



PORT WARATAH COAL SERVICES
EPL MONITORING DATA
FINES DISPOSAL
FACILITY



PORT WARATAH
COAL SERVICES

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PREMISES DETAILS

Environment Protection Licence Number:	5022
Licensee's Name:	Port Waratah Coal Services Limited
Premises Name:	Fines Disposal Facility
Premises Address:	Curlew Street, Kooragang NSW 2304
Link to POEO Public Register:	Click Here
Link to EPL 5022 on POEO Public Register:	Click Here

EPL MONITORING DATA: FINES DISPOSAL FACILITY
DISCHARGE TO WATERS – WATER QUALITY MONITORING

DISCHARGE TO WATERS – WATER QUALITY MONITORING

Monitoring frequency for the below parameters is monthly

Note: mg/L refers to ‘milligrams per litre’

EPA ID Number			1							36						
PWCS ID			WW-K4 (Leachate Sump)							WW-K3 (Leachate Drain)						
Location			Fines Disposal Facility							Fines Disposal Facility						
Analyte/Pollutant			pH	Total Suspended Solids	Manganese	Lead	Zinc	Polycyclic Aromatic Hydrocarbons	Phenols	pH	Total Suspended Solids	Manganese	Lead	Zinc	Polycyclic Aromatic Hydrocarbons	Phenols
Unit of Measure			pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EPL Concentration Limit			--	50	--	--	--	--	--	--	--	--	--	--	--	--
Sample Date	Date Data Obtained	Date Data Published														
27 Jan 2017	9/2/2017	16/2/2017	7.70	<5	1.28	<0.001	0.020	<0.0005	<0.05	7.69	<5	1.18	<0.001	<0.005	<0.0005	<0.05
27 Feb 2017	14/3/2017	16/3/2017	7.73	<5	1.19	<0.001	0.023	<0.0005	<0.05	7.74	<5	1.10	<0.001	<0.005	<0.0005	<0.05
30 Mar 2017	13/4/2017	21/4/2017	7.71	24	0.99	<0.001	<0.005	<0.0005	<0.05	7.64	4	1.46	<0.001	<0.005	<0.0005	<0.05
27 Apr 2017	15/5/2017	19/5/2017	7.67	12	1.45	<0.001	<0.005	<0.0005	<0.05	7.68	<5	1.48	<0.001	<0.005	<0.0005	<0.05
18 May 2017	9/6/2017	19/6/2017	8.30	12	0.002	<0.001	0.040	<0.0017	<0.05	7.65	74	1.60	<0.001	0.036	<0.0021	<0.05
29 May 2017	14/6/2017	19/5/2017	7.67	10	1.45	<0.001	<0.005	<0.0005	<0.05	7.65	<5	1.45	<0.001	<0.005	<0.0005	<0.05
28 Jun 2017	19/7/2017	02/8/2017	7.58	18	1.46	<0.001	0.005	0.0022	<0.05	7.54	6	1.50	<0.001	0.007	0.0015	<0.05
28 Jul 2017	11/8/2017	14/8/2017	7.62	5	1.44	<0.001	0.006	0.0021	<0.05	7.67	<5	1.34	<0.001	<0.005	<0.0005	<0.05
28 Aug 2017	13/9/2017	20/9/2017	7.67	11	1.31	<0.001	0.006	0.0019	<0.05	7.65	<5	1.32	<0.001	<0.005	<0.0005	<0.05
28 Sep 2017	13/10/2017	19/10/2017	7.62	9	1.54	<0.001	<0.005	<0.0005	<0.05	7.62	8	1.58	<0.001	<0.005	<0.0005	<0.05
27 Oct 2017	15/11/2017	16/11/2017	7.69	16	1.40	<0.001	0.005	<0.0005	<0.05	7.65	6	1.36	<0.001	<0.005	<0.0005	<0.05
28 Nov 2017	13/12/2017	19/12/2017	7.63	<5	1.38	<0.001	<0.005	<0.0005	<0.05	7.72	12	1.32	<0.001	<0.005	<0.0005	<0.05
28 Dec 2017	12/1/2018	22/1/2018	7.76	5	1.34	<0.001	<0.005	<0.0005	<0.05	7.77	<5	1.27	<0.001	<0.005	<0.0005	<0.05
29 Jan 2018	12/2/2018	22/2/2018	7.68	<5	1.26	<0.001	0.012	<0.0005	<0.05	7.73	<5	1.18	<0.001	<0.005	<0.0005	<0.05
27 Feb 2018	15/3/2018	20/3/2018	7.66	<5	0.87	<0.001	0.006	<0.0005	<0.05	7.65	<5	0.84	<0.001	<0.005	<0.0005	<0.05
27 Mar 2018	13/4/2018	19/4/2018	7.61	10	1.10	<0.001	0.006	<0.0005	<0.05	7.63	23	1.21	<0.001	0.006	<0.0005	<0.05
27 Apr 2018	15/5/2018	18/5/2018	7.66	11	1.27	<0.001	0.006	<0.0005	<0.05	7.57	6	1.22	<0.001	<0.005	<0.0005	<0.05
29 May 2018	15/6/2018	22/6/2018	7.66	13	1.31	<0.001	<0.005	<0.0005	<0.05	7.66	8	1.28	<0.001	0.006	<0.0005	<0.05
30 May 2018	15/6/2018	22/6/2018	7.9	<5	0.071	<0.001	0.007	<0.0017	<0.05	7.7	22	1.30	<0.001	0.008	0.0002	<0.05
28 Jun 2018	16/7/2018	23/7/2018	7.51	13	1.51	<0.001	<0.005	<0.0005	<0.05	7.46	19	1.51	<0.001	<0.005	<0.0005	<0.05
30 Jul 2018	14/8/2018	21/8/2018	7.58	17	1.35	<0.001	0.008	0.0018	<0.05	7.54	5	1.33	<0.001	<0.005	<0.0005	<0.05
28 Aug 2018	14/9/2018	18/9/2018	7.60	7	1.48	<0.001	0.007	<0.0005	<0.05	7.64	6	1.43	<0.001	0.010	<0.0005	<0.05

