

Hazardous Waste Section
File Room Document Transmittal Sheet

Your Name: Kathleen Z. Lawson
EPA ID: NCD049773245
Facility Name: Trex Properties
Document Group: Corrective Action (CA)
Document Type: Other (O)
Description: Results of Additional Indoor Air and Outdoor Air Analyses - Leather Trimmings, LTD Building
Date of Doc: 4/28/2016
Author of Doc: Withers and Ravenel

File Room Use Only

NCD049773245

Date Recieved by File Room:

Month	Day	Year

Scanner's Initials:

Date Scanned:



WithersRavenel

Our People. Your Success.

April 28, 2016

EnviroAnalytics Group, LLC
1650 Des Peres Road, Suite 303
Saint Louis, MO 63131

Attn.: Mr. David Craig
Project Manager

RE: **Results of Additional Indoor Air and Outdoor Air Analyses**
Leather Trimmings, LTD Building
3110 Cullman Avenue, Charlotte NC
WR Project Number: 03130430.03

Dear Mr. Craig,

As authorized by EnviroAnalytics Group, LLC (EAG) purchase order #2946 WithersRavenel (WR) has completed the collection of additional indoor and outdoor air samples from the Leather Trimmings building located at 3110 Cullman Avenue in Charlotte, NC. The indoor and outdoor air samples were submitted to ESC Lab Sciences (ESC) where they were analyzed for 1,1 dichloroethene (1,1 DCE), cis 1,2 dichloroethene (cis 1,2 DCE), trans 1,2 dichloroethene (trans 1,2 DCE), tetrachloroethylene (PCE), trichloroethylene (TCE) and vinyl chloride (VC) by EPA Method TO 15 Selected Ion Method (SIM). Prior to collection of the samples, WR repaired cracks and gaps in the floor discovered during a survey of the building as recommended in our previous air sampling report for this site dated February 29, 2015. This report provides description and documentation of the floor repair and air sampling activities, and the results of the laboratory analyses.

Documentation of Floor Repair and Air Sampling Activities

Sealing of Floor Cracks and Gaps

One of the recommendations contained in our February 29, 2016 report of indoor and outdoor air sampling at the subject site was to survey the floor of the building and seal any significant cracks or gaps discovered. On March 31, 2016 WR representative Brian Bellis returned to the Leather Trimmings site to survey the floor of the Leather Trimmings building at 3110 Cullman Avenue, and to seal significant cracks or gaps discovered in the floor. Mr. Bellis was met by Mr. Patrick Speckman, who is the owner of the business and building and who provided access to the inside of the building. Photographs of the cracks and gaps observed during the survey are provided in **Attachment A**. Mr. Bellis used professional grade hydraulic cement mortar mix to seal the larger cracks and gaps in the floor, and a commercial concrete crack filler to seal the smaller cracks and gaps. Photographs of the repaired cracks and gaps are also provided in **Attachment A**.

Collection of Indoor and Outdoor Air Samples

On April 1, 2016, Mr. Bellis returned to the site to deploy summa canisters for the collection of additional indoor and outdoor air samples. The first indoor and outdoor air sampling event at the site was conducted at the end of August 2015 and the second was conducted in early February 2016. The purpose of the April 2016 sampling event was to evaluate indoor air conditions after the floor crack sealing work had been completed and under conditions during which the positive pressure ventilation system was in continuous operation over the 24-hour composite sampling period. The system was operating during the floor crack sealing work on March 31, 2016 and was still operating when WR returned to the site on the following day.

During the April 1, 2016 site visit, WR deployed four individually certified six-liter summa canisters each equipped with 24-hour flow controllers inside the building at the approximate locations shown in **Figure 1**. One of the canisters was placed on a table in the northern portion of the building where two offices are located (sample ID LT-IA-Office). The door between the office area and the warehouse area was closed at the time the canisters were deployed because this is the normal condition when the building is occupied. The air conditioning unit for the office space was allowed to remain in operation during collection of the 24-hour composite samples because that is also a normal operating condition.

Two of the four canisters were placed side by side on a cardboard bin located near the approximate center of the warehouse portion of the building (sample IDs LT-IA-Warehouse and LT-IA-Dup). These are the same sampling locations that WR utilized in August 2015 and February 2016. At Mr. Speckman's request and with EAG's approval, W&R placed a fourth canister in the west storage area (sample ID LT-IA-West Storage) to evaluate conditions in a work space that is used on a regular basis. Following deployment of the canisters, WR and Mr. Speckman left the building and locked all of the doors to the building.

W&R also deployed two individually certified six-liter summa canisters with 24-hour flow controllers at locations close to the northern and southern exterior walls of the building (sample IDs LT-OA-North and LT-OA-South). These are the same outdoor air sampling locations to the north and south of the building that WR utilized in August 2015 and February 2016.

WR returned to subject site approximately 24 hours later on April 2, 2016 to close and retrieve the summa canisters. Mr. Speckman provided access to the inside of the building and the positive pressure ventilation fan in the warehouse and the office air conditioning unit were observed to be operating when the canisters inside the building were closed and retrieved. The outdoor ambient air canisters did not appear as if they had been tampered with overnight. Copies of the WR field log book pages and the indoor air building survey and sampling form that document the sampling locations and starting and ending vacuum pressures for each canister are provided in **Attachment B**.

