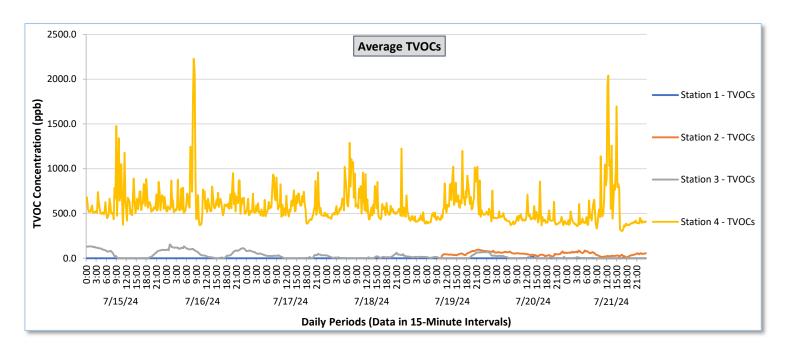
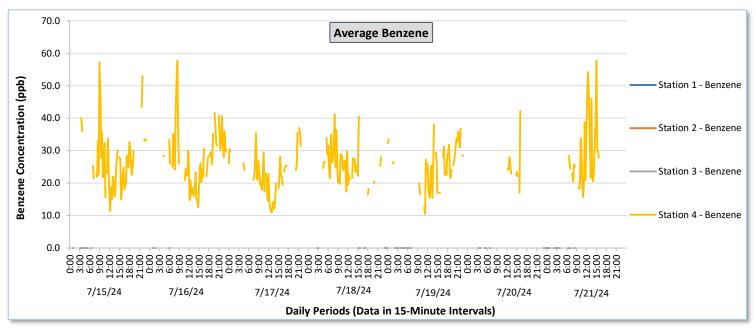
# Stantec

## **Perimeter Air Monitoring Weekly Report**

Real-Time Multigas Monitoring Bristol Landfill Air Investigation July 15 - July 21, 2024



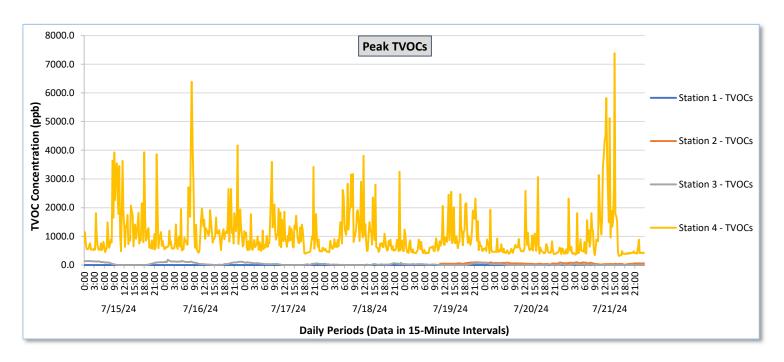


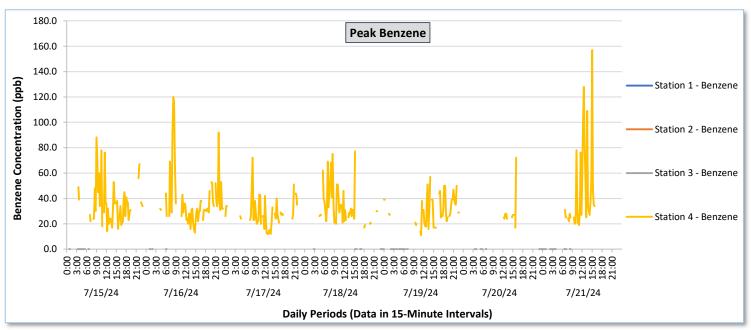
#### **Perimeter Air Monitoring Weekly Report**