EPL MONITORING DATA: FINES DISPOSAL FACILITY
DISCHARGE TO WATERS – WATER QUALITY MONITORING

EPA ID Number			1							36						
PWCS ID			WW-K4 (Leachate Sump)							WW-K3 (Leachate Drain)						
Location			Fines Disposal Facility							Fines Disposal Facility						
Analyte/Pollutant			pH	Total Suspended Solids	Manganese	Lead	Zinc	Polycyclic Aromatic Hydrocarbons	Phenols	pH	Total Suspended Solids	Manganese	Lead	Zinc	Polycyclic Aromatic Hydrocarbons	Phenols
Unit of Measure			pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EPL Concentration Limit			--	50	--	--	--	--	--	--	--	--	--	--	--	--
Sample Date	Date Data Obtained	Date Data Published														
27 Sep 2018	12/10/2018	22/10/2018	7.69	11	1.53	<0.001	<0.005	<0.0005	<0.05	7.70	7	1.50	<0.001	<0.005	<0.0005	<0.05
29 Oct 2018	12/11/2018	26/11/2018	7.70	11	1.47	<0.001	0.007	<0.0005	<0.05	7.68	7	1.52	<0.001	<0.005	<0.0005	<0.05
29 Nov 2018	13/12/2018	19/12/2018	7.60	23	1.36	<0.001	0.011	<0.0005	<0.05	7.7	22	1.36	<0.001	0.007	<0.0005	<0.05
28 Dec 2018	31/12/2018	12/02/2019	7.66	7	1.37	<0.001	0.011	<0.0005	<0.05	7.64	11	1.37	<0.001	0.011	<0.0005	<0.05
29 Jan 2019	15/2/2019	20/2/2019	7.60	<5	1.33	<0.001	0.010	<0.0005	<0.05	7.61	<5	1.31	<0.001	<0.005	<0.0005	<0.05
27 Feb 2019	14/03/2019	26/03/2019	7.63	<5	1.29	<0.001	0.006	<0.0005	<0.05	7.71	9	1.23	<0.001	<0.005	<0.0005	<0.05
28 Mar 2019	12/04/2019	16/04/2019	7.65	<5	1.06	<0.001	<0.005	<0.0005	<0.05	7.67	13	1.09	<0.001	<0.005	<0.0005	<0.05
29 Apr 2019	13/05/2019	14/05/2019	7.70	11	1.13	<0.001	<0.005	<0.0005	<0.05	7.76	<5	1.09	<0.001	<0.005	<0.0005	<0.05
29 May 2019	13/06/2019	18/06/2019	7.56	<5	1.24	<0.001	0.011	<0.0005	<0.05	7.66	6	1.19	<0.001	0.009	<0.0005	<0.05
27 Jun 2019	12/07/2019	17/07/2019	7.65	<5	1.04	<0.001	<0.005	<0.0005	<0.05	7.63	<5	1.06	<0.001	<0.005	<0.0005	<0.05
29 Jul 2019	13/08/2019	15/08/2019	7.68	13	1.72	<0.001	0.029	<0.0005	<0.05	7.67	8	1.69	<0.001	<0.005	<0.0005	<0.05
29 Aug 2019	13/09/2019	19/9/2019	7.51	6	1.41	<0.001	<0.005	<0.0005	<0.05	7.59	6	1.37	<0.001	0.009	<0.0005	<0.05
27 Sep 2019	16/10/2019	18/10/2019	7.53	<5	1.36	<0.001	<0.005	<0.0005	<0.05	7.53	<5	1.42	<0.001	0.009	<0.0005	<0.05
30 Oct 2019	26/11/2019	26/11/2019	7.46	<5	1.55	<0.001	0.040	<0.0005	<0.001	7.56	<5	1.46	<0.001	0.006	<0.0005	<0.001
28 Nov 2019	17/12/2019	20/12/2019	7.50	7	1.52	0.002	0.152	<0.0005	<0.001	7.67	<5	1.32	<0.001	<0.005	<0.0005	<0.001
30 Dec 2019	17/01/2020	30/01/2020	7.71	7	1.34	<0.001	<0.005	<0.0005	<0.001	7.48	93	1.47	<0.001	0.061	<0.0005	<0.001
30 Jan 2020	19/02/2020	27/02/2020	7.52	23	1.52	<0.001	0.040	<0.0005	<0.05	7.63	17	1.44	<0.001	0.006	<0.0005	<0.05
27 Feb 2020	26/03/2020	26/03/2020	7.73	8	1.35	<0.001	<0.005	<0.0005	<0.05	7.53	702	1.71	0.004	0.323	<0.0005	<0.05
31 Mar 2020	20/04/2020	29/04/2020	7.60	8	1.24	<0.001	<0.005	<0.0005	<0.05	7.42	31	1.54	0.001	0.102	<0.0005	<0.05
30 Apr 2020	19/05/2020	20/05/2020	7.55	26	1.37	0.004	1.090	<0.0005	<0.002	7.53	<5	1.35	<0.001	0.013	<0.0005	<0.002
28 May 2020	19/06/2020	24/06/2020	7.57	<5	1.17	<0.001	<0.005	<0.0005	<0.05	7.51	9	1.24	<0.001	0.027	<0.0005	<0.05
29 Jun 2020	14/07/2020	23/07/2020	7.47	8	1.37	<0.001	0.012	<0.0005	<0.05	7.54	79	1.60	<0.001	0.010	<0.0005	<0.05
30 Jul 2020	17/08/2020	27/08/2020	8.54	10	0.32	<0.001	0.055	<0.0005	<0.05	7.31	17	1.43	<0.001	0.029	<0.0005	<0.05
31 Aug 2020	14/09/2020	17/09/2020	7.38	<5	1.70	<0.001	0.048	1.4	<0.05	7.42	<5	1.69	<0.001	0.008	<0.0005	<0.05
30 Sep 2020	16/10/2020	23/10/2020	7.43	27	1.63	<0.001	0.017	<0.0005	<0.05	7.48	<5	1.58	<0.001	0.009	<0.0005	<0.05
29 Oct 2020	16/11/2020	04/12/2020	7.44	8	1.70	0.01	0.319	<0.0005	<0.05	7.44	210	1.35	<0.001	<0.005	<0.0005	<0.05
30 Nov 2020	16/12/2020	17/12/2020	7.43	6	1.52	<0.001	0.106	<0.0005	<0.05	7.49	15	1.38	<0.001	0.016	<0.0005	<0.05
30 Dec 2020	15/01/2021	21/01/2021	7.46	16	1.44	<0.001	0.033	<0.0005	<0.05	7.55	6	1.40	<0.001	<0.005	<0.0005	<0.05