Results of Laboratory Analyses

The results of TO 15 SIM analysis of the indoor air and outdoor ambient air samples are summarized in the table below:

**Table 1: Additional Indoor Air and Outdoor Air Sampling Results
 Leather Trimmings Facility: 3110 Cullman Avenue, Charlotte NC**

Sample ID	Sampling Apparatus	ESC Canister ID Number	Start Sampling Date (mm/dd/yy)	End Sampling Date (mm/dd/yy)	1,1 Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethylene	Trichloroethylene	Vinyl chloride
					(ug/m ³)					
LT-IA-WAREHOUSE	Six Liter Summa	1416 SIM	4/1/2016	4/2/2016	<0.0793	0.348	<0.0793	12.6	5.18	<0.0511
LT-IA-DUP	Six Liter Summa	2208 SIM	4/1/2016	4/2/2016	<0.0793	0.242	<0.0793	3.81	2.96	<0.0511
LT-IA-OFFICE	Six Liter Summa	2128 SIM	4/1/2016	4/2/2016	<0.0793	0.278	<0.0793	5.26	4.49	<0.0511
LT-IA-WEST STORAGE	Six Liter Summa	1149 SIM	4/1/2016	4/2/2016	<0.0793	<0.0793	<0.0793	0.515	4.28	<0.0511
LT-OA-NORTH	Six Liter Summa	1390 SIM	4/1/2016	4/2/2016	<0.0793	<0.0793	<0.0793	0.800	0.206	<0.0511
LT-OA-SOUTH	Six Liter Summa	1055 SIM	4/1/2016	4/2/2016	<0.0793	<0.0793	<0.0793	1.21	0.765	<0.0511

Notes: IA = Indoor air sample. See Figure 1 for sample locations.
 OA = Outdoor ambient air sample. See Figure 1 for sample locations.
 All samples were 24-hour composites.
 ESC = ESC Lab Sciences: Certified laboratory that performed TO 15 SIM analyses.
 Samples analyzed by EPA TO15 Selected Ion Method. See lab report for details.

These results are summarized by location in **Figure 1**, and the ESC analytical reports and chain of custody records are provided in **Attachment C**.

Comparison of Indoor and Outdoor Air Sampling Results to NC and EPA Screening Levels

According to the North Carolina Department of Environment and Natural Resources (NCDENR) Division of Waste Management the Non-Residential Vapor Intrusion Screening Level for PCE is 35 ug/m³. This screening level is based on the May 2014 USEPA Regional Screening Level Target Air Concentrations and the USEPA Vapor Intrusion Screening Level Calculator. All of the detected concentrations of PCE in the indoor and outdoor air samples shown in **Table 1** are below this screening level. Neither EPA nor NCDENR (now the North Carolina Department of Environmental Quality or NCDEQ) has established a screening level for cis 1,2 DCE.

According to an e-mail from on-site EPA representative Ken Rhame to EAG (**Attachment D**), the screening level established by EPA for TCE in ambient air at the Leather Trimmings site is 8.8 ug/m³. The concentrations of TCE reported for the indoor air sampling locations shown in **Table 1** do not exceed this screening level.

Results of the additional indoor air sampling work discussed in this report indicate that sealing of the cracks and gaps in the building floor and continuous operation of the positive pressure ventilation system had the intended and desired result of mitigating the vapor intrusion situation effectively because none of the detected concentrations of PCE and TCE exceeded applicable vapor intrusion screening levels.

As noted in the email correspondence from David Craig to Ms. Kathy Lawson of NCDEQ on April 25, 2016, the analytical results from the most recent sampling event imply that the repairs done to the floor and operation of the fan are effectively mitigating the pathways for vapors entering the building. Trex therefore proposes leaving the ventilation system in its current configuration, and collecting additional indoor air samples during the winter time to determine if modifying the existing vapor intrusion mitigation system is warranted.

WR appreciates the opportunity to be of assistance to EAG. Should you have any questions or comments regarding the contents of this report, please do not hesitate to contact us at 919-469-3340.

Sincerely,



A handwritten signature in blue ink that reads "Brian J. Bellis".

Brian J. Bellis, P.G.
Project Manager

Enclosures:

Figure 1: Indoor Air and Ambient Air Locations and Analytical Results

Attachment A: Photo Documentation – April 2016

Attachment B: W&R Field Log Book Pages and Indoor Air Building Survey and Sampling Form

Attachment C: Laboratory Analytical Reports and Chain of Custody Records

Attachment D: EPA Screening Level for TCE



LT-OA-NORTH
 COLLECTION DATE: 4/1/16 to 4/2/16
 SAMPLE INTERVAL 24 HR

COMPOUND	RESULTS (ug/m ³)
1,1 DCE	<0.0793
cis 1,2 DCE	0.348
trans 1,2 DCE	<0.0793
PCE	1.21
TCE	0.765
VC	<0.0511

LT-IA-OFFICE
 COLLECTION DATE: 4/1/16 to 4/2/16
 SAMPLE INTERVAL 24 HR

COMPOUND	RESULTS (ug/m ³)
1,1 DCE	<0.0793
cis 1,2 DCE	0.278
trans 1,2 DCE	<0.0793
PCE	5.26
TCE	4.49
VC	<0.0511

LT-IA-DUP
 COLLECTION DATE: 4/1/16 to 4/2/16
 SAMPLE INTERVAL 24 HR

COMPOUND	RESULTS (ug/m ³)
1,1 DCE	<0.0793
cis 1,2 DCE	0.242
trans 1,2 DCE	<0.0793
PCE	3.81
TCE	2.96
VC	<0.0511

LT-IA-WEST STORAGE
 COLLECTION DATE: 4/1/16 to 4/2/16
 SAMPLE INTERVAL 24 HR

COMPOUND	RESULTS (ug/m ³)
1,1 DCE	<0.0793
cis 1,2 DCE	<0.0793
trans 1,2 DCE	<0.0793
PCE	0.515
TCE	4.28
VC	<0.0511

LT-IA-WAREHOUSE
 COLLECTION DATE: 4/1/16 to 4/2/16
 SAMPLE INTERVAL 24 HR

COMPOUND	RESULTS (ug/m ³)
1,1 DCE	<0.0793
cis 1,2 DCE	0.348
trans 1,2 DCE	<0.0793
PCE	12.6
TCE	5.18
VC	<0.0511

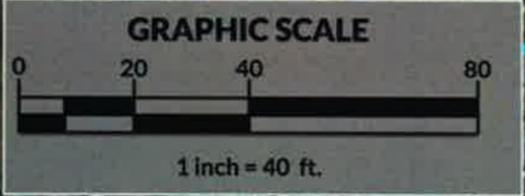
LT-OA-SOUTH
 COLLECTION DATE: 4/1/16 to 4/2/16
 SAMPLE INTERVAL 24 HR