Real-Time Multigas Monitoring Bristol Landfill Air Investigation

July 15 - July 21, 2024

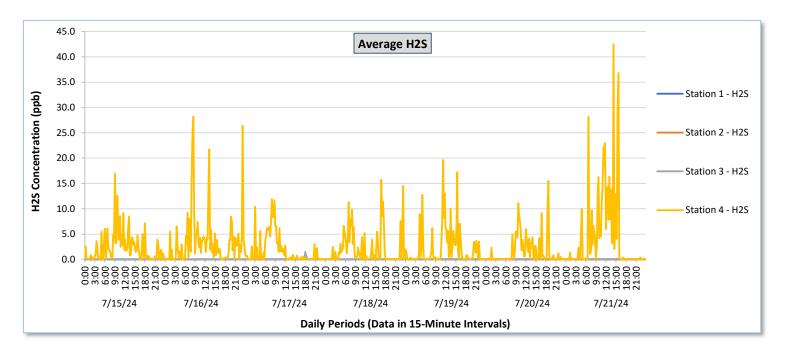


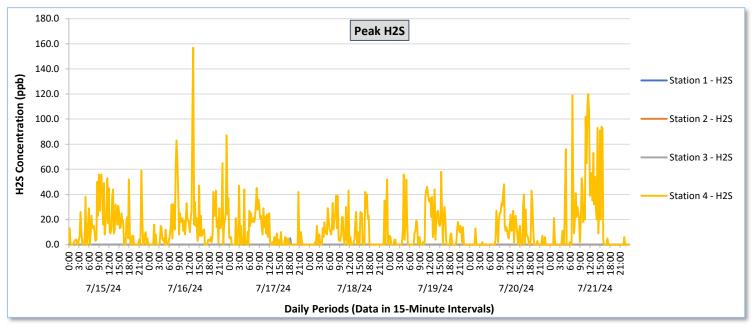


# **Stantec**

### **Perimeter Air Monitoring Weekly Report**

Real-Time Multigas Monitoring Bristol Landfill Air Investigation July 15 - July 21, 2024





#### **Perimeter Air Monitoring Weekly Report**



Real-Time Multigas Monitoring Bristol Landfill Air Investigation July 15 - July 21, 2024