EPL MONITORING DATA: FINES DISPOSAL FACILITY
DISCHARGE TO WATERS – WATER QUALITY MONITORING

EPA ID Number			1							36						
PWCS ID			WW-K4 (Leachate Sump)							WW-K3 (Leachate Drain)						
Location			Fines Disposal Facility							Fines Disposal Facility						
Analyte/Pollutant			pH	Total Suspended Solids	Manganese	Lead	Zinc	Polycyclic Aromatic Hydrocarbons	Phenols	pH	Total Suspended Solids	Manganese	Lead	Zinc	Polycyclic Aromatic Hydrocarbons	Phenols
Unit of Measure			pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EPL Concentration Limit			--	50	--	--	--	--	--	--	--	--	--	--	--	--
Sample Date	Date Data Obtained	Date Data Published														
28 Jan 2021	11/02/2021	17/02/2021	7.61	10	1.11	<0.001	0.039	<0.0005	<0.05	7.71	6	1.06	<0.001	0.010	<0.0005	<0.05
25 Feb 2021	15/03/2021	23/03/2021	7.43	6	1.39	<0.001	0.007	<0.0005	<0.05	7.40	6	1.37	<0.001	0.284	<0.0005	<0.05
31 Mar 2021	05/05/2021	13/05/2021	7.66	11	2.29	<0.001	0.077	<0.0005	<0.05	7.43	13	1.01	<0.001	0.222	<0.0005	<0.05
29 Apr 2021	17/05/2021	27/05/2021	8.04	12	0.33	<0.001	0.007	<0.0005	<0.05	7.33	14	2.04	<0.001	0.010	<0.0005	<0.05
31-May-2021	17/06/2021	01/07/2021	7.40	15	1.89	<0.001	0.096	0.0018	<0.05	7.45	7	1.84	<0.001	0.007	<0.0005	<0.05
30-Jun-2021	14/07/2021	22/07/2021	7.38	41	1.61	<0.001	0.078	<0.0005	<0.05	7.43	10	1.66	<0.001	<0.005	<0.0005	<0.05
29-Jul-2021	13/08/2021	26/08/2021	7.43	8	1.65	<0.001	0.052	<0.0005	<0.05	7.45	<5	1.59	<0.001	0.006	<0.0005	<0.05
31-Aug-2021	15/09/2021	23/09/2021	7.45	36	1.53	<0.001	0.064	<0.0005	<0.05	7.52	9	1.50	<0.001	<0.005	<0.0005	<0.05
29-Sep-2021	14/10/2021	21/10/2021	7.42	18	1.72	<0.001	0.183	<0.0005	<0.05	7.47	12	1.38	<0.001	<0.005	<0.0005	<0.05
28-Oct-2021	15/11/2021	25/11/2021	7.42	46	1.56	<0.001	0.088	<0.0005	<0.05	7.47	7	1.53	<0.001	<0.005	<0.0005	<0.05
29-Nov-2021	20/12/2021	30/12/2021	8.72	<5	0.337	<0.001	<0.005	<0.0005	<0.05	7.35	14	1.36	<0.001	0.014	<0.0005	<0.05

EPL MONITORING DATA: FINES DISPOSAL FACILITY
DISCHARGE TO WATERS – DISCHARGE VOLUME

DISCHARGE TO WATERS – DISCHARGE VOLUME

Monitoring frequency is not specified in EPL 5022 for discharge volumes.

Note: kL refers to 'kilolitres', and kL/day refers to 'kilolitres per day'

