Ångstrom Analytical, Inc.

5001 Cedar Lake Road S.
St. Louis Park, MN 55416
Office: (952) 252-0405
Fax: (952) 252-0407

RECEIVED
JUN 10 2015
CPMI

Minnesota State Capitol Building

Additional Indoor Air Quality Testing – Phase 5

St. Paul, MN.

Contract # 59638. RECS # 02CB0015

5/10/15

Report Prepared For:

State of Minnesota
Department of Administration
C/O Steve Terman - CPMI
Real Estate & Construction Services
309 Administration Building
50 Sherburne Avenue
St. Paul, MN 55155

Presented By:

Ångstrom Analytical

Ångstrom Analytical, Inc.

5001 Cedar Lake Road S.
St. Louis Park, MN 55416
Office: (952) 252-0405
Fax: (952) 252-0407

State of MN, Dept. of Admin, RECS
C/O Mr. Steve Terman, CPMI
3265 Northwood Circle, Suite 170
Eagan, MN 55121

May 10th, 2015

Re:- Additional Indoor Air Quality Testing – Phase 5
Minnesota State Capitol Building

Dear Steve:

OBJECTIVE

The Department of Administration, Real Estate and Construction Services retained Angstrom Analytical, Inc. to conduct indoor air sampling and subsequent analysis, within the Minnesota State Capitol. Specifically Angstrom Analytical, Inc. tested for:

- Asbestos fibers via NIOSH 7400 and EPA 600/M4-82-020 or EPA 600/R-93/116
- Lead Dust via NIOSH 7082 and / or X-Ray Flourescence
- Respirable Nuisance Dust via NIOSH 0600
- Respirable Silica via NIOSH 7500 and X-Ray Diffraction
- Total Hydrocarbons (products of combustion) via Modified NIOSH 1550
- Volatile Organic Compounds via USEPA TO-15 using gas chromatography and mass spectroscopy.

All of the above contaminants could reasonably be expected to be produced as a result of the ongoing hazardous material abatement, demolition and construction related activities.

On April 8th, 2015, testing of all of the above analytes were performed in the following 5 locations:

In the Rathskeller café in the basement, Hearing Room 112 in the North Wing on the First Floor, Rooms 231 to 233 on the Second Floor and Rooms 301 and 323 on the Third Floor, West Wing. For precise sampling locations and the type of test performed, please refer to the floor plans referenced in Appendix 1.

RESULTS

All of the air samples collected throughout the Capitol Building during Phase 5 are below current OSHA and / or MN Dept. of Health PELs or Threshold Limit Values.

Asbestos: The Minnesota Department of Health's Indoor Clean Air Standard is set at 0.01 fibers per cubic centimeter of air (f/cc). All sampling locations within the Capitol Building rendered readings of or below 0.002 f/cc. Reference Appendix 2.

Lead Dust: OSHA's Permissible Exposure Level (PEL) for airborne lead dust is 50 micrograms per cubic meter of air ($\mu g/m^3$). All sampling locations within the Capitol Building rendered readings below 2.4 $\mu g/m^3$. Reference Appendix 2.

Respirable Nuisance Dust: OSHA's Permissible Exposure Level (PEL) for respirable nuisance dust (exclusive of silica) is 30 milligrams per cubic meter of air (mg/m^3). All sampling locations within the Capitol Building rendered readings below 0.25 mg/m^3.

Respirable Crystalline Silica: OSHA's Permissible Exposure Level (PEL) for respirable crystalline silica is 15 milligrams per cubic meter of air (mg/m^3). All sampling locations within the Capitol Building rendered readings below 0.008 mg/m^3. Reference Appendix 3.

Total Hydrocarbon Analyses: NIOSH's Reporting Limit for total hydrocarbons is 10 milligrams per cubic meter of air (mg/m^3). All sampling locations in the Capitol Building rendered readings below 0.80 mg/m^3. Reference Appendix 4.

Volatile Organic Compound Scan: Of the 74 VOCs scanned, Ethyl Benzene and Xylene in the Rathskeller and Room 112 were detected (solvents and exhaust fume) and also Tetrachloroethene (degreasing solvent) in Room 231.

If you have any questions, please do not hesitate to call.

Sincerely,

Charles Tye
Angstrom Analytical, Inc.

CT/file.

Appendix 1

Sampling Locations / Floor Plans

Ångstrom Analytical

Basement/Tunnel Floor

Minnesota State Capitol Restoration Project
Public Access Map

Sample locations

ASB = Asbestos air sample

LD = Lead air sample

ND = Nuisance dust sample

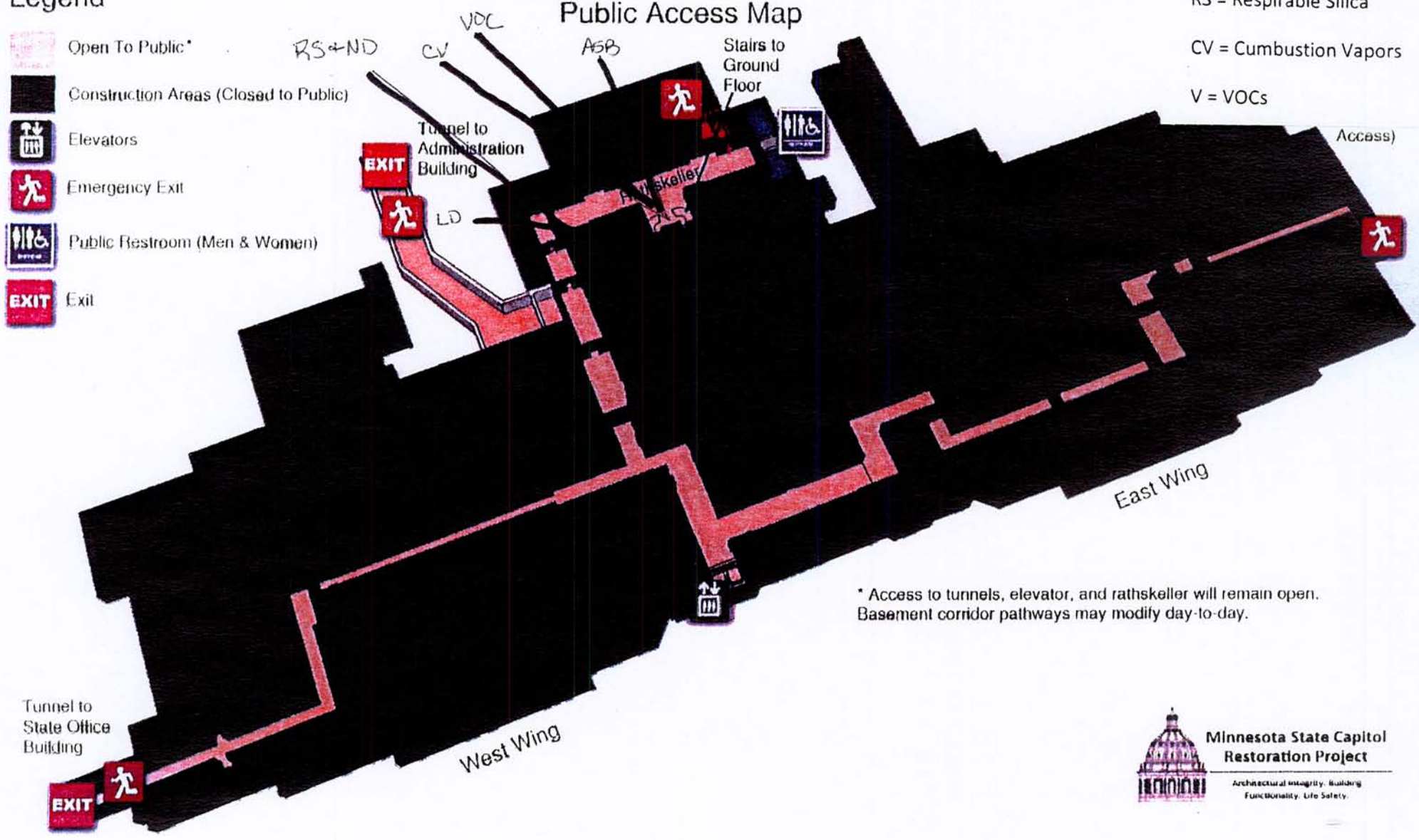
RS = Respirable Silica

CV = Cumbustion Vapors

V = VOCs

Legend

- Open To Public*
- Construction Areas (Closed to Public)
- Elevators
- Emergency Exit
- Public Restroom (Men & Women)
- Exit



* Access to tunnels, elevator, and rathskeller will remain open. Basement corridor pathways may modify day-to-day.

Minnesota State Capitol Restoration Project

Architectural Integrity. Building Functionality. Life Safety.

First Floor

Minnesota State Capitol Restoration Project
Public Access Map

Sample locations

ASB = Asbestos air sample

LD = Lead air sample

ND = Nuisance dust sample

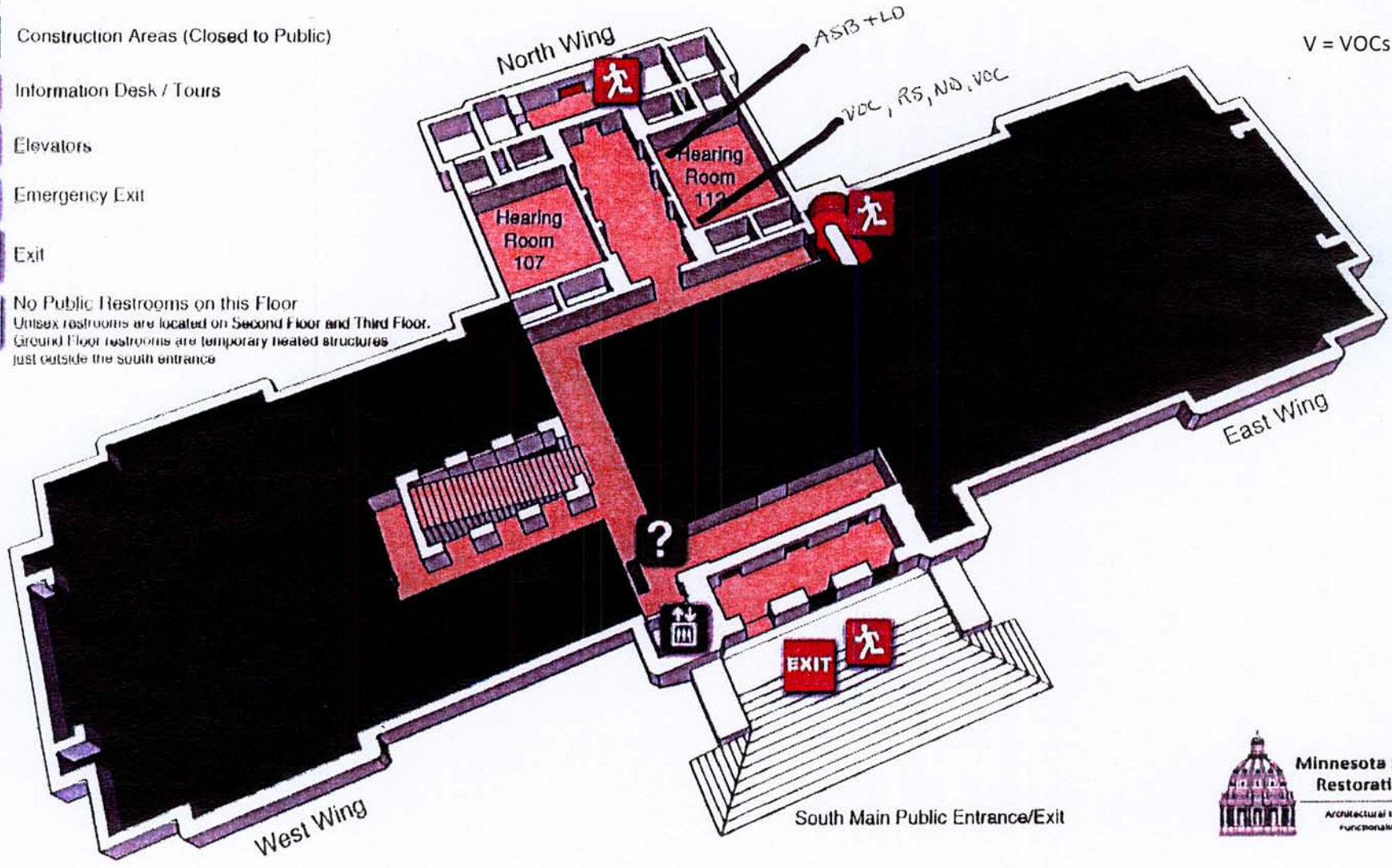
RS = Respirable Silica

CV = Cumbustion Vapors

V = VOCs

Legend

- Open To Public
- Construction Areas (Closed to Public)
- Information Desk / Tours
- Elevators
- Emergency Exit
- Exit
- No Public Restrooms on this Floor
  Unisex restrooms are located on Second Floor and Third Floor.
  Ground Floor restrooms are temporary heated structures
  just outside the south entrance



Minnesota State Capitol Restoration Project

Architectural Integrity. Building Functionality. Life Safety

Second Floor

Minnesota State Capitol Restoration Project
Public Access Map

Sample locations

ASB = Asbestos air sample

LD = Lead air sample

ND = Nuisance dust sample

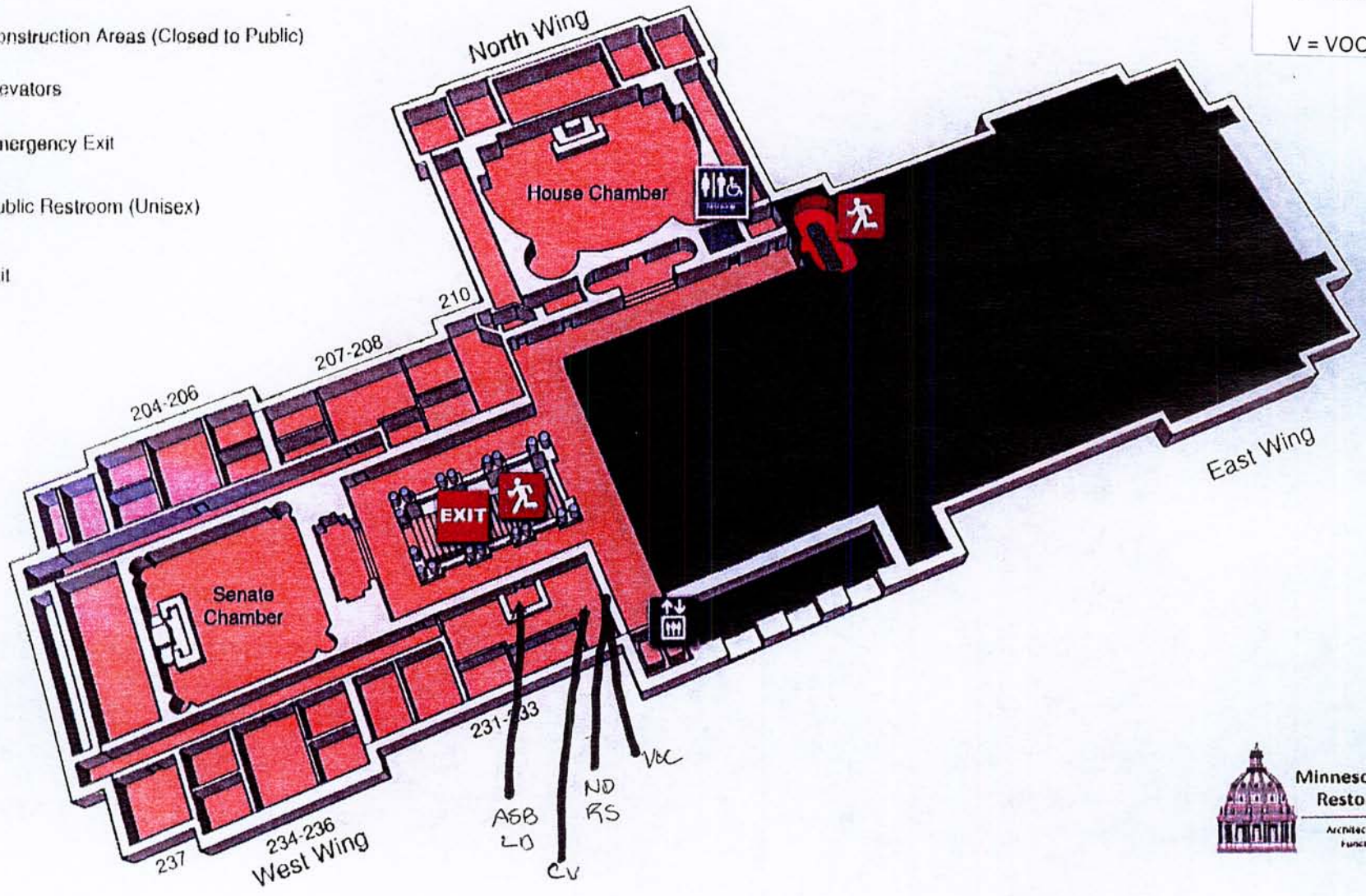
RS = Respirable Silica

CV = Cumbustion Vapors

V = VOCs

Legend

- Open To Public
- Construction Areas (Closed to Public)
- Elevators
- Emergency Exit
- Public Restroom (Unisex)
- EXIT Exit



Minnesota State Capitol Restoration Project

Architectural Integrity. Building Functionality. Life Safety.