|               | Daily Statistics . | Station 1                              |  |                                      |  |  |  | Station 2                              |  |  |  | Station 3                            |  |  |  | Station 4                                  |  |  |  |  |  |  |  |  |  |
|---------------|--------------------|--|--|--------------------------------------|--|--|--|--|--|--|--|--------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Date          |                    | TVOCs                                  |  | H2S                                  |  | Benzene                                |  | TVOCs H2S                              |  | Benzene                                |  | TVOCs H2S                            |  |  |  | Ben:                                       | Benzene  |  | TVOCs  |  | H2S  |  | Benzene  |  |  |
|               |                    | Average                                | Peak ppb   | Average                              | Peak ppb   | Average                                | Peak ppb   | Average                                | Peak ppb   | Average                                | Peak ppb   | Average                              | Peak ppb   | Average                                    | Peak ppb   | Average                                    | Peak ppb   | Average                                    | Peak ppb   | Average                                    | Peak ppb   | Average                                    | Peak ppb   | Average                                    | Peak ppb   |
|               |                    | Values from<br>15-minute<br>intervals. | 1-minute<br>max within<br>each 15<br>minute<br>interval. | ppb Values from 15-minute intervals. | 1-minute<br>max within<br>each 15<br>minute<br>interval. | values from<br>15-minute<br>intervals. | 1-minute<br>max within<br>each 15<br>minute<br>interval. | values from<br>15-minute<br>intervals. | 1-minute<br>max within<br>each 15<br>minute<br>interval. | values from<br>15-minute<br>intervals. | 1-minute<br>max within<br>each 15<br>minute<br>interval. | ppb Values from 15-minute intervals. | 1-minute<br>max within<br>each 15<br>minute<br>interval. | values<br>from 15-<br>minute<br>intervals. | 1-minute<br>max within<br>each 15<br>minute<br>interval. |
| July 15, 2024 | Minimum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | -                                      | -  | -                                      | -  | -                                    | -  | 0.0  | 0.0  | 0.0  | 0.0  | -  | -  | 375.3                                      | 453.0  | 0.0  | 0.0  | 11.5                                       | 14.0   |
|               | Maximum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | -                                      | -  | -                                      | -  | -                                    | -  | 133.3                                      | 138.0  | 0.0  | 0.0  | -  | -  | 1,476.9                                    | 3,929.0  | 16.9                                       | 59.0   | 57.2                                       | 88.0   |
|               | Average            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | -                                      | -  | -                                      | -  | -                                    | -  | 50.8                                       | 54.1   | 0.0  | 0.0  | -  | -  | 623.3                                      | 1,221.6  | 2.3  | 14.3   | 27.1                                       | 35.9   |
| July 16, 2024 | Minimum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      |  |  |  | -                                      | -  |                                      | -  | 0.0  | 0.0  | 0.0  | 0.0  |  | -  | 368.4                                      | 430.0  | 0.0  | 0.0  | 12.5                                       | 13.0   |
|               | Maximum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | -                                      | -  | -                                      | -  | -                                    | -  | 151.2                                      | 183.0  | 0.0  | 0.0  |  |  | 2,228.4                                    | 6,390.0  | 28.2                                       | 157.0  | 57.7                                       | 120.0  |
|               | Average            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      |  | -                                      |  | -                                      | -  | -                                    | -  | 67.5                                       | 71.4   | 0.0  | 0.0  |  | ,  | 664.9                                      | 1,268.8  | 3.7  | 18.7   | 28.1                                       | 38.3   |
| July 17, 2024 | Minimum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  |  |  | -                                      | -  | -                                    | -  | 0.0  | 0.0  | 0.0  | 0.0  | -  | -  | 385.8                                      | 396.0  | 0.0  | 0.0  | 11.0                                       | 12.0   |
|               | Maximum            | 0.0                                    | 0.0  | 0.9                                  | 5.0  | -                                      | -  | -                                      | -  | -                                      | -  | -                                    | -  | 85.3                                       | 97.0   | 1.5  | 5.0  | -  |  | 960.1                                      | 3,599.0  | 11.9                                       | 47.0   | 37.0                                       | 72.0   |
