

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

SAFETY AND ENFORCEMENT DIVISION  
Utilities Safety Branch

RESOLUTION SU-36  
September 27, 1995

R E S O L U T I O N

RESOLUTION SU-36. ORDER PROVIDING PACIFIC GAS & ELECTRIC COMPANY (PG&E) AN EXTENSION OF TIME TO INSTALL RELIEF VALVES ON ITS LOW PRESSURE NATURAL GAS DISTRIBUTION SYSTEMS AND/OR IMPLEMENT OTHER MEASURES WHICH PROVIDE A DEGREE OF SAFETY THAT WOULD BE EQUIVALENT TO RELIEF VALVES. THIS RESOLUTION WOULD EXTEND THE DEADLINE TO COMPLETE THESE MEASURES, AS ORDERED BY SU-32, FROM SEPTEMBER 30, 1995, TO SEPTEMBER 30, 1996.

SUMMARY

Based on recommendations made by our Utilities Safety Branch (USB), we ordered PG&E, via Resolution SU-32, dated December 7, 1994, to install relief valves on all of its low pressure gas systems (LPGS) in order to prevent an overpressure incident, similar to that which occurred in Alameda on April 13, 1994, from reoccurring in any of the other LPGS.

To date, PG&E has made a good faith effort to comply with the directives of Resolution SU-32. Of the 48 LPGS now in operation, 38 are expected to fully comply with the Commission's directives. However, due to the fact that the scope of the project has proven to be larger than first estimated, PG&E will be unable to meet the deadline established by Resolution SU-32, namely September 30, 1995, for completing the installation of an adequate number of relief devices in 10 of the 48 LPGS. Of these 10 LPGS, two are expected to be converted to high pressure by the end of 1995, and the remaining eight require additional time for analysis and installation. As such, PG&E requests an additional period of one year to complete the required work in these 10 LPGS. Within PG&E's system, a total of 46 LPGS are expected to be in operation by the end of 1995.

In addition to the request for additional time, PG&E requests that the Commission alter its original order to allow the installation of alternate safety measures, in lieu of total relief valve protection, in eight of the 48 LPGS. Due to engineering concerns which came up during the design phase, PG&E indicated that technical limitations made it difficult for it to install these valves in the said eight LPGS due to their larger capacity; therefore, PG&E requests that it be allowed to implement measures, in lieu of relief valves, which would provide a degree of safety that would be equivalent to that which would be provided if only relief valves were installed in these larger, and more densely populated, LPGS.

The USB recommends that the Commission grant PG&E the additional time it requires to convert the two LPGS to high pressure systems, and, as these conversions are expected to be completed within three months of this order, the USB recommends that these two LPGS be exempt from the directives of Resolution SU-32. As for the remaining eight LPGS in which PG&E proposes to install alternate measures, the USB requests that it be allowed to thoroughly investigate the particulars of each LPGS, on a case-by-case basis, to determine the prudence of the alternate measures. The USB would advise the Commission if any alternate measures were determined to be imprudent and the matter could not be resolved through mutual agreement between the USB and PG&E.

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BACKGROUND

On April 13-14, 1994, a malfunction of a PG&E regulator station subjected 13,790 PG&E customers in Alameda to a gas overpressurization incident. This incident resulted in extinguished pilot lights, gas odors, malfunctioning gas appliances, fires and temporary interruption of gas service. The USB conducted a thorough investigation of this incident, and issued a detailed report to the Commission on June 22, 1994.

Based on the USB report and on a subsequent PG&E report submitted to the Commission on September 30, 1994, we ordered PG&E, via Resolution SU-32, to 1) pay a fine; 2) provide a safety enhancement program for the City of Alameda; 3) modify, and/or more closely determine adherence with, its own procedural standards; and 4) install Supervisory Control and Data Acquisition (SCADA) systems along with pressure relief valves on all of its LPGS.

DISCUSSION

Based on its investigation of the Alameda Incident, the USB found that the lack of proper procedures, or failure to follow procedures already in place, were major contributing factors to the incident. Also, the USB found that the SCADA system in Alameda provided an effective early warning prior to the incident; however, the SCADA was not properly utilized by the operators. Finally, the USB recommended that pressure relief valves be installed on all of PG&E's LPGS to act as additional protection against overpressurization.

