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Mr. Gabe Stivala, P.G
Cardno ATC
701 University Drive Suite 701
Sacramento, CA 95825

Subject: Indoor Air Quality Assessment and Additional Sub-Slab Work Plan

580 Market Place Shopping Center
Alameda County LOP No. RO 3097

Dear Mr. Stivala:

I have reviewed and approved the subject report. Please submit it to the regulatory agencies listed in the distribution section of the report. Should any of the agencies require it, I am prepared to declare, under penalty of perjury, that to the best of my knowledge, the information contained in the report is true and correct.

Sincerely,

Charles Gurney
Weingarten Realty Investors
2600 Citadel Plaza Drive
Houston, Texas 77008

Date: 1-19-15

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December 19, 2014

Ms. Karel Detterman
Alameda County
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

SUBJECT **Indoor Air Quality Assessment and Additional Sub-Slab Work Plan**
580 Market Place Shopping Center
3735–4065 East Castro Valley Boulevard, Castro Valley CA
Alameda County LOP Site Cleanup Case No. RO 3003097
Cardno ATC Project No: Z075000152

Ms. Detterman:

On behalf of Weingarten Realty Investors (Weingarten), Cardno ATC is formally submitting the attached *Indoor Air Quality Assessment and Additional Sub-Slab Work Plan,* as requested by the Alameda County Environmental Health Services (ACEH) in an email dated January 8, 2015. Cardno ATC originally submitted this scope as an attachment to an email on October 31, 2014.

Please contact Mr. Gabe Stivala, Cardno ATC's senior project manager for this site, at (916) 923-1097 or at gabe.stivala@cardno.com or with any questions regarding this report.

Sincerely,

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Enclosures:

Indoor Air Quality Assessment and Additional Sub-Slab Work Plan

cc: Mr. Chuck Gurney, Weingarten Realty Investors
Mr. Thomas J. Treacy, John Hancock Life Insurance Company USA

Scope of Work for Sub-Slab Vapor and Indoor Air Assessment

3735-4065 E. Castro Valley Blvd., Castro Valley CA

Alameda County LOP Case#RO0003097

This document describes the scope of work for sub-slab vapor (SSV) and indoor air quality (IAQ) assessment for the subject site and the adjacent units, and to evaluate a site specific attenuation factor across the building slab. The purpose of the work is to evaluate the potential degradation of indoor air quality compared to both the outside air and the projections obtained from modelling sub-slab vapor data, and to identify any VOCs being emitted into the building.

Sub-Slab Vapor Assessment

Cardno proposes to install and sample five (5) permanent SSV points. Cardno will install Vapor Pin devices (see Cox-Colvin Vapor Pin SOP attachment) distributed by Cox-Colvin & Associates, Inc. (Cox-Colvin) for each SSV point. In addition to installing and sampling the five (5) permanent SSV points, existing SSV point, SS3 will be destroyed and replaced with a Cox-Colvin Vapor Pin to create sub-slab point, SS3R. Three (3) SSV samples, including SS3R will be collected from the Dryclean 580 unit. One SSV sample will be collected at each adjacent unit (i.e., Verizon Wireless and AT&T). One (1) duplicate SSV sample will be collected in the Dryclean 580 unit. The proposed SSV locations are illustrated on the attached Figure (see Site Map).

The SSV points will be sampled using batch-certified clean 1-liter Summa canisters. Each canister will be fitted with a regulator that will be calibrated by the laboratory to ensure the SSV samples are collected over an approximately 30-minute period.

Sub-slab vapor samples will be collected in batch-certified 1-liter Summa canisters. Samples are collected using a SSV purging and sampling manifold consisting of a flow regulator, vacuum gauges, vacuum pump, shroud, and laboratory-prepared, gas-tight, opaque containers such as Summa™ canisters. Prior to use, Summa™ canisters are checked to ensure they are under the laboratory induced vacuum between 31 and 25 inches of mercury (in. Hg). New inert tubing is used to purge and sample each SSV well. Prior to purging and sampling each SSV well, the sampling manifold is connected to the gas-tight vacuum fitting or valve at the wellhead, and the downstream tubing and fittings are vacuum tested at approximately 24 to 28 in. Hg. Purging and sampling are conducted only on SSV wells when the tubing and fittings hold the applied vacuum for 5 minutes per vacuum gauge reading. The default 3 purge volume will be applied to each SSV well prior to sampling. Purging is conducted at a rate of 100 to 200 milliliters per minute (ml/min).