EPA ID Number			I		
PWCS ID			WW-K4 (Leachate Sump)		
Location			Fines Disposal Facility		
Analyte/Pollutant			Total Volume Discharged	No. of Days	Ave Daily Discharge
Unit of Measure			kL	--	kL/day
EPL Limit			--	--	10,000
Sample Date	Date Data Obtained	Date Data First Published			
11 Jan 2017	9/2/2017	16/2/2017	4,709	14	336
23 Jan 2017	9/2/2017	16/2/2017	3,656	12	305
9 Feb 2017	14/3/2017	16/3/2017	4,855	17	286
23 Feb 2017	14/3/2017	16/3/2017	3,787	14	271
6 Mar 2017	13/4/2017	21/4/2017	4,541	11	413
29 Mar 2017	13/4/2017	21/4/2017	16,634	21	723
6 Apr 2017	15/5/2017	19/5/2017	9,750	8	1,219
20 Apr 2017	15/5/2017	19/5/2017	18,733	14	1,338
4 May 2017	14/6/2017	19/6/2017	14,058	14	1,004
17 May 2017	14/6/2017	19/6/2017	9,409	13	724
1 Jun 2017	19/7/2017	02/8/2017	8,640	15	576
15 Jun 2017	19/7/2017	02/8/2017	21,644	14	1,546
29 Jun 2017	19/7/2017	02/8/2017	24,399	14	1,743
14 Jul 2017	11/8/2017	14/8/2017	18,463	15	1,231
27 Jul 2017	11/8/2017	14/8/2017	13,391	13	1,030
10 Aug 2017	13/9/2017	20/9/2017	11,697	14	836
24 Aug 2017	13/9/2017	20/9/2017	9,959	14	711
7 Sep 2017	13/10/2017	19/10/2017	7,323	14	523
26 Sep 2017	13/10/2017	19/10/2017	9,231	19	486
5 Oct 2017	15/11/2017	16/11/2017	3,845	9	427
24 Oct 2017	15/11/2017	16/11/2017	7,523	19	396
7 Nov 2017	13/12/2017	19/12/2017	5,676	14	405
16 Nov 2017	13/12/2017	19/12/2017	4,997	9	555
29 Nov 2017	13/12/2017	19/12/2017	5,977	13	460
14 Dec 2017	12/1/2018	22/1/2018	NR ^A	-- (15)	--
29 Dec 2017	12/1/2018	22/1/2018	13,630	30	454
12 Jan 2018	12/2/2018	22/2/2018	1,196	14	85
31 Jan 2018	12/2/2018	22/2/2018	5,068	19	267
7 Feb 2018	15/3/2018	20/3/2018	1,743	7	249
19 Feb 2018	15/3/2018	20/3/2018	2,887	12	241
7 Mar 2018	13/4/2018	19/4/2018	5,042	16	315
23 Mar 2018	13/4/2018	19/4/2018	7,024	16	439
4 Apr 2018	15/5/2018	18/5/2018	NR ^B	-- (12)	--
19 Apr 2018	15/5/2018	18/5/2018	NR ^B	-- (15)	--
30 Apr 2018	15/5/2018	18/5/2018	29,961	38	788
4 May 2018	15/6/2018	22/6/2018	2,409	4	602
18 May 2018	15/6/2018	22/6/2018	7,106	14	508
1 Jun 2018	16/7/2018	23/7/2018	5,847	14	418
18 Jun 2018	16/7/2018	23/7/2018	14,730	17	866
26 Jun 2018	16/7/2018	23/7/2018	20,505	8	2,563
13 Jul 2018	14/8/2018	21/8/2018	28,874	17	1,698
6 Aug 2018	14/9/2018	18/9/2018	25,425	24	1,059
16 Aug 2018	14/9/2018	18/9/2018	7,322	10	732

