**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 #: **491800000**
EMSL Sample #: **491800000-1**
Customer ID: **EMSL50**
Customer PO: **NA**

Attn: **Lance Romance**
**EMSL Analytical-Air Toxics Lab**
**200 US Route 130 N**
**Cinnaminson, NJ 08077**

Phone: **800-220-3675**
Fax: **856-786-0327**
Date Collected: **2/6/2018**
Date Received: **2/7/2018**

Project: **Example format for clients**

Sample ID: Barb's Bird Room

| Analysis | Analysis Date | Analyst Init. | Lab File ID | Canister ID | Sample Vol. | Dil. Factor |
|---|---|---|---|---|---|---|
| Initial | 02/13/2018 | KW | K14736.D | HD4365 | 250 cc | 1 |
| Dilution1 | 02/14/2018 | KW | K14753.D | HD4365 | 50 cc | 5 |

## North Carolina DENR DWM- Residential Vapor Intrusion Screening Concentrations

| Target Compounds | Tox. Basis | CAS# | MW | Result ppbv | Q | Result ug/m3 | Sub Slab/ Ext. ug/m3 | > | Indoor Air ug/m3 | > |
|---|---|---|---|---|---|---|---|---|---|---|
| Propylene | NC | 115-07-1 | 42.08 | ND | | ND | 20900 | | 626 | |
| Freon 12(Dichlorodifluoromethane) | NC | 75-71-8 | 120.90 | ND | | ND | 695 | | 20.9 | |
| Freon 114(1,2-Dichlorotetrafluoroethan | -- | 76-14-2 | 170.90 | ND | | ND | N.E. | | N.E. | |
| Chloromethane | NC | 74-87-3 | 50.49 | **0.78** | | **1.6** | 626 | | 18.8 | |
| n-Butane | -- | 106-97-8 | 58.12 | **65** | **D** | **160** | N.E. | | N.E. | |
| Vinyl chloride | C | 75-01-4 | 62.50 | ND | | ND | 0.2 | | 3 | |
| 1,3-Butadiene | C | 106-99-0 | 54.09 | ND | | ND | 14 | | 0.094 | |
| Bromomethane | NC | 74-83-9 | 94.94 | ND | | ND | 35 | | 1.04 | |
| Chloroethane | NC | 75-00-3 | 64.52 | ND | | ND | 69500 | | 2090 | |
| Ethanol | -- | 64-17-5 | 46.07 | **450** | **DE** | **850** | N.E. | | N.E. | |
| Bromoethene(Vinyl bromide) | C | 593-60-2 | 106.90 | ND | | ND | 21 | | 0.088 | |
| Freon 11(Trichlorofluoromethane) | -- | 75-69-4 | 137.40 | ND | | ND | 4870 | | 146 | |
| Isopropyl alcohol(2-Propanol) | NC | 67-63-0 | 60.10 | **17** | | **41** | 1390 | | 42 | |
| Freon 113(1,1,2-Trichlorotrifluoroethan | NC | 76-13-1 | 187.40 | ND | | ND | 209000 | | 6260 | |
| Acetone | NC | 67-64-1 | 58.08 | **48** | **D** | **120** | 216000 | | 6470 | |
| 1,1-Dichloroethene | NC | 75-35-4 | 96.94 | ND | | ND | 1390 | | 42 | |
| Acetonitrile | NC | 75-05-8 | 41.00 | ND | | ND | 13 | | 52 | |
| 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) | C | 107-05-1 | 76.53 | ND | | ND | 7.0 | | 0.209 | |
| Carbon disulfide | NC | 75-15-0 | 76.14 | ND | | ND | 4870 | | 146 | |
| Methylene chloride | C | 75-09-2 | 84.94 | ND | | ND | 5 | | 26 | |
| Acrylonitrile | C | 107-13-1 | 53.00 | ND | | ND | 14 | | 0.041 | |
| Methyl-tert-butyl ether(MTBE) | C | 1634-04-4 | 88.15 | ND | | ND | 3600 | | 10.8 | |
| trans-1,2-Dichloroethene | -- | 156-60-5 | 96.94 | ND | | ND | 13 | | 52 | |
| n-Hexane | NC | 110-54-3 | 86.17 | **0.80** | | **2.8** | 4870 | | 146 | |
| 1,1-Dichloroethane | C | 75-34-3 | 98.96 | ND | | ND | 585 | | 1.75 | |
| Vinyl acetate | NC | 108-05-4 | 86.00 | ND | | ND | 1390 | | 42 | |
| 2-Butanone(MEK) | NC | 78-93-3 | 72.10 | **1.5** | | **4.4** | 34800 | | 1040 | |
| cis-1,2-Dichloroethene | -- | 156-59-2 | 96.94 | ND | | ND | N.E. | | N.E. | |
| Ethyl acetate | NC | 141-78-6 | 88.10 | **4.4** | | **16** | 487 | | 14.6 | |
| Chloroform | C | 67-66-3 | 119.40 | **1.0** | | **5.1** | 41 | | 0.122 | |
| Tetrahydrofuran | NC | 109-99-9 | 72.11 | ND | | ND | 13900 | | 417 | |
| 1,1,1-Trichloroethane | NC | 71-55-6 | 133.40 | ND | | ND | 34800 | | 1040 | |
| Cyclohexane | NC | 110-82-7 | 84.16 | ND | | ND | 41700 | | 1250 | |
| 2,2,4-Trimethylpentane(Isooctane) | -- | 540-84-1 | 114.20 | **0.85** | | **4.0** | N.E. | | N.E. | |
| Carbon tetrachloride | C | 56-23-5 | 153.80 | ND | | ND | 156 | | 0.47 | |
| n-Heptane | NC | 142-82-5 | 100.20 | ND | | ND | N.E. | | N.E. | |
| 1,2-Dichloroethane | C | 107-06-2 | 98.96 | ND | | ND | 36 | | 0.108 | |
| Benzene | C | 71-43-2 | 78.11 | **1.7** | | **5.4** | 120 | | 0.36 | |
| Trichloroethene | C | 79-01-6 | 131.40 | ND | | ND | 0.42 | | 1.8 | |
| 1,2-Dichloropropane | C | 78-87-5 | 113.00 | ND | | ND | 28 | | 0.28 | |
| Methyl Methacrylate | NC | 80-62-6 | 100.12 | ND | | ND | 4870 | | 146 | |
| Bromodichloromethane | C | 75-27-4 | 163.80 | ND | | ND | 25 | | 0.076 | |

