

Date: July 13, 2012

To: Pacific Gas and Electric Company



From: General Jack Hagen, Director, Consumer Protection and Safety Division

Re: Consumer Protection and Safety Division Review of Pacific Gas and Electric Company  
Request to Restore MAOP of Line 131-30 and Related Pipeline Facilities

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On May 9, 2012, Pacific Gas and Electric Company (PG&E) provided the Consumer Protection and Safety Division (CPSD) with copies of confidential documentation to support its request to restore the Maximum Allowable Operating Pressure (MAOP) of its Lines 131-30 and related pipeline facilities (hereafter referred to as Request). On May 31, 2012, PG&E formally filed its request to restore pressure on Line 131 with the California Public Utilities Commission (CPUC) and made supporting materials available to parties to R.11-02-019.

The portion of Line 131-30 that is the subject of the Request is approximately 7 miles in length and is primarily composed of double submerged arc welded pipe, 30-inches in diameter, similar to San Bruno, for some of which pressure test records could not be located. In addition to the mainline Line 131-30, the Request also covers transmission pipelines and other facilities attached to Line 131-30. These facilities, which include distribution feeder mains (DFMs) and other short pipe features, such as blow-down piping, are referred to as "shorts" within PG&E's filing. All pipeline facilities included in the Request are located in a Class 3 area, as defined in Title 49 Code of Federal Regulations (49 CFR), Part 192, §192.5.

In its Request, PG&E seeks to restore the Maximum Allowable Operating Pressure (MAOP), of all pipeline facilities included therein, to 595 pounds per square inch gage (psig). The Request covers the portion of Line 131-30 located between Irvington Station (Mile Point 50.58) in Alameda County and Milpitas Gas Terminal (Mile Point 57.52) in Santa Clara County. If approved, the Request would return Line 131-30 to its MAOP before it was lowered by 20%, to 476 psig, per the December 16, 2010 directive issued by CPUC Executive Director, Plan Clanon. PG&E believes it needs to restore pressure in Line 131-30 by early August in order to assure adequate supplies of natural gas to electric power generation facilities in Santa Clara and Santa

Cruz counties in anticipation of increased demand for electricity heading into the summer season.

Commission Decision D.11-09-006, issued on September 8, 2011, requires PG&E to provide as part of its filing, an indication of CPSD's concurrence with its requests to restore pressure in lines where pressure was ordered to be reduced by the CPUC. In the past, CPSD has provided guidance that all lines where PG&E has reduced pressures while MAOP validation occurs, voluntarily or per CPUC directive, be open to a public review process, and have CPSD's concurrence with the intended pressure restoration, before pressures are restored.

In support of its Request, PG&E stated it completed the following tasks:

- Hydro-statically tested all gas transmission pipe and shorts, for which pressure test records could not be located, in accordance with 49 CFR 192 Subpart J requirements for Class 3 locations. All hydro tests included a spike test, unless the piping tested was new pipe.
- Confirmed that pressure test records exist for all other pipelines and associated components included in the Request, including shorts operating greater than or equal to 20% of Specified Minimum Yield Strength (SMYS).
- Developed a pipeline features list (PFL), which confirms all pipeline components and their characteristics (i.e., pressure ratings), in order to validate the MAOP for all pipelines and associated components included in the Request.
- Conducted two excavations in 2011, to perform direct inspection of pipeline facilities, in order to obtain missing information or validate questionable data.
- Verified that PG&E's hydro-tests meet current requirements of 49 CFR Part 192, Subpart J, or those in effect at the time when the pressure test was conducted (OP 4 of D.11-09-006).

CPSD's review of PG&E's MAOP validation process has found that it begins by identifying and compiling PFLs which include each pipeline facility (pipe, valves, reducers, flanges, etc.) that is part of the Request. PG&E is utilizing engineering firms with pipeline experience to assist it in assembling the PFL using documents such as design plans, as-built drawings, purchase orders,

pressure test records, coating information, and various other documents related to the pipeline facilities. The compilation of the PFL goes through a peer review process followed by a 100% review by PG&E's engineers. PG&E has established written procedures to assemble the PFLs as well as the processes for quality assurance and quality control of the PFL process.