COMPOUND	RESULTS (ug/m ³)
1,1 DCE	<0.0793
cis 1,2 DCE	<0.0793
trans 1,2 DCE	<0.0793
PCE	0.800
TCE	0.206
VC	<0.0511

LEGEND

- INDOOR OR AMBIENT AIR SAMPLING LOCATION
- BUILDING INTERIOR WALL

NOTES
 ALL RESULTS ARE IN ug/m³
 POSITION OF INTERIOR WALLS ARE APPROXIMATE



<p>WithersRavenel Engineers Planners Surveyors</p> <p>115 MacKenan Drive Cary, NC 27511 t: 919 469 3340 license #: C-0832 www.withersravenel.com</p>	<p>LEATHER TRIMMINGS 3110 CULLMAN AVE CHARLOTTE, NORTH CAROLINA</p>	<p>DRAWN BY: CF SCALE: 1"=40' FIGURE NO.: 1</p>
	<p>INDOOR AIR, AND AMBIENT AIR SAMPLING LOCATIONS AND ANALYTICAL RESULTS</p>	<p>APPROVED BY: BB DATE: 4/11/2016 PROJECT NO.: 02130430</p>

Attachment A:

**Photo Documentation – April 2016
Leather Trimmings: 3110 Cullman Avenue, Charlotte, NC**



Photo #1: Floor crack near northeast corner of Leather Trimmings building.

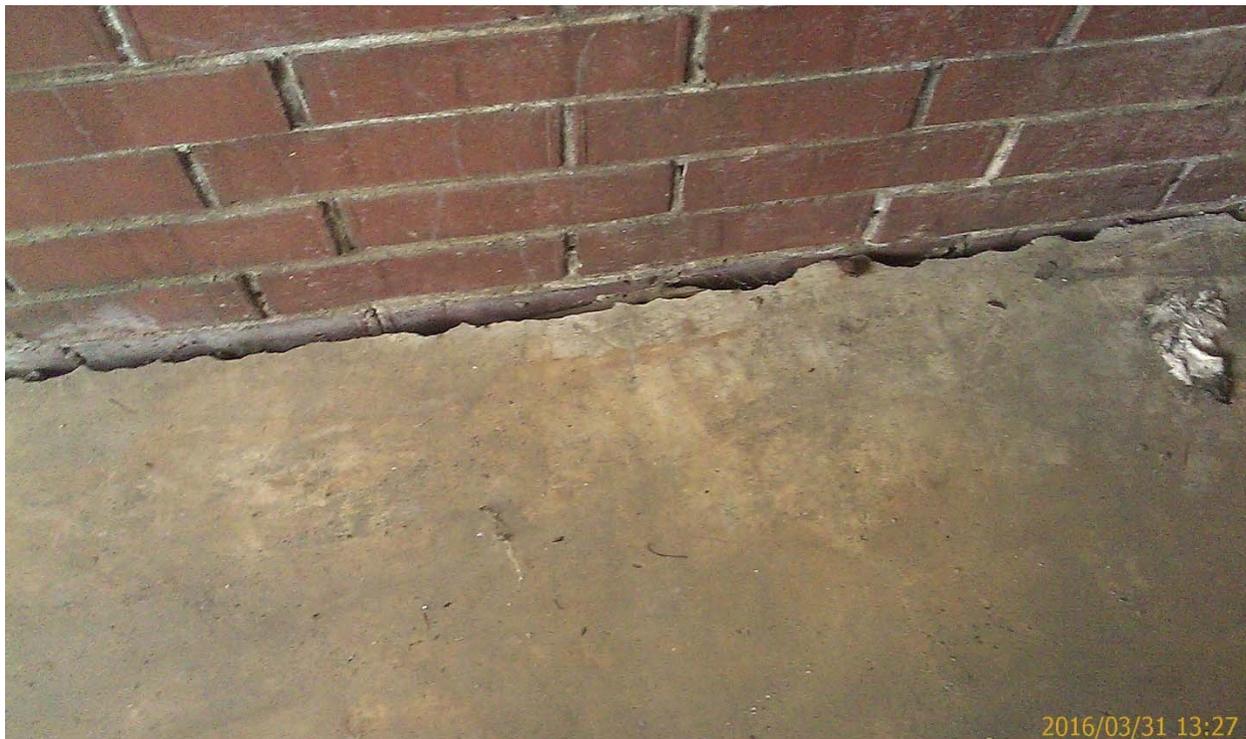


Photo #2: Gap between floor slab and eastern wall of Leather Trimmings building.



Photo #3: Hole in floor slab and gap between slab and floor and eastern wall of Leather Trimmings building.



Photo #4: Gap between floor and eastern wall of Leather Trimmings building.



Photo #5: Gap between floor and eastern wall of Leather Trimmings building.



Photo #6: Gap between floor slab and southern wall of Leather Trimmings building.



Photo #7: Hydraulic cement mortar mix used to patch significant gaps and cracks in floor.



Photo #8: Concrete crack sealant used to fill minor cracks and gaps in floor.



Photo #9: Repair to cracked slab and gap between floor slab and wall in the northeastern corner of Leather Trimmings building.

