

Stormwater Monitoring Data – EPL 1967

Year: 2022 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 2022)

Analyte	Units	January 2022 [#]	February 2022 ¹	March 2022	April 2022	May 2022	June 2022
Date sampled	-	19/01/2022	24/02/2022	1/03/2022	8/04/2022	23/05/2022	20/06/2022
Date results received	-	25/02/2022	07/03/2022	29/03/2022	12/05/2022	15/07/2022	15/07/2022
Date published	-	02/03/2022	09/03/2022	01/04/2022	17/05/2022	18/07/2022	18/07/2022
pH	pH	-	7.11	8.45	7.31	8.35	8.88
Aluminium (dissolved)	mg/L	-	0.01	0.02	0.02	<0.1	0.14
Aluminium (total)	mg/L	-	0.19	0.63	1.2	0.15	6.8
Ammonia	mg/L	-	50.7	90.7	47.6	411	146
Arsenic ** (dissolved)	mg/L	-	<0.001	0.004	<0.001	0.029	0.007
Arsenic ** (total)	mg/L	-	0.003	0.004	0.006	0.032	0.013
Cadmium (dissolved)	mg/L	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cadmium (total)	mg/L	-	0.0003	0.0008	0.0004	0.0002	0.002
Lead (dissolved)	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Lead (total)	mg/L	-	0.002	0.003	0.005	<0.001	0.049
Mercury (dissolved)	mg/L	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mercury (total)	mg/L	-	<0.0001	<0.0001	<0.0001	0.0002	0.0002
Nitrate	mg/L	-	0.04	1.49	0.63	0.13	0.66
Nitrite	mg/L	-	<0.01	0.39	0	0.60	1.88
Total Nitrogen	mg/L	-	53.2	168	57.2	379	418
Total Kjeldahl Nitrogen	mg/L	-	53.2	166	56.2	378	416
Phosphate (total)	mg/L	-	176	55.1	146	426	85.1
Phosphorus (dissolved reactive)	mg/L	-	48.1	12.9	46.6	112	12.1
Phosphorus (total)	mg/L	-	57.6	18	47.6	139	27.8
Sulphate	mg/L	-	111	292	8	532	43
Sulphide (total)	mg/L	-	0.4	<0.1	<0.1	<0.1	1.4
Sulphur (total)	mg/L	-	90	180	<10	520	80
Total Suspended Solids	mg/L	-	41	52	41	107	421
Zinc (dissolved)	mg/L	-	0.031	<0.005	0.041	<0.005	0.013
Zinc (total)	mg/L	-	0.115	0.182	0.138	0.147	0.878

* insufficient rainfall for sample collection

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

Sample was unable to be collected due to equipment malfunction.

1. Sample obtained manually (grab sample) as automatic sampler not operational.

Results are continued on next page.

Analyte	Units	July 2022	August 2022	Sept 2022	Oct 2022	Nov 2022	Dec 2022
Date sampled	-	04/07/2022	10/08/2022	05/09/2022	1/10/2022	13/11/2022	12/12/2022
Date results received	-	15/07/2022	16/09/2022	07/10/2022	24/10/2022	16/11/2022	13/01/2022
Date published	-	18/07/2022	5/10/2022 ²	19/10/2022	28/10/2022	11/01/2023 ³	31/01/2022
pH	pH	8.07	8.65	9.37	9.01	8.79	7.42
Aluminium (dissolved)	mg/L	0.04	0.51	0.53	0.27	0.54	<0.10
Aluminium (total)	mg/L	1.39	5.6	14.1	1.76	0.77	0.52
Ammonia	mg/L	55.9	60.9	0.25	224	1110	21.4
Arsenic ** (dissolved)	mg/L	0.002	0.002	0.002	0.005	0.002	<0.010
Arsenic ** (total)	mg/L	0.004	0.005	0.014	0.006	0.002	<0.010
Cadmium (dissolved)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0010
Cadmium (total)	mg/L	0.0003	0.0008	0.0026	0.0005	0.0002	<0.0010
Lead (dissolved)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.010
Lead (total)	mg/L	0.007	0.016	0.074	0.01	<0.001	<0.010
Mercury (dissolved)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NR
Mercury (total)	mg/L	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001
Nitrate	mg/L	<0.05	<0.05	0.4	0.41	<0.05	4.97
Nitrite	mg/L	0.65	<0.05	<0.05	2.45	0.42	2.92
Total Nitrogen	mg/L	55.4	73.3	0.9	255	1210	35.8
Total Kjeldahl Nitrogen	mg/L	55.3	73.3	0.5	252	1210	27.9
Phosphate (total)	mg/L	22.4	12.8	0.58	34.6	6.79	13
Phosphorus (dissolved reactive)	mg/L	4.33	2.5	0.11	5.89	1.95	3.19
Phosphorus (total)	mg/L	7.32	4.19	0.19	11.3	2.21	4.24
Sulphate	mg/L	115	33	1740	162	488	1360
Sulphur (total)	mg/L	120	50	30	180	590	1480
Sulphide (total)	mg/L	0.3	2.6	1.4	<0.1	<0.1	<0.1
Total Suspended Solids	mg/L	256	105	378	96	<5	119
Zinc (dissolved)	mg/L	0.048	0.147	0.099	0.048	0.149	0.104
Zinc (total)	mg/L	0.238	0.647	1.63	0.641	0.245	0.237

* insufficient rainfall for sample collection.

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

Sample was unable to be collected due to equipment malfunction.

NR No result due to sampling or laboratory error

1. Sample obtained manually (grab sample) as automatic sampler not operational.

2. August 2022 data published more than 14 days after receipt due to school holidays and personnel on leave

3. November 2022 data published more than 14 days after receipt due to holiday period over New Year with personnel on leave.