV1-5 - SHM_CONF.pdf NOV1-5 - GP - Bird - Tracy Maintenance_CONF.pdf NOV1-5b - SGM_CONF.pdf

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AOC	1	It was observed that a number of valve maintenance records (valve cards) did not have valve pressure ratings, model number and others. Examples are: - Station MAHP-52 (River Island and MCKee W/) I-5 Lathrop, valves 1 and 2 - MAHP-47, McKinley and Roth b Road, valves 1.11 and 2 - MAHP-42(Jennifer and Jacktone), valve 2 - MAHP-17 (First and Industrial), valves 1, 2 and 3 Please provide detailed explanations of any efforts that PG&E made to find this critical information ("Type", "Pressure Rating", "Make/Model", "Size") for those filled as "Unknown" on valve cards.	PG&E believes the valve card contains sufficient information to perform the valve maintenance. "Critical" information is validated through the MAOP Validation process and stored in GT-GIS. PG&E's distribution engineering group has reviewed the database and provided the attached table with valve ratings (attachment "AOC1 - Valve Card Ratings_CONF.pdf") The pressure ratings of valves on distribution system are historically greater than 100 psig , which is more than the operating pressure of a distribution system of 60 psig or less. Please see attachment "AOC1 - TD-4430P-04-JA01 Valve Maintenance Record.pdf." Unknown valve ratings on the valve maintenance cards are acceptable.	AOC1 - Valve Card Ratings_CONF.pdf AOC1 - TD-4430P-04-JA01 Valve Maintenance Record.pdf
AOC	2	A number of valves had notes such as hard to turn, in some case either there were no correctives or no action taken on the requests. Examples are: - July binder Valve: L-197 Ione Tap & Acampo Rd, V-B Hard to turn; operable w/ 2 people - January binder Valve: Cambridge and Lathrop V-12 Hard to turn in 2013 and 2014 Please provide update on actions being taken to resolve the situation, and expected deadlines.	PG&E respectfully disagrees with this observation. Hard to turn valves are not considered inoperable valves. No futher action was deemed necessary at that time. Please see below for an update on the valves: (i) V-B, L-197 Ione Tap & Acampo Rd - the valve was flushed on 5/29/15 and maintained on 7/20/15. The valve operated normally is not hard to turn. Please see attachment "AOC2 - V-B Valve Card_CONF.pdf". The valve was last maintained on 9/4/16 with no issues identified. (ii) V-12, Cambridge and Lathrop - The valve was last maintained on 1/23/16 with no issues identified. Please see attachment "AOC2 - V-12 Valve Card_CONF.pdf"	
AOC	3	SED observed that a number of regulator stations have lock up issues, possibly due to Sulphur deposits on regulator components which was also observed during the field visit for the station LO-HP-11. Please provide an update on steps being taken to avoid this situation in future. Examples are: - ST-HP-27 b Swain Ct & N. El Dorado - ST-HP-56 Waterloo Rd & Hiawatha Way - ST-HP-60 Feather River Dr & March Ln - ST-HP-61 Swain Rd & West Ln (station needs painting, there are lots of corrosion pits, please provide update) - LO-HP-03 Kile Rd & WPRR Station - LO-HP-11 Turner Rd & Lower Sacramento Rd	The maintenance records for 3 of the 6 stations (ST-HP-27, ST-HP-56, and ST-HP-61) identified sulfur only in 2011. Sulfur filters were subsequently installed in 2011 and 2012. The maintenance records for 5 of the 6 stations did not identify any lock-up issues during the most recent maintenance. Please see attachment "AOC3 - Reg Station Maintenance History.pdf" for the maintenance history of the stations. Sulfur causing issues with regulator lock-up is an industry wide problem, and its effect on equipment is difficult to predict as its immediate impact on components will differ based on numerous variables. Sulfur can adversely affect regulators from functioning properly in two ways to prevent lock-up; 1) sulfur depositing on the main body or boot, and 2) sulfur obstructing the pilots. Because there is no filter that can be installed on the main line to prevent sulfur from depositing on the main body cages and boots, PG&E will continue to monitor sulfur conditions through our periodic