Third Floor

Minnesota State Capitol Restoration Project
Public Access Map

Sample locations

ASB = Asbestos air sample

LD = Lead air sample

ND = Nuisance dust sample

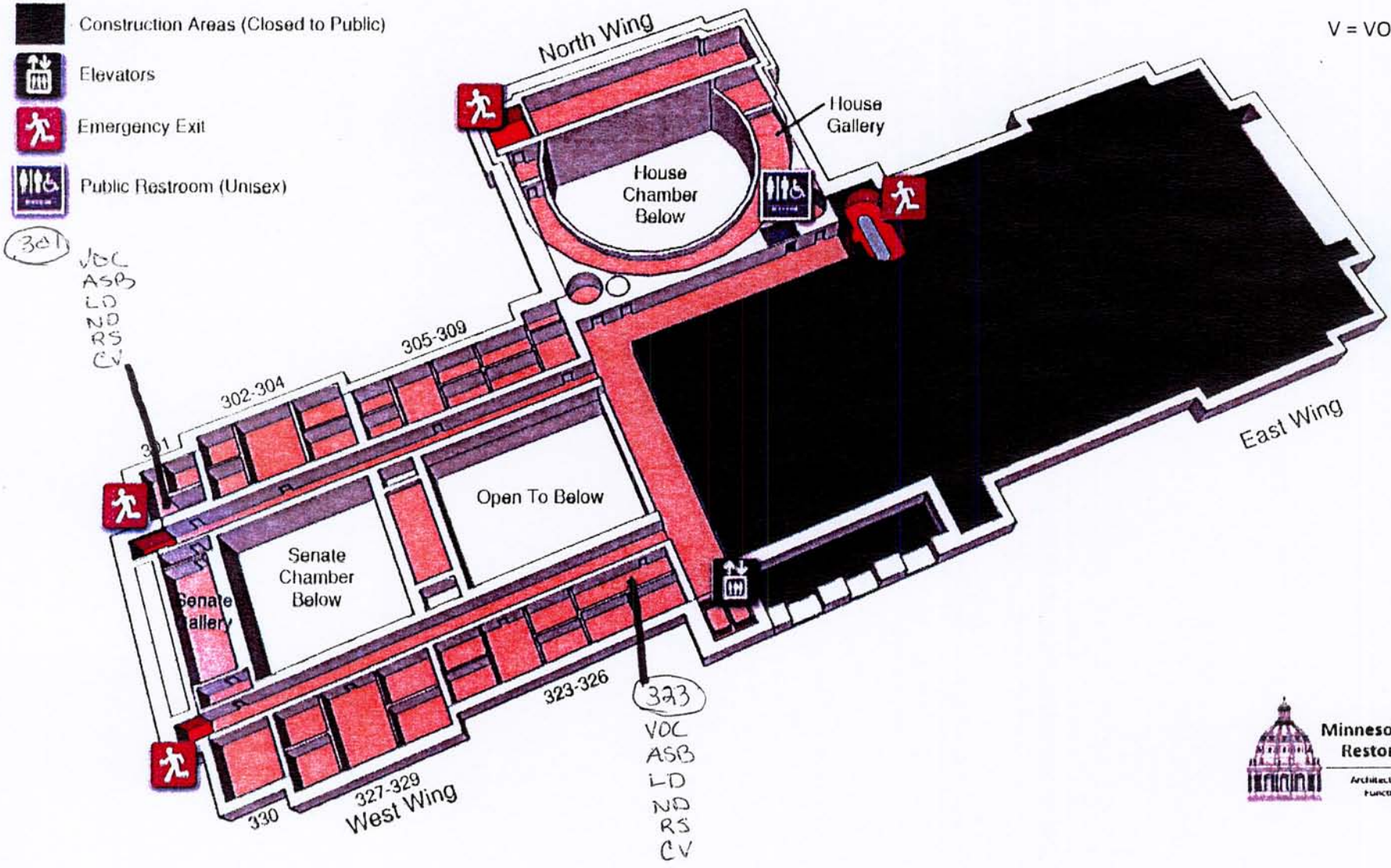
RS = Respirable Silica

CV = Cumbustion Vapors

V = VOCs

Legend

- Open To Public
- Construction Areas (Closed to Public)
- Elevators
- Emergency Exit
- Public Restroom (Unisex)



Minnesota State Capitol Restoration Project

Architectural Integrity, Building Functionality, Life Safety

Appendix 2

Asbestos Fiber and Lead Dust Results

Ångstrom Analytical

ngstrom Analytical &
Environmental Services

5001 Cedar Lake Road * St. Louis Park, MN 55416
952-252-0405 Office / 952-252-0407 Fax

ANALYSIS OF AIR FILTER SAMPLES USING PHASE CONTRAST MICROSCOPY (PCM) ACCORDING TO NIOSH 7400 METHODOLOGY

Prepared for:	**State of Minnesota Capitol Building** 75 Rev. Dr. Martin Luther King Blvd. St. Paul, MN 55155
Client Job or reference:	**Air Quality Check throughout the State Capitol Building**
Number of samples:	**6**

State of Minnesota/CPMI hereafter referred to as the client, contracted us to collect air samples at the above referenced property, during a remodel project. The client requested air samples be taken to determine if there was an issue regarding the air quality. Five air samples were and a field blank were collected on 4/8/15. The first sample was collected in the Rathskeller, the second sample was collected in the north wing room 112 on the 1st floor, the third sample was collected in room 231 on the second floor, the fourth sample was collected in room 301 on the third floor and the fifth sample was collected in room 323 on the the third floor. The scope of our services was limited to the collection, preparation and analysis of air samples. The results of our analysis indicate that the air quality, at the time of our sample collection, did not exceed the below listed indoor air standard. State regulations for "clean air" is set at **0.01 fibers per cubic centimeter (f/cc)** of air. Each air fiber analysis was conducted utilizing Phase Contrast Microscopy (PCM) and NIOSH 7400 methodology. The samples analyzed were of the 25 mm diameter, high volume type. We analyzed all samples and representative samples were subject to our quality control program. The results are printed on the enclosed air sampling summary sheets along with all necessary calculations. If there are any questions concerning these analyses please call us at the number listed above.

Thank you for letting Angstrom Analytical serve your needs.

Sincerely yours,

Kevin Hagen
Angstrom Analytical, Inc.

Angstrom Analytical

Angstrom Analytical
5001 Cedar Lake Road
St. Louis Park, Mn 55416

ASBESTOS AIR SAMPLING RECORD AND WORKSHEET

LAB USE ONLY
Approved By
Project # ON-Site
Analyst KH
Data Rec'd 4/8/15
Analyzed 4/9/15
Text / Email / Phone (circle)_____

CLIENT	Location	Job/Project #
C/o CPMI State of Minnesota	State Capitol Bldg.	ON-Site

Process Description/Employee Activities	Calibration Method
Air Quality Check	Rotometer

Sample # / Pump #	Date	Sample Location	Time On	Time Off	Total Min.	Flow Rate	Air Volume	Average # Fibers Per Field	Field Count	F/CC
1	4/8/15	Rathskeller	525	730	125	16lpm	2000l		100	<0.002
2		Room 112	530	735	125	16lpm	2000l		100	<0.002
3		Room 231	535	740	125	16lpm	2000l		100	<0.002
4		Room 301	537	742	125	16lpm	2000l		100	<0.002
5		Room 323	540	745	125	16lpm	2000l		100	<0.002
6		Field Blank	/	/	30 sec	✓	✓		100	NFD

Signed _____

Ångstrom Analytical &
Environmental Services

5001 Cedar Lake Road * St. Louis Park, MN 55416
952-252-0405 Office / 952-252-0407 Fax

ANALYSIS OF AIR FILTER SAMPLES USING X-RAY FLUORESCENCE (XRF)

Prepared for:	**State of Minnesota Capitol Building** 75 Rev. Dr. Martin Luther King Blvd. St. Paul, MN 55155
Client Job or reference:	**Air Quality (Lead Pb)**
Number of samples:	**5**

State of Minnesota/CPMI hereafter referred to as the client, contracted us to collect air samples at the above referenced property, during a remodel project. The client requested air samples be taken to determine if there was an issue regarding the air quality. Five air samples were collected on 4/8/15. The first sample was collected in the Rathskeller, the second sample was collected in the north wing room 112 of the first floor, the third sample was collected in room 231 on the second floor, the fourth sample was collected room 301 on the third floor and the fifth sample was collected in room 323 on the third floor. The scope of our services was limited to the preparation and analysis of air samples. Each analysis was conducted utilizing a portable X-ray Fluorescence (XRF) instrument. The samples analyzed were of the 37 mm diameter, high volume type. We analyzed all samples and representative samples were subject to our quality control program. The results are printed on the enclosed air sampling summary sheets along with all necessary calculations. If there are any questions concerning these analyses please call us at the number listed above.

Sincerely yours,

Kevin Hagen
Angstrom Analytical, Inc.

Angstrom Analytical

Angstrom Analytical
5001 Cedar Lake Road
St. Louis Park, Mn 55416

LEAD AIR SAMPLING RECORD AND WORKSHEET

LAB USE ONLY		Approved By	
Project #	ON-Site	Analyst	KH
Data Rec'd	4/8/15	Analyzed	4/9/15
Date Mailed		Phoned	

CLIENT	Location	Job/Project #
State of Minnesota c/o CPMI	State Capitol Bldg.	ON-Site

Process Description/Employee Activities	Calibration Method
Air Quality Check	Rotometer

Sample # / Pump #	Date	Sample Location	Time On	Time Off	Total Min.	Flow Rate	Air Volume		µg/m³ Pb	Note
1	4/8/15	Rathskeller	525	730	120	10 lpm	1200 l		2.36	
2		Room 112	530	735	120	10 lpm	1200 l		1.78	
3		Room 231	535	740	120	10 lpm	1200 l		<LOD	
4		Room 301	537	742	120	10 lpm	1200 l		1.98	
5		Room 323	540	745	120	10 lpm	1200 l		1.03	

Signed _____

Appendix 3

Respirable Nuisance Dust and Respirable Silica (Quartz) Results

Ångstrom Analytical

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	041510737
Customer ID:	ANGS50
Customer PO:	
Project ID:	

Attn:	Steve Wallinga Angstrom Analytical, Inc. 5001 Cedar Lake Road St Louis Park, MN 55416	Phone: Fax: Collected: Received: Analyzed:	(952) 252-0405 (952) 252-0407 04/08/2015 04/14/2015 04/29/2015
Proj:	State Capitol Phase II		

Test Report: Respirable Silica, Crystalline Analysis of Air Samples Performed by X-Ray Diffraction and Respirable Dust Analysis (Gravimetric) of Air Samples NIOSH 0600, Issue 3, 1/15/98 Via NIOSH Method 7500 (Modified), Issue 4, 3/15/2003

Sample ID	Collected	Location / Description	Volume (L)	Respirable Dust (mg)	Respirable Dust (mg/m³)	Silica	Analytical Sensitivty (mg/m³)	Weight (mg)	Conc. (mg/m³)	% Silica
1 **041510737-0001** **Comment: Customer**	4/8/2015	Rathskeller	600	0.117	0.195	α-Quartz	0.008	<0.005	<0.008	N/A
2 **041510737-0002** **Comment: Customer**	4/8/2015	Rm 301	600	0.068	0.113	α-Quartz	0.008	<0.005	<0.008	N/A
3 **041510737-0003** **Comment: Customer**	4/8/2015	Rm 323	600	0.2	0.333	α-Quartz	0.008	<0.005	<0.008	N/A
4 **041510737-0004** **Comment: Customer**	4/8/2015	Rm 231	600	0.147	0.245	α-Quartz	0.008	<0.005	<0.008	N/A
5 **041510737-0005** **Comment: Customer**	4/8/2015	Rm 112	600	0.062	0.103	α-Quartz	0.008	<0.005	<0.008	N/A

Analyst(s)

Andrew Pale

Stephen Siegel, CIH, Laboratory Manager
or Other Approved Signatory

Any questions please contact Steve Siegel.

The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-laboratory personnel. This report only relate to the samples submitted. The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-Laboratory Personnel. "<" means less than the stated value. The lowest reportable value is equivalent to the Analytical Sensitivity that is calculated from the lowest reproducible amount of specific mineral detectable by the instrument. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--IHLAP Lab 100194, PA ID# 68-00367

Initial report from: 04/29/2015 14:12:52

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	041510737
Customer ID:	ANGS50
Customer PO:	
Project ID:	

Attn:	Steve Wallinga	Phone:	(952) 252-0405
	Angstrom Analytical, Inc.	Fax:	(952) 252-0407
	5001 Cedar Lake Road	Collected:	04/08/2015
	St Louis Park, MN 55416	Received:	04/14/2015
		Analyzed:	04/29/2015
Proj:	State Capitol Phase II		

Test Report: Respirable Silica, Crystalline Analysis of Air Samples Performed by X-Ray Diffraction and Respirable Dust Analysis (Gravimetric) of Air Samples NIOSH 0600, Issue 3, 1/15/98 Via NIOSH Method 7500 (Modified), Issue 4, 3/15/2003

QC Batch ID: 04Q150429-004

	Collected	Location / Description	Volume (L)	Respirable Dust (mg)	Respirable Dust (mg/m³)	Silica	Analytical Sensitivty (mg/m³)	Weight (mg)	Conc. (mg/m³)	% Silica
Method Blank				<0.050	N/A	α-Quartz	N/A	<0.005		N/A

Reference Standards	Analytical Sensitivity (mg/m³)	Weight (mg)	Conc. (mg/m³)	% Silica
α-Quartz (0.250 mg)	N/A	0.274		N/A
α-Quartz (0.005 mg)	N/A	0.006		N/A

In the absence of a bulk dust sample, neither the specific forms of crystalline silica nor the interfering species can be fully determined. Hence, the amount for each phase, if anticipated, will be analyzed based on primary, secondary, and/or tertiary peak data with comparison to calibration curves of known standards. It should be noted that air samples are meant for only quantifying silica (or a mineral phase) which must first be identified from a bulk dust sample.