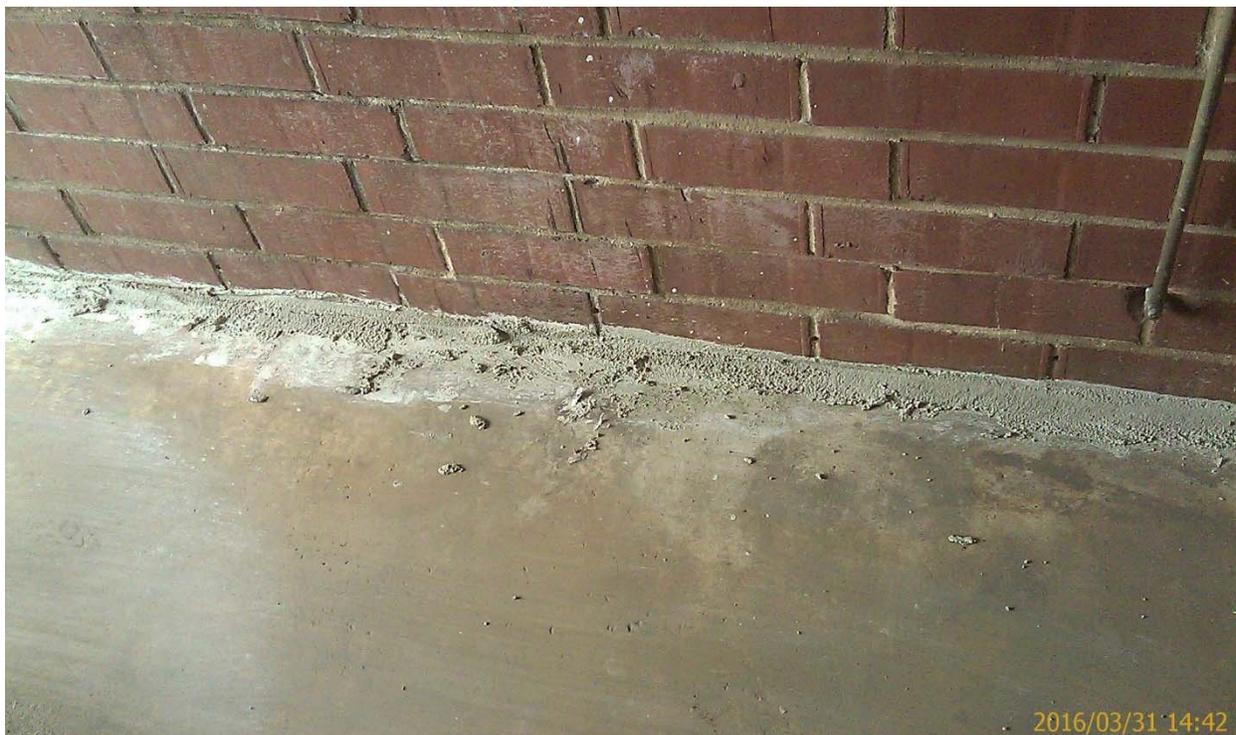


Photo #10: Repaired gap between floor slab and eastern wall of Leather Trimmings building.



Photo #11: Repairs to hole in floor and gap between floor and eastern wall of building.

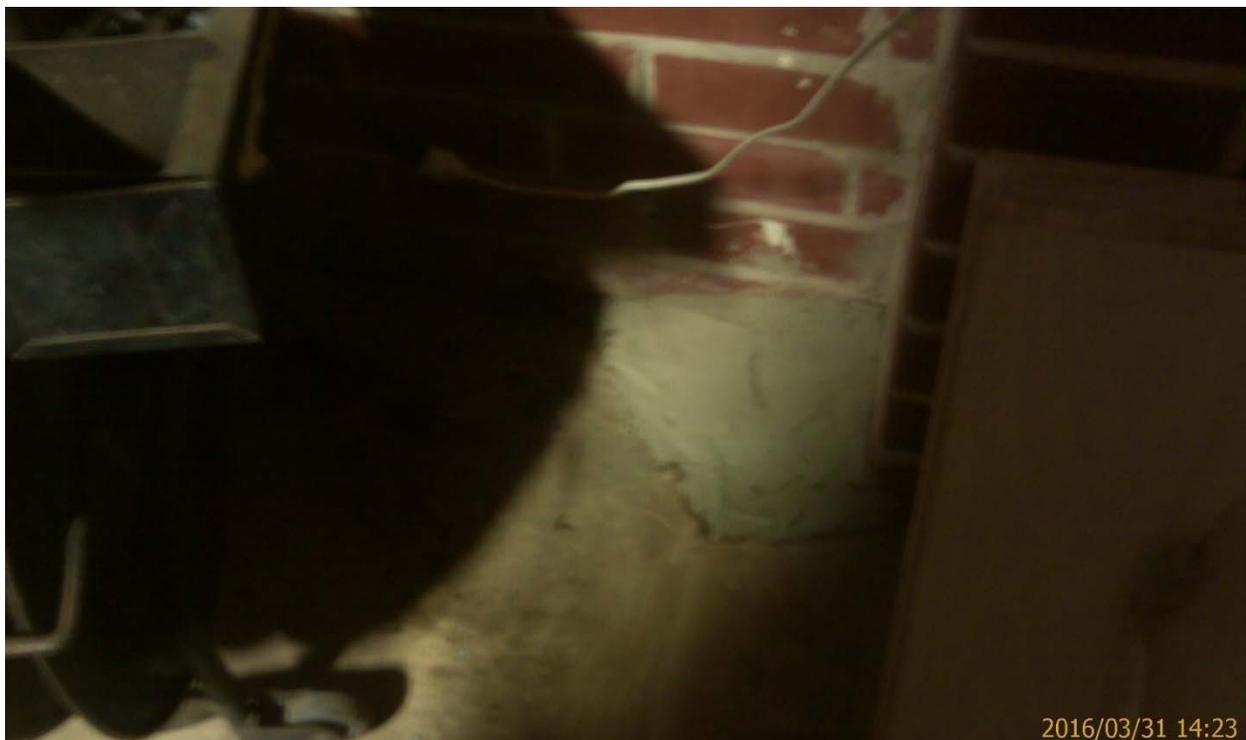


Photo #12: Repair to hole in floor next to eastern wall of building.



Photo #13: Repairs to small gap between floor slab and eastern wall of building.



Photo #14: Repairs to gap between floor slab and southern wall of building.



Photo #15: Outdoor air sample LT-OA-South at start of 24-hour composite sampling.



Photo #16: Location of sample LT-OA-South at start of 24-hour composite sampling.