maintenance program and rectify issues as they are found. For sulfur creating obstructions in pilot lines, personnel are instructed to install sulfur-gon filters in the pilot lines, per TD-4540P-01. Additionally, PG&E will utilize the quality control reviews to assist in identifying and monitoring repetitive instances of regulator stations encountering lock-up issues due to sulfur. As the conditions above are encountered, the local I&R supervisor can work with engineering, asset management and integrity management to address these issues on a case by case basis. STHP-61 - Notification 112404207 was created to paint the station due to corrosion. Please see attachment "AOC3 - STHP61 - Paint Work Ticket_CONF.pdf." The work is tentatively scheduled for Q4 2017.	AOC3 - Reg Station Maintenance History.pdf AOC3 - STHP61 - Paint Work Ticket_CONF.pdf

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AOC	4	During field visit, following observations were made:	PG&E recognizes these observations and has taken the following corrective actions:	AOC4c - STHP-27 V-2 Valve Card_CONF.pdf
		(a) It was observed that the work was performed by a journeyman and two employees under training. Although, journeyman did his best to direct and observe these employees, but it would be more appropriate	(a) PG&E agrees this was not an appropriate use of PG&E's span of control.	AOC4d - V-2 T and LE photos.pdf
		to have 1:1 span of control in such situations.	(c) Valve V-2, ST-HP-27, Swain Ct and N El Dorado - The multi-turn information was a data entry error. The valve card was updated to quarter turn. Please see attached "AOC4c - STHP-27 V-2 Valve Card_CONF.pdf".	AOC4d - V-2 T and LE Valve Card_CONF.pdf
			(d) Valve V-2 (Thornton Rd. E/O Lodi Energy Plant) - The valve was tagged on 10/8/16 and has a serial number. Please see attachment "AOC4d - V-2 T and L E photos.pdf" for photos of the valve. In addition, the valve card was updated to include the vineyard to easier locate the valve location. Please see attachment "AOC4d - V-2 T and LE Valve Card CONF.pdf"	AOC4b - H-43.pdf
		(c) For the station ST-HP-27, Swain Ct and N El Dorado, Stockton, the valve card for valve V-2 had information		AOC4b - H-70.pdf
		that it is multi-turn, but it was found to be quarter turn. Necessary change in records is required.	PG&E respectfully disagrees with this observation.	AOC4b - TYHP-76 Maintenance Record_CONF.pdf
		(d) Valve, V-2 (Thornton Rd. E/O Lodi Energy Plant) needs tags and specific location identification for ease of locating and identifying it in the field.	(b) The relief set point for TYHP-76 was lowered from 53 psig to 50 psig to account for operating tolerance per H-43 (step 4a) and H-70 (step 18a). The relief set point at 50 psig will prevent the system pressure from rising beyond the MAOP plus allowable of 66 psig. The relief set point change was adjusted PG&E procedures. The relief device has sufficient capacity per the relief valve capacity verification (please see attached "AOC4b - TYHP76 - Relief Calc.pdf") and the	AOC4b - TYHP76 - Relief Calc.pdf
		(e) Station LO-HP-11, Turner Road and Lower Sacramento Rd. Lodi The regulator did not lock-up; the Sulphur build-up was noticed and therefore it required change of the	relief device was inspected and tested during the maintenance on 10/5/16.	
		cartridge and boot. In this case, Sulphur filters were also present at the station and hence in addition to other investigation of cause of the Sulphur presence, the performance of these filters may need to be investigated.	As part of the NOP reduction effort in 2012, the HPR Dreg set point was changed from 37 psig to 40 psig. The goal of the NOP reduction effort was to increase margins of pressure below MAOP. Majority of the effort resulted in set point reductions, however for this station, the reg set point pressure was raised by 3 psig. Prior to increasing the pressure, the planning engineer reviewed and confirmed that the system was able to accommodate the 40 psig change. The reg set pt was changed during the maintenance on 10/6/16. Please see attachment "AOC4b - TYHP-76 Maintenance Record_CONF.pdf"	