

Mr. Danny Daibes Daibes Enterprises 125 River Road Edgewater, NJ 07020

Date: July 28, 2022 Our Ref: 30050861

Subject: Vapor Intrusion Investigation at:

8 Somerset Lane (Building M)

Borough of Edgewater, Bergen County

Block 99, Lot 1.19

Sampling Date: 3/24/2022

ipark Edgewater, LLC (aka Unilever Research and Development Inc. and Edgewater Lofts)

45 River Road

Borough of Edgewater, Bergen County

PI# 015891

Case Tracking No. E20030062

Dear Mr. Daibes,

For:

Arcadis U.S., Inc. (Arcadis) respectfully submits the results of a vapor intrusion investigation completed at the ipark Edgewater Building M, the multi-tenant residential building located at 8 Somerset Lane, Borough of Edgewater, Bergen County (hereinafter "Building M") in March 2022. The investigation was required by the New Jersey Department of Environmental Protection (NJDEP) due to the presence of volatile organic compounds (VOCs) in groundwater at the ipark Edgewater, LLC site ("the Site").

The investigation was completed at Building M because it is located within 100 feet of VOC-impacted groundwater. A passive sub-slab depressurization system (SSVD) and vapor barrier were installed during building construction to reduce the potential for vapor intrusion. As required by the NJDEP, annual inspection of the building and SSVD system and these investigation activities have been implemented to verify that vapor intrusion is not a concern. The objective of the investigation was to determine if VOCs exist in soil gas beneath Building M at concentrations above NJDEP Residential Soil Gas Screening Levels (RSGSLs) that could impact the indoor air.

Methodology

The investigation was conducted in general accordance with the NJDEP Vapor Intrusion Technical Guidance (VITG) dated May 2021. Arcadis collected five sub-slab soil gas samples from the pipe risers of the passive SSVD system installed beneath the building foundation. Four samples of indoor air were also collected from the ground floor of Building M along with an ambient (outdoor) air sample; these samples were put on hold pending the results of the sub-slab soil gas samples. The sampling locations are depicted on the attached Figures 1 and 2.

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Mr. Danny Daibes Daibes Enterprises July 28, 2022

The soil gas and indoor air samples were collected in laboratory-supplied Summa canisters and shipped under chain of custody to Alpha Analytical Laboratories of Mansfield, Massachusetts for analysis of VOCs by United States Environmental Protection Agency (USEPA) Method TO-15. The presence of benzene in Site groundwater within 100 feet of the building triggered the investigation. However, since this is the first time a vapor intrusion investigation was performed for this building, NJDEP requires that the samples be analyzed for the full list of VOCs and that all analytical results be included in this letter and summary table. Therefore, if additional VOCs unrelated to historical Site impacts were detected, these compounds are also reported for your information.

Analytical Results

A summary of sub-slab soil gas analytical results is presented as attached Table 1. All results were compared to the NJDEP RSGSLs. As mentioned above, all analyzed parameters were either not detected or detected at concentrations below the RSGSLs. Based on these sub-slab soil gas results, the indoor and ambient air samples were not analyzed.

Analytical results indicate that VOCs are not present in soil gas beneath Building M at concentrations sufficient to affect indoor air quality. Therefore, vapor intrusion is not occurring, and no additional vapor intrusion testing is required for this building. Please share these results with the various tenants of the building, as appropriate. Please note that remedial investigations and remedial actions at the Site are ongoing. If future findings indicate that a historical release at the Site has the potential to impact indoor air quality, additional sampling may be necessary, and you will be contacted.

Please note that pursuant to New Jersey's Open Public Records Act (OPRA), all building surveys and vapor intrusion sampling results submitted to NJDEP during this investigation become part of the public record for the ipark Edgewater site. The NJDEP is obligated to make this information available to any interested party that requests access to it through its Office of Record Access.

Mr. Danny Daibes **Daibes Enterprises** July 28, 2022

If you have any questions about these sampling results or the remedial activities in progress at the Site, please contact David Thompson, LSRP, at 908.526.1000. For information about vapor intrusion, please see NJDEP's web page at www.nj.gov/dep/srp/guidance/vaporintrusion/indoor_air.htm.

Sincerely, Arcadis U.S., Inc.

Lawrence G. Brunt, P.E.