Prior to sampling, a helium leak test is performed at each SSV well, including a summa canister and its fittings, to check for leaks in the SSV annulus. To assess the potential for leaks in the SSV well annulus, a shroud is placed over the SSV well and summa canister and the shroud is filled with a measured amount of helium. Helium screening is performed in the field by drawing soil gas into a Tedlar bag via a lung-box and screening the contents of the Tedlar bag with a helium meter. The concentration of helium in the sample divided by the concentration of helium in the shroud provides a measure of the proportion of the sample attributable to leakage. A leak that comprises less than 5% of the sample is insignificant. Helium screening is also performed using laboratory analysis of the contents of the summa canister collected under the shroud. Sampling is conducted at approximately the same rate of purging, at 100 to 200 ml/min. Sub-slab vapor samples will be submitted under chain-of-custody protocol for the specified laboratory analyses. During SSV sample collection, the HVAC system will operate under normal conditions. Cardno will mark the proposed locations, use a private utility locator, and activate an underground service alert ticket 48 hours prior to the onset of field activities.

At a minimum, weather conditions (temperature, barometric pressure and precipitation), the sampling flow rate, the purge volume, the helium leak detection percentage results, the sample canister identification number, the method of sample collection, and the vacuum of the sampling canister at the start and end of sample collection (if applicable) are recorded on a log for each SSV well purged and sampled. Proposed SSV well locations may change based on site conditions.

The SSV samples will be submitted under chain of custody documentation to a state-certified laboratory and analyzed for the presence of VOCs (full scan) including BTEX compounds, chlorinated compounds, and fixed gases methane, carbon dioxide, oxygen + argon, and helium (leak detection compound). At least one (1) duplicate sample will be collected that will be used for QA/QC.

Indoor Air Quality Assessment

Cardno proposes to collect five (5) indoor ambient air samples and one (1) outdoor air sample using time release, individually-certified clean 6-liter Summa canisters. Each canister will be fitted with a regulator that is individually-certified clean by an analytical laboratory and will be calibrated by the laboratory to ensure air sample collection over an 8-hour period. Two (2) indoor air samples will be collected from the Dryclean 580 unit and from the adjacent Verizon Wireless unit. One (1) indoor air sample will be collected from the adjacent AT&T unit. One (1) duplicate sample will be collected in the Dryclean 580 unit. The samples will be collected in the occupied areas of each unit at a height between 3 and 5 feet above the floor. The units are in constant use, so a filter probe will be employed to keep incidental dust and airborne particles from entering the sample canister. The outdoor air sample will be collected from approximately 100 feet away from the site building in the prevailing up-wind direction concurrent with the indoor samples. The outdoor air sample will be positioned away from vegetation, automobiles, fuel tanks, and other sources of VOCs, and the sample will be collected from approximately 6 feet above the ground surface.

Prior to the indoor air sampling event, a building inspection and chemical inventory survey will be performed to identify any consumer and household products such as, cleaners, aerosol deodorants and similar products that may contain volatile compounds that could interfere with the sample analysis. If possible, these chemicals will be removed from the units at least two weeks in prior to sampling. During the site inspection the HVAC system will be evaluated. The HVAC system will operate under normal conditions during indoor air sample collection. Proposed indoor air sampling locations may change based on site conditions.