Analyst(s)

Andrew Pale

Stephen Siegel, CIH, Laboratory Manager
or Other Approved Signatory

Any questions please contact Steve Siegel.

The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-laboratory personnel. This report only relate to the samples submitted. The laboratory can only verify the concentration of silica on the filter and not the final concentration due to data obtained by non-Laboratory Personnel. "<" means less than the stated value. The lowest reportable value is equivalent to the Analytical Sensitivity that is calculated from the lowest reproducible amount of specific mineral detectable by the instrument. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--IHLAP Lab 100194, PA ID# 68-00367

Initial report from: 04/29/2015 14:12:52

OrderID: 041510737

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Chain of Custody

EMSL Order Number *(Lab Use Only)*:

041510737

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1	RATHSKELLER	600 l	4/8/15
2	Rm 301	600 l	4/8/15
3	Rm 323	600 l	4/8/15
4	Rm 231	600 l	4/8/15
5	Rm 112	600 l	4/8/15

RECEIVED
EMSL
CINNAMINSON, N.J.
2015 APR 14 P 1:42

*Comments/Special Instructions:

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide

OrderID: 041510737

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Chain of Custody

EMSL Order Number *(Lab Use Only)*: 041510737

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Company: Angstrom Analytical, Inc.	**EMSL-Bill to:** ✓ Same ☐ Different If Bill to is Different note instructions in Comments**
Street: 5001 Cedar Lake Rd	Third Party Billing requires written authorization from third party
City: St. Louis Park **State/Province:** MN	**Zip/Postal Code:** 55416 **Country:** United States
Report To (Name): Steve Wallinga	**Telephone #:** 952-252-0405
Email Address: steve@angstromanalytical.com	**Fax #:** 952-252-0407 **Purchase Order:**
Project Name/Number: State Capitol phase II	**Please Provide Results:** ☐ FAX ✓ E-mail ☐ Mail
U.S. State Samples Taken: MN	**Connecticut Samples:** Commercial Residential

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ✓ 2 Week

**For RUSH TAT's Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test. Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)*

Asbestos

PCM - Air
☐ NIOSH 7400
☐ w/ 8hr. TWA

TEM– Air ☐ 4-4.5hr TAT(AHERA ONLY)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Water
Fibers ≥10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

PLM - Bulk
☐ PLM EPA 600/R-93/116
☐ PLM EPA NOB (<1%)
☐ NYS 198.1 (friable-NY)
☐ NYS 198.6 (non-friable-NY)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/ Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

TEM - Dust
☐ Microvac – ASTM D 5755
☐ Wipe-ASTM D6480

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP

Soil/Rock/Vermiculite
☐ PLM CARB 435 – A (0.25% sensitivity)
☐ PLM CARB 435 – B (0.1% sensitivity)
☐ TEM CARB 435 – B (0.1% sensitivity)
☐ EPA Reg. 1 Screening Protocol (Qualitative)

Other:

Lead (Pb)

Flame Atomic Absorption
☐ Chips SW846-7000B or AOAC 974.02
☐ Soil SW846-7000B/7420
☐ Air NIOSH 7082
☐ Wastewater SM3111B or SW846-7000B/7420
☐ ASTM Wipe SW846-7000B/7420
☐ non ASTM Wipe SW846-7000B/7420
☐ TCLP SW846-1311/7420/SM 3111B

ICP
☐ Air NIOSH 7300 Modified
☐ non ASTM Wipe SW846-6010B or C
☐ ASTM Wipe SW846-6010B or C
☐ Soil SW846-6010 B or C
☐ Waste Water SW846-6010B or C
☐ TCLP SW846-6010B or C

Graphite Furnace Atomic Absorption
☐ Soil SW846-7421 ☐ Wastewater EPA 200.9
☐ Air NIOSH 7105 ☐ Drinking Water EPA 200.9

Other: ☐

Materials Science

☐ Common Particle ID (large particles)
☐ Full Particle ID (environmental dust)
☐ Basic Material ID (solids)
☐ Advanced Material ID
☐ Physical Testing (Tensile, Compression)
☐ Combustion-by-products (soot, char, etc.)
☐ X-Ray Fluorescence (elem. analysis)
☐ X-Ray Diffraction (Crystalline Part.)
☐ MMVF's (Fibrous glass, RCE's)
☐ Particle Size (sieve/microscopy/laser)
☐ Combustible Dust
☐ Petrographic Examination
Other: ☐

Microbiology

Wipe and Bulk Samples
☐ Mold & Fungi – Direct Examination
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi Culture (Genus & Species)
☐ Bacterial Count & ID (Up to Three Types)
☐ Bacterial Count & ID (Up to Five Types)
☐ MRSA
☐ *Pseudomonas aeruginosa*

Water Samples
☐ Total Coliform & E.coli (P/A)
☐ Fecal Coliform (SM 9222D)
☐ Sewage Screen
☐ Heterotrophic Plate Count (SM 9215)

Air Samples
☐ Mold & Fungi (Spore Trap)
☐ Mold & Fungi Culture (Genus Only)
☐ Mold & Fungi (Genus & Species)
☐ Bacterial Culture & ID (Up to Three Types)
☐ Bacterial Culture & ID (Up to Five Types)
☐ Endotoxin Testing

Real Time Q-PCR (See Analytical Guide for Code)
Code:

Legionella
☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4

Other: ☐

IAQ

Nuisance Dust NIOSH ☐ 0500 ☐ 0600
Airborne Dust ☐ PM10 ☐ TSP
Silica Analysis: ☐ All Species
Silica Analysis – Single Species
✓ Alpha Quartz ☐ Cristobalite ☐ Tridymite
☐ HVAC Efficiency
☐ Carbon Black
☐ Airborne Oil Mist
Radon Testing: Call for Kit and COC
Other: ☐

****Comments/Special Instructions:**

Client Sample #'s	1 - 5		**Total # of Samples:** 5
Relinquished (Client): Angstrom		**Date:** 4/9/15	**Time:** 3:30 pm
Received (Lab): UC FXG		**Date:** 4/13/15	**Time:** 1:30 p

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide

RECEIVED 2015 APR 13 PM 12:12 EMSL ANALYTICAL

Appendix 4

Total Hydrocarbon Analyses and Volatile Organic Compound Scan (GC/MS via USEPA TO-15) Results

Ångstrom Analytical

EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ 08052

Order ID: 281500868

Attn:	Steve Wallinga Angstrom Analytical Inc. 5001 Cedar Lake Road St. Louis Park, MN 55416	Customer ID: Customer PO: Date Received:	ANGS50 4/14/15
Phone:	(952) 252-0407	EMSL Order:	2815300868
Project:	State Capitol Phase V	EMSL Project ID:	
Report Date:	4/22/15	Date Analyzed:	4/21/15

Test Report – Total Hydrocarbon Analysis as VM&P Naphtha by GC/FID of Solid Sorbent Tubes via Modified NIOSH 1550, Issue 2, 8/15/94

Sample ID	Client Sample ID/Location	Volume (L)	Sample Weight (mg)	Sample Conc. (mg/m^3)	Reporting Limit (mg/m^3)
281500868-0001	1/Rathskeller	10	<0.0074	<0.74	0.74
281500868-0002	2 Room 301	10	<0.0074	<0.74	0.74
281500868-0003	3/ Room 333	10	<0.0074	<0.74	0.74
281500868-0004	4/ Room 231	10	<0.0074	<0.74	0.74
281500868-0005	5/ Room 112	10	<0.0074	<0.74	0.74
Desorption Blank		0	<0.0074	N/A	N/A

Notes:
1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are blank corrected unless otherwise noted.
4. Discernable field blank(s) not submitted with samples.

SV
Analyst

Scott VanEtten, CIH- Lab Manager
Or other approved signatory

EMSL ANALYTICAL, INC.

Industrial Hygiene Chain of Custody

EMSL Order Number (Lab Use Only): 281500868

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Report To Contact Name: Steve Wallinga			Bill To Company: Angstrom Analytical, Inc.		
Company Name: Angstrom Analytical, Inc.			Attention To: Steve Wallinga		
Street: 5001 Cedar Lake Rd			Street: 5001 Cedar Lake Rd		
City: St. Louis Park	State/Province: MN	Zip Code: 55416	City: St. Louis Park	State/Province: MN	Zip Code: 55416
Phone: 952-252-0405	Fax: 952-252-0407		Phone: 952-252-0405	Fax: 952-252-0407	
Project Name: State Capitol Phase II			U.S. State where Samples Collected: MN		
Number of Samples In Shipment:	Date of Shipment:	Purchase Order:	Sampled By (Signature):		
Please Provide results: ☐ FAX ☑ E-mail ☐ Mail			Email Results To: steve@angstromanalytical.com		

Turnaround Time – Please Check: Please Note Standard TAT is 2 Week.							Media Type:
2 Week	1 Week	4 Day	3 Day	2 Day	1 Day	Other (Call Lab)	Manufacturer/Part #:
☑	☐	☐	☐	☐	☐	☐	Lot #:

Sample ID	Media	Analyte/Method	Volume	Sample Date/Time	Location	Comments
1	Sorbent tube	1550	10 l	4/8/15 AM	Bathskeller	
2	Sorbent tube	1550	10 l	4/8/15	Rm 301	
3	Sorbent tube	1550	10 l	4/8/15	Rm 323	
4	Sorbent tube	1550	10 l	4/8/15	Rm 231	
5	Sorbent tube	1550	10 l	4/8/15	Rm 112	

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By	Date	Received By	Date
[signature]	4/9/15	[signature] EXG	4/13/15 1:30p

Comments: (5) JP

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Page 1 Of 1

OrderID: 281500868

Page ____ of ____ pages

EMSL Analytical
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856)858-4800 / (856)858-4571
http://www.EMSL.com to15lab@EMSL.com

EMSL Order #: **491500363**
EMSL Sample #: **491500363-1**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rathskeller**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		310	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	N.E.		10.0	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	N.E.		N.E.	
Chloromethane	74-87-3	50.49	0.58		1.2	N.E.		9.40	
n-Butane	106-97-8	58.12	14		32	N.E.		N.E.	
Vinyl chloride	75-01-4	62.50	ND		ND	0.160		10.0	
1,3-Butadiene	106-99-0	54.09	ND		ND	0.0810		0.210	
Bromomethane	74-83-9	94.94	ND		ND	N.E.		0.520	
Chloroethane	75-00-3	64.52	ND		ND	N.E.		1000	
Ethanol	64-17-5	46.07	59	D	110	N.E.		N.E.	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	0.0760		0.310	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	1.6		9.0	N.E.		73.0	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	4.1		10	N.E.		730	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	N.E.		3100	
Acetone	67-64-1	58.08	110	D	250	N.E.		3200	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	N.E.		21.0	
Acetonitrile	75-05-8	41.00	ND		ND	N.E.		6.30	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	N.E.		N.E.	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	N.E.		N.E.	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	0.410		0.100	
Carbon disulfide	75-15-0	76.14	ND		ND	N.E.		73.0	
Methylene chloride	75-09-2	84.94	0.57		2.0	96.0		63.0	
Acrylonitrile	107-13-1	53.00	ND		ND	0.0360		0.210	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	9.40		310	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	N.E.		6.30	
n-Hexane	110-54-3	86.17	1.4		4.9	N.E.		73.0	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	1.50		N.E.	
Vinyl acetate	108-05-4	86.00	ND		ND	N.E.		21.0	
2-Butanone(MEK)	78-93-3	72.10	16		48	N.E.		520	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	N.E.		N.E.	
Ethyl acetate	141-78-6	88.10	2.0		7.2	N.E.		N.E.	
Chloroform	67-66-3	119.40	ND		ND	0.110		10.0	
Tetrahydrofuran	109-99-9	72.11	62	D	180	N.E.		210	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	N.E.		520	
Cyclohexane	110-82-7	84.16	3.9		13	N.E.		630	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	0.410		10.0	
n-Heptane	142-82-5	100.20	0.84		3.4	N.E.		N.E.	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	0.0940		0.730	
Benzene	71-43-2	78.11	ND		ND	0.310		3.10	
Trichloroethene	79-01-6	131.40	ND		ND	0.430		0.210	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	0.240		0.420	
Methyl Methacrylate	80-62-6	100.12	ND		ND	N.E.		73.0	
Bromodichloromethane	75-27-4	163.80	ND		ND	0.0660		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	0.320		11.0	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	N.E.		310	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	0.610		2.10	

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EMSL Sample #: **491500363-1**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rathskeller**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Toluene	108-88-3	92.14	74	D	280	N.E.		520	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	0.610		2.10	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	0.150		0.0210	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	N.E.		3.10	
Tetrachloroethene	127-18-4	165.80	ND		ND	9.40		4.20	
Dibromochloromethane	124-48-1	208.30	ND		ND	0.0900		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	0.00410		0.940	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		5.20	
Ethylbenzene	100-41-4	106.20	1.2		5.0	0.970	⚑	100	
Xylene (p,m)	1330-20-7	106.20	4.4		19	N.E.		10.0	⚑
Xylene (Ortho)	95-47-6	106.20	1.4		6.1	N.E.		10.0	
Styrene	100-42-5	104.10	ND		ND	N.E.		100	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	N.E.		42.0	
Bromoform	75-25-2	252.80	ND		ND	2.20		N.E.	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	0.0420		N.E.	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	N.E.		N.E.	
2-Chlorotoluene	95-49-8	126.60	ND		ND	N.E.		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	N.E.		0.730	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	0.220		83.0	
Benzyl chloride	100-44-7	126.00	ND		ND	0.0500		0.100	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	N.E.		21.0	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	N.E.		0.210	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	0.110		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	0.0720		0.310	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked ⚑ ⚑

Exposure Limit Definitions
RBC= Risk Based Concentration

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
EPA III= USEPA Region 3, Mid-Atlantic

Reference
EPA Region III Risk-Based Concentration (RBC) Table, Nov 2012.

Carcinogenic Exceedence
Value exceeds the theoretical risk that 1 additional case of cancer will occur in a population of 1 million than statistically expected. Thus is a theoretical risk and not an actual epidemiological one.

NonCarcinogenic Exceedence
Value exceeds the theoretical risk that 1 in a population of 100,000 will experience deliterious health effects. Thus is a theoretical risk and not an actual epidemiological one.

