

**Via E-Mail**

June 18, 2015

Grey Mine, LLC  
126 Main Street - #250  
Cold Spring Harbor, NY 11724

Attention: Ms. Amy Stevens

Re: Indoor Air Assessment  
Former Pope's Dry Cleaners  
Raleigh, North Carolina  
H&H Project No. GML-001

Dear Amy:

**1.0 Introduction and Background**

Hart & Hickman, PC (H&H) is pleased to present this report documenting indoor air assessment activities at the former Pope's Dry Cleaners facility located at 7713 Lead Mine Road in Raleigh, North Carolina. A site location map is include as Figure 1. Active dry-cleaning operations were conducted at the facility from 1987 to 2005. Subsequently, site operations were converted to dry-cleaning pick-up/drop-off services only until operations ceased in 2015.

The site was previously enrolled in the North Carolina Department of Environment and Natural Resources (DENR) Dry-cleaning Solvent Cleanup Act (DSCA) Program (DSCA Site # 92-0023). The site was closed and was issued a Notice of No Further Action on July 24, 2014. At the time of site closure, the former Pope's Dry Cleaners facility was operating as a pick-up/drop-off location with no dry cleaning being conducted on-site; however, potential off-gassing from dry-cleaned clothes prevented the collection of reliable indoor air data from the dry cleaner space. As such, a land use restriction (LUR) was included in the deed as part of the site's closure that requires indoor air testing after the dry cleaning business vacates the building and prior to a new tenant moving in.

Based on information provided by Grey Mine, LLC, the dry cleaning pick-up/drop-off operations have ceased and the space has been vacated. The process of finding a new tenant for the space has begun. In accordance with the LUR on the deed and to maintain closure status, an indoor air sample was collected in the former dry-cleaning space. A description of the indoor air assessment activities and results is provided.

## 2.0 Indoor Air Assessment

On June 3 2015, H&H visited the site to confirm the presence or absence of any potential indoor air contamination sources and to purge the space of potential residual vapors from the pickup/drop off operation. After confirming that no indoor air contaminant sources were present, H&H purged the space of potential residual vapor by utilizing a commercial grade high volume/high velocity fan inside the space with all doors open for an approximate 4-hour period. Following purging, an approximate 7-day “stabilization” period was allowed prior to sample collection. During this 7-day period, the tenant space remained vacant with the doors closed and the HVAC system operating.

On June 10, 2015, H&H returned to the space to collect the indoor air sample. The indoor air sample (IAS-1) was collected in a central building location as indicated on Figure 2. An indoor air building survey and sampling form was completed during the sampling event and is provided in Appendix A. The indoor air sample was collected using a Summa® canister connected to an in-line flow controller set to collect the sample over an 8-hour period. In addition, a 3-ft long sampling cane was connected to the flow controller so that the sample intake point was positioned approximately 5 ft above grade (typical breathing zone height). During the sampling event, the space was vacant and the HVAC system was operating. A background sample was not collected concurrent with the indoor air sample, because a background sample was already collected during previous indoor air assessment at the site.

Following sampling, the Summa® canister was shipped under standard chain-of-custody procedures to ConTest Analytical Laboratory for analysis of tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, and vinyl chloride by EPA Method TO-15. The results of the analysis are discussed in the following section.

### 3.0 Indoor Air Results

The analytical results of the indoor air sample (IAS-1) indicate a concentration of PCE equal to the North Carolina Division of Waste Management (DWM) Non-Residential Indoor Air Screening level (IASL) of  $35 \mu\text{g}/\text{m}^3$ . An estimated concentration of TCE was also detected in the indoor air sample ( $0.072 \text{ J } \mu\text{g}/\text{m}^3$ ), but the detected concentration is below the DWM Non-Residential IASL of  $1.75 \mu\text{g}/\text{m}^3$  for TCE. No other compounds selected for analysis were detected above laboratory reporting limits. The laboratory analytical results are summarized on Table 1, and the laboratory analytical report is included in Appendix B.