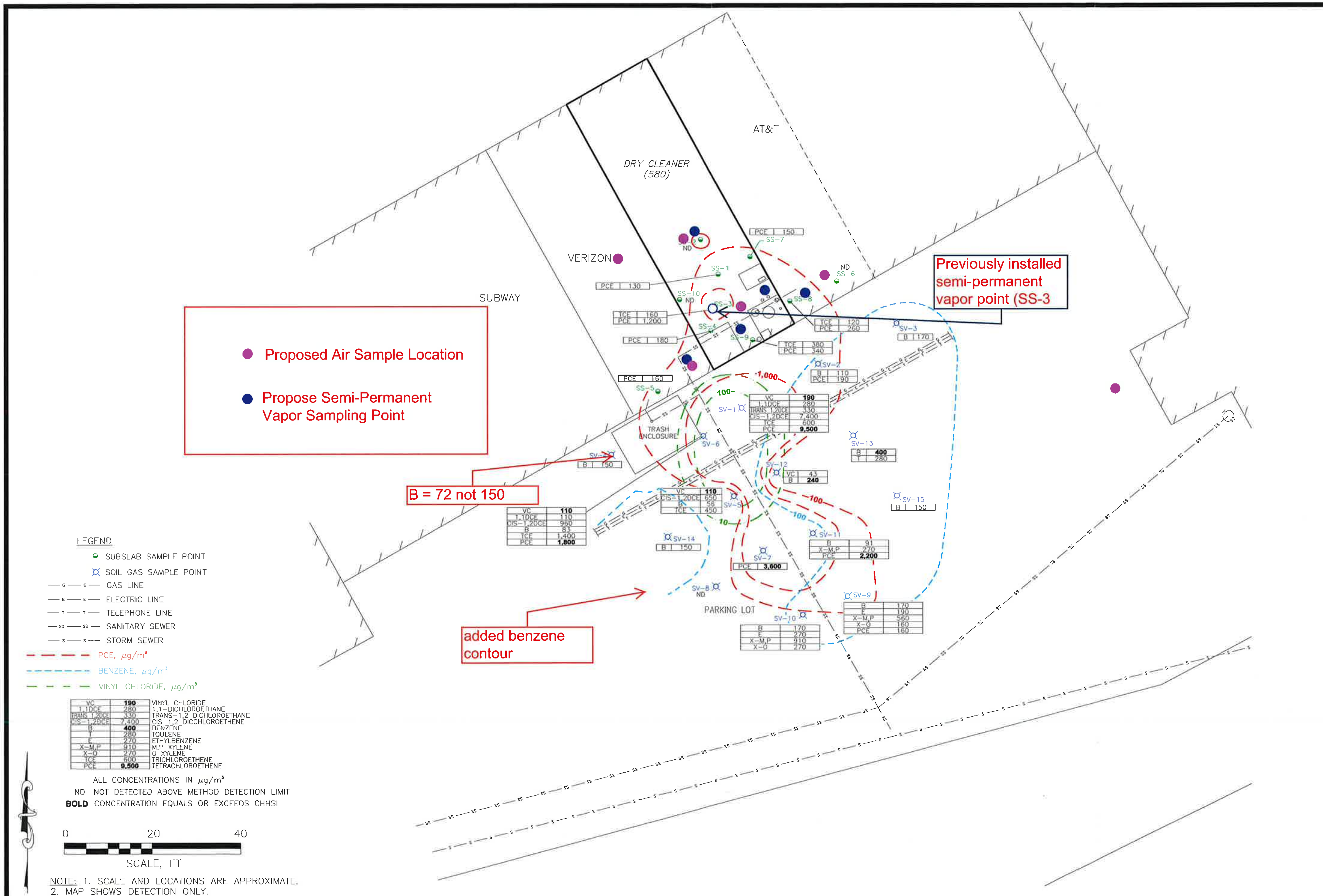
The air samples will be submitted under chain of custody documentation to a state-certified laboratory and analyzed for the presence of VOCs (full scan) including BTEX compounds, chlorinated compounds, and fixed gases methane, carbon dioxide, and oxygen + argon. At least one (1) duplicate sample will be collected that will be used for QA/QC.

Attenuation Factor Calculation

The site specific building attenuation factor will be calculated by comparing constituent concentrations in sub-slab vapor samples to those in indoor air samples.

RWQCB Environmental Screening Levels

As agreed to with the Alameda County LOP, analytical results of sub-slab vapor and indoor air will be evaluated to San Francisco Bay- Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (December 2013) Tables E-2 and E-3.



SHALLOW SOIL VAPOR CONCENTRATIONS - DETECTED

DRYCLEAN 580
3735 E. CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CA

FIGURE 4

PROJECT NUMBER: 75.75354.0002
DATE: 3/27/14
APPROVED BY: GS
DRAWN BY: BK

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Standard Operating Procedure Installation and Extraction of the Vapor Pin™

December 3, 2013

Scope:

This standard operating procedure describes the installation and extraction of the Vapor Pin™ for use in sub-slab soil-gas sampling.

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™ for the collection of sub-slab soil-gas samples.

Equipment Needed:

- Assembled Vapor Pin™ [Vapor Pin™ and silicone sleeve (Figure 1)];
- Hammer drill;
- 5/8-inch diameter hammer bit (Hilti™ TE-YX 5/8" x 22" #00206514 or equivalent);
- 1½-inch diameter hammer bit (Hilti™ TE-YX 1½" x 23" #00293032 or equivalent) for flush mount applications;
- ¾-inch diameter bottle brush;
- Wet/dry vacuum with HEPA filter (optional);
- Vapor Pin™ installation/extraction tool;
- Dead blow hammer;
- Vapor Pin™ flush mount cover, if desired;
- Vapor Pin™ protective cap; and
- VOC-free hole patching material (hydraulic cement) and putty knife or trowel.