Based on the USB's findings and recommendations, we ordered PG&E to review, and modify as necessary, its procedures pertaining to emergency response. In addition, we ordered PG&E to install SCADA systems on all LPGS and to assure that training was provided in their proper utilization. As of this date, PG&E has completed the installation of SCADA in all of the 46 LPGS which PG&E intends to operate beyond the end of this year, and with the exception of installing relief valves on all the LPGS, PG&E has complied with all other directives of Resolution SU-32.

To date, PG&E has made a good faith effort to comply with the directives of Resolution SU-32. Of the 48 LPGS now in operation, 38 are expected to fully comply with the Commission's directives. However, due to the fact that the scope of the project has proven to be larger than first estimated, PG&E will be unable to meet the deadline established by Resolution SU-32, namely September 30, 1995, for completing the installation of an adequate number of relief devices in 10 of the 48 LPGS. Of the 10 LPGS, two (one in Richmond and one in West Fowler) are expected to be converted to high pressure by the end of 1995; the remaining eight require additional time for analysis and installation. As such, PG&E requests an additional period of one year to complete the required work in these 10 LPGS. Within PG&E's system, a total of 46 LPGS are expected to be in operation by the end of this year.

In addition to the request for additional time, PG&E requests that the Commission alter its original order, in the case of the remaining eight LPGS, to allow the installation of alternate safety measures, in lieu of total relief valve protection. Based on engineering concerns which arose in the course of designing the installation of the relief valves, PG&E indicates that technical limitations made it difficult for it to install these valves in these eight LPGS due to their large capacities; therefore, PG&E requests that it be allowed to implement measures, in lieu of relief valves, which would provide a degree of safety that would be equivalent to relief valves in the larger, more densely populated, LPGS.

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The USB believes that relief valves still provide an additional margin of safety on LPGS, and this persuaded the Commission to order their installation within Resolution SU-32. In light of that, the USB recommends that the Commission grant PG&E additional time, until the end of 1995, to convert the two LPGS to high pressure and, because these conversions are expected to be completed within three months of this order, these two LPGS should be exempt from the directives of Resolution SU-32. However, for those LPGS in which PG&E proposes to install alternate measures, the USB requests that it be allowed to thoroughly investigate the particulars of each of LPGS, on a case-by-case basis, to determine the prudence of the alternate measures. The USB would advise the Commission if any alternate measures were determined to be imprudent, and if the matter could not be resolved through mutual agreement between the USB and PG&E.

### FINDINGS

1. PG&E has made a good faith effort in complying with the mandates of Resolution SU-32.
2. The USB's recommendation, that PG&E be provided with additional time to convert the two LPGS to high pressure by the end of 1995, is reasonable.
3. The USB's recommendation that the two LPGS, to be converted to high pressure, be exempt from the mandates of Resolution SU-32, is reasonable.
4. The USB's recommendation that it be allowed to investigate and advise the Commission, as necessary, on the eight LPGS in which PG&E would like to install alternate measures in lieu of, or in addition to, partial relief valve protection, is reasonable.
5. The suggested revised completion date of September 30, 1996, for completing all installations, is reasonable.

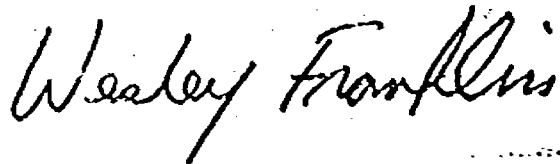
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THEREFORE, IT IS ORDERED that:

Pacific Gas & Electric Company shall..

1. By December 31, 1995, complete the conversion of two LPGS, one in Richmond and one in West Fowler, to high pressure. These LPGS shall be exempt from the directives of Resolution SU-32.
2. Be provided an additional one year to complete the installation of relief valves and/or alternate measures in the eight LPGS which will not be completed per directives of Resolution SU-32. All work shall be completed by September 30, 1996.
3. Supply the USB, in a timely manner, with all information necessary in order for the USB to investigate the particulars of the LPGS and the alternate measures, for the 8 LPGS in which PG&E proposes to install alternate measures,
4. Consult with the USB and attempt to resolve, through mutual agreement, any differences which arise between PG&E and the USB, regarding the installation of alternate measures in lieu of, or in addition to, relief valves.

I hereby certify that this Resolution was adopted by the Public Utilities Commission at its regular meeting on September 27, 1995. The following Commissioners approved it:



Wesley M. Franklin  
Acting Executive Director

DANIEL Wm. FESSLER  
President  
P. GREGORY CONLON  
JESSIE J. KNIGHT, JR.  
HENRY M. DUQUE  
Commissioners