Assessment of changes in distribution of total mercury and polychlorinated biphenyls in Green Bay, Wisconsin, USA

Marcia R. Silva\textsuperscript{1, *}, Alice Lecus\textsuperscript{1}, Chad Haehle \textsuperscript{1}, David Garman\textsuperscript{2} and Shelby Brunner\textsuperscript{3}

\textsuperscript{1} Water Technology Accelerator (WaTA), University of Wisconsin-Milwaukee, 247 W. Freshwater Way, Milwaukee, Wisconsin, 53204 (USA)

\textsuperscript{2} Centre for Infrastructure Engineering, Western Sydney University, 56 Second Avenue, Kingswood, 2747 NSW Australia

\textsuperscript{3} UCAR-The University Corporation of Atmospheric Research, Silver Spring, MD, 20910, USA

*Corresponding author: m Silva@uwm.edu, phone number: +1-414-326-8285, fax number: +1-414-382-1705.

Supplementary Materials:

Supplementary Material (SM) Table 1: Lower Green Bay Mercury II Concentration Statistics for Solid Matrix

| Site ID | Number of Replicates | Mean (mg·kg\textsuperscript{-1}) | Std dev (mg·kg\textsuperscript{-1}) | Range (mg·kg\textsuperscript{-1}) | RSD% \textsuperscript{1} |
|---------|----------------------|-------------------------------|-----------------------------------|-----------------------------------|-------------------------|
| 6       | 3                    | 0.164                         | 0.006                             | 0.157                             | 0.168                   | 3.58                   |
| 8       | 3                    | 0.244                         | 0.003                             | 0.241                             | 0.246                   | 1.18                   |
| 9       | 2                    | 0.456                         | 0.006                             | 0.452                             | 0.460                   | 1.24                   |
| 13      | 3                    | 0.131                         | 0.005                             | 0.127                             | 0.136                   | 3.62                   |
| 14      | 3                    | 0.0203                        | 0.000                             | 0.0203                            | 0.0204                  | 0.28                   |
| 16      | 3                    | 0.428                         | 0.019                             | 0.406                             | 0.439                   | 4.45                   |
| 17      | 3                    | 0.0916                        | 0.007                             | 0.0832                            | 0.0964                  | 7.97                   |
| 18      | 2                    | 0.149                         | 0.002                             | 0.147                             | 0.150                   | 1.43                   |
| 20      | 3                    | 0.168                         | 0.006                             | 0.162                             | 0.173                   | 3.38                   |
| 21      | 3                    | 0.186                         | 0.006                             | 0.180                             | 0.192                   | 3.23                   |
| 26      | 3                    | 0.108                         | 0.008                             | 0.100                             | 0.115                   | 7.20                   |
| 27      | 3                    | 0.0403                        | 0.001                             | 0.0392                            | 0.0414                  | 2.74                   |
| 31      | 3                    | 0.106                         | 0.003                             | 0.103                             | 0.109                   | 2.87                   |
| 32      | 3                    | 0.109                         | 0.003                             | 0.105                             | 0.111                   | 2.96                   |
| 33      | 3                    | 0.120                         | 0.005                             | 0.115                             | 0.124                   | 3.77                   |
| 38      | 2                    | 0.460                         | 0.008                             | 0.454                             | 0.466                   | 1.84                   |
| 42      | 3                    | 0.117                         | 0.004                             | 0.113                             | 0.120                   | 3.01                   |
| 43      | 3                    | 0.115                         | 0.006                             | 0.108                             | 0.119                   | 5.29                   |
| 44      | 3                    | 0.112                         | 0.006                             | 0.105                             | 0.115                   | 5.17                   |
| 47      | 3                    | 0.0662                        | 0.003                             | 0.0630                            | 0.0699                  | 5.27                   |

\textsuperscript{1} RSD% is the relative standard deviation
Supplementary Material (SM) Table 2: Lower Green Bay Mercury II Concentration Statistics for Pore Water

| Site ID | Number of Replicates | Mean (ng·L\(^{-1}\)) | Stdev (ng·L\(^{-1}\)) | Range (ng·L\(^{-1}\)) | RSD %\(^2\) |
|---------|----------------------|-----------------------|------------------------|------------------------|-------------|
|         |                      | Min                   | Max                    |                        |             |
| 6       | 3                    | 128                   | 12.1                   | 115                    | 139         | 9.47       |
| 8       | 2                    | 124                   | 15.6                   | 113                    | 135         | 12.55      |
| 9       | 3                    | 414                   | 32.8                   | 392                    | 452         | 7.92       |
| 13      | 2                    | 11.9                  | 0.9                    | 11.2                   | 12.5        | 7.76       |
| 14      | 3                    | 6.39                  | 0.4                    | 5.99                   | 6.87        | 6.95       |
| 16      | 2                    | 315                   | 111.7                  | 236                    | 394         | 35.47      |
| 17      | 2                    | 9.48                  | 1.4                    | 8.45                   | 10.5        | 15.30      |
| 18      | 2                    | 127                   | 24.0                   | 89.1                   | 144         | 18.93      |
| 20      | 2                    | 115                   | 37.7                   | 88.7                   | 142         | 32.67      |
| 21      | 3                    | 126                   | 8.6                    | 117                    | 134         | 6.82       |
| 26      | 2                    | 441                   | 21.2                   | 426                    | 456         | 4.81       |
| 27      | 3                    | Below the limit of detection |                        |                        |             |
| 31      | 2                    | 167                   | 39.5                   | 177                    | 200         | 23.72      |
| 32      | 3                    | 664                   | 9.6                    | 653                    | 671         | 1.45       |
| 33      | 3                    | 148                   | 8.2                    | 139                    | 155         | 5.53       |
| 38      | 2                    | 55.7                  | 1.6                    | 54.6                   | 56.8        | 2.79       |
| 42      | 2                    | 79.8                  | 13.1                   | 56.3                   | 89.0        | 16.40      |
| 43      | 3                    | 346                   | 26.9                   | 315                    | 365         | 7.77       |
| 44      | 2                    | 30.5                  | 2.0                    | 29.1                   | 31.9        | 6.49       |
| 47      | 2                    | 18.5                  | 1.8                    | 17.2                   | 19.8        | 9.94       |

\(^2\) RSD% is the relative standard deviation