Lawrence J. Brunt

Principal Engineer

David Thompson, LSRP **Principal Geologist**

LGB/swi

Email: larry.brunt@arcadis.com Direct Line: 908.685.7878

CC. Carl Monheit - ipark (with analytical report)

Joseph Cotter – ipark

David Thompson, LSRP – Arcadis (with analytical report)

Thomas Longo, Coordinator - Bergen County Department of Health Services,

Environmental Protection Program

Arturo Romua – NJDEP (with analytical report)

Enclosures:

Table

Figures

2022 Sub-Slab Soil Gas Analytical Results - 8 Somerset Lane

ipark Edgewater (aka Unilever Research and Development Inc., Edgewater Lofts) 45 River Road

Borough of Edgewater, Bergen County NJDEP Preferred Identification (PI) # 015891

| 45 River Road Associates LLC 8 Somerset Lane (Bldg. M) Borough of Edgewater Bergen County Block 99, Lot 1.19 Residential Apartments | NJDEP 2021 Residential Soil Gas Screening Levels | SAMPLE ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX: | SS-M-1 3/24/2022 L2215788-11 Subslab Soil Gas | | SS-M-2 3/24/2022 L2215788-12 Subslab Soil Gas | | SS-M-3 3/24/2022 L2215788-13 Subslab Soil Gas | | SS-M-4 3/24/2022 L2215788-14 Subslab Soil Gas | | SS-M-5 3/24/2022 L2215788-15 Subslab Soil Gas | |
|---|---|---|--|----------|--|------------|--|----------------|--|----------------|--|---------------|
| ANALYTE | (ug/m3) | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| NJ Volatile Organics in Air | L | | 40 | | 40 | | | 1 | | | 0.1 | |
| Acetone Benzene | NS 18 | ug/m3 | 13 1 | U | 10 | U | 6 | U | 14 1 | U | 21 1 | U |
| Bromodichloromethane | NS | ug/m3 ug/m3 | 3 | U | 3 | U | 3 | U | 3 | | 3 | U |
| Bromoform | NS | ug/m3 | 4 | Ü | 4 | T U | 5 | T U | 4 | T U | 4 | $\frac{U}{U}$ |
| Bromomethane | 260 | ug/m3 | 2 | Ü | 2 | Ü | 2 | Ü | 2 | Ū | 2 | Ü |
| 1,3-Butadiene | NS | ug/m3 | 0.9 | U | 0.9 | U | 1 | U | 1 | U | 0.9 | U |
| 2-Butanone | 260000 | ug/m3 | 3 | U | 6 | | 4 | U | 3 | U | 3 | U |
| Carbon disulfide | 36000 | ug/m3 | 11 | U | 1 | U | 2 | U | 1 | U | 1 | U |
| Carbon tetrachloride Chlorobenzene | 23 2600 | ug/m3 ug/m3 | <u>3</u> | U | 3 2 | U | <u>3</u> | U | 3 2 | U | <u>3</u> | U |
| Chloroethane | 520000 | ug/m3 | 1 | U | 1 | U | 1 | U | 1 | 1 0 | 1 | U |
| Chloroform | 5100 | ug/m3 | 2 | T U | 2 | T U | 2 | T U | 2 | 1 0 | 2 | $\frac{U}{U}$ |
| Chloromethane | 4700 | ug/m3 | 1 | | 0.9 | | 1 | | 1 | | 0.8 | Ü |
| 3-Chloropropene | NS | ug/m3 | 1 | U | 1 | U | 2 | U | 1 | U | 1 | U |
| 2-Chlorotoluene | NS | ug/m3 | 2 | U | 2 | U | 3 | U | 2 | U | 2 | U |
| Cyclohexane | 310000 | ug/m3 | 1 | U | 1 | U | 2 | U | 1 | U | 1 | U |
| Dibromochloromethane | NS 15 | ug/m3 | 3 | U | 3 | U | 4 | U | 3 | U | 3 | U |
| 1,2-Dibromoethane 1,2-Dichlorobenzene | 15 10000 | ug/m3 ug/m3 | <u>3</u> | U | 3 2 | U | 3 | U | 3 | U | 3 2 | U |
| 1.3-Dichlorobenzene | NS | ug/m3 | 2 | U | 2 | T U | 3 | 1 0 | 3 | U | 2 | U |
| 1,4-Dichlorobenzene | 42000 | ug/m3 | 2 | Ü | 2 | Ü | 3 | Ü | 3 | Ü | 2 | Ü |
| Dichlorodifluoromethane | NS | ug/m3 | 2 | | 3 | | 2 | U | 2 | | 26 | |
| 1,1-Dichloroethane | NS | ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| 1,2-Dichloroethane | 360 | ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| 1,1-Dichloroethene | 1000 | ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U U | 2 | U |