NJDEP Certification #: 03036

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200 Route 130 North, Cinnaminson, NJ 08077
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http://www.EMSL.com to15lab@EMSL.com

EMSL Order #: **491500363**
EMSL Sample #: **491500363-1**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rathskeller**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		N.E.	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	4900000		4900000	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	7000000		7000000	
Chloromethane	74-87-3	50.49	0.58		1.2	LFC		210000	
n-Butane	106-97-8	58.12	14		32	1900000		1900000	
Vinyl chloride	75-01-4	62.50	ND		ND	LFC		2600	
1,3-Butadiene	106-99-0	54.09	ND		ND	LFC		2200	
Bromomethane	74-83-9	94.94	ND		ND	LFC		78000	
Chloroethane	75-00-3	64.52	ND		ND	LFC		2600000	
Ethanol	64-17-5	46.07	59	D	110	1900000		1900000	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	LFC		N.E.	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	1.6		9.0	5600000		5600000	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	4.1		10	980000		980000	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	7700000		7700000	
Acetone	67-64-1	58.08	110	D	250	590000		2400000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	790000		790000	
Acetonitrile	75-05-8	41.00	ND		ND	34000		67000	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	300000		300000	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	880000		880000	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	3100		3100	
Carbon disulfide	75-15-0	76.14	ND		ND	3100		62000	
Methylene chloride	75-09-2	84.94	0.57		2.0	LFC		87000	
Acrylonitrile	107-13-1	53.00	ND		ND	2200		4300	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	N.E.		N.E.	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	790000		790000	
n-Hexane	110-54-3	86.17	1.4		4.9	180000		1800000	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	400000		400000	
Vinyl acetate	108-05-4	86.00	ND		ND	14000		N.E.	
2-Butanone(MEK)	78-93-3	72.10	16		48	590000		590000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	790000		790000	
Ethyl acetate	141-78-6	88.10	2.0		7.2	1400000		1400000	
Chloroform	67-66-3	119.40	ND		ND	9800		240000	
Tetrahydrofuran	109-99-9	72.11	62	D	180	590000		590000	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	1900000		1900000	
Cyclohexane	110-82-7	84.16	3.9		13	1000000		1000000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	13000		63000	
n-Heptane	142-82-5	100.20	0.84		3.4	350000		2000000	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	4000		200000	
Benzene	71-43-2	78.11	ND		ND	320		3200	
Trichloroethene	79-01-6	131.40	ND		ND	130000		540000	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	LFC		350000	
Methyl Methacrylate	80-62-6	100.12	ND		ND	410000		410000	
Bromodichloromethane	75-27-4	163.80	ND		ND	N.E.		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	3600		360000	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	200000		410000	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	4500		N.E.	

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EMSL Sample #: **491500363-1**
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Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rathskeller**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Toluene	108-88-3	92.14	74	D	280	380000		750000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	4500		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	55000		55000	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	4100		410000	
Tetrachloroethene	127-18-4	165.80	ND		ND	LFC		680000	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	350		150000	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		350000	
Ethylbenzene	100-41-4	106.20	1.2		5.0	430000		430000	
Xylene (p,m)	1330-20-7	106.20	4.4		19	430000		430000	
Xylene (Ortho)	95-47-6	106.20	1.4		6.1	430000		430000	
Styrene	100-42-5	104.10	ND		ND	210000		430000	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	250000		250000	
Bromoform	75-25-2	252.80	ND		ND	5200		5200	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	6900		34000	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	120000		120000	
2-Chlorotoluene	95-49-8	126.60	ND		ND	260000		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	120000		120000	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	LFC		450000	
Benzyl chloride	100-44-7	126.00	ND		ND	5200		5200	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	300000		300000	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	37000		N.E.	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	210		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	52000		52000	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
REL= Recommended Exposure Limit, PEL= Permissable Exposure Limit

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
NIOSH= The National Institute for Occupational Safety

Reference
Occupational Safety and Health Administration (OSHA) General Industry Air Contaminants Standard (29 CFR 1910.1000)

NJDEP Certification #: 03036

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Date Collected: **04/08/2015**
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Project: **Capitol Bldg. Phase V**

Sample ID: **Rathskeller**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Chloromethane	74-87-3	0.58		1.2	Most (99%) of the chloromethane in the environment comes from natural sources. Because chloromethane is made in the oceans by natural processes, it is present in air all over the world. In most areas, the outside air contains less than 1 part of chloromethane in a billion parts of air (ppb). In cities, human activities, mostly combustion and manufacturing, add to the chloromethane in the air, resulting in somewhat higher levels, up to 1 ppb. Cigarette smoke, polystyrene insulation, and aerosol propellants; home burning of wood, coal, or certain plastics; and chlorinated swimming pools.[4]
n-Butane	106-97-8	14		32	Aerosol spray products for some paints, cosmetics, automotive products, leather treatments, pesticides.[2]
Ethanol	64-17-5	59	D	110	Hand sanitizers, disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray. [2]
Freon 11(Trichlorofluoromethane)	75-69-4	1.6		9.0	Refrigerant from air conditioners, freezers, refrigerators, dehumidifiers.[2]
Isopropyl alcohol(2-Propanol)	67-63-0	4.1		10	Eye Glass Cleaners. Disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Acetone	67-64-1	110	D	250	Rubber cement, cleaning fluids, scented candles and nail polish remover.[1]
Methylene chloride	75-09-2	0.57		2.0	Methylene chloride is used as an industrial solvent and as a paint stripper. It may also be found in some aerosol and pesticide products and is used in the manufacture of photographic film. [4] Hairspray, paint stripper, rug cleaners, insecticides and furniture polish.[1]
n-Hexane	110-54-3	1.4		4.9	Gasoline, rubber cement, typing correction fluid and aerosols in perfumes.[1]
2-Butanone(MEK)	78-93-3	16		48	2-Butanone is produced in large quantities. Nearly half of its use is in paints and other coatings because it will quickly evaporate into the air and it dissolves many substances.[4] Can occur from automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke.[1]
Ethyl acetate	141-78-6	2.0		7.2	Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Tetrahydrofuran	109-99-9	62	D	180	PVC cement and primer, various adhesives, contact cement, model cement.[2]
Cyclohexane	110-82-7	3.9		13	Cyclohexane can be added to lacquers and resins, paint and varnish removers, and fungicides. It is also used as a fuel for camp stoves. Exposure can also occur when people use products that contain cyclohexane or when they smoke cigarettes.[4]
n-Heptane	142-82-5	0.84		3.4	It is used as an industrial solvent and in gasoline and petroleum products refining processes.Also may be in nail polishes and wood office furniture.[1]

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EMSL Order #:	**491500363**
EMSL Sample #:	**491500363-1**
Customer ID:	**ANGS50**
Customer PO:	**Not Available**

Attn:	**Kevin Hagen** **Angstrom Analytical, Inc.** **5001 Cedar Lake Road** **St Louis Park, MN 55416**	Phone: Fax: Date Collected: Date Received:	**952-252-0405** **952-252-0407** **04/08/2015** **04/14/2015**
Project:	**Capitol Bldg. Phase V**	Sample ID:	**Rathskeller**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Toluene	108-88-3	74	D	280	Toluene is produced in the process of making gasoline and other fuels from crude oil and making coke from coal. Will occur in gasoline exhaust. Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes.[4]
Ethylbenzene	100-41-4	1.2		5.0	It is found in natural products such as coal tar and petroleum and is also found in manufactured products such as inks, insecticides, and paints. Ethylbenzene is used primarily to make another chemical, styrene. Other uses include as a solvent, in fuels, and to make other chemicals. [4]
Xylene (p,m)	1330-20-7	4.4		19	It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline.[4] Water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke.[1]
Xylene (Ortho)	95-47-6	1.4		6.1	It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline.[4] Water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke.[1]

Qualifier Definitions

ND = Non Detect
B = Compound also found in method blank.
E= Estimated concentration exceeding upper calibration range.
D= Result reported from diluted analysis.

Sources References

(1) NJDEP "Common Household Sources of Background Indoor Air Contamination". June 26, 2012
(2) NYSDOH "Volatile Organic Compounds (VOCs) in Commonly Used Products", 2007
(3) EPA, Air & Radiation, TTN Web - Technology Transfer NetworkAir Toxics Web site, various years.
(4) Agency for Toxic Substances and Disease Registry (ATSDR). U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1998.
(5) OFFICE OF POLLUTION PREVENTION AND TOXICS, U.S. ENVIRONMENTAL PROTECTION AGENCY, August 1994, EPA 749-F-94-012a
(6) U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. 1985.
(7) World Health Organization,
(8) Product Safety Assessment, Revised: November 19, 2010 The Dow Chemical Company
(9) California Office of Environmental Health Hazard Assessment, PROPOSED ACTION LEVEL FOR 2-CHLOROTOLUENE
(10) Delaware Health and Social Services, Division of Public Health, Revised: 01/2010
(11) USEPA, Envirofacts Master Chemical Integrator (EMCI), Scorecard, 4/10/2009

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-2**
Customer ID: **ANGS50**
Customer PO: **Not Available**

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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 301**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		310	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	N.E.		10.0	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	N.E.		N.E.	
Chloromethane	74-87-3	50.49	0.61		1.3	N.E.		9.40	
n-Butane	106-97-8	58.12	2.3		5.4	N.E.		N.E.	
Vinyl chloride	75-01-4	62.50	ND		ND	0.160		10.0	
1,3-Butadiene	106-99-0	54.09	ND		ND	0.0810		0.210	
Bromomethane	74-83-9	94.94	ND		ND	N.E.		0.520	
Chloroethane	75-00-3	64.52	ND		ND	N.E.		1000	
Ethanol	64-17-5	46.07	49	E	93	N.E.		N.E.	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	0.0760		0.310	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	ND		ND	N.E.		73.0	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	2.5		6.1	N.E.		730	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	N.E.		3100	
Acetone	67-64-1	58.08	19		46	N.E.		3200	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	N.E.		21.0	
Acetonitrile	75-05-8	41.00	ND		ND	N.E.		6.30	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	N.E.		N.E.	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	N.E.		N.E.	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	0.410		0.100	
Carbon disulfide	75-15-0	76.14	ND		ND	N.E.		73.0	
Methylene chloride	75-09-2	84.94	0.96		3.3	96.0		63.0	
Acrylonitrile	107-13-1	53.00	ND		ND	0.0360		0.210	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	9.40		310	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	N.E.		6.30	
n-Hexane	110-54-3	86.17	0.74		2.6	N.E.		73.0	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	1.50		N.E.	
Vinyl acetate	108-05-4	86.00	ND		ND	N.E.		21.0	
2-Butanone(MEK)	78-93-3	72.10	2.0		5.8	N.E.		520	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	N.E.		N.E.	
Ethyl acetate	141-78-6	88.10	0.71		2.6	N.E.		N.E.	
Chloroform	67-66-3	119.40	ND		ND	0.110		10.0	
Tetrahydrofuran	109-99-9	72.11	4.3		13	N.E.		210	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	N.E.		520	
Cyclohexane	110-82-7	84.16	0.78		2.7	N.E.		630	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	0.410		10.0	
n-Heptane	142-82-5	100.20	ND		ND	N.E.		N.E.	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	0.0940		0.730	
Benzene	71-43-2	78.11	ND		ND	0.310		3.10	
Trichloroethene	79-01-6	131.40	ND		ND	0.430		0.210	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	0.240		0.420	
Methyl Methacrylate	80-62-6	100.12	ND		ND	N.E.		73.0	
Bromodichloromethane	75-27-4	163.80	ND		ND	0.0660		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	0.320		11.0	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	N.E.		310	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	0.610		2.10	

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-2**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
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Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 301**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Toluene	108-88-3	92.14	7.3		27	N.E.		520	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	0.610		2.10	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	0.150		0.0210	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	N.E.		3.10	
Tetrachloroethene	127-18-4	165.80	ND		ND	9.40		4.20	
Dibromochloromethane	124-48-1	208.30	ND		ND	0.0900		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	0.00410		0.940	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		5.20	
Ethylbenzene	100-41-4	106.20	ND		ND	0.970		100	
Xylene (p,m)	1330-20-7	106.20	ND		ND	N.E.		10.0	
Xylene (Ortho)	95-47-6	106.20	ND		ND	N.E.		10.0	
Styrene	100-42-5	104.10	ND		ND	N.E.		100	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	N.E.		42.0	
Bromoform	75-25-2	252.80	ND		ND	2.20		N.E.	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	0.0420		N.E.	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	N.E.		N.E.	
2-Chlorotoluene	95-49-8	126.60	ND		ND	N.E.		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	N.E.		0.730	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	0.220		83.0	
Benzyl chloride	100-44-7	126.00	ND		ND	0.0500		0.100	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	N.E.		21.0	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	N.E.		0.210	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	0.110		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	0.0720		0.310	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
RBC= Risk Based Concentration

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
EPA III= USEPA Region 3, Mid-Atlantic

Reference
EPA Region III Risk-Based Concentration (RBC) Table, Nov 2012.

Carcinogenic Exceedence
Value exceeds the theoretical risk that 1 additional case of cancer will occur in a population of 1 million than statistically expected. Thus is a theoretical risk and not an actual epidemiological one.

NonCarcinogenic Exceedence
Value exceeds the theoretical risk that 1 in a population of 100,000 will experience deliterious health effects. Thus is a theoretical risk and not an actual epidemiological one.

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-2**
Customer ID: **ANGS50**
Customer PO: **Not Available**

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Phone: **952-252-0405**
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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 301**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		N.E.	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	4900000		4900000	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	7000000		7000000	
Chloromethane	74-87-3	50.49	0.61		1.3	LFC		210000	
n-Butane	106-97-8	58.12	2.3		5.4	1900000		1900000	
Vinyl chloride	75-01-4	62.50	ND		ND	LFC		2600	
1,3-Butadiene	106-99-0	54.09	ND		ND	LFC		2200	
Bromomethane	74-83-9	94.94	ND		ND	LFC		78000	
Chloroethane	75-00-3	64.52	ND		ND	LFC		2600000	
Ethanol	64-17-5	46.07	49	E	93	1900000		1900000	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	LFC		N.E.	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	ND		ND	5600000		5600000	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	2.5		6.1	980000		980000	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	7700000		7700000	
Acetone	67-64-1	58.08	19		46	590000		2400000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	790000		790000	
Acetonitrile	75-05-8	41.00	ND		ND	34000		67000	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	300000		300000	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	880000		880000	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	3100		3100	
Carbon disulfide	75-15-0	76.14	ND		ND	3100		62000	
Methylene chloride	75-09-2	84.94	0.96		3.3	LFC		87000	
Acrylonitrile	107-13-1	53.00	ND		ND	2200		4300	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	N.E.		N.E.	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	790000		790000	
n-Hexane	110-54-3	86.17	0.74		2.6	180000		1800000	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	400000		400000	
Vinyl acetate	108-05-4	86.00	ND		ND	14000		N.E.	
2-Butanone(MEK)	78-93-3	72.10	2.0		5.8	590000		590000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	790000		790000	
Ethyl acetate	141-78-6	88.10	0.71		2.6	1400000		1400000	
Chloroform	67-66-3	119.40	ND		ND	9800		240000	
Tetrahydrofuran	109-99-9	72.11	4.3		13	590000		590000	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	1900000		1900000	
Cyclohexane	110-82-7	84.16	0.78		2.7	1000000		1000000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	13000		63000	
n-Heptane	142-82-5	100.20	ND		ND	350000		2000000	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	4000		200000	
Benzene	71-43-2	78.11	ND		ND	320		3200	
Trichloroethene	79-01-6	131.40	ND		ND	130000		540000	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	LFC		350000	
Methyl Methacrylate	80-62-6	100.12	ND		ND	410000		410000	
Bromodichloromethane	75-27-4	163.80	ND		ND	N.E.		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	3600		360000	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	200000		410000	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	4500		N.E.	