To further evaluate the indoor air results, H&H completed DSCA's Indoor Air Risk Calculator to determine the calculated cumulative risk and hazard index for an industrial worker associated with the detected concentrations. The threshold for site closure in the DSCA Program is a calculated cumulative carcinogenic risk less than  $1 \times 10^{-5}$  and a calculated non-carcinogenic hazard index less than 1. Based on the concentrations detected in IAS-1, the calculated cumulative carcinogenic risk level is  $7.66 \times 10^{-7}$  and the hazard index is 0.21. A copy of the risk calculator is provided in Appendix C.

### 4.0 Summary and Recommendations

H&H conducted indoor air assessment activities at the former Pope's Dry Cleaners facility located at 7713 Lead Mine Road in Raleigh, North Carolina to evaluate indoor air concentrations prior to the facility being occupied by a new tenant. The site was previously enrolled in the DENR DSCA Program (DSCA Site # 92-0023) and was issued a Notice of No Further Action in

July 2014. At the time of site closure, the former Pope's Dry-Cleaners facility was operating as a pick-up/drop-off location and the presence of dry-cleaned clothes prevented the collection of reliable indoor air data from the dry cleaner space. As such, a LUR was included in the deed as part of the site's closure requiring indoor air testing after the dry-cleaning business vacates the building and prior to a new tenant moving in. The dry cleaning pick-up/drop-off operations ceased in 2015, and the space is currently vacant. In accordance with the LUR on the deed and to maintain closure status, an indoor air sample was collected in the vacant former dry-cleaning space prior to occupancy by a new tenant.

The indoor air assessment included the collection of one indoor air sample (IAS-1) inside the former Pope's Dry Cleaning space. PCE and TCE were detected in the indoor air sample (IAS-1), but at concentrations equal to or below the DWM Non-Residential IASLs. Based on the detected indoor air concentrations, the calculated cumulative carcinogenic risk is  $7.66 \times 10^{-7}$  and the hazard index is 0.21. These values are below the current acceptable thresholds. H&H recommends providing a copy of this report to the DSCA Program to confirm that the risk levels are acceptable and no further action is needed.

H&H appreciates the opportunity to work with you on this project. If you have any questions or require additional information, please do not hesitate to contact our office at 704-586-0007.

Very truly yours,

*Hart & Hickman, PC*



John Lopez  
Project Geologist

Attachments



Christie Zawtocki, PE  
Principal

**TABLE**

**Table 1**  
**Summary of Indoor Air Analytical Data**  
**Former Pope's Dry Cleaning**  
**Raleigh, North Carolina**  
**H&H Job No. GML-001**

Sample ID	Sample Location	Sampling Date	Analytical Method	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Vinyl Chloride
IAS-1	Former Dry Cleaner	06/10/15	TO-15	35	0.072 J	<0.14	<0.14	<0.090
DWM Non-Residential Indoor Air Screening Level (LICR = $1 \times 10^{-5}$ and HI = 0.2)				35.0	1.75	NS	NS	27.9
				µg/m <sup>3</sup>				

