

Standard Operating Procedure

Installation of the Vapor Pin® Capsule

Scope & Purpose

Scope

This standard operating procedure describes how to use the Vapor Pin® Capsule.

Purpose

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the Vapor Pin® Capsule. The Vapor Pin® Capsule is used to house the Waterloo Membrane Sampler (WMS™-VP) to passively collect sub-slab soil-gas.

Equipment Needed

- Vapor Pin® Sampling Device
- Vapor Pin® Sleeve
- Vapor Pin® Cap
- Vapor Pin® Capsule
- Waterloo Membrane Sampler (WMS-VP) Kit
- Installation/Extraction Tool
- Rotary Hammer Drill
 - 5/8 - Inch (16mm) diameter hammer bit
 - 1 1/2 - Inch (38mm) diameter hammer bit for flush mount applications
- 3/4- Inch (19mm) diameter bottle brush
- Wet/Dry Vacuum with HEPA filter (optional)
- Dead Blow Hammer
- 3/4" diameter closed cell foam rod to seal the hole prior to applying patching material
- VOC-free hole patching material (hydraulic cement) and a putty knife or trowel
 - This is for repairing the hole following the extraction of the Vapor Pin® Sampling Device

How to House your Waterloo Membrane Sampler (WMS™-VP)

1. Assemble your Vapor Pin® Sampling Device as seen in (Figure 1).

Figure 1



2. Screw the Vapor Pin® Capsule into the base of the Vapor Pin® Sampling Device as seen in (Figure 2).

Figure 2

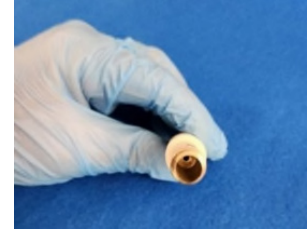


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3. Your Vapor Pin® Capsule (VPC) cap will be shipped already unthreaded. Once you have the VPC screwed into your Vapor Pin® Sampling Device, inspect the interior of the Capsule for potential blockages (Figure 3).

Figure 3



4. For the following instructions please handle the Waterloo Membrane Sampler (WMS™-VP) per manufactures specifications.
5. Remove your WMS™-VP from the packaging. Place the WMS™-VP vial into the Vapor Pin® Capsule. Make sure that the membrane end is facing the open end of the Vapor Pin® Capsule. Re-thread the Vapor Pin® Capsule cap to finger level tightness (Figures 4, 5 & 6).



Figure 4



Figure 5



Figure 6

6. Install your Vapor Pin® Sampling Device, with Vapor Pin® Capsule, into your Stick-Up/Flush-Mounted drilled hole (Figures 7 & 8). If Stick-Up Configuration use a cone to cover your pin and if Flush-Mounted Cover be sure to use either the Plastic Flush Mount Cover or Stainless Steel Secure Cover!

NOTE: Prior to leaving site, be sure your Vapor Pin® has a Vapor Pin® Plastic Cap on. If extensions are required per sampling plan/slab thickness/state or local guidance, thread extensions onto the Vapor Pin® Sampling Device prior to threading on the Vapor Pin® Capsule.



Figure 7



Figure 8



Figure 9

7. Post passive sampling of two to three weeks, use the Installation/Extraction Tool to remove the Vapor Pin® Sampling Device (Figure 9). Use the Spanner tool first if you are using a Flush-Mounted configuration With the Stainless Steel Secure Cover. and retrieve your WMS™-VP to send it back off to the lab. Please follow all handling instructions, per manufactures specifications, when retrieving and packaging up the WMS™-VP.