

Docket No. SA-534

Exhibit No. 2-DY

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

PG&E JUNE 24, 1996 MEMO RE: REMOTE/AUTOMATIC VALVES

(4 Pages)

**PACIFIC GAS AND ELECTRIC COMPANY
San Bruno Gas Transmission Line Incident
Data Response**

PG&E Data Request No.:	NTSB_051-001		
PG&E File Name:	San Bruno GT Line Incident_DR_NTSB_051-001		
Request Date:	February 14, 2011	Requesting Party:	NTSB
Date Sent:	February 17, 2011	Requestor:	Operations (Chhatre)

QUESTION 1

Please see the attached PG&E's memo dated June 14, 2006. NTSB requests that you send us a copy of letter, dated 1/12/1996 (reference 8 in attached memo). NTSB ask that it not be marked "privileged and confidential" because depending upon the content, we may want to keep this letter in the docket along with the attached memo (which we know is not marked confidential). Additionally, we were unable to locate reference 7 (white paper) in that letter. Please provide origin/source of this document; or send a copy if it is not covered by copy-write.

ANSWER 1A

The "January 12, 1996 draft letter" described in Citation # 8 in the June 14, 2006 memorandum, referenced above, was finalized in memorandum form, dated June 24, 1996. The June 24, 1996 memorandum is attached.

ANSWER 1B

As we understand it, the draft white paper, dated April 15, 2005, cited in the June 14, 2006 memorandum in Citation # 7 was ultimately published as, "INGAA Pipeline Safety Committee, *White Paper on Equivalent Safety for Alternative Valve Spacing*, Prepared by Process Performance Improvement Consultants, LLC, November 15, 2005." After a diligent search, we have not been able to locate the document.

Memorandum

Date: June 24, 1996

File #:

To: VP - GAS SERVICES & OPERATIONS

From: GAS SYSTEM MAINTENANCE

Subject: Remote/Automatic Valves



WILLIAM R. MAZOTTI:

In your note of late last year (reference materials attached), you asked for an assessment of the NTSB recommendation to the AGA regarding Automatic Control Valves (ACVs) and Remote Control Valves (RCVs).

We commonly install RCVs, and have had very little problem with the remote operation of any valve. RCVs can contribute to a reduction in the impact of a pipeline break. However, we share the views of much of the U.S. pipeline industry that the systems and logic control equipment for detection and subsequent control of pipeline breaks using ACVs has proven unreliable for most applications. We have concerns about PG&E installing additional ACVs until more reliable and commercially available line break controls are developed. Accordingly, GSM is not presently planning to adopt policies promoting the use of ACVs. A more complete preliminary assessment is attached.

GSM will continue to work in this area within the priorities we set for our other maintenance work. Bob Becken will continue to participate at the national level on reviews of this issue, and develop an assessment of the specific locations in Gas Supply's system where a greater level of automation or remote control of valves should be considered.


KIM A. SLOAT


DON W. ANDERSON ⁻⁷MTW

RCBecken(583-3710):llb

cc: Sue Chwistek
Rob Grimm/Mike E. O'Donnell
Jim Grinstead

Attachments

Automatic Control Valves (ACVs) and Remote Control Valves (RCVs)
RCBecken, 6/96

1. NTSB Recommendation to AGA

The attached letter from the AGA refers to a report being prepared by the Gas Research Institute and the Southwest Research Institute (GRI/SwRI), regarding ACVs and RCVs. The report is titled, Remote and Automatic Main Line Valve Technology Assessment, and I received a copy of the report on December 4, 1995 through my affiliation with the Gas Piping Technology Committee (GPTC). The abstract from this report, which follows, is very much in line with my experiences and thoughts on ACVs.

"Present equipment in use by the natural gas industry for detection and control of pipeline breaks has proven unreliable for many applications. While the valves and their gas/hydraulic operators normally perform adequately, the detection systems and logic control used to trigger the closure of automatic valves are plagued by reliability problems. Most detectors seek to identify a rupture event by monitoring transient pressure signals that are generated in pipelines by the quick release of gas. However, the allowable detection sensitivity of these devices is limited by other operational transients in the pipeline with characteristics similar to line breaks. In order to avoid false closures due to normal transients, detector system sensitivity must be severely reduced, in some cases, even to the point of inoperable on a full line break."

"Computer modeling can be used to predict the intensity of line break signals and other operational transients within the pipeline. This approach may enhance the reliability of line break detection by evaluating alternative sense parameters, and by identifying a threshold setting or trip level at each valve that best discriminates a line break from other pipeline transient conditions."

Although the abstract does not mention RCVs, the report contains some information on them and indicates the same difficulties we have had; namely, distinguishing a line break from some other normal pipeline condition, probably through the use of SCADA, and then remotely operating a valve.

In most cases, when we upgrade an existing major control station or build a new one, we install RCVs; we have historically had an unwritten policy to install SCADA and the controls necessary to remotely position the regulating and routing valves at this type of facility. We have had very little problem with the remote operation of any valve, just the decision-making to operate. In fact, I know of only one false remote gas valve operation at PG&E, and that was when a telephone company employee, in 1972, used a random signal generator on our dedicated lease (forbidden by telephone company rules). Present day SCADA systems prevent such a telephone company mistake from operating any valve or device.

We presently have ACVs at numerous locations on Line 300A and 300B. We also have ACVs on the connections to Line 138A and 138B at Helm Tap Station. Years ago we installed ACVs on the taps to Half Moon Bay, but I do not know whether they are still operational. Line 177 from the Gerber Compressor Station to Eureka used to have numerous ACVs but the controls were removed two years ago because a false trip of one of those valves would have caused serious delivery problems to the Eureka area and the Humboldt Bay Power Plant; the Tompkins Hill Gas Field (near Eureka) no longer has production capable of sustaining gas deliveries in the area. Our historic unwritten policy has been to install ACVs only in pipelines where alternate sources of supply are available and a false trip would not serious impact critical gas deliveries; but a legitimate trip would minimize the gas release, keep the line break from affecting the alternate source of supply, and possibly reduce property damage.

2. Gas Piping Technology Committee Consideration

The GPTC, of which I am a member, has opened Transaction 95-09 to consider drafting Guide Material under Section 192.179 of 49CFR192 for installing RCVs and ACVs. An ad hoc task group was established within the GPTC to review industry action and report to the GPTC Executive Committee. The task group is presently reviewing the NTSB Report on the Edison, NJ incident and the GRI/SwRI Assessment described above.

The ASME B31.8 Committee, of which I am a member, has discussed this issue at recent meetings but has chosen not to draft any B31.8 Code language at this time due to the unreliability of commercially available line break controls. It should be noted that the B31.8 Committee has looked at this issue many times since the early 1970s when environmentalists were involved in the regulatory and construction phases of the Alyeska Pipeline Project on the North Slope.

3. Conclusions

Reiterating, I have concerns about PG&E installing additional ACVs until more reliable and commercially available line break controls are developed. I have no concerns about installing RCVs and feel there are existing places within PG&E's gas transmission system where we should consider installing them in the near future.