

Zappe, Steve, NMENV

From: Kesterson, Thomas L, NMENV
Sent: Thursday, September 25, 2008 10:51 AM
To: Zappe, Steve, NMENV
Subject: Fire line inspection
Attachments: Steve-Inspection.doc; Fireline_1.JPG; Fireline_2.JPG; Fireline_3.JPG; Fireline_4.JPG



Hey, Steve

Attached is my account of Monday's fire line inspection. Also, I have attached some photos (labeled Fireline 1-4), which, unfortunately, were an afterthought, and were taken after the pipe was already covered with the plastic.

Fireline_1 shows the ten-inch pvc pipe emplaced with the old water main. This photo is towards the south. Fireline_2 is facing towards the north, and includes both the ten-inch line and the new fire hydrant. Fireline_3 is a joint in the six-inch line running towards the Waste Handling Building., again, covered with plastic. Fireline_4 shows the four-foot vertical rise outside the south wall of the Waste Handling Building. The blind was installed at the top of this rise, within the flange just below the red pipe.

Thanks

Thomas L. Kesterson
NM Environment Department
DOE Oversight Bureau
604B N. Canal Street
Carlsbad, NM 88220

Steve Zappe
NMED WIPP Project Leader
2905 Rodeo Park Drive E. Building 1
Santa Fe, New Mexico 87505

September 25, 2008

Steve,

On Monday of this week, September 22, 2008, I was present during the inspection of the new fire suppression line at the Waste Isolation Pilot Plant. The Professional Engineer inspecting the line was Robert Frasier (Bridger and Paxton – Albuquerque). Those present during the inspection, besides Mr. Frasier and myself, were Dan Ferguson (DOE), John Ford (DOE), Stewart Jones (WRES), Sherman Butler (WTS), Jay Brazeal (Brazeal Plumbing), Bill Barnhart (WTS), and Hardy Bellows (WTS). The contractors for the installation were Constructors, which subcontracted the job to Brazeal Plumbing.

The new line originates at an approximately ten to twelve foot length of ten-inch diameter, Schedule 40 pvc pipe inserted east-west into the old carbon-steel water main, six to six and one-half feet below grade. From this addition, two 6-inch diameter pvc lines run north towards the Waste Handling Building. The 6-inch line to the west terminates at a new, 5 1/4" fire hydrant. The other 6-inch line continues on to Waste Handling Building, through a four foot vertical rise before penetrating the south wall of the Waste Handling Building into the CH bay. For the pressure test, a blind was installed at the top of this four foot vertical rise.

The joints of this new line were braced with "sur-grips", which are essentially carbon-steel collars on adjacent lengths of pipe, the collars connected together on opposite sides of the pipe by long bolts. Tightening these bolts pulls the two pipes together into a more secure fit. Next, "tar" is applied around the "sur-grips" for corrosion prevention. Following this tar application, a heavy plastic sleeve is wrapped around the joints, for further protection.

Bill Barnhart (WTS) informed me that water was introduced into the line through the fire hydrant, and pressurized with a high pressure sprayer. Pressure was monitored with a Fluke 743 *Documenting Process Calibrator*.

That portion of new pipe which was both soak tested and pressure tested included the ten-inch pvc at the old water main, the six-inch line terminating at, and including, the new fire hydrant, and the second six-inch line to the blind atop the four-foot vertical run just outside the Waste Handling Building. That portion of line between the blind and the fire suppression header on the south wall of the CH Bay was hydrostatically tested at an earlier date, and was not tested at this time.

The 24-hour soak test, a simple, hydrostatic test by which obvious leaks can be detected, was completed September 20. No leaks were reported. During a soak test, the line

pressure is required to be at least 50 pounds per square inch. The pressure applied during this soak test was 80 pounds per square inch.

For the 2-hour pressure test, the line was pressured to 215.0 pounds per square inch, at 3:02 PM on September 20. At 5:02 PM, the pressure was recorded as 207.1 pounds per square inch. The criteria for calling the pressure test "passing" was a pressure drop of no more than 10 pounds per square inch during this two hour period. This pressure test met the criteria, and was considered "passing".

If there are any questions, please let me know.

Thanks.

Thomas Kesterson
NM Environment Department
DOE Oversight Bureau
604-B N. Canal St.
Carlsbad, NM 88220



①



②



3



4