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EMSL Sample #: **491500363-2**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 301**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Toluene	108-88-3	92.14	7.3		27	380000		750000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	4500		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	55000		55000	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	4100		410000	
Tetrachloroethene	127-18-4	165.80	ND		ND	LFC		680000	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	350		150000	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		350000	
Ethylbenzene	100-41-4	106.20	ND		ND	430000		430000	
Xylene (p,m)	1330-20-7	106.20	ND		ND	430000		430000	
Xylene (Ortho)	95-47-6	106.20	ND		ND	430000		430000	
Styrene	100-42-5	104.10	ND		ND	210000		430000	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	250000		250000	
Bromoform	75-25-2	252.80	ND		ND	5200		5200	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	6900		34000	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	120000		120000	
2-Chlorotoluene	95-49-8	126.60	ND		ND	260000		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	120000		120000	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	LFC		450000	
Benzyl chloride	100-44-7	126.00	ND		ND	5200		5200	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	300000		300000	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	37000		N.E.	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	210		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	52000		52000	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
REL= Recommended Exposure Limit, PEL= Permissable Exposure Limit

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
NIOSH= The National Institute for Occupational Safety

Reference
Occupational Safety and Health Administration (OSHA) General Industry Air Contaminants Standard (29 CFR 1910.1000)

NJDEP Certification #: 03036

EMSL Analytical
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http://www.EMSL.com to15lab@EMSL.com

EMSL Order #:	491500363
EMSL Sample #:	491500363-2
Customer ID:	ANGS50
Customer PO:	Not Available

Attn:	Kevin Hagen Angstrom Analytical, Inc. 5001 Cedar Lake Road St Louis Park, MN 55416	Phone: Fax: Date Collected: Date Received:	952-252-0405 952-252-0407 04/08/2015 04/14/2015
Project:	Capitol Bldg. Phase V	Sample ID:	Rm 301

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Chloromethane	74-87-3	0.61		1.3	Most (99%) of the chloromethane in the environment comes from natural sources. Because chloromethane is made in the oceans by natural processes, it is present in air all over the world. In most areas, the outside air contains less than 1 part of chloromethane in a billion parts of air (ppb). In cities, human activities, mostly combustion and manufacturing, add to the chloromethane in the air, resulting in somewhat higher levels, up to 1 ppb. Cigarette smoke, polystyrene insulation, and aerosol propellants; home burning of wood, coal, or certain plastics; and chlorinated swimming pools.[4]
n-Butane	106-97-8	2.3		5.4	Aerosol spray products for some paints, cosmetics, automotive products, leather treatments, pesticides.[2]
Ethanol	64-17-5	49	E	93	Hand sanitizers, disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Isopropyl alcohol(2-Propanol)	67-63-0	2.5		6.1	Eye Glass Cleaners. Disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Acetone	67-64-1	19		46	Rubber cement, cleaning fluids, scented candles and nail polish remover.[1]
Methylene chloride	75-09-2	0.96		3.3	Methylene chloride is used as an industrial solvent and as a paint stripper. It may also be found in some aerosol and pesticide products and is used in the manufacture of photographic film.[4] Hairspray, paint stripper, rug cleaners, insecticides and furniture polish.[1]
n-Hexane	110-54-3	0.74		2.6	Gasoline, rubber cement, typing correction fluid and aerosols in perfumes.[1]
2-Butanone(MEK)	78-93-3	2.0		5.8	2-Butanone is produced in large quantities. Nearly half of its use is in paints and other coatings because it will quickly evaporate into the air and it dissolves many substances.[4] Can occur from automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke.[1]
Ethyl acetate	141-78-6	0.71		2.6	Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Tetrahydrofuran	109-99-9	4.3		13	PVC cement and primer, various adhesives, contact cement, model cement.[2]
Cyclohexane	110-82-7	0.78		2.7	Cyclohexane can be added to lacquers and resins, paint and varnish removers, and fungicides. It is also used as a fuel for camp stoves. Exposure can also occur when people use products that contain cyclohexane or when they smoke cigarettes.[4]
Toluene	108-88-3	7.3		27	Toluene is produced in the process of making gasoline and other fuels from crude oil and making coke from coal. Will occur in gasoline exhaust. Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes.[4]

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EMSL Order #:	**491500363**
EMSL Sample #:	**491500363-2**
Customer ID:	**ANGS50**
Customer PO:	**Not Available**

Attn:	**Kevin Hagen** **Angstrom Analytical, Inc.** **5001 Cedar Lake Road** **St Louis Park, MN 55416**	Phone: Fax: Date Collected: Date Received:	**952-252-0405** **952-252-0407** **04/08/2015** **04/14/2015**
Project:	**Capitol Bldg. Phase V**	Sample ID:	**Rm 301**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Sources References

(1) NJDEP "Common Household Sources of Background Indoor Air Contamination". June 26, 2012
(2) NYSDOH "Volatile Organic Compounds (VOCs) in Commonly Used Products", 2007
(3) EPA, Air & Radiation, TTN Web - Technology Transfer NetworkAir Toxics Web site, various years.
(4) Agency for Toxic Substances and Disease Registry (ATSDR). U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1998.
(5) OFFICE OF POLLUTION PREVENTION AND TOXICS, U.S. ENVIRONMENTAL PROTECTION AGENCY, August 1994, EPA 749-F-94-012a
(6) U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. 1985.
(7) World Health Organization,
(8) Product Safety Assessment, Revised: November 19, 2010 The Dow Chemical Company
(9) California Office of Environmental Health Hazard Assessment, PROPOSED ACTION LEVEL FOR 2-CHLOROTOLUENE
(10) Delaware Health and Social Services, Division of Public Health, Revised: 01/2010
(11) USEPA, Envirofacts Master Chemical Integrator (EMCI), Scorecard, 4/10/2009

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-3**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 323**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		310	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	N.E.		10.0	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	N.E.		N.E.	
Chloromethane	74-87-3	50.49	0.62		1.3	N.E.		9.40	
n-Butane	106-97-8	58.12	2.4		5.8	N.E.		N.E.	
Vinyl chloride	75-01-4	62.50	ND		ND	0.160		10.0	
1,3-Butadiene	106-99-0	54.09	ND		ND	0.0810		0.210	
Bromomethane	74-83-9	94.94	ND		ND	N.E.		0.520	
Chloroethane	75-00-3	64.52	ND		ND	N.E.		1000	
Ethanol	64-17-5	46.07	330	E	620	N.E.		N.E.	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	0.0760		0.310	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	ND		ND	N.E.		73.0	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	3.9		9.5	N.E.		730	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	N.E.		3100	
Acetone	67-64-1	58.08	18		42	N.E.		3200	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	N.E.		21.0	
Acetonitrile	75-05-8	41.00	ND		ND	N.E.		6.30	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	N.E.		N.E.	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	N.E.		N.E.	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	0.410		0.100	
Carbon disulfide	75-15-0	76.14	ND		ND	N.E.		73.0	
Methylene chloride	75-09-2	84.94	0.79		2.8	96.0		63.0	
Acrylonitrile	107-13-1	53.00	ND		ND	0.0360		0.210	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	9.40		310	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	N.E.		6.30	
n-Hexane	110-54-3	86.17	0.59		2.1	N.E.		73.0	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	1.50		N.E.	
Vinyl acetate	108-05-4	86.00	ND		ND	N.E.		21.0	
2-Butanone(MEK)	78-93-3	72.10	1.7		5.0	N.E.		520	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	N.E.		N.E.	
Ethyl acetate	141-78-6	88.10	1.0		3.7	N.E.		N.E.	
Chloroform	67-66-3	119.40	ND		ND	0.110		10.0	
Tetrahydrofuran	109-99-9	72.11	4.0		12	N.E.		210	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	N.E.		520	
Cyclohexane	110-82-7	84.16	0.89		3.1	N.E.		630	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	0.410		10.0	
n-Heptane	142-82-5	100.20	ND		ND	N.E.		N.E.	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	0.0940		0.730	
Benzene	71-43-2	78.11	ND		ND	0.310		3.10	
Trichloroethene	79-01-6	131.40	ND		ND	0.430		0.210	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	0.240		0.420	
Methyl Methacrylate	80-62-6	100.12	ND		ND	N.E.		73.0	
Bromodichloromethane	75-27-4	163.80	ND		ND	0.0660		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	0.320		11.0	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	N.E.		310	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	0.610		2.10	

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-3**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 323**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Toluene	108-88-3	92.14	7.7		29	N.E.		520	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	0.610		2.10	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	0.150		0.0210	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	N.E.		3.10	
Tetrachloroethene	127-18-4	165.80	ND		ND	9.40		4.20	
Dibromochloromethane	124-48-1	208.30	ND		ND	0.0900		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	0.00410		0.940	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		5.20	
Ethylbenzene	100-41-4	106.20	ND		ND	0.970		100	
Xylene (p,m)	1330-20-7	106.20	ND		ND	N.E.		10.0	
Xylene (Ortho)	95-47-6	106.20	ND		ND	N.E.		10.0	
Styrene	100-42-5	104.10	ND		ND	N.E.		100	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	N.E.		42.0	
Bromoform	75-25-2	252.80	ND		ND	2.20		N.E.	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	0.0420		N.E.	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	N.E.		N.E.	
2-Chlorotoluene	95-49-8	126.60	ND		ND	N.E.		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	N.E.		0.730	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	0.220		83.0	
Benzyl chloride	100-44-7	126.00	ND		ND	0.0500		0.100	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	N.E.		21.0	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	N.E.		0.210	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	0.110		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	0.0720		0.310	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
RBC= Risk Based Concentration

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
EPA III= USEPA Region 3, Mid-Atlantic

Reference
EPA Region III Risk-Based Concentration (RBC) Table, Nov 2012.

Carcinogenic Exceedence
Value exceeds the theoretical risk that 1 additional case of cancer will occur in a population of 1 million than statistically expected. Thus is a theoretical risk and not an actual epidemiological one.

NonCarcinogenic Exceedence
Value exceeds the theoretical risk that 1 in a population of 100,000 will experience deliterious health effects. Thus is a theoretical risk and not an actual epidemiological one.

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-3**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 323**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		N.E.	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	4900000		4900000	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	7000000		7000000	
Chloromethane	74-87-3	50.49	0.62		1.3	LFC		210000	
n-Butane	106-97-8	58.12	2.4		5.8	1900000		1900000	
Vinyl chloride	75-01-4	62.50	ND		ND	LFC		2600	
1,3-Butadiene	106-99-0	54.09	ND		ND	LFC		2200	
Bromomethane	74-83-9	94.94	ND		ND	LFC		78000	
Chloroethane	75-00-3	64.52	ND		ND	LFC		2600000	
Ethanol	64-17-5	46.07	330	E	620	1900000		1900000	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	LFC		N.E.	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	ND		ND	5600000		5600000	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	3.9		9.5	980000		980000	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	7700000		7700000	
Acetone	67-64-1	58.08	18		42	590000		2400000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	790000		790000	
Acetonitrile	75-05-8	41.00	ND		ND	34000		67000	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	300000		300000	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	880000		880000	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	3100		3100	
Carbon disulfide	75-15-0	76.14	ND		ND	3100		62000	
Methylene chloride	75-09-2	84.94	0.79		2.8	LFC		87000	
Acrylonitrile	107-13-1	53.00	ND		ND	2200		4300	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	N.E.		N.E.	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	790000		790000	
n-Hexane	110-54-3	86.17	0.59		2.1	180000		1800000	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	400000		400000	
Vinyl acetate	108-05-4	86.00	ND		ND	14000		N.E.	
2-Butanone(MEK)	78-93-3	72.10	1.7		5.0	590000		590000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	790000		790000	
Ethyl acetate	141-78-6	88.10	1.0		3.7	1400000		1400000	
Chloroform	67-66-3	119.40	ND		ND	9800		240000	
Tetrahydrofuran	109-99-9	72.11	4.0		12	590000		590000	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	1900000		1900000	
Cyclohexane	110-82-7	84.16	0.89		3.1	1000000		1000000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	13000		63000	
n-Heptane	142-82-5	100.20	ND		ND	350000		2000000	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	4000		200000	
Benzene	71-43-2	78.11	ND		ND	320		3200	
Trichloroethene	79-01-6	131.40	ND		ND	130000		540000	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	LFC		350000	
Methyl Methacrylate	80-62-6	100.12	ND		ND	410000		410000	
Bromodichloromethane	75-27-4	163.80	ND		ND	N.E.		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	3600		360000	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	200000		410000	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	4500		N.E.	

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EMSL Order #:	**491500363**
EMSL Sample #:	**491500363-3**
Customer ID:	**ANGS50**
Customer PO:	**Not Available**

Attn:	**Kevin Hagen** **Angstrom Analytical, Inc.** **5001 Cedar Lake Road** **St Louis Park, MN 55416**	Phone: Fax: Date Collected: Date Received:	**952-252-0405** **952-252-0407** **04/08/2015** **04/14/2015**
Project:	**Capitol Bldg. Phase V**	Sample ID:	**Rm 323**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Toluene	108-88-3	92.14	7.7		29	380000		750000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	4500		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	55000		55000	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	4100		410000	
Tetrachloroethene	127-18-4	165.80	ND		ND	LFC		680000	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	350		150000	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		350000	
Ethylbenzene	100-41-4	106.20	ND		ND	430000		430000	
Xylene (p,m)	1330-20-7	106.20	ND		ND	430000		430000	
Xylene (Ortho)	95-47-6	106.20	ND		ND	430000		430000	
Styrene	100-42-5	104.10	ND		ND	210000		430000	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	250000		250000	
Bromoform	75-25-2	252.80	ND		ND	5200		5200	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	6900		34000	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	120000		120000	
2-Chlorotoluene	95-49-8	126.60	ND		ND	260000		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	120000		120000	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	LFC		450000	
Benzyl chloride	100-44-7	126.00	ND		ND	5200		5200	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	300000		300000	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	37000		N.E.	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	210		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	52000		52000	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
REL= Recommended Exposure Limit, PEL= Permissable Exposure Limit

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
NIOSH= The National Institute for Occupational Safety

Reference
Occupational Safety and Health Administration (OSHA) General Industry Air Contaminants Standard (29 CFR 1910.1000)

NJDEP Certification #: 03036

EMSL Analytical
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EMSL Order #: **491500363**
EMSL Sample #: **491500363-3**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 323**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Chloromethane	74-87-3	0.62		1.3	Most (99%) of the chloromethane in the environment comes from natural sources. Because chloromethane is made in the oceans by natural processes, it is present in air all over the world. In most areas, the outside air contains less than 1 part of chloromethane in a billion parts of air (ppb). In cities, human activities, mostly combustion and manufacturing, add to the chloromethane in the air, resulting in somewhat higher levels, up to 1 ppb. Cigarette smoke, polystyrene insulation, and aerosol propellants; home burning of wood, coal, or certain plastics; and chlorinated swimming pools.[4]
n-Butane	106-97-8	2.4		5.8	Aerosol spray products for some paints, cosmetics, automotive products, leather treatments, pesticides.[2]
Ethanol	64-17-5	330	E	620	Hand sanitizers, disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray. [2]
Isopropyl alcohol(2-Propanol)	67-63-0	3.9		9.5	Eye Glass Cleaners. Disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Acetone	67-64-1	18		42	Rubber cement, cleaning fluids, scented candles and nail polish remover.[1]
Methylene chloride	75-09-2	0.79		2.8	Methylene chloride is used as an industrial solvent and as a paint stripper. It may also be found in some aerosol and pesticide products and is used in the manufacture of photographic film. [4] Hairspray, paint stripper, rug cleaners, insecticides and furniture polish.[1]
n-Hexane	110-54-3	0.59		2.1	Gasoline, rubber cement, typing correction fluid and aerosols in perfumes.[1]
2-Butanone(MEK)	78-93-3	1.7		5.0	2-Butanone is produced in large quantities. Nearly half of its use is in paints and other coatings because it will quickly evaporate into the air and it dissolves many substances.[4] Can occur from automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke.[1]
Ethyl acetate	141-78-6	1.0		3.7	Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Tetrahydrofuran	109-99-9	4.0		12	PVC cement and primer, various adhesives, contact cement, model cement.[2]
Cyclohexane	110-82-7	0.89		3.1	Cyclohexane can be added to lacquers and resins, paint and varnish removers, and fungicides. It is also used as a fuel for camp stoves. Exposure can also occur when people use products that contain cyclohexane or when they smoke cigarettes.[4]
Toluene	108-88-3	7.7		29	Toluene is produced in the process of making gasoline and other fuels from crude oil and making coke from coal. Will occur in gasoline exhaust. Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes.[4]