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Project: **Example format for clients**

Sample ID: Barb's Bird Room

| Analysis | Analysis Date | Analyst Init. | Lab File ID | Canister ID | Sample Vol. | Dil. Factor |
|---|---|---|---|---|---|---|
| Initial | 02/13/2018 | KW | K14736.D | HD4365 | 250 cc | 1 |
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## North Carolina DENR DWM- Residential Vapor Intrusion Screening Concentrations

| Target Compounds | Tox. Basis | CAS# | MW | Result ppbv | Q | Result ug/m3 | Sub Slab/ Ext. ug/m3 | > | Indoor Air ug/m3 | > |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | C | 123-91-1 | 88.12 | ND | | ND | 187 | | 0.56 | |
| 4-Methyl-2-pentanone(MIBK) | NC | 108-10-1 | 100.20 | ND | | ND | 20900 | | 626 | |
| cis-1,3-Dichloropropene** | C | 10061-01-5 | 111.00 | ND | | ND | 0.6 | | 3 | |
| Toluene | NC | 108-88-3 | 92.14 | **3.7** | | **14** | 34800 | | 1040 | |
| trans-1,3-Dichloropropene** | C | 10061-02-6 | 111.00 | ND | | ND | 0.6 | | 3 | |
| 1,1,2-Trichloroethane | C | 79-00-5 | 133.40 | ND | | ND | 1.4 | | 0.042 | |
| 2-Hexanone(MBK) | NC | 591-78-6 | 100.10 | ND | | ND | 209 | | 6.3 | |
| Tetrachloroethene | C | 127-18-4 | 165.80 | **3.0** | | **20** | 278 | | 8.3 | |
| Dibromochloromethane | -- | 124-48-1 | 208.30 | ND | | ND | 35 | | 0.104 | |
| 1,2-Dibromoethane | C | 106-93-4 | 187.80 | ND | | ND | 1.6 | | 0.0047 | |
| Chlorobenzene | NC | 108-90-7 | 112.60 | ND | | ND | 348 | | 10.4 | |
| Ethylbenzene | C | 100-41-4 | 106.20 | **0.63** | | **2.7** | 374 | | 1.12 | |
| Xylene (p,m) | NC | 1330-20-7 | 106.20 | **1.9** | | **8.3** | 695 | | 20.9 | |
| Xylene (Ortho) | NC | 95-47-6 | 106.20 | **0.74** | | **3.2** | 695 | | 20.9 | |
| Styrene | NC | 100-42-5 | 104.10 | ND | | ND | 6950 | | 209 | |
| Isopropylbenzene (cumene) | NC | 98-82-8 | 120.19 | ND | | ND | 2780 | | 83 | |
| Bromoform | C | 75-25-2 | 252.80 | ND | | ND | 851 | | 2.6 | |
| 1,1,2,2-Tetrachloroethane | C | 79-34-5 | 167.90 | ND | | ND | 16 | | 0.048 | |
| 4-Ethyltoluene | -- | 622-96-8 | 120.20 | **1.3** | | **6.4** | N.E. | | N.E. | |
| 1,3,5-Trimethylbenzene | NC | 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 | NC | 95-63-6 | 120.20 | **1.7** | | **8.2** | 49 | | 1.46 | |
| 1,3-Dichlorobenzene | -- | 541-73-1 | 147.00 | ND | | ND | N.E. | | N.E. | |
| 1,4-Dichlorobenzene | C | 106-46-7 | 147.00 | ND | | ND | 85 | | 0.26 | |
| Benzyl chloride | C | 100-44-7 | 126.00 | ND | | ND | 7.0 | | 0.057 | |
| 1,2-Dichlorobenzene | NC | 95-50-1 | 147.00 | ND | | ND | 1390 | | 42 | |
| 1,2,4-Trichlorobenzene | NC | 120-82-1 | 181.50 | ND | | ND | 14 | | 0.42 | |
| Hexachloro-1,3-butadiene | C | 87-68-3 | 260.80 | ND | | ND | 43 | | 0.128 | |
| Naphthalene | C | 91-20-3 | 128.17 | ND | | ND | 21 | | 0.083 | |

**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
PEL= Permissable Exposure Limit

Agency Definitions
North Carolina Department of Environment and Natural Resources -DWM

Reference
NC DENR, Division of Waste Management Vapor Intrusion Screening Concentrations (October, 2016)
Toxicity Class (EPA Regionional Screening Levels (RSL) Table, Nov 2017)

Carcinogenic (C) 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 (NC) 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.

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

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.