

VaporPin®

Standard Operating Procedure

Leak Testing the Vapor Pin® Sampling Device Via Water Dam

Scope & Purpose

Scope

The operating procedure describes the methodology to test a Vapor Pin® Sampling Device 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® Sampling Device.

Equipment Needed

- Water Dam
- Distilled water
- VOC free modeling clay or equivalent
- Vapor Pin® Sampling Device and associated sample tubing

Procedure

1. Drill a 5/8-inch (16mm) hole in the concrete slab and install the Vapor Pin® Sampling Device as per the Standard Operating Procedure (SOP).
2. Clean the slab within a 2-inch radius of the Vapor Pin® Sampling Device 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. Remaining dust can be picked up with a piece of scrap modeling clay.
3. Roll a 1-inch diameter ball of modeling clay between your palms to form a “snake” approximately 7 inches long and press it against the end of the water dam. Push the water dam gently against the slab to form a seal with the concrete.
4. Attach the sample tubing to the top of the Vapor Pin® Sampling Device and pour enough distilled water into the water dam to immerse the base of the Vapor Pin® and the tubing connection at the top of the Vapor Pin® Sampling Device.
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 water dam, and reposition the Vapor Pin® Sampling Device to stop the leakage. Reseat the leak test equipment, if needed.
6. If the Vapor Pin® Sampling Device is installed in the flush-mount configuration, the larger hole can be filled with water in place of the water dam modeling clay.

Figure 1. Water dam used for leak detection