^A Meter unable to be read on 14 Dec 2017

^B Meter unable to be read on 4 & 19 April 2018

EPL MONITORING DATA: FINES DISPOSAL FACILITY
DISCHARGE TO WATERS – DISCHARGE VOLUME

EPA ID Number			1		
PWCS ID			WW-K4 (Leachate Sump)		
Location			Fines Disposal Facility		
Analyte/Pollutant			Total Volume Discharged	No. of Days	Ave Daily Discharge
Unit of Measure			kL	--	kL/day
EPL Limit			--	--	10,000
Sample Date	Date Data Obtained	Date Data First Published			
29 Aug 2018	14/9/2018	18/9/2018	8,030	13	618
12 Sep 018	12/10/2018	22/10/2018	8,584	14	613
25 Sep 2018	12/10/2018	22/10/2018	7,264	13	559
11 Oct 2018	12/11/2018	26/11/2018	9,797	16	612
24 Oct 2018	12/11/2018	26/11/2018	12,296	13	946
6 Nov 2018	13/12/2018	19/12/2018	9,022	13	694
22 Nov 2018	13/12/2018	19/12/2018	9,001	16	563
3 Dec 2018	31/12/2018	12/02/2019	5,571	11	506
17 Dec 2018	31/12/2018	12/02/2019	6,466	14	462
4 Jan 2019	15/2/2019	20/2/2019	7,153	18	397
18 Jan 2019	15/2/2019	20/2/2019	5,732	14	409
31 Jan 2019	15/2/2019	20/2/2019	3,130	13	241
14 Feb 2019	14/3/2019	26/3/2019	3,888	14	278
28 Feb 2019	14/3/2019	26/3/2019	3,552	14	254
15 Mar 2019	12/4/2019	16/4/2019	3,293	15	220
26 Mar 2019	12/4/2019	16/4/2019	3,434	11	312
10 Apr 2019	13/05/2019	14/05/2019	5,526	15	368
24 Apr 2019	13/05/2019	14/05/2019	4,828	14	345
10 May 2019	13/06/2019	18/06/2019	4,911	16	307
22 May 2019	13/06/2019	18/06/2019	3,354	12	280
4 Jun 2019	12/07/2019	17/07/2019	3,807	13	293
21 Jun 2019	12/07/2019	17/07/2019	7,318	17	430
4 Jul 2019	13/08/2019	15/08/2019	8,295	13	638
19 Jul 2019	13/08/2019	15/08/2019	9,381	15	625
31 Jul 2019	13/08/2019	15/08/2019	6,919	12	577
14 Aug 2019	13/09/2019	19/09/2019	7,244	14	517
27 Aug 2019	13/09/2019	19/09/2019	6,008	13	462
11 Sep 2019	16/10/2019	18/10/2019	11,634	15	776
25 Sep 2019	16/10/2019	18/10/2019	7,990	14	571
30 Oct 2019	26/11/2019	26/11/2019	30,157	36	838
15/11/2019	17/12/2019	20/12/2019	10,433	16	652
28/11/2019	17/12/2019	20/12/2019	8,285	13	637
11/12/2019	17/12/2019	20/12/2019	7,941	13	611
17/12/2019	17/01/2020	30/01/2020	3,384	6	564
13/01/2020	19/02/2020	27/02/2020	New Meter	27	New Meter
21/01/2020	19/02/2020	27/02/2020	2,891	8	361
30/01/2020	19/02/2020	27/02/2020	2,970	9	330
12/02/2020	26/03/2020	26/03/2020	5,802	13	446
27/02/2020	26/03/2020	26/03/2020	10,794	15	720
12/03/2020	20/04/2020	29/04/2020	8,336	14	595
31/03/2020	20/04/2020	29/04/2020	12,037	19	634