**Notes**

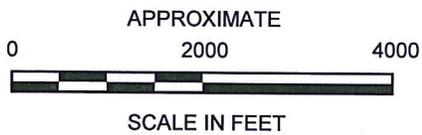
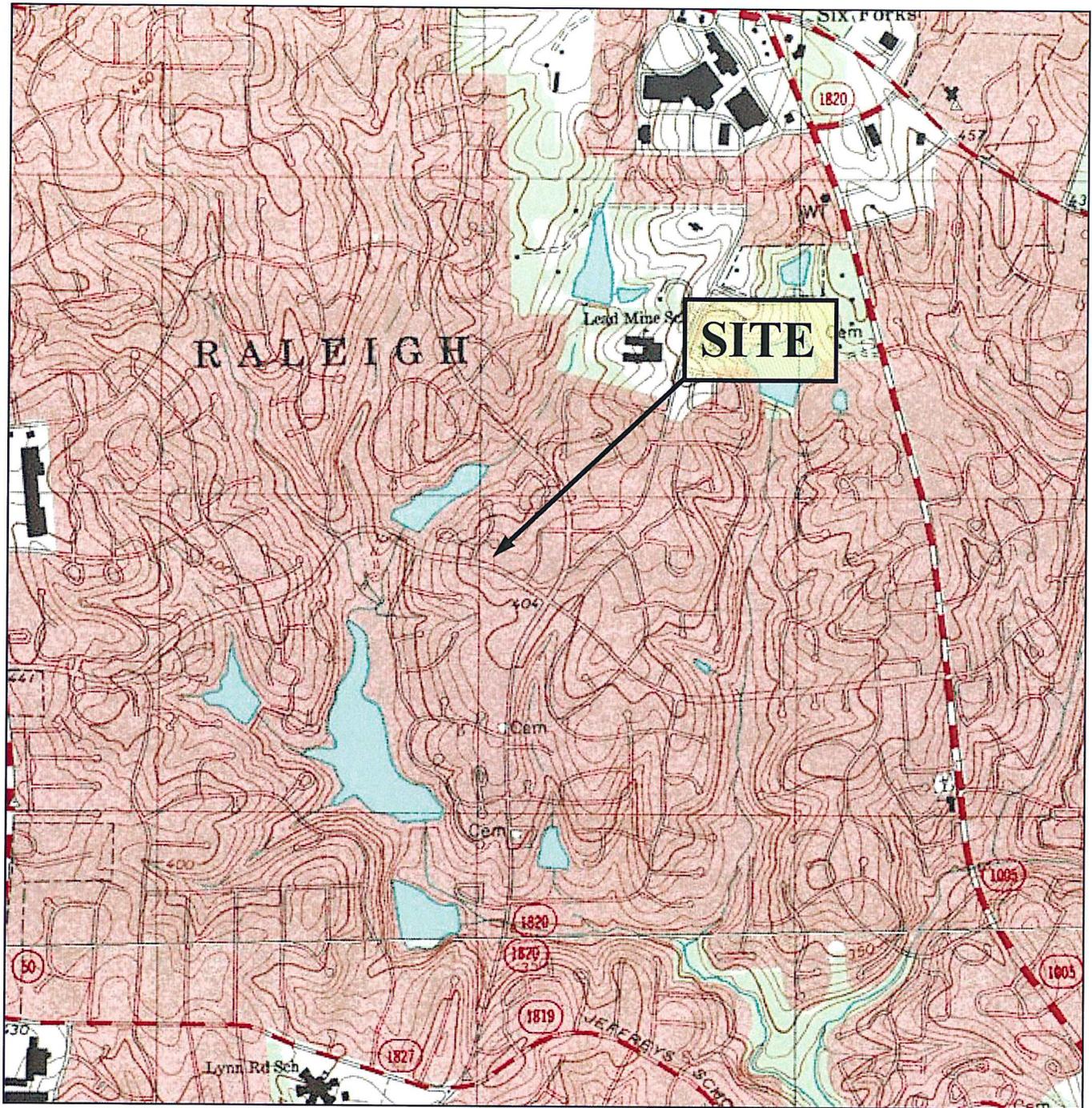
NS = Not Specified