| cis-1,2-Dichloroethene trans-1,2-Dichloroethene | NS NS | ug/m3 | 2 2 | U | 2 | U | 2 2 | U | 2 | U | 2 | U |
| 1,2-Dichloroethene (total) | NS NS | ug/m3 ug/m3 | 2 | U | 2 | U | 2 | U | 2 | | 2 | U |
| 1,2-Dichloropropane | 38 | ug/m3 | 2 | U | 2 | T U | 2 | ŭ | 2 | ŭ | 2 | U |
| cis-1,3-Dichloropropene | NS | ug/m3 | 2 | Ü | 2 | Ü | 2 | Ü | 2 | ΙŪ | 2 | Ü |
| trans-1,3-Dichloropropene | NS | ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| 1,3-Dichlopropene (total) | 35 | ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| 1,4-Dioxane | 28 NG | ug/m3 | 1 | U | 1 | U | 2 | U | 2 | U | 1 | U |
| Ethanol Ethylbenzene | NS 56 | ug/m3 | 19 2 | U | 20 | U | 23 | U | 21 2 | U | 19 2 | U |
| 4-Ethyltoluene | NS NS | ug/m3 ug/m3 | 2 | U | 2 | U | 2 | U | 2 | 1 0 | 2 | U |
| Freon-113 | 260000 | ug/m3 | 3 | Ü | 3 | ΙÜ | 4 | ΙÜ | 3 | ΙÜ | 3 | 1 0 |
| Freon-114 | NS | ug/m3 | 3 | Ū | 3 | Ū | 3 | Ū | 3 | Ū | 3 | Ü |
| Heptane | NS | ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| Hexachlorobutadiene | NS | ug/m3 | 4 | U | 4 | U | 5 | U | 5 | U | 4 | U |
| Isopropanol | NS | ug/m3 | 3 | . | 2 | U | 3 | U | 12 | + | 3 | + |
| Methyl Methacrylate | NS 400000 | ug/m3 | 4 | U | 4 | U | 5 | U | 5 | U | 4 | U |
| 4-Methyl-2-pentanone Methyl tert butyl ether | 160000 540 | ug/m3 ug/m3 | 4 | U | 4 | U | 5 2 | U | 5 2 | U | 4 | U |
| Methylene chloride | 14000 | ug/m3 | 3 | U | 3 | 1 0 | 4 | U | 4 | U | 3 | U |
| n-Hexane | 36000 | ug/m3 | 1 | Ü | 1 | Ü | 2 | Ü | 2 | ΤÜ | 1 | Ü |
| Naphthalene | 26 | ug/m3 | 2 | U | 2 | Ü | 3 | Ü | 2 | Ū | 2 | Ü |
| Styrene | 52000 | ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| Tertiary butyl Alcohol | NS | ug/m3 | 3 | U | 3 | U | 4 | U | 3 | U | 3 | U |
| 1,1,2,2-Tetrachloroethane Tetrachloroethene | NS 540 | ug/m3 | 3 | U | 3 | U | 3 | U | 3 | U | 3 | U |
| Tetrahydrofuran | NS | ug/m3 ug/m3 | 3 | U | 6 | + | 4 | U | 3 | U | 3 | U |
| Toluene | 260000 | ug/m3 | 2 | U | 2 | T U | 2 | 1 0 | 2 | | 2 | $\frac{1}{0}$ |
| 1,2,4-Trichlorobenzene | 100 | ug/m3 | 3 | Ü | 3 | Ü | 4 | ΙÜ | 3 | T U | 3 | U |
| 1,1,1-Trichloroethane | 260000 | ug/m3 | 2 | Ü | 2 | Ü | 3 | Ü | 2 | Ü | 2 | Ü |
| 1,1,2-Trichloroethane | NS | ug/m3 | 2 | U | 2 | U | 3 | U | 2 | U | 2 | U |
| Trichloroethene | 34 | ug/m3 | 2 | U | 2 | U | 3 | U | 2 | U | 2 | U |
| Trichlorofluoromethane | NS 3400 | ug/m3 | 2 | U | 2 | $+$ \mid | 3 | U | 2 | U | 8 | + $ $ |
| 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene | 3100 NS | ug/m3 ug/m3 | 2 2 | U | 2 2 | U | 2 2 | U | 2 | U | 2 | U |
| 2,2,4-Trimethylpentane | NS NS | ug/m3 ug/m3 | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| Vinyl bromide | NS NS | ug/m3 | 2 | T U | 2 | 1 0 | 2 | 1 0 | 2 | 1 0 | 2 | U |
| Vinyl chloride | 32 | ug/m3 | 1 | Ü | 1 | Ü | 1 | Ü | 1 | Ü | 1 | Ü |
| o-Xylene | 5200 | ug/m3 | 2 | Ü | 2 | Ü | 2 | Ü | 2 | Ü | 2 | Ü |
| p/m-Xylene | 5200 | ug/m3 | 4 | U | 4 | U | 4 | U | 4 | U | 4 | U |
| Xylenes (total) | 5200 | ug/m3 | 4 | U | 4 | U | 4 | U | 4 | U | 4 | U |
| Total TIC Compounds | NS | ppbv | ND | | 4.9 | J | ND | | ND | | 7.1 | J |