22/04/2020	19/05/2020	20/05/2020	15,502	22	705
30/04/2020	19/05/2020	20/05/2020	4,429	8	554
12/05/2020	19/06/2020	24/06/2020	6,043	12	504
28/05/2020	19/06/2020	24/06/2020	7,876	16	492
10/06/2020	14/07/2020	23/07/2020	7,538	13	580
29/06/2020	14/07/2020	23/07/2020	15,204	19	800
17/07/2020	17/08/2020	27/08/2020	13,099	18	728
30/07/2020	17/08/2020	27/08/2020	14,769	13	1,136
18/08/2020	14/09/2020	17/09/2020	35,889	19	1,889
31/08/2020	14/09/2020	17/09/2020	22,023	13	1,694
15/09/2020	16/10/2020	23/10/2020	18,658	15	1,244

EPL MONITORING DATA: FINES DISPOSAL FACILITY
DISCHARGE TO WATERS – DISCHARGE VOLUME

EPA ID Number			1		
PWCS ID			WW-K4 (Leachate Sump)		
Location			Fines Disposal Facility		
Analyte/Pollutant			Total Volume Discharged	No. of Days	Ave Daily Discharge
Unit of Measure			kL	--	kL/day
EPL Limit			--	--	10,000
Sample Date	Date Data Obtained	Date Data First Published			
30/09/2020	16/10/2020	23/10/2020	14,872	15	991
13/10/2020	16/11/2020	04/12/2020	9,944	13	765
29/10/2020	16/11/2020	04/12/2020	13,674	16	855
13/11/2020	16/12/2020	17/12/2020	15,337	15	1,022
30/11/2020	16/12/2020	17/12/2020	12,605	17	741
18/12/2020	15/01/2021	21/01/2021	10,405	18	578
30/12/2020	15/01/2021	21/01/2021	8,183	12	682
15/01/2021	11/02/2021	17/02/2021	12,119	16	757
28/01/2021	11/02/2021	17/02/2021	8,526	13	656
22/02/2021	15/03/2021	23/03/2021	18,950	25	758
25/02/2021	15/03/2021	23/03/2021	2,511	3	837
12/03/2021	05/05/2021	13/05/2021	11,710	15	781
6/04/2021	05/05/2021	13/05/2021	11,388	25	456
29/04/2021	17/05/2021	27/05/2021	90,934	23	3,954
20/05/2021	17/06/2021	01/07/2021	84,971	21	4,046
31/05/2021	17/06/2021	01/07/2021	18,965	11	1,724
16/06/2021	14/07/2021	22/07/2021	21,778	16	1,361
30/06/2021	14/07/2021	22/07/2021	16,164	14	1,155
23/07/2021	13/08/2021	26/08/2021	26,258	23	1,142
29/07/2021	13/08/2021	26/08/2021	5,954	6	992
5/08/2021	15/09/2021	23/09/2021	6,775	7	968
31/08/2021	15/09/2021	23/09/2021	21,354	26	821
16/09/2021	14/10/2021	21/10/2021	12,496	16	781
29/09/2021	14/10/2021	21/10/2021	11,600	13	892
18/10/2021	15/11/2021	25/11/2021	15,224	19	801
28/10/2021	15/11/2021	25/11/2021	7,924	10	792
19/11/2021	20/12/2021	30/12/2021	22,276	22	1,013
29/11/2021	20/12/2021	30/12/2021	77,125	10	7,713

GROUNDWATER QUALITY MONITORING

GROUNDWATER QUALITY MONITORING

Monitoring frequency for groundwater monitoring is annually.

