Line 132 Hydrotest Failure
Internal/External Talking Points
November 4, 2011

Background:
At approximately 4 p.m. yesterday (Thursday, November 3) afternoon, a hydrostatic pressure test (test section T-30) on a four mile-long section of Line 132 near Palo Alto detected a slow and steady water leak of about 30 gallons per hour. The water leak has characteristics of a pinhole leak of approximately one millimeter in diameter. The situation is safe and there are currently no customer impacts. The California Public Utilities Commission (CPUC) has been notified.

The water leak was detected during the initial phase of the hydrostatic pressure test when the pipe is tested at 75% of the test pressure for one hour. The test pressure at the time of the leak was 525 psig. The pressure dropped at a steady rate of eight pounds per hour during the overnight hours.

The purpose of performing the first phase of the hydrostatic pressure test is to identify small water leaks such as this. Such leaks do not pose significant safety risks and are easily repaired.

PG&E crews are now in the process of identifying the exact location of the water leak. There is no public safety risk in the meantime – there is no gas in the line and the rate of the water leak is minimal with no risk of increasing.

Once repairs are made, PG&E will re-conduct the hydrostatic pressure test.

Key Points:
- PG&E is conducting hydrostatic pressure tests throughout the service area to find any weaknesses that exist in our pipelines. These tests are conducted using safe and proven methods that are used throughout the nation.
- We want to identify any weaknesses during a hydrostatic pressure test so that we can immediately repair, replace and retest the segment, and ensure that our natural gas transmission system is operating safely and reliably.
- Since April, we've conducted over 60 hydrostatic pressure tests on nearly 120 miles of pipeline throughout our service area. Only one of these tests has failed, Line 300B in Bakersfield, and it was immediately repaired, retested, and restored to a normal and safe operating pressure.

Hydrostatic Pressure Tests and Assessment Tests:
- Hydrostatic pressure testing involves filling a section of pipe with water, pressurizing it to a much higher level than the pipe will ever operate with natural gas, then monitoring the pipe for eight hours.
- Any pipe sections that do not meet acceptable standards during the test will be replaced with new pipe that has already passed a pressure test.
- Any pinhole leaks or leaks on valves will be fully repaired

- Following a successful test, the section of pipe is emptied of water, dried thoroughly and placed back in service.
- PG&E will provide updates on progress as hydrostatic testing work proceeds.
- PG&E also plans to conduct several pipeline assessment tests throughout the Bay Area. This work may require crews to excavate around the pipe, x-ray welds, test the strength of the pipe, or use a robotic camera to inspect the inside of the pipe.

If Asked:

Q: When was this segment of pipeline laid?
A: The majority of the footage in this test segment was laid in 1947.

Q: How big was the pipeline?
A: This segment is 24 inches in diameter.

Q: Were the pipeline features similar to the section of Line 132 that ruptured in San Bruno?
A: None of the pipe in Test 30 is of the same type as the 30-inch DSAW pipe installed in the San Bruno section that failed. The pipe in Test Section T-30 is mostly comprised of 20,800 feet of 24-inch diameter, seamless, 0.281 wall thickness, 45,000 psi pipe that was installed in 1947. This pipe has been confirmed with numerous digs during the installation of test heads and tap cut offs. This test section also has 2670 feet of 24-inch, ERW (electric resistance welded), API 5L X-42 pipe installed in 1957. Seamless pipe will not have a seam rupture as was seen in both San Bruno and Bakersfield, which occurred last week.

Q: What was the operating pressure of this transmission line?
A: The pipeline's MAOP is 400 psig. Its MOP is 375, and it's currently operating at a reduced pressure of 300 psig until PG&E can establish it is safe to restore the normal operating pressure through strength testing and MAOP validation.

Q: What was the test pressure of the section that failed?
A: The pressure on this segment of pipe when the leak was discovered was 525 psig, which is 75% of the scheduled test pressure. During the test, PG&E detected a very slow decline in pressure of approximately eight pounds per hour, which indicated a small leak of about 20-30 gallons of water per hour. By morning, the test pressure was at 350 psi. Total water lost is about 600 gallons out of over 500,000 gallons in the pipeline.

Q: Where is the leak located?
A: This has not yet been determined since the water leak is so small. Crews are working today to identify the location of the leak. There is no public safety risk while the leak location remains undetected.

Q: How will crews find the leak?
A: To identify the leak, PG&E crews will first need to de-water the line. Crews will then need to re-water the line and inject a tracer gas in the test water in the pipeline. The tracer

gas is detected by walking the pipeline and taking samples in a search pattern. Once the area where the leak is identified, PG&E will excavate the area around the pipeline and repair the leak. The repair could involve installing a repair sleeve or replacing the section of pipe with new pipe.

Locating the leak may take several days, but there is no public safety risk or customer impact while the leak location remains undetected – there is no gas in the line and the rate of the water leak is minimal with no risk of increasing.

Q: Was this leak potentially dangerous before the hydrostatic pressure test was performed?
A: No, the leak appeared for the first time during the pressure test at a pressure (525 psig) well above the current operating pressure of 300 psig, and also well above the pipeline's MAOP of 400 psig. No leaks were detected at the water pressure of 150 psig, nor were any leaks found at 300 psig. Further, this line is patrolled weekly for leaks.

Q: Did this hydrostatic pressure test include a spike test?
A: Yes, but crews detected the leak before a spike test was performed. Crews had planned to pressurize the section up to a maximum test pressure of 770 psig which is about 73% of SMYS (specified minimum yield strength) for the test section. Once the leak is located and repaired, PG&E will re-conduct the hydrostatic pressure test and will include a spike test.

Q: Why isn't PG&E spike testing all of its lines?
A: A spike test won't be performed if the pressure is close to or exceeds 100% of a pipeline's SMYS. Pressure at 100% of SMYS risks damaging the pipeline and valves, and risks the possibility of introducing water in to the gas system – which is a significant public safety concern.

Q: Why did PG&E wait until the morning to notify the public of this leak?
A: PG&E wanted to continue the test overnight to rule out other potential causes of the drop in pressure. Additionally, PG&E crews needed to stop work last night as crew safety was compromised in dark and wet conditions. There was no public safety risk in allowing the test to continue running overnight – there is no gas in the line and the rate of the water leak is minimal with no risk of increasing.