All results are in micrograms per cubic meter (µg/m³).

J - Estimated value

NS - A screening level is currently not available for this chemical. U - Not detected at the reported detection limit for the sample.

Italicized laboratory detection limits exceed the applicable NJDEP Soil Gas Screening Levels.

Bolded and shaded results identify exceedances of the applicable NJDEP Soil Gas Screening Level.

NJ-RSGS: New Jersey 2021 Residential Soil Gas Screening Levels - ug/m3 Criteria per May 2021 Version 5.0 Guidance Document.





LEGEND:

SS-M-1 🛕

SUB SLAB SOIL GAS SAMPLE LOCATION

SUB SLAB VENT PIPING RUN (PERFORATED)

NOTES:

- 1. MAP DATUM: NEW JERSEY STATE PLANE, NORTH AMERICAN DATUM 1983, FEET.
- 2. BUILDING LAYOUT AND PIPING LOCATIONS DIGITIZED FROM: SUB SLAB DEPRESSURIZATION SYSTEM DIAGRAM & DETAILS, DATED JAN. 9, 2017, SHEET A501, PREPARED BY DIABES ENTERPRISES, EDGEWATER, NJ. SCALE IS APPROXIMATE.
- 3. VENT PIPING VARIES FROM REFERENCED MAP. PIPING WAS RELOCATED USING FIELD MEASUREMENTS.

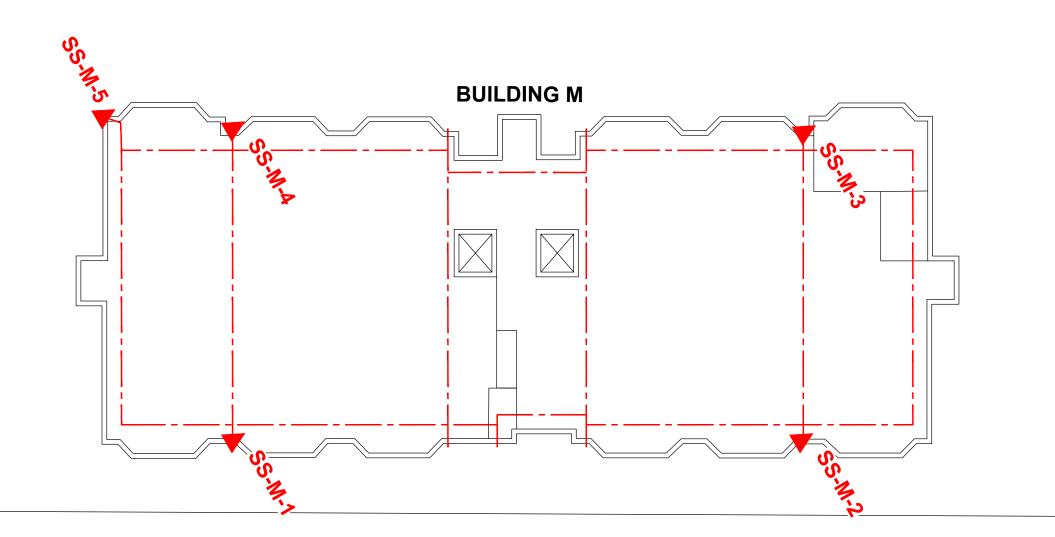


I. PARK EDGEWATER BUILDING M 8 SOMERSET LANE EDGEWATER, NEW JERSEY

VAPOR INTRUSION SAMPLING LOCATIONS



FIGURE



SOMERSET LANE

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