Note: mg/L refers to ‘milligrams per litre’, µg/L refers to ‘micrograms per litre’, and µS/cm⁻¹ refers to ‘microsiemens per centimetre’

EPA ID Number		14	18	20	21	22	26	30	31	33	35	37	38	39
PWCS ID		EPIW_U	EP6W_U	ESH1W_U	ESH2W_U	ESH3W_U	ESH8W_U	EH6W_L	EH7W_L	EH11W_L	EH14W_L	ESH5W_U	ESH6W_U	ESH7W_U
Location		Port Waratah Fines Disposal Facility												
Sample Date		17/05/2017	18/05/2017	18/05/2017	18/05/2017	17/05/2017	17/05/2017	18/05/2017	17/05/2017	18/05/2017	17/05/2017	16/05/2017	16/05/2017	16/05/2017
Date Data Obtained		9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017	9/6/2017
Date Data Published		19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017	19/6/2017
Analyte/Pollutant	Unit of Measure													
Aluminium - Al	mg/L	<0.01	<0.01	<0.01	0.10	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Arsenic - As	mg/L	0.001	0.002	<0.001	0.011	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.003	0.003	0.001
Cadmium - Cd	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium - Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Conductivity - EC	µS/cm ⁻¹	3,400	2,100	3,800	2,300	6,300	4,000	27,000	5,200	9,300	29,000	1,900	4,400	2,200
Copper - Cu	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	0.001
Cyanide - CN	mg/L	0.007	<0.004	0.008	<0.004	0.087	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Lead - Pb	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese - Mn	mg/L	0.16	2.00	0.56	0.11	1.10	3.50	0.59	0.12	0.41	0.56	0.37	1.70	0.60
Mercury - Hg	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel - Ni	mg/L	0.004	0.001	0.002	0.032	0.016	0.015	0.032	0.015	0.037	0.020	0.001	0.016	0.018
pH	pH	7.8	7.0	7.9	5.8	7.7	7.4	6.8	7.0	6.4	6.7	7.6	7.6	7.4
Phenol	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium - Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total PAH's	µg/L	<1.7	<1.7	<1.7	1.1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Total Petroleum Hydrocarbons - TPH	µg/L	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260
Zinc - Zn	mg/L	0.001	0.006	<0.001	0.009	<0.001	0.007	0.013	0.009	0.005	0.007	0.006	<0.001	0.003

EPL MONITORING DATA: FINES DISPOSAL FACILITY

GROUNDWATER QUALITY MONITORING

EPA ID Number		14	18	20	21	22	26	30	31	33	35	37	38	39
PWCS ID		EPIW_U	EP6W_U	ESH1W_U	ESH2W_U	ESH3W_U	ESH8W_U	EH6W_L	EH7W_L	EH11W_L	EH14W_L	ESH5W_U	ESH6W_U	ESH7W_U
Location		Port Waratah Fines Disposal Facility												
Sample Date		28/5/2018	30/5/2018	29/5/2018	29/5/2018	30/5/2018	29/5/2018	29/5/2018	29/5/2018	29/5/2018	30/5/2018	28/5/2018	28/5/2018	28/5/2018
Date Data Obtained		15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018	15/6/2018
Date Data Published		22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018	22/6/2018
Analyte/Pollutant	Unit of Measure													
Aluminium - Al	mg/L	<0.01	0.02	<0.01	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic - As	mg/L	<0.001	0.001	<0.001	0.003	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.003	0.001	0.001
Cadmium - Cd	mg/L	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0001
Chromium - Cr	mg/L	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Conductivity - EC	µS/cm ⁻¹	3,300	1,400	5,500	2,800	7,400	4,600	32,000	5,900	12,000	34,000	2,000	6,400	2,000
Copper - Cu	mg/L	0.010	0.032	0.001	<0.001	0.007	0.003	0.026	0.032	0.006	0.019	0.005	<0.001	0.042
Cyanide - CN	mg/L	0.006	<0.004	0.009	<0.004	0.110	<0.004	<0.004	<0.004	<0.004	<0.004	0.006	<0.004	<0.004
Lead - Pb	mg/L	0.002	0.003	<0.001	<0.001	0.001	<0.001	0.030	0.003	<0.001	0.002	<0.001	<0.001	0.003
Manganese - Mn	mg/L	0.058	0.640	0.110	0.007	1.100	6.400	0.770	0.097	0.340	0.630	0.300	2.000	0.500
Mercury - Hg	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel - Ni	mg/L	0.033	0.007	0.011	0.030	0.014	<0.001	0.036	0.012	0.001	0.038	0.037	0.018	0.020
pH	pH	6.3	7.1	7.4	5.7	7.7	7.5	7.1	7.6	7.8	7.0	6.0	7.5	7.5
Phenol	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium - Se	mg/L	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Total PAH's	µg/L	0.61	0.24	<1.7	0.42	<1.7	<1.7	<1.7	<1.7	<1.7	0.20	<1.7	<1.7	<1.7
Total Petroleum Hydrocarbons - TPH	µg/L	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260
Zinc - Zn	mg/L	0.060	0.069	0.006	0.022	0.037	0.017	0.069	0.055	0.036	0.077	0.080	0.001	0.063