µg/m<sup>3</sup> = micrograms per cubic meter

LICR = Lifetime Incremental Cancer Risk

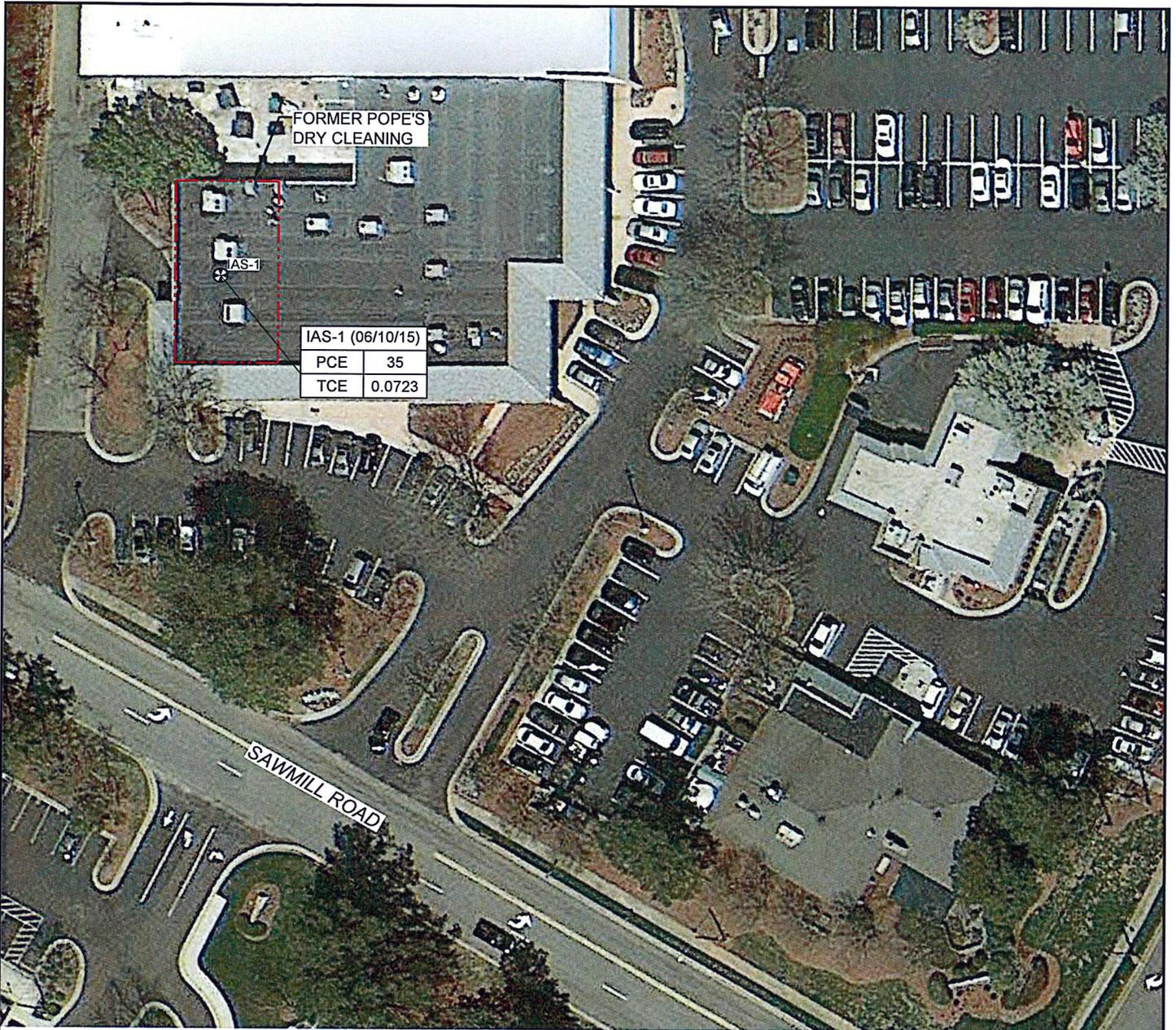
HI = Non-carcinogenic hazard index

## **FIGURES**



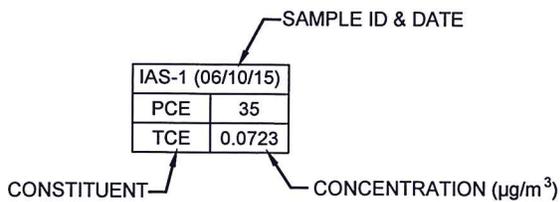
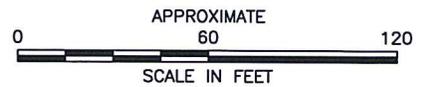
**HICKORY, NORTH CAROLINA 1993**  
 U.S.G.S. QUADRANGLE MAP  
 7.5 MINUTE SERIES (TOPOGRAPHIC)

<b>SITE LOCATION MAP</b>	
FORMER POPE'S DRY CLEANING 7713 LEAD MINE ROAD RALEIGH, NORTH CAROLINA	
	2923 S. Tryon Street, Suite 100 Charlotte, NC 28203 704.586.0007(p) 704.586.0373(f)
DATE: 06/18/2015	REVISION NO: 0
JOB NO: GML-001	FIGURE NO: 1



**LEGEND**

- - - - - SITE PROPERTY BOUNDARY
- INDOOR AIR SAMPLE LOCATION



<b>TITLE</b>	<b>INDOOR AIR SAMPLE LOCATION MAP</b>	
<b>PROJECT</b>	<b>FORMER POPE'S DRY CLEANING 7713 LEAD MINE ROAD RALEIGH, NORTH CAROLINA</b>	
		2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) License # C-1269 / #C-245 Geology
<b>DATE:</b> 06-17-15	<b>REVISION NO. 0</b>	
<b>JOB NO. GML-001</b>	<b>FIGURE NO. 2</b>	