Photo #17: Indoor air samples LT-IA-Warehouse and LT-IA-Dup at start of 24-hour composite sampling.

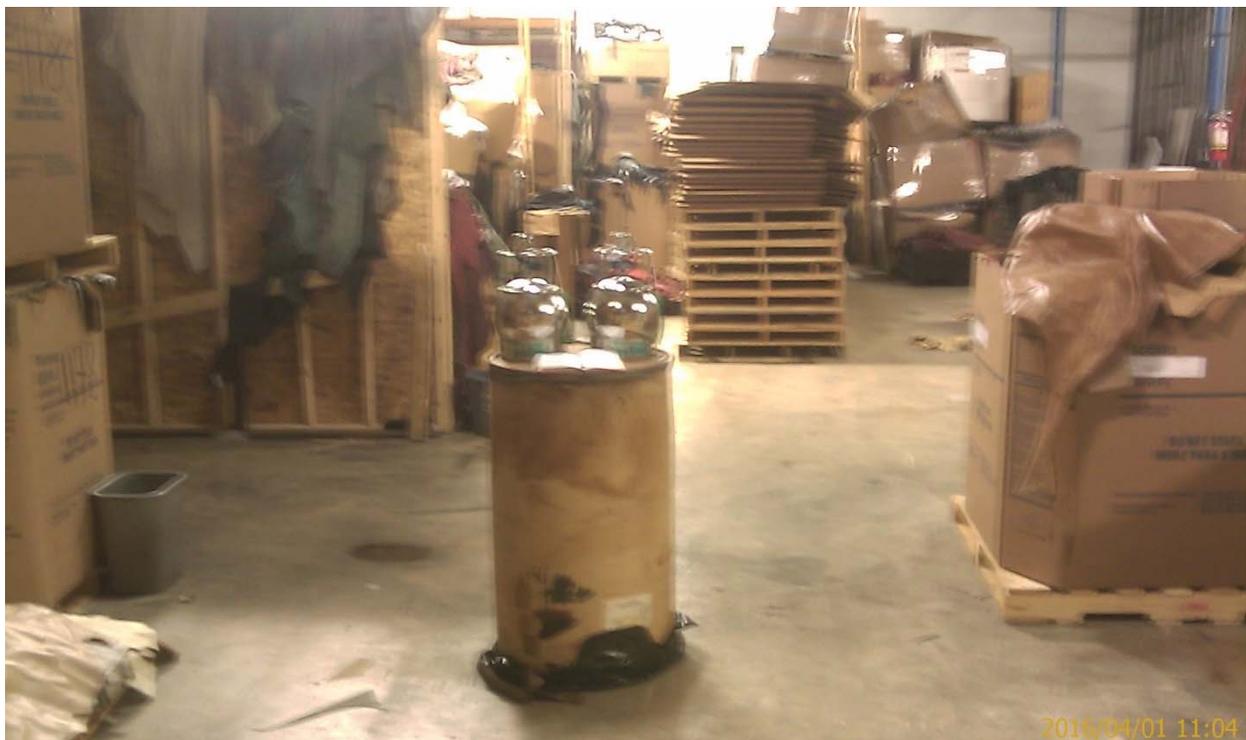


Photo #18: Location of samples LT-IA-Warehouse and LT-IA-Dup in approximate center of warehouse.



Photo #19: Indoor air sample LT-IA-West Storage at start of 24-hour composite sampling period.



Photo #20: Location of indoor air sample LT-IA-West Storage.



Photo #21: Indoor air sample LT-IA-Office at start of 24-hour composite sampling period.



Photo #22: Location of sample LT-IA-Office.



Photo #23: Outdoor air sample LT-OA-North at start of 24-hour sampling period.



Photo #24: Location of outdoor air sample LT-OA-North.



Photo #25: Wind direction was out of southwest at about 5 to 10 mph just prior to the start of 24-hour composite indoor and outdoor air sampling at Leather Trimmings building.



Photo #26: Retrieval of sample LT-OA-South after 24-hours had elapsed.



Photo #27: Retrieval of samples LT-IA-Warehouse and LT-IA-Dup after 24-hours had elapsed.



Photo #28: Retrieval of sample LT-IA-West Storage after 24-hours had elapsed.



Photo #29: Retrieval of sample LT-IA-Office after 24-hours had elapsed.



Photo #30: Retrieval of sample LT-OA-North after 24-hours had elapsed.

Attachment B:

**W&R Field Log Book Pages: March 31 to April 2, 2016
and Indoor Air Building Survey and Sampling Form
Leather Trimmings: 3110 Cullman Avenue, Charlotte, NC**

3/17/16

TREX

Cray

1630 SAEDACCO cleaning
drums & placing them in
building

2 soil

13 water/cottings

1 Trash

1730 leave site

1730 - 2130 mabc

(116)

3/31/16

Trey

BFB

- Leave Wilmington 0910hrs
 - Arrive @ 3110 Callman Ave @ 1245hrs. Meet w/ Patrick Speckman
 - Assemble materials & Equipment for mixing concrete patch
 - Begin sealing cracks & gaps in floor 1315hrs
 - See photos for details & documentation of work
 - Finish sealing cracks/gaps 1530hrs Fan is running
 - Talk w/ Mr. Speckman re time to start IA sampling tomorrow. He will contact me.
 - Clean wheel barrow & tools. Finish clean in 1545hrs
 - Go to Nexus church to hand deliver paper copy of report
 - Pastor Noah is there doing renovations to Fellowship Rm
 - Take photos + leave site.
- EOD 1600hrs (117)

4/1/16 TREC BJB

- Arrive on-site 0800 hrs
- Weather @ 0800 overcast + rainy wind ~5-10 mph out of southwest
- Wait for Mr. Speckman to arrive. Label canisters to be used and assemble stand and umbrella for the outdoor ambient air sample on south side of 3110 Callman

Sample ID	Summa #	Reg #	START TIME	START VAC PRESSURE
LT-1A-WAREHOUSE	1416	153	1103	28.5
LT-1A-DUP	2208	475	1104	27.8
LT-1A-OFFICE	2128	246	1106	28.2
LT-0A-SOUTH	1055	646	1100	28.5
LT-0A-NORTH	1390	611	1108	28.5
LT-1A- ^{WEST} STORAGE	1149	315	1105	29.5

- 1040 hrs Skies have cleared, wind still out of SW Temp mid 70's
- All canisters deployed, will start around 1100 hrs after building is sealed + shut.