|               | Average            | 0.0                                    | 0.0  | 0.0                                  | 0.1  | -                                      | -  | -                                      | -  | -                                      | -  | -                                    | -  | 27.0                                       | 30.3   | 0.0  | 0.1  | -  | -  | 574.7                                      | 970.0  | 1.7  | 8.6  | 23.3                                       | 28.6   |
| July 18, 2024 | Minimum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  |  |  |  |  | _                                      | _  | _                                    | -  | 0.0  | 0.0  | 0.0  | 0.0  |  |  | 431.6                                      | 445.0  | 0.0  | 0.0  | 16.5                                       | 17.0   |
|               | Maximum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | _                                      | _  |  |  |  | _  | _                                    | _  | 62.3                                       | 74.0   | 0.0  | 0.0  | _  | -  | 1,288.4                                    | 3,807.0  | 15.8                                       | 52.0   | 43.3                                       | 80.0   |
|               | Average            | 0.0                                    | 0.0  | 0.0                                  | 0.0  |  |  |  |  | _                                      |  |                                      | _  | 12.0                                       | 15.7   | 0.0  | 0.0  | _  | -  | 604.5                                      | 1,089.3  | 2.1  | 9.8  | 26.2                                       | 34.8   |
| $\sqsubseteq$ |                    |  |  |                                      |  |  |  |  |  |  |  |                                      |  |  |  |  |  |  |  |  | 2,000.0  |  |  |  |  |
| July 19, 2024 | Minimum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | 22.1                                   | 25.0   | 0.0                                    | 0.0  | -                                    | -  | 0.0  | 0.0  | 0.0  | 0.0  | -  | -  | 387.1                                      | 402.0  | 0.0  | 0.0  | 10.5                                       | 11.0   |
|               | Maximum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | 95.5                                   | 96.0   | 0.0                                    | 0.0  | -                                    | -  | 69.5                                       | 76.0   | 0.0  | 0.0  | -  | -  | 1,198.7                                    | 2,554.0  | 19.6                                       | 58.0   | 38.1                                       | 57.0   |
|               | Average            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | 58.3                                   | 61.9   | 0.0                                    | 0.0  | -                                    | -  | 16.0                                       | 20.3   | 0.0  | 0.0  | -  | -  | 574.2                                      | 905.6  | 2.1  | 10.9   | 25.7                                       | 31.7   |
| July 20, 2024 | Minimum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      | -  | 20.0                                   | 21.0   | 0.0                                    | 0.0  | -                                    | -  | 0.0  | 0.0  | 0.0  | 0.0  | -  | -  | 365.4                                      | 380.0  | 0.0  | 0.0  | 17.0                                       | 17.0   |
|               | Maximum            | 18.9                                   | 31.0   | 0.0                                  | 0.0  | -                                      | -  | 83.1                                   | 93.0   | 0.0                                    | 0.0  | -                                    | -  | 75.5                                       | 78.0   | 0.0  | 0.0  | -  | -  | 856.3                                      | 3,070.0  | 15.5                                       | 48.0   | 42.2                                       | 72.0   |
|               | Average            | 1.0                                    | 2.5  | 0.0                                  | 0.0  | -                                      | -  | 51.7                                   | 54.5   | 0.0                                    | 0.0  | -                                    | -  | 9.8  | 12.5   | 0.0  | 0.0  | -  | -  | 452.9                                      | 625.7  | 1.6  | 7.9  | 27.3                                       | 31.6   |
| July 21, 2024 | Minimum            | 0.0                                    | 0.0  | 0.0                                  | 0.0  | -                                      |  | 9.3                                    | 10.0   | 0.0                                    | 0.0  | -                                    | -  | 0.0  | 0.0  | 0.0  | 0.0  | -  | -  | 303.2                                      | 322.0  | 0.0  | 0.0  | 15.8                                       | 19.0   |
|               | Maximum            | 11.9                                   | 39.0   | 0.0                                  | 0.0  | -                                      | -  | 87.1                                   | 93.0   | 0.0                                    | 0.0  | -                                    | -  | 10.6                                       | 55.0   | 0.1  | 1.0  | -  | -  | 2,041.0                                    | 7,387.0  | 42.5                                       | 120.0  | 57.8                                       | 157.0  |
|               | Average            | 0.2                                    | 0.7  | 0.0                                  | 0.0  | -                                      | -  | 44.8                                   | 49.0   | 0.0                                    | 0.0  | -                                    | -  | 0.8  | 3.4  | 0.0  | 0.0  | -  | -  | 541.3                                      | 1,126.9  | 4.6  | 20.8   | 29.7                                       | 45.1   |