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EMSL Order #:	491500363
EMSL Sample #:	491500363-3
Customer ID:	ANGS50
Customer PO:	Not Available

Attn:	Kevin Hagen Angstrom Analytical, Inc. 5001 Cedar Lake Road St Louis Park, MN 55416	Phone: Fax: Date Collected: Date Received:	952-252-0405 952-252-0407 04/08/2015 04/14/2015
Project:	Capitol Bldg. Phase V	Sample ID:	Rm 323

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Sources References

(1) NJDEP "Common Household Sources of Background Indoor Air Contamination". June 26, 2012
(2) NYSDOH "Volatile Organic Compounds (VOCs) in Commonly Used Products", 2007
(3) EPA, Air & Radiation, TTN Web - Technology Transfer NetworkAir Toxics Web site, various years.
(4) Agency for Toxic Substances and Disease Registry (ATSDR). U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1998.
(5) OFFICE OF POLLUTION PREVENTION AND TOXICS, U.S. ENVIRONMENTAL PROTECTION AGENCY, August 1994, EPA 749-F-94-012a
(6) U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. 1985.
(7) World Health Organization,
(8) Product Safety Assessment, Revised: November 19, 2010 The Dow Chemical Company
(9) California Office of Environmental Health Hazard Assessment, PROPOSED ACTION LEVEL FOR 2-CHLOROTOLUENE
(10) Delaware Health and Social Services, Division of Public Health, Revised: 01/2010
(11) USEPA, Envirofacts Master Chemical Integrator (EMCI), Scorecard, 4/10/2009

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-4**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
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Phone: **952-252-0405**
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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 231**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		310	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	N.E.		10.0	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	N.E.		N.E.	
Chloromethane	74-87-3	50.49	0.71		1.5	N.E.		9.40	
n-Butane	106-97-8	58.12	2.0		4.8	N.E.		N.E.	
Vinyl chloride	75-01-4	62.50	ND		ND	0.160		10.0	
1,3-Butadiene	106-99-0	54.09	ND		ND	0.0810		0.210	
Bromomethane	74-83-9	94.94	ND		ND	N.E.		0.520	
Chloroethane	75-00-3	64.52	ND		ND	N.E.		1000	
Ethanol	64-17-5	46.07	800	E	1500	N.E.		N.E.	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	0.0760		0.310	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	ND		ND	N.E.		73.0	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	5.1		13	N.E.		730	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	N.E.		3100	
Acetone	67-64-1	58.08	26		62	N.E.		3200	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	N.E.		21.0	
Acetonitrile	75-05-8	41.00	ND		ND	N.E.		6.30	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.58		1.8	N.E.		N.E.	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	N.E.		N.E.	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	0.410		0.100	
Carbon disulfide	75-15-0	76.14	ND		ND	N.E.		73.0	
Methylene chloride	75-09-2	84.94	0.73		2.5	96.0		63.0	
Acrylonitrile	107-13-1	53.00	ND		ND	0.0360		0.210	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	9.40		310	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	N.E.		6.30	
n-Hexane	110-54-3	86.17	0.57		2.0	N.E.		73.0	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	1.50		N.E.	
Vinyl acetate	108-05-4	86.00	ND		ND	N.E.		21.0	
2-Butanone(MEK)	78-93-3	72.10	2.1		6.2	N.E.		520	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	N.E.		N.E.	
Ethyl acetate	141-78-6	88.10	2.5		8.9	N.E.		N.E.	
Chloroform	67-66-3	119.40	ND		ND	0.110		10.0	
Tetrahydrofuran	109-99-9	72.11	5.7		17	N.E.		210	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	N.E.		520	
Cyclohexane	110-82-7	84.16	1.0		3.6	N.E.		630	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	0.410		10.0	
n-Heptane	142-82-5	100.20	0.73		3.0	N.E.		N.E.	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	0.0940		0.730	
Benzene	71-43-2	78.11	ND		ND	0.310		3.10	
Trichloroethene	79-01-6	131.40	ND		ND	0.430		0.210	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	0.240		0.420	
Methyl Methacrylate	80-62-6	100.12	ND		ND	N.E.		73.0	
Bromodichloromethane	75-27-4	163.80	ND		ND	0.0660		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	0.320		11.0	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	N.E.		310	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	0.610		2.10	

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-4**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
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5001 Cedar Lake Road
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Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 231**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Toluene	108-88-3	92.14	9.7		36	N.E.		520	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	0.610		2.10	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	0.150		0.0210	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	N.E.		3.10	
Tetrachloroethene	127-18-4	165.80	1.0		6.9	9.40		4.20	
Dibromochloromethane	124-48-1	208.30	ND		ND	0.0900		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	0.00410		0.940	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		5.20	
Ethylbenzene	100-41-4	106.20	ND		ND	0.970		100	
Xylene (p,m)	1330-20-7	106.20	ND		ND	N.E.		10.0	
Xylene (Ortho)	95-47-6	106.20	ND		ND	N.E.		10.0	
Styrene	100-42-5	104.10	ND		ND	N.E.		100	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	N.E.		42.0	
Bromoform	75-25-2	252.80	ND		ND	2.20		N.E.	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	0.0420		N.E.	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	N.E.		N.E.	
2-Chlorotoluene	95-49-8	126.60	ND		ND	N.E.		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	N.E.		0.730	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	0.220		83.0	
Benzyl chloride	100-44-7	126.00	ND		ND	0.0500		0.100	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	N.E.		21.0	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	N.E.		0.210	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	0.110		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	0.0720		0.310	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
RBC= Risk Based Concentration

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
EPA III= USEPA Region 3, Mid-Atlantic

Reference
EPA Region III Risk-Based Concentration (RBC) Table, Nov 2012.

Carcinogenic Exceedence
Value exceeds the theoretical risk that 1 additional case of cancer will occur in a population of 1 million than statistically expected. Thus is a theoretical risk and not an actual epidemiological one.

NonCarcinogenic Exceedence
Value exceeds the theoretical risk that 1 in a population of 100,000 will experience deliterious health effects. Thus is a theoretical risk and not an actual epidemiological one.

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-4**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
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Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 231**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		N.E.	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	4900000		4900000	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	7000000		7000000	
Chloromethane	74-87-3	50.49	0.71		1.5	LFC		210000	
n-Butane	106-97-8	58.12	2.0		4.8	1900000		1900000	
Vinyl chloride	75-01-4	62.50	ND		ND	LFC		2600	
1,3-Butadiene	106-99-0	54.09	ND		ND	LFC		2200	
Bromomethane	74-83-9	94.94	ND		ND	LFC		78000	
Chloroethane	75-00-3	64.52	ND		ND	LFC		2600000	
Ethanol	64-17-5	46.07	800	E	1500	1900000		1900000	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	LFC		N.E.	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	ND		ND	5600000		5600000	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	5.1		13	980000		980000	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	7700000		7700000	
Acetone	67-64-1	58.08	26		62	590000		2400000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	790000		790000	
Acetonitrile	75-05-8	41.00	ND		ND	34000		67000	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	0.58		1.8	300000		300000	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	880000		880000	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	3100		3100	
Carbon disulfide	75-15-0	76.14	ND		ND	3100		62000	
Methylene chloride	75-09-2	84.94	0.73		2.5	LFC		87000	
Acrylonitrile	107-13-1	53.00	ND		ND	2200		4300	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	N.E.		N.E.	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	790000		790000	
n-Hexane	110-54-3	86.17	0.57		2.0	180000		1800000	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	400000		400000	
Vinyl acetate	108-05-4	86.00	ND		ND	14000		N.E.	
2-Butanone(MEK)	78-93-3	72.10	2.1		6.2	590000		590000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	790000		790000	
Ethyl acetate	141-78-6	88.10	2.5		8.9	1400000		1400000	
Chloroform	67-66-3	119.40	ND		ND	9800		240000	
Tetrahydrofuran	109-99-9	72.11	5.7		17	590000		590000	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	1900000		1900000	
Cyclohexane	110-82-7	84.16	1.0		3.6	1000000		1000000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	13000		63000	
n-Heptane	142-82-5	100.20	0.73		3.0	350000		2000000	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	4000		200000	
Benzene	71-43-2	78.11	ND		ND	320		3200	
Trichloroethene	79-01-6	131.40	ND		ND	130000		540000	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	LFC		350000	
Methyl Methacrylate	80-62-6	100.12	ND		ND	410000		410000	
Bromodichloromethane	75-27-4	163.80	ND		ND	N.E.		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	3600		360000	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	200000		410000	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	4500		N.E.	

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EMSL Sample #: **491500363-4**
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Phone: **952-252-0405**
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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 231**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Toluene	108-88-3	92.14	9.7		36	380000		750000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	4500		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	55000		55000	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	4100		410000	
Tetrachloroethene	127-18-4	165.80	1.0		6.9	LFC		680000	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	350		150000	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		350000	
Ethylbenzene	100-41-4	106.20	ND		ND	430000		430000	
Xylene (p,m)	1330-20-7	106.20	ND		ND	430000		430000	
Xylene (Ortho)	95-47-6	106.20	ND		ND	430000		430000	
Styrene	100-42-5	104.10	ND		ND	210000		430000	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	250000		250000	
Bromoform	75-25-2	252.80	ND		ND	5200		5200	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	6900		34000	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	120000		120000	
2-Chlorotoluene	95-49-8	126.60	ND		ND	260000		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	120000		120000	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	LFC		450000	
Benzyl chloride	100-44-7	126.00	ND		ND	5200		5200	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	300000		300000	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	37000		N.E.	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	210		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	52000		52000	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
REL= Recommended Exposure Limit, PEL= Permissable Exposure Limit

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
NIOSH= The National Institute for Occupational Safety

Reference
Occupational Safety and Health Administration (OSHA) General Industry Air Contaminants Standard (29 CFR 1910.1000)

NJDEP Certification #: 03036

EMSL Analytical
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EMSL Order #: **491500363**
EMSL Sample #: **491500363-4**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 231**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Chloromethane	74-87-3	0.71		1.5	Most (99%) of the chloromethane in the environment comes from natural sources. Because chloromethane is made in the oceans by natural processes, it is present in air all over the world. In most areas, the outside air contains less than 1 part of chloromethane in a billion parts of air (ppb). In cities, human activities, mostly combustion and manufacturing, add to the chloromethane in the air, resulting in somewhat higher levels, up to 1 ppb. Cigarette smoke, polystyrene insulation, and aerosol propellants; home burning of wood, coal, or certain plastics; and chlorinated swimming pools.[4]
n-Butane	106-97-8	2.0		4.8	Aerosol spray products for some paints, cosmetics, automotive products, leather treatments, pesticides.[2]
Ethanol	64-17-5	800	E	1500	Hand sanitizers, disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray. [2]
Isopropyl alcohol(2-Propanol)	67-63-0	5.1		13	Eye Glass Cleaners. Disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Acetone	67-64-1	26		62	Rubber cement, cleaning fluids, scented candles and nail polish remover.[1]
Tertiary butyl alcohol(TBA)	75-65-0	0.58		1.8	Gasoline (oxygenating agent).[1]
Methylene chloride	75-09-2	0.73		2.5	Methylene chloride is used as an industrial solvent and as a paint stripper. It may also be found in some aerosol and pesticide products and is used in the manufacture of photographic film. [4] Hairspray, paint stripper, rug cleaners, insecticides and furniture polish.[1]
n-Hexane	110-54-3	0.57		2.0	Gasoline, rubber cement, typing correction fluid and aerosols in perfumes.[1]
2-Butanone(MEK)	78-93-3	2.1		6.2	2-Butanone is produced in large quantities. Nearly half of its use is in paints and other coatings because it will quickly evaporate into the air and it dissolves many substances.[4] Can occur from automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke.[1]
Ethyl acetate	141-78-6	2.5		8.9	Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Tetrahydrofuran	109-99-9	5.7		17	PVC cement and primer, various adhesives, contact cement, model cement.[2]
Cyclohexane	110-82-7	1.0		3.6	Cyclohexane can be added to lacquers and resins, paint and varnish removers, and fungicides. It is also used as a fuel for camp stoves. Exposure can also occur when people use products that contain cyclohexane or when they smoke cigarettes.[4]
n-Heptane	142-82-5	0.73		3.0	It is used as an industrial solvent and in gasoline and petroleum products refining processes.Also may be in nail polishes and wood office furniture.[1]

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EMSL Order #:	491500363
EMSL Sample #:	491500363-4
Customer ID:	ANGS50
Customer PO:	Not Available

Attn:	Kevin Hagen Angstrom Analytical, Inc. 5001 Cedar Lake Road St Louis Park, MN 55416	Phone: Fax: Date Collected: Date Received:	952-252-0405 952-252-0407 04/08/2015 04/14/2015
Project:	Capitol Bldg. Phase V	Sample ID:	Rm 231

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Toluene	108-88-3	9.7		36	Toluene is produced in the process of making gasoline and other fuels from crude oil and making coke from coal. Will occur in gasoline exhaust. Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes.[4]
Tetrachloroethene	127-18-4	1.0		6.9	Tetrachloroethylene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products.4

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Sources References

(1) NJDEP "Common Household Sources of Background Indoor Air Contamination". June 26, 2012
(2) NYSDOH "Volatile Organic Compounds (VOCs) in Commonly Used Products", 2007
(3) EPA, Air & Radiation, TTN Web - Technology Transfer NetworkAir Toxics Web site, various years.
(4) Agency for Toxic Substances and Disease Registry (ATSDR). U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1998.
(5) OFFICE OF POLLUTION PREVENTION AND TOXICS, U.S. ENVIRONMENTAL PROTECTION AGENCY, August 1994, EPA 749-F-94-012a
(6) U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. 1985.
(7) World Health Organization,
(8) Product Safety Assessment, Revised: November 19, 2010 The Dow Chemical Company
(9) California Office of Environmental Health Hazard Assessment, PROPOSED ACTION LEVEL FOR 2-CHLOROTOLUENE
(10) Delaware Health and Social Services, Division of Public Health, Revised: 01/2010
(11) USEPA, Envirofacts Master Chemical Integrator (EMCI), Scorecard, 4/10/2009

