From:Cherry, Brian KSent:2/22/2013 4:49:15 PMTo:Michel Florio (mike.florio@cpuc.ca.gov)Cc:Bcc:Bcc:Subject:Fwd: CCT - Wireless Robots Make Life Easier on PG&E InspectionsFYI.

Brian K. Cherry PG&E Company VP, Regulatory Relations 77 Beale Street San Francisco, CA. 94105 (415) 973-4977

Begin forwarded message:

From: News Flash <<u>newsflash@pge.com</u>> Date: February 22, 2013, 4:46:25 PM PST To: Real time PG&E coverage {PG&E Internal - #PRIVATE#} <<u>Newsflash-Real-Time@pge.com</u>> Subject: CCT - Wireless Robots Make Life Easier on PG&E Inspections Reply-To: <<u>newsflash@pge.com</u>>

The *Contra Costa Times* published a story about PG&E's new wireless robot designed to inspect natural gas pipelines. Jason King, PG&E spokesman, was quoted.

Wireless Robots Make Life Easier on PG&E Inspections

By Paul Burgarino

Contra Costa Times, February 22, 2013

http://www.mercurynews.com/top-stories/ci_22648898/wireless-robotsmake-life-easier-pg-e-inspections

Meet PG&E's newest pipeline inspector. It's about 12 feet long, weighs about 250 pounds, has cameras on both ends and is made of metal.

The public utility started using the untethered wireless robot for the first time this week to inspect about 3,000 feet of hard-to-reach natural gas pipeline along Grant Street in Brentwood.

PG&E plans to eventually use the Explorer robot at other difficult-toinspect sites throughout the Bay Area and in Northern and Central California.

"It's going to become a key tool," said Jason King, a PG&E spokesman. "We've been searching across the country for cutting-edge technology to enhance the safety of our system."

PG&E was prompted to upgrade its pipeline testing methods following public outrage over the Sept. 9, 2010, blast in San Bruno, which killed eight people, injured dozens of others and destroyed or damaged 108 homes.

An investigation by the National Transportation Safety Board found that the blast was caused by a rupture in a pipe with a deficient seam weld that had gone undetected because PG&E had failed to conduct proper inspections.

"Our goal is to become the safest gas system in the country and, to that end, using (sic) the best practices and technology for each specific location," **King** said.

Friday's work, stationed in a residential neighborhood near Brentwood Boulevard and Sunset Road, measured 800 feet of transmission line where accessibility is difficult due to the pipe's sharp bends and because it goes underneath Marsh Creek, **King** said. The Explorer robot, built by Pipetel Technologies Inc., will provide benefits to PG&E customers -- particularly in that the power can remain on while inspections are being done, **King** said.

Utility workers, including PG&E's, have used "smart" pipeline inspection gauges, or "pigs," for decades to find indicators that pipes need repair or replacement.

"The smart pigs are useful, but the lines pretty much have to be straight," **King** said.

The pig's movement is dictated by the flow of natural gas in the pipeline. The Explorer, however, has a drive train that allows it to cut through the natural gas. The operator of the robot is able to see what's in front of it using the camera and operate it much like a video game to meander down the pipeline.

The new robot can also navigate through "unpiggable" or tight spots, such as 90-degree bends or other acute angles, allowing it to snake farther down a pipeline.

The robot sends streaming video and pictures from inside the pipeline to PG&E engineers.

The Explorer's technology was first used several years ago by utility companies in Pennsylvania, Arizona and upstate New York.

The robot is able to detect changes in a pipe's thickness by using magnetic sensors as it travels, while data collected from its trek are later examined by Pipetel to see if there is any corrosion or other

imperfections.

PG&E's work on pipeline testing through 2014 includes pressure testing 783 miles of gas lines, replacing 186 miles of pipe, installing 228 automated valves and upgrading 199 miles of pipe so inspection devices can run inside them.

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