(118)

4/1/16 TREC BJB

- All canisters on by 1108 all have sufficient vacuum. Mr. Speckman leaves site and will return tomorrow morning @ 11 AM to allow me to retrieve canisters
- Go to TREC site await concrete delivery
- 1330 Carolina Concrete arrives
- Fill 2 planters in front of 3114 Callman Ave w/ 3000 psi concrete. Also fill rectangular holes in pavement left by directional drill machine.
- Smooth concrete, clean tools.
- Check on LT-0A N+S can. Vacuum @ LT-0A-North is 26" Hg @ 1355
- Vacuum @ LT-0A-South is 26" Hg @ 1357 Leave site.

EOD 14⁰⁰ hrs

(119)

4/2/16 TREV BJD

- Arrive @ 3110 Cullman Ave
10³⁰ hrs Meet w/ Mr. Spectman

- Go to LT-01A-SOUTH

Vac. Press = 5" Hg

Shut valve @ 1100 AM take
photo

- Fans running in wave house

LT-1A-Warehouse

Vac. Press 8" Hg

Shut valve 1105

LT-1A-Dup

Vac Press 9" Hg

Shut valve 1106

LT-1A-WEST STORAGE

Vac Press 4" Hg

Shut. valve 1108

LT-1A-Office

Vac. Press 10" Hg

Shut valve 1110 hrs

LT-017-NORTH

Vac Press 5.8" Hg

Shut off @ 1112 hrs

Label + pack canisters in container
w/ food tin w/ mt. leave site 1130

Return to Wilmington

1500 hrs

(120)

INDOOR AIR BUILDING SURVEY
and SAMPLING FORM

Site Name: TREX CHARLOTTE DSCAID#: NA
Preparer's name: BRITN BELLIS Date: APRIL 1, 2016
Preparer's affiliation: WITHERS RAVENEL CONSULTANT Phone #: 910-256-9277

Part I - Occupants

Building Address: 3110 CULLMAN AVE, CHARLOTTE, NC
Property Contact: PATRICK SPECKMAN Owner / Renter / other: _____
Contact's Phone: home () _____ work () _____ cell () 704-347-1718
of Building occupants: Children under age 13 0 Children age 13-18 0 Adults UP TO 3

Part II - Building Characteristics

Building type: residential / multi-family residential / office / strip mall / commercial / industrial

Describe building: 210,000 FT² WAREHOUSE W/OFFICE Year constructed: ~1960

Sensitive population: day care / nursing home / hospital / school / other (specify): NONE

Number of floors below grade: NONE (full basement / crawl space / slab on grade) RAISED FLOOR TO ACCOMMODATE TRACTOR TRAILER DELIVERY

Number of floors at or above grade: 1

Depth of basement below grade surface: NA ft. Basement size: NA ft²

Basement floor construction: concrete / dirt / floating / stone / other (specify): NA

Foundation walls: poured concrete / cinder blocks / stone / other (specify) _____

Basement sump present? Yes / No / NA Sump pump? Yes / No / NA 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): OFFICE ONLY

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? NA Yes / No

Is there a whole house fan? Yes / No *POSITIVE PRESSURE VENTILATION FAN IN*
~ APPROX CENTER OF SOUTH WALL

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
 Type of barrier: _____

Part III - Outside Contaminant Sources

Other stationary sources nearby (gas stations, emission stacks, etc.): *FORMER DETROIT FACILITY TO EAST*

Heavy vehicular traffic nearby (or other mobile sources): *YES, TRUCK + HEAVY EQUIP ASSOCIATED*
WITH RAIL LINE CONSTRUCTION TO SOUTH

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

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes No 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? ~~NA~~ Yes / No

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

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

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: BRIAN BELLIS Phone number: (910) 256 - 9277

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

OUTDOOR AMBIENT AIR

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

Analytical Method: TO-15 / TO-17 / other: SIM Cert. Laboratory: ESC

Sample locations (floor, room):

Field ID # LT - 1A - WARHOUSE

Field ID # LT - 1A - DUP (OF WAREHOUSE SAMPLE)