**Appendix A**

**DWM Indoor Air Building Survey and Sampling Form**

DWM INDOOR AIR BUILDING SURVEY  
and SAMPLING FORM

Site Name: FORMER POPE'S DRY-CLEANING DSCAID#: 92-0023  
Preparer's name: JOHN LOPEZ Date: 6/10/15  
Preparer's affiliation: M+H Phone #: 704 586 0007

Part I - Occupants - VACANT

Building Address: 7713 LEAD MINE RD RALEIGH NC  
Property Contact: VACANT Owner / Renter / other: \_\_\_\_\_  
Contact's Phone: home ( ) \_\_\_\_\_ work ( ) \_\_\_\_\_ cell ( ) \_\_\_\_\_  
# of Building occupants: Children under age 13 \_\_\_\_\_ Children age 13-18 \_\_\_\_\_ Adults \_\_\_\_\_

Part II - Building Characteristics

Building type: residential / multi-family residential / office / strip mall / commercial / industrial  
Describe building: Multi tenant shopping center Year constructed: unk  
SLAB ON GRADE  
Sensitive population: day care / nursing home / hospital / school / other (specify): \_\_\_\_\_  
Number of floors below grade: \_\_\_\_\_ (full basement / crawl space / slab on grade)  
Number of floors at or above grade: 1  
Depth of basement below grade surface: \_\_\_\_\_ ft. Basement size: \_\_\_\_\_ ft<sup>2</sup> NA  
Basement floor construction: concrete / dirt / floating / stone / other (specify): \_\_\_\_\_ NA  
Foundation walls: poured concrete / cinder blocks / stone / other (specify) \_\_\_\_\_ NA  
Basement sump present? Yes / No Sump pump? Yes / No Water in sump? Yes / No NA  
Type of heating system (circle all that apply):  
hot air circulation / hot air radiation / wood / steam radiation  
heat pump / hot water radiation / kerosene heater / electric baseboard  
other (specify): \_\_\_\_\_  
Type of ventilation system (circle all that apply):  
central air conditioning / mechanical fans / bathroom ventilation fans  
individual air conditioning units / kitchen range hood fan / outside air intake  
other (specify): \_\_\_\_\_  
Type of fuel utilized (circle all that apply):  
Natural gas / electric / fuel oil / wood / coal / solar / kerosene  
Are the basement walls or floor sealed with waterproof paint or epoxy coatings? Yes / No NA

Is there a whole house fan? Yes / No

Septic system? Yes / Yes (but not used) / No

Irrigation/private well? Yes / Yes (but not used) / No

Type of ground cover outside of building: grass / concrete / asphalt / other (specify) \_\_\_\_\_

Existing subsurface depressurization (radon) system in place? Yes / No active / passive

Sub-slab vapor/moisture barrier in place? Yes / No unknown

Type of barrier: \_\_\_\_\_

Part III - Outside Contaminant Sources

Other stationary sources nearby (gas stations, emission stacks, etc.): HEAVY TRAFFIC None

Heavy vehicular traffic nearby (or other mobile sources): HEAVY TRAFFIC

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)	
Gasoline storage cans		NA	
Gas-powered equipment		↓	
Kerosene storage cans			
Paints / thinners / strippers			
Cleaning solvents			
Oven cleaners			
Carpet / upholstery cleaners			
Other house cleaning products			
Moth balls			
Polishes / waxes			
Insecticides			
Furniture / floor polish			
Nail polish / polish remover			
Hairspray			
Cologne / perfume			
Air fresheners			
Fuel tank (inside building)			NA
Wood stove or fireplace			NA
New furniture / upholstery		NA	
New carpeting / flooring		NA	
Hobbies - glues, paints, etc.		NA	

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes / No VACANT How often? \_\_\_\_\_

Last time someone smoked in the building? \_\_\_\_\_ hours / days ago

Does the building have an attached garage directly connected to living space? Yes / No

If so, is a car usually parked in the garage? Yes / No

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? Yes / No NA

Do the occupants of the building have their clothes dry cleaned? Yes / No

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? Yes / No VACANT

If yes, what types of solvents are used? \_\_\_\_\_

If yes, are their clothes washed at work? Yes / No

Have any pesticides/herbicides been applied around the building or in the yard? Yes / No