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-5**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 112**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		310	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	N.E.		10.0	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	N.E.		N.E.	
Chloromethane	74-87-3	50.49	0.66		1.4	N.E.		9.40	
n-Butane	106-97-8	58.12	20		47	N.E.		N.E.	
Vinyl chloride	75-01-4	62.50	ND		ND	0.160		10.0	
1,3-Butadiene	106-99-0	54.09	ND		ND	0.0810		0.210	
Bromomethane	74-83-9	94.94	ND		ND	N.E.		0.520	
Chloroethane	75-00-3	64.52	ND		ND	N.E.		1000	
Ethanol	64-17-5	46.07	34		64	N.E.		N.E.	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	0.0760		0.310	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	1.6		8.7	N.E.		73.0	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	12		29	N.E.		730	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	N.E.		3100	
Acetone	67-64-1	58.08	73	D	170	N.E.		3200	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	N.E.		21.0	
Acetonitrile	75-05-8	41.00	ND		ND	N.E.		6.30	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	N.E.		N.E.	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	N.E.		N.E.	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	0.410		0.100	
Carbon disulfide	75-15-0	76.14	ND		ND	N.E.		73.0	
Methylene chloride	75-09-2	84.94	0.91		3.1	96.0		63.0	
Acrylonitrile	107-13-1	53.00	ND		ND	0.0360		0.210	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	9.40		310	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	N.E.		6.30	
n-Hexane	110-54-3	86.17	2.0		7.1	N.E.		73.0	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	1.50		N.E.	
Vinyl acetate	108-05-4	86.00	ND		ND	N.E.		21.0	
2-Butanone(MEK)	78-93-3	72.10	3.7		11	N.E.		520	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	N.E.		N.E.	
Ethyl acetate	141-78-6	88.10	4.8		17	N.E.		N.E.	
Chloroform	67-66-3	119.40	ND		ND	0.110		10.0	
Tetrahydrofuran	109-99-9	72.11	11		34	N.E.		210	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	N.E.		520	
Cyclohexane	110-82-7	84.16	4.7		16	N.E.		630	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	0.410		10.0	
n-Heptane	142-82-5	100.20	ND		ND	N.E.		N.E.	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	0.0940		0.730	
Benzene	71-43-2	78.11	ND		ND	0.310		3.10	
Trichloroethene	79-01-6	131.40	ND		ND	0.430		0.210	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	0.240		0.420	
Methyl Methacrylate	80-62-6	100.12	ND		ND	N.E.		73.0	
Bromodichloromethane	75-27-4	163.80	ND		ND	0.0660		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	0.320		11.0	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	N.E.		310	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	0.610		2.10	

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EMSL Order #:	491500363
EMSL Sample #:	491500363-5
Customer ID:	ANGS50
Customer PO:	Not Available

Attn:	Kevin Hagen Angstrom Analytical, Inc. 5001 Cedar Lake Road St Louis Park, MN 55416	Phone: Fax: Date Collected: Date Received:	952-252-0405 952-252-0407 04/08/2015 04/14/2015
Project:	Capitol Bldg. Phase V	Sample ID:	Rm 112

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

USEPA Residential Air Generic Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Carcinogenic ug/m3	>	Non-Carcin. ug/m3	>
Toluene	108-88-3	92.14	110	D	410	N.E.		520	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	0.610		2.10	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	0.150		0.0210	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	N.E.		3.10	
Tetrachloroethene	127-18-4	165.80	ND		ND	9.40		4.20	
Dibromochloromethane	124-48-1	208.30	ND		ND	0.0900		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	0.00410		0.940	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		5.20	
Ethylbenzene	100-41-4	106.20	2.0		8.6	0.970	⚑	100	
Xylene (p,m)	1330-20-7	106.20	7.4		32	N.E.		10.0	⚑
Xylene (Ortho)	95-47-6	106.20	2.4		11	N.E.		10.0	⚑
Styrene	100-42-5	104.10	ND		ND	N.E.		100	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	N.E.		42.0	
Bromoform	75-25-2	252.80	ND		ND	2.20		N.E.	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	0.0420		N.E.	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	N.E.		N.E.	
2-Chlorotoluene	95-49-8	126.60	ND		ND	N.E.		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	N.E.		0.730	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	0.220		83.0	
Benzyl chloride	100-44-7	126.00	ND		ND	0.0500		0.100	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	N.E.		21.0	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	N.E.		0.210	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	0.110		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	0.0720		0.310	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked ⚑ ⚑

Exposure Limit Definitions
RBC= Risk Based Concentration

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
EPA III= USEPA Region 3, Mid-Atlantic

Reference
EPA Region III Risk-Based Concentration (RBC) Table, Nov 2012.

Carcinogenic Exceedence
Value exceeds the theoretical risk that 1 additional case of cancer will occur in a population of 1 million than statistically expected. Thus is a theoretical risk and not an actual epidemiological one.

NonCarcinogenic Exceedence
Value exceeds the theoretical risk that 1 in a population of 100,000 will experience deliterious health effects. Thus is a theoretical risk and not an actual epidemiological one.

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-5**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
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Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 112**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		N.E.	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	4900000		4900000	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	7000000		7000000	
Chloromethane	74-87-3	50.49	0.66		1.4	LFC		210000	
n-Butane	106-97-8	58.12	20		47	1900000		1900000	
Vinyl chloride	75-01-4	62.50	ND		ND	LFC		2600	
1,3-Butadiene	106-99-0	54.09	ND		ND	LFC		2200	
Bromomethane	74-83-9	94.94	ND		ND	LFC		78000	
Chloroethane	75-00-3	64.52	ND		ND	LFC		2600000	
Ethanol	64-17-5	46.07	34		64	1900000		1900000	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	LFC		N.E.	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	1.6		8.7	5600000		5600000	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	12		29	980000		980000	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	7700000		7700000	
Acetone	67-64-1	58.08	73	D	170	590000		2400000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	790000		790000	
Acetonitrile	75-05-8	41.00	ND		ND	34000		67000	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	300000		300000	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	880000		880000	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	3100		3100	
Carbon disulfide	75-15-0	76.14	ND		ND	3100		62000	
Methylene chloride	75-09-2	84.94	0.91		3.1	LFC		87000	
Acrylonitrile	107-13-1	53.00	ND		ND	2200		4300	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	N.E.		N.E.	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	790000		790000	
n-Hexane	110-54-3	86.17	2.0		7.1	180000		1800000	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	400000		400000	
Vinyl acetate	108-05-4	86.00	ND		ND	14000		N.E.	
2-Butanone(MEK)	78-93-3	72.10	3.7		11	590000		590000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	790000		790000	
Ethyl acetate	141-78-6	88.10	4.8		17	1400000		1400000	
Chloroform	67-66-3	119.40	ND		ND	9800		240000	
Tetrahydrofuran	109-99-9	72.11	11		34	590000		590000	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	1900000		1900000	
Cyclohexane	110-82-7	84.16	4.7		16	1000000		1000000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	13000		63000	
n-Heptane	142-82-5	100.20	ND		ND	350000		2000000	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	4000		200000	
Benzene	71-43-2	78.11	ND		ND	320		3200	
Trichloroethene	79-01-6	131.40	ND		ND	130000		540000	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	LFC		350000	
Methyl Methacrylate	80-62-6	100.12	ND		ND	410000		410000	
Bromodichloromethane	75-27-4	163.80	ND		ND	N.E.		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	3600		360000	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	200000		410000	
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	4500		N.E.	

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-5**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 112**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Toluene	108-88-3	92.14	110	D	410	380000		750000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	4500		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	55000		55000	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	4100		410000	
Tetrachloroethene	127-18-4	165.80	ND		ND	LFC		680000	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	350		150000	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		350000	
Ethylbenzene	100-41-4	106.20	2.0		8.6	430000		430000	
Xylene (p,m)	1330-20-7	106.20	7.4		32	430000		430000	
Xylene (Ortho)	95-47-6	106.20	2.4		11	430000		430000	
Styrene	100-42-5	104.10	ND		ND	210000		430000	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	250000		250000	
Bromoform	75-25-2	252.80	ND		ND	5200		5200	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	6900		34000	
4-Ethyltoluene	622-96-8	120.20	ND		ND	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	ND		ND	120000		120000	
2-Chlorotoluene	95-49-8	126.60	ND		ND	260000		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	ND		ND	120000		120000	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	LFC		450000	
Benzyl chloride	100-44-7	126.00	ND		ND	5200		5200	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	300000		300000	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	37000		N.E.	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	210		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	52000		52000	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
REL= Recommended Exposure Limit, PEL= Permissable Exposure Limit

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration

Agency Definitions
NIOSH= The National Institute for Occupational Safety

Reference
Occupational Safety and Health Administration (OSHA) General Industry Air Contaminants Standard (29 CFR 1910.1000)

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-5**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
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St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 112**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Chloromethane	74-87-3	0.66		1.4	Most (99%) of the chloromethane in the environment comes from natural sources. Because chloromethane is made in the oceans by natural processes, it is present in air all over the world. In most areas, the outside air contains less than 1 part of chloromethane in a billion parts of air (ppb). In cities, human activities, mostly combustion and manufacturing, add to the chloromethane in the air, resulting in somewhat higher levels, up to 1 ppb. Cigarette smoke, polystyrene insulation, and aerosol propellants; home burning of wood, coal, or certain plastics; and chlorinated swimming pools.[4]
n-Butane	106-97-8	20		47	Aerosol spray products for some paints, cosmetics, automotive products, leather treatments, pesticides.[2]
Ethanol	64-17-5	34		64	Hand sanitizers, disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Freon 11(Trichlorofluoromethane)	75-69-4	1.6		8.7	Refrigerant from air conditioners, freezers, refrigerators, dehumidifiers.[2]
Isopropyl alcohol(2-Propanol)	67-63-0	12		29	Eye Glass Cleaners. Disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Acetone	67-64-1	73	D	170	Rubber cement, cleaning fluids, scented candles and nail polish remover.[1]
Methylene chloride	75-09-2	0.91		3.1	Methylene chloride is used as an industrial solvent and as a paint stripper. It may also be found in some aerosol and pesticide products and is used in the manufacture of photographic film.[4] Hairspray, paint stripper, rug cleaners, insecticides and furniture polish.[1]
n-Hexane	110-54-3	2.0		7.1	Gasoline, rubber cement, typing correction fluid and aerosols in perfumes.[1]
2-Butanone(MEK)	78-93-3	3.7		11	2-Butanone is produced in large quantities. Nearly half of its use is in paints and other coatings because it will quickly evaporate into the air and it dissolves many substances.[4] Can occur from automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke.[1]
Ethyl acetate	141-78-6	4.8		17	Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray.[2]
Tetrahydrofuran	109-99-9	11		34	PVC cement and primer, various adhesives, contact cement, model cement.[2]
Cyclohexane	110-82-7	4.7		16	Cyclohexane can be added to lacquers and resins, paint and varnish removers, and fungicides. It is also used as a fuel for camp stoves. Exposure can also occur when people use products that contain cyclohexane or when they smoke cigarettes.[4]

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-5**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
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Phone: **952-252-0405**
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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 112**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Toluene	108-88-3	110	D	410	Toluene is produced in the process of making gasoline and other fuels from crude oil and making coke from coal. Will occur in gasoline exhaust. Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes.[4]
Ethylbenzene	100-41-4	2.0		8.6	It is found in natural products such as coal tar and petroleum and is also found in manufactured products such as inks, insecticides, and paints. Ethylbenzene is used primarily to make another chemical, styrene. Other uses include as a solvent, in fuels, and to make other chemicals. [4]
Xylene (p,m)	1330-20-7	7.4		32	It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline.[4] Water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke.[1]
Xylene (Ortho)	95-47-6	2.4		11	It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline.[4] Water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke.[1]

Qualifier Definitions
ND = Non Detect
B = Compound also found in method blank.
E= Estimated concentration exceeding upper calibration range.
D= Result reported from diluted analysis.

Sources References
(1) NJDEP "Common Household Sources of Background Indoor Air Contamination". June 26, 2012
(2) NYSDOH "Volatile Organic Compounds (VOCs) in Commonly Used Products", 2007
(3) EPA, Air & Radiation, TTN Web - Technology Transfer NetworkAir Toxics Web site, various years.
(4) Agency for Toxic Substances and Disease Registry (ATSDR). U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1998.
(5) OFFICE OF POLLUTION PREVENTION AND TOXICS, U.S. ENVIRONMENTAL PROTECTION AGENCY, August 1994, EPA 749-F-94-012a
(6) U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. 1985.
(7) World Health Organization,
(8) Product Safety Assessment, Revised: November 19, 2010 The Dow Chemical Company
(9) California Office of Environmental Health Hazard Assessment, PROPOSED ACTION LEVEL FOR 2-CHLOROTOLUENE
(10) Delaware Health and Social Services, Division of Public Health, Revised: 01/2010
(11) USEPA, Envirofacts Master Chemical Integrator (EMCI), Scorecard, 4/10/2009

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
Customer ID: **ANGS50**
Customer PO: **Not Available**

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Project: **Capitol Bldg. Phase V**

Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Laboratory Report- Sample Summary

EMSL Sample ID.	Client Sample ID.	Start Sampling Date	Start Sampling Time
491500363-0001	Rathskeller	4/8/2015	
491500363-0002	Rm 301	4/8/2015	
491500363-0003	Rm 323	4/8/2015	
491500363-0004	Rm 231	4/8/2015	
491500363-0005	Rm 112	4/8/2015	

If "Preliminary Report" is displayed in the signature box; this indicates that there are samples that have not yet been analyzed, that are in a preliminary state, or that analysis is in progress but not completed at the time of report issue.

Report Date:	Report Revision	Revision Comments
04/28/2015	R0	Initial Report

Marjorie Howley

Marjorie Howley, Laboratory Manager
or other approved signatory

Test results meet all NELAP requirements unless otherwise specified.