Field ID # LT - 1A - OFFICE

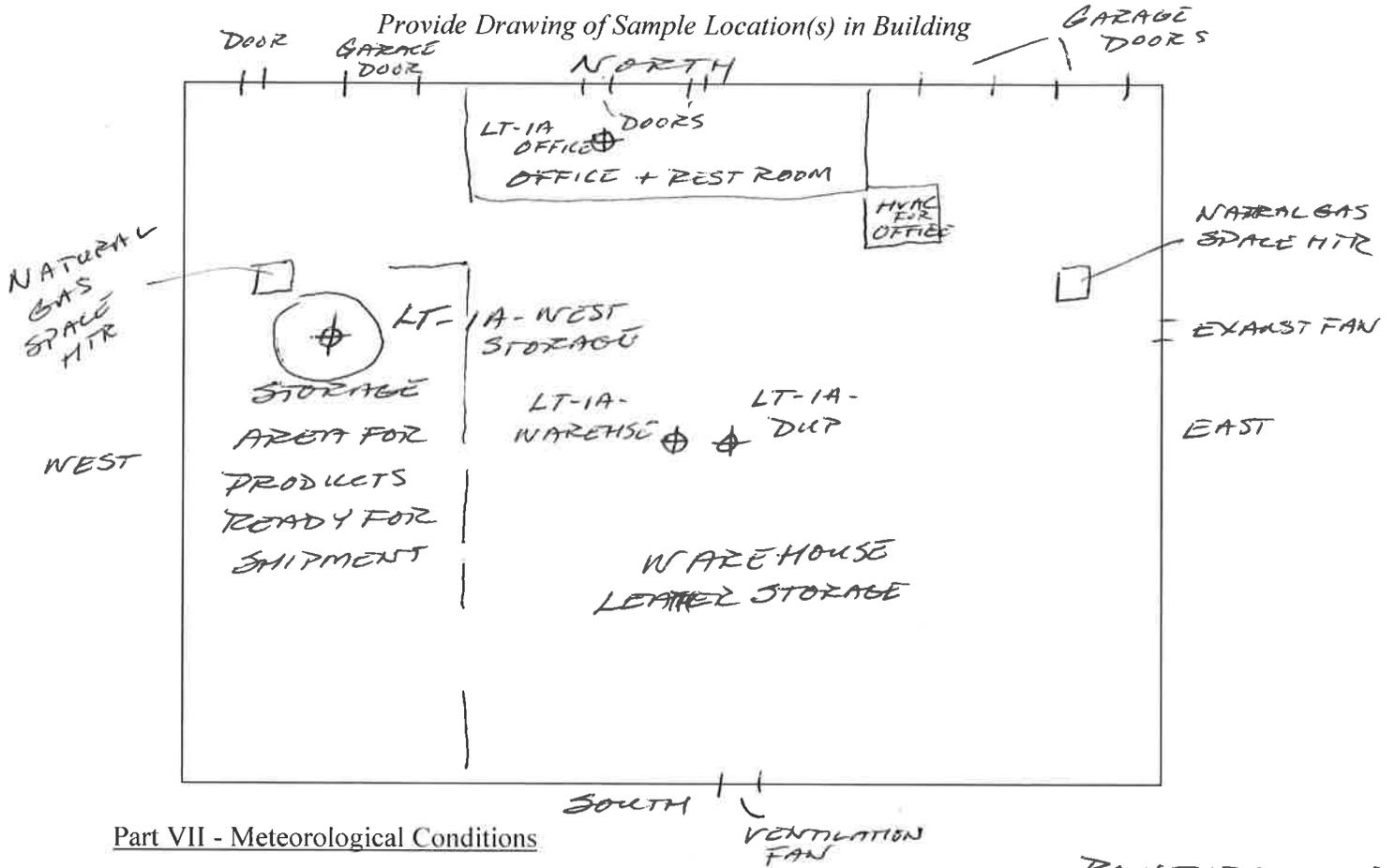
Field ID # LT - 0A - SOUTH

LT - 0A - NORTH

Were "Instructions for Occupants" followed? Yes / No

If not, describe modifications: _____

3110 CULLMAN AVE



Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? Yes / No **RAIN THE EVENING BEFORE**

Describe the general weather conditions: 4/1/16 - OVERCAST / LIGHT RAIN MORNING

Part VIII - General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process (e.g., observed that drycleaner operated with door or windows propped open for ventilation).

Attachment C

**Laboratory Analytical Reports and Chain of Custody Records
Leather Trimmings: 3110 Cullman Avenue, Charlotte, NC**

April 08, 2016

Withers & Ravenel Eng. - Standard

Sample Delivery Group: L827580
Samples Received: 04/05/2016
Project Number: 03130430.03
Description: Trex Charlotte
Site: CHARLOTTE, NC
Report To: Brian Bellis
115 MacKenan Drive
Cary, NC 27511

Entire Report Reviewed By:



Jimmy Hunt

Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



¹Cp: Cover Page	1	
²Tc: Table of Contents	2	
³Ss: Sample Summary	3	
⁴Cn: Case Narrative	4	
⁵Sr: Sample Results	5	
LT-1A-WAREHOUSE L827580-01	5	
LT-1A-DUP L827580-02	6	
LT-1A-WEST STORAGE L827580-03	7	
LT-1A-OFFICE L827580-04	8	
LT-0A-SOUTH L827580-05	9	
LT-0A-NORTH L827580-06	10	
⁶Qc: Quality Control Summary	11	
Volatile Organic Compounds (MS) by Method TO-15	11	
⁷Gl: Glossary of Terms	13	
⁸Al: Accreditations & Locations	14	
⁹Sc: Chain of Custody	15	

SAMPLE SUMMARY



LT-1A-WAREHOUSE L827580-01 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Brian Bellis				Collected date/time 04/04/16 11:05	Received date/time 04/05/16 09:00
Volatile Organic Compounds (MS) by Method TO-15	WG862392	1	04/06/16 19:10	04/06/16 19:10	MBF

1 Cp

2 Tc

LT-1A-DUP L827580-02 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Brian Bellis				Collected date/time 04/04/16 11:06	Received date/time 04/05/16 09:00
Volatile Organic Compounds (MS) by Method TO-15	WG862392	1	04/06/16 19:55	04/06/16 19:55	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG862620	1	04/07/16 13:49	04/07/16 13:49	MBF

3 Ss

4 Cn

5 Sr

LT-1A-WEST STORAGE L827580-03 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Brian Bellis				Collected date/time 04/04/16 11:08	Received date/time 04/05/16 09:00
Volatile Organic Compounds (MS) by Method TO-15	WG862392	1	04/06/16 20:38	04/06/16 20:38	MBF

6 Qc

7 Gl

8 Al

LT-1A-OFFICE L827580-04 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Brian Bellis				Collected date/time 04/04/16 11:10	Received date/time 04/05/16 09:00
Volatile Organic Compounds (MS) by Method TO-15	WG862392	1	04/06/16 21:24	04/06/16 21:24	MBF

9 Sc

LT-0A-SOUTH L827580-05 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Brian Bellis				Collected date/time 04/04/16 11:00	Received date/time 04/05/16 09:00
Volatile Organic Compounds (MS) by Method TO-15	WG862392	1	04/06/16 22:07	04/06/16 22:07	MBF