PG&E's validation process reviews coating and pressure test records in order to establish the maximum pressure at which each identified feature can be operated. Where PFLs identifies a deficiency which prohibits the operation of the facility at a given pressure, or the absence of pressure test documentation, PG&E performs pressure tests or excavations to confirm pipe specifications. CPSD's review of the supporting documents appear to show that PG&E's activities, to validate the components included in the Request, to be consistent with its MAOP validation procedures.

PG&E provided all parties with data in support of its Request. CPSD performed an overall review to determine if PG&E's data shows that the company properly followed its MAOP validation processes; however, the large volume of data did not permit CPSD to be able to review each of the pipeline features included in the PFLs for Line 131-30, and related shorts attached to Line 131-30.

CPSD's review of the Request noted the following:

- PG&E's MAOP Validation approach meets the CPUC directive applicable to gas pipe facilities in Class 3 and 4 locations and HCAs which, by definition, only apply to transmission facilities. Likewise, transmission facilities primarily include facilities operating at stresses greater than or equal to 20% of SMYS, but also include pipeline facilities, operating at less than 20% of SMYS, which supply gas to large volume customers, and which are not downstream of a distribution center.

CPSD's review noted that PG&E's approach to pressure test verification appears to have included all distribution facilities (shorts) which receive gas at pressures prevailing in Line 131-30. CPSD noted these shorts are generally comprised of smaller diameter facilities and, as a result, tend to operate at much lower stresses than Line 131-30.

CPSD believes that PG&E's approach has addressed all less than 20% of SMYS branch lines connected to Line 131-30; however, CPSD expects that any not verified at this time will be verified as part of PG&E's forthcoming activities related to its distribution integrity management program.

- CPSD's review determined that PG&E performed spike tests for all non-newly installed pipeline facilities recently pressure tested subject to the Request. Some pressure testing included the use of nitrogen gas as the test medium; however, as CPSD has stated in the past, PG&E's use of medium other than water for pressure testing is accepted by regulations, and CPSD has no issues with such testing, as long as the limitations specified in 49 CFR, Part 192, §192.503, are complied with.
- PG&E has stated that as part of its MAOP Validation projects, the manager for the project receives completed qualification reports from all contractors which specify their employees' qualifications, for covered tasks, prior to the employees beginning work. PG&E qualifies its own employees through its own OQ Program, per 49 CFR, Part 192, Subpart N. CPSD reviewed documentation for qualifications of welders involved with pressure testing performed in relation to the Request and continues to review PG&E's OQ records during the course of its inspection activities.
- PG&E excavated and repaired an external corrosion caused pin-hole leak on DFM 2405-01, a 4.5-inch diameter, 0.156-inch wall pipeline, which failed to achieve the minimum required pressure test level during an April 18, 2012 pressure test. The corroded area of pipe was replaced with new pipe. After the repair, DFM 2405-01 was again pressure tested and it passed this subsequent test. PG&E did not report this as a pressure test failure to the CPUC when it occurred because it determined this to be a pressure test leak and not a pressure test failure.

- PG&E has patrolled the portion of Line 131-30 and related shorts subject to the Request and has confirmed that no current activities or encroachment issues present a threat to its pipeline facilities.

Based on the above review, CPSD recommends that the CPUC allow PG&E to restore the MAOP in Line 131-30, and all related shorts, to 595 psig. Also, CPSD needs to be provided with confirmation from PG&E that it understands and agrees that for all future pressure tests, all leaks which prevent the minimum required pressure level from being achieved and maintained for the entire duration of the test are to be considered as a pressure test failure and must be reported as such to the CPUC when they occur.

***This review was performed by Sunil Shori, Interim Program and Project Supervisor, Gas Safety and Reliability Branch, Consumer Protection and Safety Division.***