

Kurnell Landfill Quarterly Ground Water Analytical Results - April-June 2023

| Monitoring Location: | | | BH3A | BH4A | BH5A | BH6A | BH7A | BH8A | BH9C | BH10B | BH11A | BH12A | BH13A |
|---------------------------------|------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Sample Id: | | | BH3A | BH4A | BH5A | BH6A | BH7A | BH8A | BH9C | BH10B | BH11A | BH12A | BH13A |
| Laboratory Report Number: | | | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 |
| Laboratory: | | | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab |
| Date Sampled: | | | 18 Apr 23 | 17 Apr 23 | 18 Apr 23 | 17 Apr 23 | 17 Apr 23 | 17 Apr 23 | 18 Apr 23 | 18 Apr 23 | 17 Apr 23 | 17 Apr 23 | 17 Apr 23 |
| Parameters | PQL | Units | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter |
| | | | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 |
| Standing Water Level | 0.01 | mBTOC | 3.15 | 3.87 | 7.12 | 14.85 | 2.05 | 16.30 | 4.50 | 3.97 | 9.32 | 9.69 | 3.68 |
| pH (field) | 0.1 | pH units | 7.64 | 6.97 | 6.88 | 6.9 | 7.3 | 7.4 | 7.01 | 6.94 | 7.15 | 6.8 | 7.09 |
| Electrical Conductivity (field) | 1 | µS/cm | 1,196 | 1,130 | 1986 | 2,020 | 671 | 461.7 | 833 | 2153 | 1082 | 2063 | 1313 |
| pH | 0.1 | pH units | 7.6 | 6.8 | 6.9 | 6.9 | 7.1 | 7.4 | 6.9 | 6.9 | 7.4 | 6.9 | 7.3 |
| Total Dissolved Solids | 5 | mg/L | 990 | 940 | 1200 | 1200 | 460 | 300 | 640 | 1700 | 660 | 1500 | 950 |
| Total Organic Carbon | 1 | mg/L | 7 | 19 | 37 | 59 | 11 | 4 | 7 | 42 | 5 | 25 | 39 |
| Carbonate Alkalinity (CO3-2) | 1 | mg/L | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloride | 20 | mg/L | 44 | 38 | 260 | 220 | 18 | 22 | 40 | 150 | 66 | 250 | 91 |
| Sulphate | 5 | mg/L | 500 | 270 | 50 | 13 | 6 | 8 | 130 | 280 | 45 | 110 | 190 |
| Ammonia as N | 0.1 | mg/L | 0.75 | 0.007 | 22 | 8.7 | 0.27 | 0.13 | 1.7 | 1.9 | 1.8 | 1 | 3.3 |
| Sodium (Na) | 0.03 | mg/L | 39 | 31 | 160 | 140 | 13 | 15 | 26 | 100 | 39 | 160 | 64 |
| Potassium (I) Ion | 0.03 | mg/L | 12 | 11 | 25 | 18 | 2 | 0.9 | 7.1 | 13 | 16 | 14 | 15 |
| Calcium (II) Ion | 0.03 | mg/L | 190 | 200 | 160 | 220 | 110 | 73 | 140 | 380 | 170 | 270 | 160 |
| Magnesium (II) Ion | 0.03 | mg/L | 19 | 15 | 37 | 31 | 16 | 7.3 | 10 | 43 | 19 | 21 | 21 |

NOTES:

