



Standard Operating Procedure Leak Testing the VAPOR PIN® Via Water Dam

Updated March 28, 2016

Scope:

The operating procedure describes the methodology to test a VAPOR PIN® or equivalent sub-slab sampling device for leakage of indoor air.

Purpose:

The purpose of this procedure is to assess the potential for indoor air to leak past the VAPOR PIN® and dilute the sub-slab soil gas sample.

Equipment Needed:

- VAPOR PIN® water dam
- Play-Doh or VOC free modeling clay
- distilled water
- VAPOR PIN® and associated sample tubing.

Procedure:

- 1) Drill a 5/8" diameter hole in the concrete slab and install the VAPOR PIN® as per the Standard Operating Procedure (SOP).
- 2) Clean the slab within a 2-inch radius of the VAPOR PIN® to remove dust. Avoid wetting the concrete or wait until the concrete is dry before proceeding and avoid cleaning with VOC-containing substances. A whisk broom or shop

vacuum is recommended. Any remaining dust can be picked up with a piece of scrap Play-Doh or modeling clay.

- 3) Roll a 1-inch diameter ball of Play-Doh or modeling clay between your palms to form a "snake" approximately 7 inches long and press it against the end of the pipe couple. Push the couple against the slab to form a seal between the pipe and the concrete.
- 4) Attach the sample tubing to the top of the VAPOR PIN® and pour enough distilled water into the pipe couple to immerse base of the VAPOR PIN®, and if desired, the tubing connection at the top of the VAPOR PIN®.
- 5) Purge the sample point as required by the data quality objectives. Concrete will absorb some of the water, which is normal; however, if water is lost to the sub-slab, stop, remove the water from the couple, and reposition the VAPOR PIN® to stop the leakage. Reseat the leak test equipment, if needed.
- 6) If the VAPOR PIN® is installed in the flush-mount configuration, the larger hole can be filled with water in place of the plastic pipe fitting and Play-Doh or modeling clay.