LT-0A-NORTH L827580-06 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Brian Bellis				Collected date/time 04/04/16 11:12	Received date/time 04/05/16 09:00
Volatile Organic Compounds (MS) by Method TO-15	WG862392	1	04/06/16 22:50	04/06/16 22:50	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG862620	1	04/07/16 15:27	04/07/16 15:27	MBF



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG862392
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	0.0879	0.348		1	WG862392
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG862392
Tetrachloroethylene	127-18-4	166	0.0200	0.136	1.86	12.6		1	WG862392
Trichloroethylene	79-01-6	131	0.0200	0.107	0.967	5.18		1	WG862392
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG862392
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		119				WG862392

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG862392
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	0.0610	0.242		1	WG862392
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG862392
Tetrachloroethylene	127-18-4	166	0.0200	0.136	0.562	3.81		1	WG862620
Trichloroethylene	79-01-6	131	0.0200	0.107	0.552	2.96		1	WG862620
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG862392
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		118				WG862392

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG862392
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG862392
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG862392
Tetrachloroethylene	127-18-4	166	0.0200	0.136	0.0758	0.515		1	WG862392
Trichloroethylene	79-01-6	131	0.0200	0.107	0.799	4.28		1	WG862392
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG862392
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		110				WG862392

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG862392
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	0.0702	0.278		1	WG862392
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG862392
Tetrachloroethylene	127-18-4	166	0.0200	0.136	0.775	5.26		1	WG862392
Trichloroethylene	79-01-6	131	0.0200	0.107	0.838	4.49		1	WG862392
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG862392
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		109				WG862392

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG862392
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG862392
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG862392
Tetrachloroethylene	127-18-4	166	0.0200	0.136	0.118	0.800		1	WG862392
Trichloroethylene	79-01-6	131	0.0200	0.107	0.0385	0.206		1	WG862392
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG862392
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		119				WG862392

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG862620
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG862620
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG862620
Tetrachloroethylene	127-18-4	166	0.0200	0.136	0.178	1.21		1	WG862620
Trichloroethylene	79-01-6	131	0.0200	0.107	0.143	0.765		1	WG862620
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG862620
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		112				WG862392

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3126862-3 04/06/16 12:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
1,1-Dichloroethene	U		0.00521	0.0200
cis-1,2-Dichloroethene	U		0.00770	0.0200
trans-1,2-Dichloroethene	U		0.00499	0.0200
Tetrachloroethylene	U		0.00457	0.0200
Trichloroethylene	U		0.00736	0.0200
Vinyl chloride	U		0.00765	0.0200
(S) 1,4-Bromofluorobenzene	104			60.0-140

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3126862-1 04/06/16 09:41 • (LCSD) R3126862-2 04/06/16 10:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
1,1-Dichloroethene	0.500	0.494	0.482	98.8	96.3	70.0-130			2.55	25
cis-1,2-Dichloroethene	0.500	0.518	0.506	104	101	70.0-130			2.18	25
trans-1,2-Dichloroethene	0.500	0.502	0.503	100	101	70.0-130			0.160	25
Tetrachloroethylene	0.500	0.508	0.510	102	102	70.0-130			0.440	25
Trichloroethylene	0.500	0.511	0.511	102	102	70.0-130			0.110	25
Vinyl chloride	0.500	0.489	0.476	97.7	95.1	70.0-130			2.73	25
(S) 1,4-Bromofluorobenzene				99.4	99.8	60.0-140				

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3127235-3 04/07/16 09:02

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
1,1-Dichloroethene	U		0.00521	0.0200
cis-1,2-Dichloroethene	U		0.00770	0.0200
trans-1,2-Dichloroethene	U		0.00499	0.0200
Tetrachloroethylene	U		0.00457	0.0200
Trichloroethylene	U		0.00736	0.0200
Vinyl chloride	U		0.00765	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3127235-1 04/07/16 07:38 • (LCSD) R3127235-2 04/07/16 08:19

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethene	0.500	0.499	0.497	99.8	99.4	70.0-130			0.410	25
cis-1,2-Dichloroethene	0.500	0.519	0.520	104	104	70.0-130			0.240	25
trans-1,2-Dichloroethene	0.500	0.509	0.512	102	102	70.0-130			0.580	25
Tetrachloroethylene	0.500	0.522	0.519	104	104	70.0-130			0.580	25
Trichloroethylene	0.500	0.527	0.522	105	104	70.0-130			0.960	25
Vinyl chloride	0.500	0.498	0.491	99.6	98.2	70.0-130			1.36	25

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
-----------	-------------

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Attachment D

**EPA Screening Level for TCE
Leather Trimmings: 3110 Cullman Avenue, Charlotte, NC**

Bellis, Brian

From: Lucia Casabo <lcasabo@enviroanalyticsgroup.com>
Sent: Monday, October 05, 2015 3:51 PM
To: Bellis, Brian
Subject: FW: Leather Trimmings

Lucia Casabo



Ph: 919.960.9311

From: Kenneth Rhame [mailto:Rhame.Kenneth@epa.gov]
Sent: Wednesday, September 9, 2015 3:31 PM
To: Lucia Casabo <lcasabo@enviroanalyticsgroup.com>
Cc: Adams, Glenn <Adams.Glenn@epa.gov>; Sandy Mort <sandy.mort@dhhs.nc.gov>; david.lilley@ncdenr.gov
Subject: Re: Leather Trimmings

Lucia,

The EPA screening value for the leather trimmings facility is 8.8 ug/m3 for trichloroethylene. Please forward the results when available.

Thanks,
Kenneth B Rhame
US EPA Region 4
On-Scene Coordinator
Raleigh, NC
(919) 475-7397 cell

On Sep 8, 2015, at 6:16 PM, Lucia Casabo <lcasabo@enviroanalyticsgroup.com> wrote:

Hi Ken,

Sampling at the Leather Trimmings site was completed last week and we are now in the process of evaluating potential screening levels.

Please let me know which EPA screening levels will be used to evaluate the Leather Trimmings data.

Thanks,

Lucia Casabo