If so, when and which chemicals? \_\_\_\_\_

Has there ever been a fire in the building? Yes / No If yes, when? \_\_\_\_\_

Has painting or staining been done in the building in the last 6 months? Yes / No

If yes, when \_\_\_\_\_ and where? \_\_\_\_\_

Part VI – Sampling Information

Sample Technician: JEFFERY OLLISON Phone number: (336) 214 - 2417

Sample Source: Indoor Air / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas

Sampler Type: Tedlar bag / Sorbent / Stainless Steel Canister / Other (specify): \_\_\_\_\_

Analytical Method: TO-15 / TO-17 / other: \_\_\_\_\_ Cert. Laboratory: \_\_\_\_\_

Sample locations (floor, room):

Field ID # 1A5 - \_\_\_\_\_ Field ID # \_\_\_\_\_ - \_\_\_\_\_

Field ID # \_\_\_\_\_ - \_\_\_\_\_ Field ID # \_\_\_\_\_ - \_\_\_\_\_

Were "Instructions for Occupants" followed? Yes / No VACANT

If not, describe modifications: \_\_\_\_\_

Provide Drawing of Sample Location(s) in Building

SEE ATTACHED FIGURE 2

Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? Yes No

Describe the general weather conditions: clear warm

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

HVAC fan operational during SAMPLING

(Adapted from the NJDEP Vapor Intrusion Guidance, October 2005)

**Appendix B**  
**Laboratory Analytical Report**

June 16, 2015

John Lopez  
Hart & Hickman - Charlotte, NC  
2923 South Tryon Street, Suite 100  
Charlotte, NC 28203

Project Location: Pope's Dry Cleaners  
Client Job Number:  
Project Number: GML.001  
Laboratory Work Order Number: 15F0716

Enclosed are results of analyses for samples received by the laboratory on June 11, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa A. Worthington  
Project Manager



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Hart & Hickman - Charlotte, NC  
2923 South Tryon Street, Suite 100  
Charlotte, NC 28203  
ATTN: John Lopez

REPORT DATE: 6/16/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: GML.001

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15F0716

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

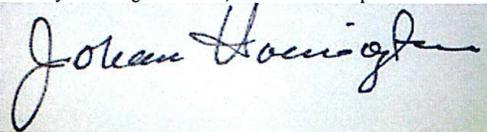
PROJECT LOCATION: Pope's Dry Cleaners

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
IAS-1	15F0716-01	Indoor air		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing. I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Johanna K. Harrington  
Manager, Laboratory Reporting

**ANALYTICAL RESULTS**

Project Location: Pope's Dry Cleaners  
 Date Received: 6/11/2015  
 Field Sample #: IAS-1  
 Sample ID: 15F0716-01  
 Sample Matrix: Indoor air  
 Sampled: 6/10/2015 00:00

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1007  
 Canister Size: 6 liter  
 Flow Controller ID: 3010  
 Sample Type: 8 hr

Work Order: 15F0716  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -7  
 Receipt Vacuum(in Hg): -6.1  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
		RL	MDL		Results	RL			
cis-1,2-Dichloroethylene	ND	0.035	0.013		ND	0.14	0.702	6/15/15 23:56	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.0093		ND	0.14	0.702	6/15/15 23:56	TPH
Tetrachloroethylene	5.2	0.035	0.010		35	0.24	0.702	6/15/15 23:56	TPH
Trichloroethylene	0.013	0.035	0.010	J	0.072	0.19	0.702	6/15/15 23:56	TPH
Vinyl Chloride	ND	0.035	0.015		ND	0.090	0.702	6/15/15 23:56	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	119	70-130	6/15/15 23:56

**Sample Extraction Data**

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
15F0716-01 [IAS-1]	B124227	1.5	1	N/A	1000	400	855	06/15/15