#### Notes:

- Data records with a dash indicate no data is available for that interval.
- Calibration readings and data produced during sensor errors are excluded from the report.
- Station 2 went offline on 6/20/2024 due to technical problems and returned online on 7/19/2024.
- The CTair monitoring systems at each station are programmed to initiate benzene sampling when a TVOC reading of ≥ 160 ppb is measured. It has been observed that there are occurrences of TVOC readings ≥ 160 ppb where the benzene sampling was not initiated. The affected stations and periods are included in the report table. The equipment manufacturer is actively working to resolve this issue.
- As discussed with the manufacturer of the H2S sensor, there is high likelihood that the H2S sensor has cross sensitivity with other sulfur compounds. Other sulfur compounds include, but are not limited to, carbonyl sulfide, dimethyl sulfide, dimethyl disulfide, and methyl mercaptan.



## **Perimeter Air Monitoring Weekly Report**

Real-Time Multigas Monitoring Bristol Landfill Air Investigation

July 15 - July 21, 2024

|               |                  | Bristol Met Station |            |      |              |       |  |  |  |  |  |  |  |
|---------------|------------------|---------------------|------------|------|--------------|-------|--|--|--|--|--|--|--|
| Date          | Daily Statistics | Wind Dir            | Wind Speed | Temp | Rel Humidity | Baro  |  |  |  |  |  |  |  |
|               |                  | degrees             | mph        | °F   | %            | mbar  |  |  |  |  |  |  |  |
| 124           | Minimum          |                     | 0.0        | 63.5 | 37.1         | 948.4 |  |  |  |  |  |  |  |
| July 15, 2024 | Maximum          |                     | 10.0       | 93.8 | 86.4         | 953.8 |  |  |  |  |  |  |  |
| lu (          | Average          | 158.4               | 2.0        | 79.7 | 60.5         | 951.4 |  |  |  |  |  |  |  |
| 4             | Minimum          |                     | 0.0        | 71.9 | 47.9         | 948.3 |  |  |  |  |  |  |  |
| July 16, 2024 | Maximum          |                     | 15.0       | 90.2 | 81.6         | 951.9 |  |  |  |  |  |  |  |
| July          | Average          | 218.9               | 2.8        | 80.4 | 68.0         | 949.8 |  |  |  |  |  |  |  |
| 24            | Minimum          |                     | 0.0        | 68.8 | 43.8         | 946.9 |  |  |  |  |  |  |  |
| July 17, 2024 | Maximum          |                     | 19.0       | 91.0 | 91.9         | 951.4 |  |  |  |  |  |  |  |
| lul           | Average          | 227.5               | 2.8        | 77.0 | 77.1         | 949.6 |  |  |  |  |  |  |  |
| 24            | Minimum          |                     | 0.0        | 67.5 | 64.4         | 949.6 |  |  |  |  |  |  |  |
| July 18, 2024 | Maximum          |                     | 10.0       | 78.6 | 95.2         | 952.7 |  |  |  |  |  |  |  |
| lul           | Average          | 202.6               | 1.9        | 71.9 | 85.0         | 950.8 |  |  |  |  |  |  |  |
| 4             | Minimum          |                     | 0.0        | 62.5 | 39.5         | 951.1 |  |  |  |  |  |  |  |
| July 19, 2024 | Maximum          |                     | 10.0       | 88.1 | 95.9         | 954.3 |  |  |  |  |  |  |  |
| July          | Average          | 145.5               | 1.8        | 74.8 | 70.5         | 952.8 |  |  |  |  |  |  |  |
| 4             | Minimum          |                     | 0.0        | 68.3 | 76.1         | 952.2 |  |  |  |  |  |  |  |
| July 20, 2024 | Maximum          |                     | 6.0        | 76.0 | 94.4         | 954.8 |  |  |  |  |  |  |  |
| ylut          | Average          | 152.3               | 1.3        | 70.9 | 88.6         | 953.5 |  |  |  |  |  |  |  |
| 4.            | Minimum          |                     | 0.0        | 63.6 | 61.6         | 950.9 |  |  |  |  |  |  |  |
| July 21, 2024 | Maximum          |                     | 16.0       | 82.4 | 95.5         | 953.8 |  |  |  |  |  |  |  |
| ylul          | Average          | 99.5                | 2.1        | 71.5 | 85.1         | 952.5 |  |  |  |  |  |  |  |
|               |                  |                     |            |      |              |       |  |  |  |  |  |  |  |

#### Notes:

- Dash/Blank data records indicate no data is available for that interval.
- Wind direction is a daily (24-hr) average value; with the origin of wind in degrees; clockwise from North calculated with vector averaging.