

Stormwater Monitoring Data – EPL 1967 EPL

Year: 2021 calendar year

Licensee Name and Address: Port of Newcastle Operations Pty Ltd; Newcastle Bulk Terminal, Heron Road Kooragang NSW 2304.

Location: Point 1 (Berth K2 Outlet)

Type of Monitoring: Discharge water quality monitoring.

Frequency required: Monthly during discharge with exceptions noted below table.

Notes: No limits are specified in EPL 1967.

EPL Link: [Link to EPL 1967](#) on EPA POEO Register

Monitoring location:



Figure: Location of EPL 1967 Point 1 (Google Maps, accessed 2021)

| Analyte | Units | January 2021 | February 2021 | March 2021 | April 2021 | May 2021 | June 2021 |
|---------------------------------|-------|--------------|---------------|------------|------------|------------|------------|
| Date sampled | - | 7/01/2021 | 2/02/2021 | 14/03/2021 | 10/04/2021 | 4/05/2021 | 9/06/2021 |
| Date results received | - | 25/02/2021 | 30/03/2021 | 14/05/2021 | 11/06/2021 | 9/07/2021 | 24/08/2021 |
| Date published | - | 19/04/2021 | 19/04/2021 | 18/05/2021 | 24/06/2021 | 13/07/2021 | 27/08/2021 |
| pH | pH | 7.19 | 5.7 | 9.03 | 8.34 | 6.7 | 8.8 |
| Aluminium (dissolved) | mg/L | 0.03 | 0.02 | 0.18 | 0.04 | <0.1 | 0.01 |
| Aluminium (total) | mg/L | 0.42 | 0.68 | 0.24 | 0.24 | 0.44 | 0.99 |
| Ammonia | mg/L | 69.5 | 12.7 | 544 | 228 | 188 | 528 |
| Arsenic ** (dissolved) | mg/L | 0.005 | 0.012 | 0.006 | 0.005 | 0.011 | 0.011 |
| Arsenic ** (total) | mg/L | 0.006 | 0.012 | 0.006 | 0.005 | 0.016 | 0.013 |
| Cadmium (dissolved) | mg/L | <0.0001 | 0.001 | <0.0001 | 0.0009 | <0.0001 | <0.0001 |
| Cadmium (total) | mg/L | 0.001 | 0.0033 | 0.0004 | 0.001 | 0.0018 | 0.0005 |
| Lead (dissolved) | mg/L | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Lead (total) | mg/L | 0.003 | 0.003 | <0.001 | <0.001 | 0.002 | 0.005 |
| Mercury (dissolved) | mg/L | 0.0003 | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Mercury (total) | mg/L | 0.0002 | 0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0003 |
| Nitrate | mg/L | 0.05 | 1.26 | 0.99 | 1.5 | 0.1 | 1.44 |
| Nitrite | mg/L | <0.05 | 0.14 | 0.45 | 13 | 0.12 | 0.78 |
| Total Nitrogen | mg/L | 82.2 | 13.7 | 542 | 231 | 674 | 1060 |
| Total Kjeldahl Nitrogen | mg/L | 82.1 | 12.3 | 541 | 216 | 674 | 1060 |
| Phosphate | mg/L | 167 | 310 | 85.8 | 30 | 468 | 285 |
| Phosphorus (dissolved reactive) | mg/L | <0.05 | 101 | 22.7 | 5.18 | 148 | 81.3 |
| Phosphorus (total) | mg/L | 54.4 | 101 | 28 | 9.79 | 153 | 93.1 |
| Sulfate | mg/L | 58 | 643 | 74 | 1250 | 2110 | 513 |
| Sulfur | mg/L | 70 | 710 | 100 | 1400 | 2420 | 560 |
| Sulfide (dissolved) | mg/L | 2.5 | <0.1 | <0.1 | <0.1 | 0.1 | <0.1 |
| Total Suspended Solids | mg/L | 60 | 29 | 18 | 70 | 34 | 76 |
| Zinc (dissolved) | mg/L | 0.049 | 2.74 | 0.023 | 0.089 | <0.05 | 0.01 |
| Zinc (total) | mg/L | 0.277 | 3.22 | 0.092 | 0.389 | 0.298 | 0.769 |

* insufficient rainfall for sample collection

** only required to be monitored following Sulphate of Ammonia operation

Results are continued on next page.

| Analyte | Units | July 2021 | August 2021 | Sept 2021 | Oct 2021 | Nov 2021 | Dec 2021 |
|---------------------------------|-------|------------|-------------|------------|----------|----------|----------|
| Date sampled | - | 17/07/2021 | 24/08/2021 | 14/09/2021 | | | |
| Date results received | - | 24/08/2021 | 16/09/2021 | 17/11/2021 | | | |
| Date published | - | 27/08/2021 | 17/09/2021 | 19/11/2021 | | | |
| pH | pH | 6.92 | 8.74 | 9 | | | |
| Aluminium (dissolved) | mg/L | <0.01 | 0.12 | 0.1 | | | |
| Aluminium (total) | mg/L | 0.03 | 0.71 | 0.66 | | | |
| Ammonia | mg/L | 130 | 170 | 190 | | | |
| Arsenic ** (dissolved) | mg/L | 0.007 | 0.003 | 0.002 | | | |
| Arsenic ** (total) | mg/L | 0.007 | 0.004 | 0.003 | | | |
| Cadmium (dissolved) | mg/L | <0.0001 | 0.0001 | 0.0003 | | | |
| Cadmium (total) | mg/L | 0.0001 | 0.005 | 0.0005 | | | |
| Lead (dissolved) | mg/L | <0.001 | <0.001 | <0.001 | | | |
| Lead (total) | mg/L | <0.001 | 0.004 | 0.011 | | | |
| Mercury (dissolved) | mg/L | <0.0001 | 0.0001 | <0.0001 | | | |
| Mercury (total) | mg/L | 0.0001 | 0.0002 | <0.0001 | | | |
| Nitrate | mg/L | 0.38 | 1.81 | <0.05 | | | |
| Nitrite | mg/L | 0.49 | 1.25 | <0.05 | | | |
| Total Nitrogen | mg/L | 137 | 159 | 229 | | | |
| Total Kjeldahl Nitrogen | mg/L | 136 | 156 | 229 | | | |
| Phosphate | mg/L | 133 | 20.2 | 32.7 | | | |
| Phosphorus (dissolved reactive) | mg/L | 41.2 | 2.11 | 8.23 | | | |
| Phosphorus (total) | mg/L | 43.5 | 6.6 | 10.7 | | | |
| Sulfate | mg/L | 1780 | 883 | 41 | | | |
| Sulfur | mg/L | 2160 | 920 | 20 | | | |
| Sulfide (dissolved) | mg/L | <0.1 | <0.1 | <0.1 | | | |
| Total Suspended Solids | mg/L | 59 | 55 | 79 | | | |
| Zinc (dissolved) | mg/L | 0.016 | 0.072 | 0.098 | | | |
| Zinc (total) | mg/L | 0.032 | 0.255 | 0.43 | | | |

* insufficient rainfall for sample collection

** only required to be monitored following Sulphate of Ammonia operation