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EMSL Order #:	491500363
EMSL Sample #:	491500363-1
Customer ID:	ANGS50
Customer PO:	Not Available

Attn: **Kevin Hagen**
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Phone: 952-252-0405
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Date Collected: 04/08/2015
Date Received: 04/14/2015

Project: **Capitol Bldg. Phase V**

Sample ID: **Rathskeller**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.58	0.50		1.2	1.0	
n-Butane	106-97-8	58.12	14	0.50		32	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	59	2.5	D	110	4.7	*Reported Dilution #1*
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	1.6	0.50		9.0	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	4.1	0.50		10	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	110	2.5	D	250	5.9	*Reported Dilution #1*
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	0.57	0.50		2.0	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	1.4	0.50		4.9	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	16	0.50		48	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	2.0	0.50		7.2	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	62	2.5	D	180	7.4	*Reported Dilution #1*
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	3.9	0.50		13	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	0.84	0.50		3.4	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	

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EMSL Order #:	491500363
EMSL Sample #:	491500363-1
Customer ID:	ANGS50
Customer PO:	Not Available

Attn:	Kevin Hagen Angstrom Analytical, Inc. 5001 Cedar Lake Road St Louis Park, MN 55416	Phone: Fax: Date Collected: Date Received:	952-252-0405 952-252-0407 04/08/2015 04/14/2015
Project:	Capitol Bldg. Phase V	Sample ID:	Rathskeller

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3126.D	E12274	250 cc	1
Dilution1	04/23/2015	KW	K3152.D	E12274	50 cc	5

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	74	2.5	D	280	9.4	*Reported Dilution #1*
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	1.2	0.50		5.0	2.2	
Xylene (p,m)	1330-20-7	106.2	4.4	1.0		19	4.3	
Xylene (Ortho)	95-47-6	106.2	1.4	0.50		6.1	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			360	ppbv		1000	ug/m3	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	11	10	110%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-2**
Customer ID: **ANGS50**
Customer PO: **Not Available**

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Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 301**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.61	0.50		1.3	1.0	
n-Butane	106-97-8	58.12	2.3	0.50		5.4	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	49	0.50	E	93	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	2.5	0.50		6.1	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	19	0.50		46	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	0.96	0.50		3.3	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	0.74	0.50		2.6	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	2.0	0.50		5.8	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	0.71	0.50		2.6	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	4.3	0.50		13	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	0.78	0.50		2.7	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-2**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 301**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3127.D	E0277	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	7.3	0.50		27	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			**90**	**ppbv**		**210**	**ug/m3**	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10	10	100%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-3**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 323**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	**0.62**	0.50		**1.3**	1.0	
n-Butane	106-97-8	58.12	**2.4**	0.50		**5.8**	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	**330**	0.50	E	**620**	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	**3.9**	0.50		**9.5**	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	**18**	0.50		**42**	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	**0.79**	0.50		**2.8**	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	**0.59**	0.50		**2.1**	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	**1.7**	0.50		**5.0**	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	**1.0**	0.50		**3.7**	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	**4.0**	0.50		**12**	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	**0.89**	0.50		**3.1**	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	

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EMSL Order #:	491500363
EMSL Sample #:	491500363-3
Customer ID:	ANGS50
Customer PO:	Not Available

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone:	952-252-0405
Fax:	952-252-0407
Date Collected:	04/08/2015
Date Received:	04/14/2015

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 323**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/22/2015	KW	K3128.D	E0385	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	7.7	0.50		29	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			370	ppbv		740	ug/m3	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	11	10	110%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

NJDEP Certification #: 03036

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EMSL Order #: **491500363**
EMSL Sample #: **491500363-4**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
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Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 231**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	**0.71**	0.50		**1.5**	1.0	
n-Butane	106-97-8	58.12	**2.0**	0.50		**4.8**	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	**800**	0.50	E	**1500**	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.50		ND	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	**5.1**	0.50		**13**	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	**26**	0.50		**62**	1.2	
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	**0.58**	0.50		**1.8**	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	**0.73**	0.50		**2.5**	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	**0.57**	0.50		**2.0**	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	**2.1**	0.50		**6.2**	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	**2.5**	0.50		**8.9**	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	**5.7**	0.50		**17**	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	**1.0**	0.50		**3.6**	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	**0.73**	0.50		**3.0**	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	

EMSL Analytical
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856)858-4800 / (856)858-4571
http://www.EMSL.com to15lab@EMSL.com

EMSL Order #:	491500363
EMSL Sample #:	491500363-4
Customer ID:	ANGS50
Customer PO:	Not Available

Attn:	Kevin Hagen Angstrom Analytical, Inc. 5001 Cedar Lake Road St Louis Park, MN 55416	Phone: Fax: Date Collected: Date Received:	952-252-0405 952-252-0407 04/08/2015 04/14/2015
Project:	Capitol Bldg. Phase V	Sample ID:	Rm 231

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3129.D	E0249	250 cc	1

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	9.7	0.50		36	1.9	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	1.0	0.50		6.9	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	ND	0.50		ND	2.2	
Xylene (p,m)	1330-20-7	106.2	ND	1.0		ND	4.3	
Xylene (Ortho)	95-47-6	106.2	ND	0.50		ND	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			860	ppbv		1700	ug/m3	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10	10	100%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

NJDEP Certification #: 03036

EMSL Analytical
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856)858-4800 / (856)858-4571
http://www.EMSL.com to15lab@EMSL.com

EMSL Order #:	491500363
EMSL Sample #:	491500363-5
Customer ID:	ANGS50
Customer PO:	Not Available

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: 952-252-0405
Fax: 952-252-0407
Date Collected: 04/08/2015
Date Received: 04/14/2015

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 112**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	1.0		ND	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.50		ND	2.5	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.50		ND	3.5	
Chloromethane	74-87-3	50.49	0.66	0.50		1.4	1.0	
n-Butane	106-97-8	58.12	20	0.50		47	1.2	
Vinyl chloride	75-01-4	62.50	ND	0.50		ND	1.3	
1,3-Butadiene	106-99-0	54.09	ND	0.50		ND	1.1	
Bromomethane	74-83-9	94.94	ND	0.50		ND	1.9	
Chloroethane	75-00-3	64.52	ND	0.50		ND	1.3	
Ethanol	64-17-5	46.07	34	0.50		64	0.94	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.50		ND	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	1.6	0.50		8.7	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	12	0.50		29	1.2	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.50		ND	3.8	
Acetone	67-64-1	58.08	73	2.5	D	170	5.9	*Reported Dilution #1*
1,1-Dichloroethene	75-35-4	96.94	ND	0.50		ND	2.0	
Acetonitrile	75-05-8	41.00	ND	0.50		ND	0.84	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.50		ND	1.5	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.50		ND	2.2	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.50		ND	1.6	
Carbon disulfide	75-15-0	76.14	ND	0.50		ND	1.6	
Methylene chloride	75-09-2	84.94	0.91	0.50		3.1	1.7	
Acrylonitrile	107-13-1	53.00	ND	0.50		ND	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.50		ND	1.8	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.50		ND	2.0	
n-Hexane	110-54-3	86.17	2.0	0.50		7.1	1.8	
1,1-Dichloroethane	75-34-3	98.96	ND	0.50		ND	2.0	
Vinyl acetate	108-05-4	86.00	ND	0.50		ND	1.8	
2-Butanone(MEK)	78-93-3	72.10	3.7	0.50		11	1.5	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.50		ND	2.0	
Ethyl acetate	141-78-6	88.10	4.8	0.50		17	1.8	
Chloroform	67-66-3	119.4	ND	0.50		ND	2.4	
Tetrahydrofuran	109-99-9	72.11	11	0.50		34	1.5	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.50		ND	2.7	
Cyclohexane	110-82-7	84.16	4.7	0.50		16	1.7	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.50		ND	2.3	
Carbon tetrachloride	56-23-5	153.8	ND	0.50		ND	3.1	
n-Heptane	142-82-5	100.2	ND	0.50		ND	2.0	
1,2-Dichloroethane	107-06-2	98.96	ND	0.50		ND	2.0	
Benzene	71-43-2	78.11	ND	0.50		ND	1.6	
Trichloroethene	79-01-6	131.4	ND	0.50		ND	2.7	
1,2-Dichloropropane	78-87-5	113.0	ND	0.50		ND	2.3	
Methyl Methacrylate	80-62-6	100.12	ND	0.50		ND	2.0	
Bromodichloromethane	75-27-4	163.8	ND	0.50		ND	3.3	
1,4-Dioxane	123-91-1	88.12	ND	0.50		ND	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.50		ND	2.0	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.50		ND	2.3	

EMSL Analytical
200 Route 130 North, Cinnaminson, NJ 08077
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http://www.EMSL.com to15lab@EMSL.com

EMSL Order #: **491500363**
EMSL Sample #: **491500363-5**
Customer ID: **ANGS50**
Customer PO: **Not Available**

Attn: **Kevin Hagen**
Angstrom Analytical, Inc.
5001 Cedar Lake Road
St Louis Park, MN 55416

Phone: **952-252-0405**
Fax: **952-252-0407**
Date Collected: **04/08/2015**
Date Received: **04/14/2015**

Project: **Capitol Bldg. Phase V**

Sample ID: **Rm 112**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	04/23/2015	KW	K3130.D	E12294	250 cc	1
Dilution1	04/24/2015	KW	K3156.D	E12294	50 cc	5

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Toluene	108-88-3	92.14	110	2.5	D	410	9.4	*Reported Dilution #1*
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.50		ND	2.3	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.50		ND	2.7	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.50		ND	2.0	
Tetrachloroethene	127-18-4	165.8	ND	0.50		ND	3.4	
Dibromochloromethane	124-48-1	208.3	ND	0.50		ND	4.3	
1,2-Dibromoethane	106-93-4	187.8	ND	0.50		ND	3.8	
Chlorobenzene	108-90-7	112.6	ND	0.50		ND	2.3	
Ethylbenzene	100-41-4	106.2	2.0	0.50		8.6	2.2	
Xylene (p,m)	1330-20-7	106.2	7.4	1.0		32	4.3	
Xylene (Ortho)	95-47-6	106.2	2.4	0.50		11	2.2	
Styrene	100-42-5	104.1	ND	0.50		ND	2.1	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.50		ND	2.5	
Bromoform	75-25-2	252.8	ND	0.50		ND	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.50		ND	3.4	
4-Ethyltoluene	622-96-8	120.2	ND	0.50		ND	2.5	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.50		ND	2.5	
2-Chlorotoluene	95-49-8	126.6	ND	0.50		ND	2.6	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.50		ND	2.5	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.50		ND	3.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.50		ND	3.0	
Benzyl chloride	100-44-7	126.0	ND	0.50		ND	2.6	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.50		ND	3.0	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.50		ND	3.7	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.50		ND	5.3	
Naphthalene	91-20-3	128.17	ND	0.50		ND	2.6	
Total Target Compound Concentrations:			**290**	**ppbv**		**870**	**ug/m3**	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10	10	100%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

NJDEP Certification #: 03036

USEPA TO-15

External Chain of Custody/ Field Test Data Sheet

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Ph. (800) 220-3675
Fax (856) 786-0327

EMSL ANALYTICAL, INC. LABORATORY • PRODUCTS • TRAINING

EMSL Order Number (Lab Use Only): 491500363

Report To Contact Name: Kevin Hagen	Bill To Company:	Sampled By (Sign):
Company Name: Angstrom Analytical, Inc	Attention To: SAME	Sampled By (Name): Kevin Hagen
Address 1: 5001 Cedar Lake Rd S.	Address 1:	Total # of Samples: 5
Address 2: St. Louis Park, MN 55416	Address 2:	Date Shipped:
Phone No.: 612-865-2020 Fax: 952-252-0405	Phone No.: Fax:	Sample Collection Zip Code: 55101
Email Results To: Ctyeang@aol.com.	Project Name: Capitol Bldg. Phase V	Purchase Order:

Turnaround Time (in Business Days): ☒ 10 Day Standard ☐ 5 Day ☐ 4 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day ☐ Other

Reporting Format: ☒ Results Only (Standard Lab Report) ☐ Full Deliverables (Surcharge may apply) ☐ Other

Field Use - All Information Required! / Lab Use Only

EMSL Sample Identifier	Client Field Sample Identification	Sampling Start Information: Barometric Pres. ("Hg): Start Date	Time (24 hr clock)	Canister Pressure ("Hg)	Interior Temp. (F)	Sampling Stop Information: Barometric Pres. ("Hg): Stop Date	Time (24 hr clock)	Canister Pressure ("Hg)	Interior Temp. (F)	Canister Information: Canister ID	Size (L)	Can Cert Batch ID	Outgoing Pressure ("Hg)	Incoming Pressure ("Hg)	Flow Contoller: Reg. ID	Cal Flow (ml/min)	Analysis: USEPA TO-15	NJDEP LLTO-15	LIBRARY SEARCH	Other (Specify)	Matrix: Indoor/ Ambient Air	Soil Gas	Landfill/ Vent
1	Rathskeller	4/8/15	0625	-27.0	71°	4/8/15	1430	-1.0	71°	E12274	6	C3063	-29.4	-2.4	3719	10.6	X				X		
2	Rm 301		0632	-28.0	73°		1435	-5.0	74°	E0277				-5.8	5955	10.7	X				X		
3	Rm 323		0638	-30.0	72°		1440	-4.0	74°	E0385				-4.4	3690	10.7	X				X		
4	Rm 231		0644	-28.0	72°		1445	-3.0	72°	E0249				-5.2	5995	10.8	X				X		
5	Rm 112		0650	-29.0	74°		1500	-5.0	74°	E12294				-7.6	5972	10.7	X				X		

Comments:

Lab Canister Certification
Analyst Signature (TO-15):

Relinquished by:	Date/ Time	Received by:	Date/ Time	Affixed Seal #	Reason for Exchange (circle appropriate)
[signature]	4/3/15 1440			610, 611	Shipping Courier Receiving Sampling Other:
		[signature]	4/7/15 12:30pm.		Shipping Courier Receiving Sampling Other:
		[signature]	4/8/15 0625		Shipping Courier Receiving Sampling Other:
[signature]	4/9/15 1530	[signature] FXG	4/13/15 1:30p		Shipping Courier Receiving Sampling Other:
[signature]	4/13/15 1210p	[signature]	4/16/15 1100		Shipping Courier Receiving Sampling Other: A.N

2015 APR -14 P 1:41 ANALYTICAL INC. CINNAMINSON, N.J.

491500363

CINNAMINSON, N.J.

TO-15 Sample Information

Please fill out this worksheet in addition to the Chain of Custody form. This information helps us to best analyze your samples and achieve requested TAT

Company: ANGSTROM ANALYTICAL, INC.

Contact Person:

Name: CHARLES TYE / KEVIN HAGEN.

E-mail: CTyeAng@aol.com Kevin@AngstromAnalytical.com

Additional E-mails: Steve@Angstrom Analytical.com

Telephone #: 612 865 2020 Fax #: 952 252 0405

Do you want your results emailed? [✓] YES [ ] NO

Library Search requested: [ ] YES [✓] NO

A library search will identify up to 20 of the largest, non-target peaks that are not part of the standard TO-15 list of 74 compounds. If you are performing an Indoor Air Quality or odor investigation, the library search is recommended. If you will need help interpreting your report, the library search is REQUIRED.

Sample Type:

[✓] Indoor Air Quality (Home/Office)
[ ] IAQ (Industrial)
[ ] Vent Gas
[ ] Soil Gas
[ ] Other: _____

Description of sample (Important for the lab to achieve your requested turnaround time):
AMBIENT INDOOR AIR SAMPLE FROM MN STATE CAPITOL BLDG.
APPROX 8hr SAMPLE DURATION

Are there any special detection limits, specific set of compounds, or any other specifics you need in your report?

[✓] OSHA/NIOSH RELS
[✓] EPA PELS - Circle one: (Residential) Industrial
[ ] NJ DEP - Circle one: Indoor Air Soil Gas
[ ] NC DNER - Circle one: Indoor Air Soil Gas
[ ] PA DEP - Circle one: Indoor Air Soil Gas

[✓] Possible Sources of Contaminants
[ ] TVOC (Library Search Required for this format)
[ ] Ohio - Circle one: Residential Commercial
[ ] Indiana Dept Env Mgmt Screeening Levels
[ ] Other (Please list or attach separate sheet)

Do you need any additional analysis on the canister sample? Indicate below (additional charges will apply)

Draeger CMS Analyzer:

[ ] CO ; [ ] CO_2 ; [ ] SO_2 ; [ ] EtO ; [ ] NH_3 ; [ ] Cl_2 ; [ ] H_2S; [ ] NO2 [ ] NO_2 ; [ ] NOx ; [ ] O_2 ;
[ ] Petroleum hydrocarbons ; [ ] Phosgene ; [ ] Phosphene

US EPA TO-3 (choose one below):
[ ] C_1-C_5 hydrocarbons
[ ] Methane only

ASTM-D5504 (choose one below):
[ ] Sulfur Scan (H_2S, COS, MeSH, EtSH, DMS)
[ ] H_2S only

Sample Retention Policy: All canisters are guaranteed to be retained for one day after results are reported. Please review your results promptly to ensure that your project scope is fully addressed. Cans may be retained for a longer period of time but arrangements to hold your cans must be made through your customer account representative quickly. Thank you.