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	Limit		
<b>Batch B124227 - TO-15 Prep</b>										
<b>Blank (B124227-BLK1)</b>					Prepared & Analyzed: 06/15/15					
cis-1,2-Dichloroethylene	ND	0.025								
trans-1,2-Dichloroethylene	ND	0.025								
Tetrachloroethylene	ND	0.025								
Trichloroethylene	ND	0.025								
Vinyl Chloride	ND	0.025								
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>9.34</i>				<i>8.00</i>	<i>117</i>	<i>70-130</i>			
<b>LCS (B124227-BS1)</b>					Prepared & Analyzed: 06/15/15					
cis-1,2-Dichloroethylene	4.27				5.00	85.4	70-130			
trans-1,2-Dichloroethylene	3.92				5.00	78.4	70-130			
Tetrachloroethylene	5.30				5.00	106	70-130			
Trichloroethylene	4.00				5.00	80.0	70-130			
Vinyl Chloride	3.79				5.00	75.8	70-130			
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>9.69</i>				<i>8.00</i>	<i>121</i>	<i>70-130</i>			

FLAG/QUALIFIER SUMMARY

- \* QC result is outside of established limits.
  - † Wide recovery limits established for difficult compound.
  - ‡ Wide RPD limits established for difficult compound.
  - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
cis-1,2-Dichloroethylene	AIHA,FL,NY,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,VA
Tetrachloroethylene	AIHA,FL,NJ,NY,VA
Trichloroethylene	AIHA,FL,NJ,NY,VA
Vinyl Chloride	AIHA,FL,NJ,NY,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2015
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2015
FL	Florida Department of Health	E871027 NELAP	06/30/2015
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2015
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2015





Ship Track Manage Learn FedEx Office®

Login

FedEx® Tracking

773814400184

Ship (PAU) date :  
Thur 6/11/2015

Raleigh, NC US



Delivered

Signed for by: KMCKEE

Actual delivery :  
Mon 6/15/2015 1:10 pm

EAST LONGMEADOW, MA US

2 Piece shipment

Travel History

Date/Time	Activity	Location
6/15/2015 - Monday		
1:10 pm	Delivered	East Longmeadow, MA
6/13/2015 - Saturday		
7:16 am	On FedEx vehicle for delivery	CHICOPPEE, MA
7:10 am	At local FedEx facility	CHICOPPEE, MA
1:18 am	Departed FedEx location	WELLINGTON, CT
6/12/2015 - Friday		
8:50 pm	Arrived at FedEx location	WELLINGTON, CT
6/11/2015 - Thursday		
10:09 pm	Left FedEx origin facility	DURHAM, NC
9:09 pm	Arrived at FedEx location	DURHAM, NC
8:05 pm	Picked up	DURHAM, NC
5:05 pm	In FedEx possession	RALEIGH, NC
4:55 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	773814400184	Service	FedEx Ground
Reference	80	Master tracking number	773814400184
Weight	8.3 lbs / 3.76 kgs	Dimensions	18x10x10 in.
Total pieces	2	Total shipment weight	10 lbs / 4.54 kgs
Packaging	Package		



Search

Customer Focus  
New Customer Center  
Small Business Center  
Service Guide  
Customer Support

Company Information  
About FedEx  
Careers  
Investor Relations

Featured Services  
FedEx One Rate  
FedEx SameDay  
FedEx Home Delivery  
Healthcare Solutions  
Online Retail Solutions  
Packaging Services  
Ancillary Clearance Services

Other Resources  
FedEx Compatible  
Developer Resource Center  
FedEx Ship Manager Software  
FedEx Mobile

Companies  
FedEx Express  
FedEx Ground  
FedEx Office  
FedEx Freight  
FedEx Custom Critical  
FedEx Trade Networks  
FedEx SupplyChain  
FedEx TechConnect

Follow FedEx

United States - English

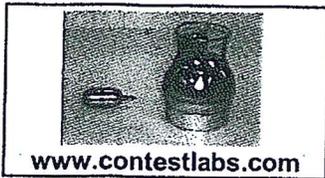
**Login Sample Receipt Checklist**  
**(Rejection Criteria Listing - Using Sample Acceptance Policy)**  
**Any False statement will be brought to the attention of Client**