Figure 1. Assembled Vapor Pin™.

Installation Procedure:

1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.

2) Set up wet/dry vacuum to collect drill cuttings.

3) If a flush mount installation is required, drill a 1½-inch diameter hole at least 1¾-inches into the slab.

4) Drill a 5/8-inch diameter hole through the slab and approximately 1-inch into the underlying soil to form a void.

5) Remove the drill bit, brush the hole with the bottle brush, and remove the loose cuttings with the vacuum.

6) Place the lower end of Vapor Pin™ assembly into the drilled hole. Place the small hole located in the handle of the extraction/installation tool over the Vapor Pin™ to protect the barb fitting and cap, and tap the Vapor Pin™ into place using a dead blow hammer (Figure 2). Make sure

the extraction/installation tool is aligned parallel to the Vapor Pin™ to avoid damaging the barb fitting.

Figure 2. Installing the Vapor Pin™.

For flush mount installations, unscrew the threaded coupling from the installation/extraction handle and use the hole in the end of the tool to assist with the installation (Figure 3).

Figure 3. Flush-mount installation.

During installation, the silicone sleeve will form a slight bulge between the slab and the Vapor Pin™ shoulder. Place the protective cap on Vapor Pin™ to prevent vapor loss prior to sampling (Figure 4).

Figure 4. Installed Vapor Pin™.

7) For flush mount installations, cover the Vapor Pin™ with a flush mount cover, using either the plastic cover or the optional stainless-steel Secure Cover.

8) Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to equilibrate prior to sampling.

9) Remove protective cap and connect sample tubing to the barb fitting of the Vapor Pin™ (Figure 5).

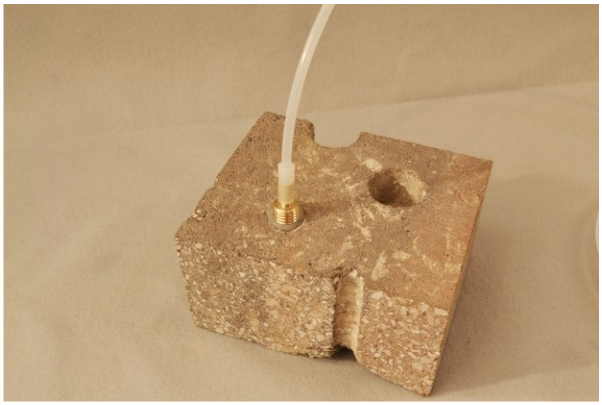

Figure 5. Vapor Pin™ sample connection.

10) Conduct leak tests in accordance with applicable guidance. If the method of leak testing is not specified, an attractive alternative can be the use of a water dam and vacuum pump, as described in SOP Leak Testing the Vapor Pin™ via Mechanical Means (Figure 6).

Figure 6. Water dam used for leak detection.

11) Collect sub-slab soil gas sample. When finished sampling, replace the protective cap and flush mount cover until the next sampling event. If the sampling is complete, extract the Vapor Pin™.

Extraction Procedure:

1) Remove the protective cap, and thread the installation/extraction tool onto the barrel of the Vapor Pin™ (Figure 7). Continue turning the tool to assist in extraction, then pull the Vapor Pin™ from the hole.

2) Fill the void with hydraulic cement and smooth with the trowel or putty knife. Urethane caulk is widely recommended for installing radon systems and can provide a tight seal, but it could also be a source of VOCs during subsequent sampling.

Figure 7. Removing the Vapor Pin™.

3) Prior to reuse, remove the silicone sleeve and discard. Decontaminate the Vapor Pin™ in a hot water and Alconox® wash, then heat in an oven to a temperature of 130° C.

The Vapor Pin™ to designed be used repeatedly; however, replacement parts and supplies will be required periodically. These parts are available on-line at www.CoxColvin.com.

Replacement Parts:

Vapor Pin™ Kit Case - VPC001
Vapor Pins™ - VPIN0522
Silicone Sleeves - VPTS077
Installation/Extraction Tool - VPIE023
Protective Caps - VPPC010
Flush Mount Covers - VPFM050
Water Dam - VPWD004
Brush - VPB026
Secure Cover - VPSCSS001
Spanner Wrench - VPSPAN001