nt = Not Tested

| Kurnell Landfill Quarterly Ground Water Analytical Results - April-June 2023 | | | | | | | | | | | | | | |
|---|------|----------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Monitoring Location: | | | BH14 | BH15 | BH16 | BH17 | BH18 | BH19B | BH20 | BH22 | BH23 | BH24 | BH25 | LB2 |
| Sample Id: | | | BH14A | BH15 | BH16 | BH17 | BH18 | BH19B | BH20 | BH22 | BH23 | BH24 | BH25 | LB02 |
| Laboratory Report Number: | | | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 | 321251 |
| Laboratory: | | | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab | Envirolab |
| Date Sampled: | | | 18 Apr 23 | 18 Apr 23 | 18 Apr 23 | 18 Apr 23 | 17 Apr 23 | 18 Apr 23 | 05 Jun 23 | 18 Apr 23 | - | 13 Jun 23 | 17 Apr 23 | 18 Apr 23 |
| Parameters | PQL | Units | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter | 1st Quarter |
| | | | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 | 2023/2024 |
| Standing Water Level | 0.01 | mBTOC | 3.56 | 4.36 | 0.84 | 5.29 | 20.77 | 3.73 | 0.35 | 2.66 | 3.15 | 12.61 | 7.20 | 13.67 |
| pH (field) | 0.1 | pH units | 7.01 | 7.22 | 6.7 | 6.87 | 6.51 | 7.42 | nt | 7.15 | - | 6.41 | 7.22 | 6.74 |
| Electrical Conductivity (field) | 1 | µS/cm | 2780 | 1618 | 403 | 1891 | 1,290 | 708 | nt | 1308 | - | 431 | 1486 | 5,984 |
| pH | 0.1 | pH units | 6.8 | 7.3 | 6.6 | 7.2 | 6.8 | 7.1 | 7.5 | 7.2 | 7.4 | 6.8 | 7.4 | nt |
| Total Dissolved Solids | 5 | mg/L | 2400 | 1200 | 300 | 1300 | 870 | 570 | 1200 | 1000 | 270 | 210 | 1000 | nt |
| Total Organic Carbon | 1 | mg/L | 33 | 20 | 12 | 23 | 2 | 14 | 52 | 13 | 11 | 10 | 12 | nt |
| Carbonate Alkalinity (CO3-2) | 1 | mg/L | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloride | 20 | mg/L | 250 | 170 | 41 | 140 | 100 | 40 | 520 | 99 | 13 | 26 | 230 | 480 |
| Sulphate | 5 | mg/L | 1100 | 330 | 10 | 280 | 45 | 95 | 41 | 290 | 7 | 16 | 50 | 280 |
| Ammonia as N | 0.1 | mg/L | 0.075 | 0.036 | 1.2 | 2.9 | 1 | 0.007 | 6.5 | 2.5 | 0.19 | 0.018 | 0.48 | 220 |
| Sodium (Na) | 0.03 | mg/L | 220 | 120 | 22 | 120 | 47 | 17 | 170 | 59 | 8.1 | 20 | 120 | 390 |
| Potassium (I) Ion | 0.03 | mg/L | 18 | 15 | 4 | 13 | 4 | 4 | 21 | 14 | 5.6 | 5.8 | 4 | 160 |
| Calcium (II) Ion | 0.03 | mg/L | 420 | 200 | 26 | 260 | 190 | 120 | 180 | 190 | 77 | 69 | 160 | 310 |
| Magnesium (II) Ion | 0.03 | mg/L | 65 | 24 | 7.4 | 30 | 25 | 11 | 34 | 23 | 9.2 | 7.3 | 24 | 110 |

Kurnell Landfill Quarterly Subsurface Gas Results - 17 April 2023

| EPA ID No. | Well ID | Initial well pressure above atmospheric (kPa) | Initial vent | Flow Rate L/hr | Initial well concentrations | Maximum vacuum on well (psi) | Recovery time (min) | Total volume purged (L) | Well concentrations following purging |
|------------|---------|---|--------------|----------------|-----------------------------|------------------------------|---------------------|-------------------------|---------------------------------------|
| | | | | | CH ₄ | | | | CH ₄ |
| | | | | | (%) | | | | (%) |
| 20 | BH4A | <0.1 | Nil | 0.1 | <0.1 | 10 | <1 | 12 | <0.1 |
| 22 | BH8B | 0.2 | Nil | 0.1 | <0.1 | 10 | <1 | 12 | <0.1 |
| 23 | BH12A | <0.1 | Nil | 0.2 | <0.1 | 10 | <1 | 12 | <0.1 |
| 24 | BH13A | -0.1 | Nil | 0.2 | <0.1 | No Access | | | |
| 25 | BH18 | 2.4 | Nil | 0.3 | <0.1 | No Access | | | |

BOLD Greater than the assessment criteria of 1.0 % CH₄

Kurnell Landfill Environmental Monitoring Locations

| EPA ID No. | Monitoring Location | Easting | Northing |
|-------------------|----------------------------|----------------|-----------------|
| 3 | BH3A | 331557.559 | 6233612.570 |
| 4 | BH4A | 331555.149 | 6233531.497 |
| 5 | BH5A | 331325.514 | 6233723.575 |
| 6 | BH6A | 331588.552 | 6233160.367 |
| 7 | BH7A | 331293.2 | 6233053.87 |
| 8 | BH8A | 331005.488 | 6233233.894 |
| 9 | BH9C | 331540.67 | 6233420.14 |
| 11 | BH10A | 331819.08 | 6233299.27 |
| 12 | BH11A | 331350.35 | 6233170.05 |
| 13 | BH12A | 331166.433 | 6233699.572 |
| 14 | BH13A | 331447.247 | 6233662.638 |
| 15 | BH14 | 331997.150 | 6233370.046 |
| 16 | BH15 | 332482.813 | 6233510.587 |
| 17 | BH16 | 332149.279 | 6233032.038 |
| 18 | BH17 | 331432.560 | 6233696.015 |
| 19 | BH18 | 330761.63 | 6233399.46 |
| 26 | BH19B | 332003 | 6233379 |
| 27 | BH20 | 332200.120 | 6233439.830 |
| 28 | BH22 | 332446.162 | 6233300.895 |
| 29 | BH23 | 332254.027 | 6233075.673 |
| 30 | BH24 | 331709.001 | 6232960.575 |
| 31 | BH25 | 330974 | 6233693 |
| 1 | LB02 | 331246 | 6233411 |