<u>Question</u>	<u>Answer (True/False)</u>		<u>Comment</u>
	<u>T/F/NA</u>		
1) The coolers'/boxes' custody seal, if present, is intact.	NA		
2) The cooler or samples do not appear to have been compromised or tampered with.	T		
3) Samples were received on ice.	NA		
4) Cooler Temperature is acceptable.	NA		
5) Cooler Temperature is recorded.	NA		
6) COC is filled out in ink and legible.	T		
7) COC is filled out with all pertinent information.	T		
8) Field Sampler's name present on COC.	T		
9) Samples are received within Holding Time.	T		
10) Sample containers have legible labels.	T		
11) Containers/media are not broken or leaking and valves and caps are closed tightly.	T		
12) Sample collection date/times are provided.	T		
13) Appropriate sample/media containers are used.	T		
14) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T		
15) Trip blanks provided if applicable.	NA		

Doc #278 Rev. 5 October 2014

Who notified of False statements?  
 Log-In Technician Initials: PB

Date/Time:  
 Date/Time: 6.15.15  
 13:10



39 Spruce St.  
 East Longmeadow, MA.  
 01028  
 P: 413-525-2332  
 F: 413-525-6405

**AIR Only Receipt Checklist**

CLIENT NAME: Hart + Hickman RECEIVED BY: PB DATE: 6.15.15

- 1) Was the chain(s) of custody relinquished and signed?  Yes  No
- 2) Does the chain agree with the samples?  Yes  No  
 If not, explain:
- 3) Are all the samples in good condition?  Yes  No  
 If not, explain:
- 4) Are there any samples "On Hold"? Yes  No  Stored where:
- 5) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No   
 Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Location where samples are stored: Air Lab  
 Permission to subcontract samples? Yes No  
 (Walk-in clients only) if not already approved  
 Client Signature: \_\_\_\_\_

7) Number of cans Individually Certified or Batch Certified? None

Containers received at Con-Test		
	# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)	1	6 hr
Tedlar Bags		
TO-17 Tubes		
Regulators	1	8 hr
Restrictors		
Hg/Hopcalite Tube (NIOSH 6009)		
(TO-4A/ TO-10A/TO-13) PUFs		
PCB Florisil Tubes (NIOSH 5503)		
Air cassette		
PM 2.5/PM 10		
TO-11A Cartridges		
Other		

Unused Summas/PUF Media:

Unused Regulators:

- 1) Was all media (used & unused) checked into the WASP?
- 2) Were all returned summa cans, Restrictors & Regulators and PUF's documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments: 1007 3010

**Appendix C**  
**DSCA Risk Calculator**

**DSCA Indoor Air Risk Calculator - Cumulative Risk for Non-Residential Worker**  
Version 3, 1/16/2015

DSCA ID No: 92-0023  
 Name/Address of DSCA Site: Pope's Dry Cleaners  
 Name/Address of Sampling Location: Former Pope's Dry Cleaners 7713 Lead Mine Road Raleigh, North Carolina  
 Sampling Date: 6/10/2015  
 Sample ID: IAS-1

CAS	Chemical Name	Indoor Air Concentration	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
		(ug/m <sup>3</sup> )	(ug/m3)	(ug/m3)	CR	HI
127-18-4	Tetrachloroethylene	35	4.72E+01	3.50E+01	7.42E-07	0.1998
79-01-6	Trichloroethylene	0.072	2.99E+00	1.75E+00	2.41E-08	0.0082

<b>Cumulative:</b>	7.66E-07	0.21
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Notes:

1. Target indoor air concentrations calculated using the EPA Vapor Intrusion Screening Level (VISL) Calculator, which is based on the EPA Regional Screening Levels. Note that concentrations are equivalent to the Inactive Hazardous Sites Branch (IHSB) VISLs.
2. Cumulative carcinogenic risk (CR) and hazard index (HI) calculated using the following formulas, per the procedure detailed in the EPA Regional Screening Levels User's Guide.

$$CR = [(Conc_x/SL_x) + (Conc_y/SL_y) + (Conc_z/SL_z)] \times 10^{-6}$$

Where,

Conc = indoor air concentration for constituent of concern

SL = target indoor air concentration for constituent of concern based on carcinogenic risk of 10<sup>-6</sup>

$$HI = [(Conc_x/SL_x) + (Conc_y/SL_y) + (Conc_z/SL_z)]$$

Where,

Conc = indoor air concentration for constituent of concern

SL = target indoor air concentration for constituent of concern based on hazard quotient of 1\*

\* = Tabulated values are based on a hazard quotient of 0.2. These values are multiplied by 5 to convert to a hazard quotient of 1.