EPL MONITORING DATA: FINES DISPOSAL FACILITY

GROUNDWATER QUALITY MONITORING

EPA ID Number		14	18	20	21	22	26	30	31	33	35	37	38	39
PWCS ID		EPIW_U	EP6W_U	ESH1W_U	ESH2W_U	ESH3W_U	ESH8W_U	EH6W_L	EH7W_L	EH11W_L	EH14W_L	ESH5WA_U	ESH6W_U	ESH7W_U
Location		Port Waratah Fines Disposal Facility												
Sample Date		08/05/2019	09/05/2019	08/05/2019	09/05/2019	09/05/2019	07/05/2019	08/05/2019	08/05/2019	08/05/2019	08/05/2019	07/05/2019	07/05/2019	07/05/2019
Date Data Obtained		21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019	21/06/2019
Date Data Published		27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019	27/06/2019
Analyte/Pollutant	Unit of Measure													
Aluminium - Al	mg/L	0.01	0.02	<0.01	0.19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic - As	mg/L	<0.001	0.002	<0.001	0.011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.001	<0.001
Cadmium - Cd	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium - Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Conductivity - EC	µS/cm ⁻¹	4,300	1,400	4,300	2,600	7,100	5,400	27,000	5,200	11,000	32,000	3,100	5,000	28,000
Copper - Cu	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	0.001	<0.001
Cyanide - CN	mg/L	0.006	<0.004	0.007	<0.004	0.140	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Lead - Pb	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese - Mn	mg/L	0.10	0.35	0.06	<0.005	1.10	0.03	0.72	0.11	0.28	0.59	0.29	2.00	0.76
Mercury - Hg	µg/L	<0.05	<0.05	<0.05	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel - Ni	mg/L	<0.001	0.002	<0.001	0.001	0.007	0.012	0.020	0.013	0.006	0.062	<0.001	0.014	0.015
pH	pH	8.3	7.7	8.5	10.6	7.7	8.3	7.2	7.6	7.9	7.1	8.0	8.1	7.7
Phenol	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium - Se	mg/L	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total PAH's	µg/L	1.0	<1.7	<1.7	2.0	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Total Petroleum Hydrocarbons - TPH	µg/L	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260
Zinc - Zn	mg/L	<0.001	0.003	<0.001	0.001	<0.001	0.010	0.002	0.003	0.008	0.005	0.003	0.007	0.004

EPL MONITORING DATA: FINES DISPOSAL FACILITY

GROUNDWATER QUALITY MONITORING

EPA ID Number		14	18	20	21	22	26	30	31	33	35	37	38	39
PWCS ID		EPIW_U	EP6W_U	ESH1W_U	ESH2W_U	ESH3W_U	ESH8W_U	EH6W_L	EH7W_L	EHI1W_L	EHI4W_L	ESH5WA_U	ESH6WA_U	ESH7W_U
Location		Port Waratah Fines Disposal Facility												
Sample Date		11/05/2020	14/05/2020	15/05/2020	14/05/2020	14/05/2020	12/05/2020	12/05/2020	13/05/2020	14/05/2020	15/05/2020	15/05/2020	12/05/2020	15/05/2020
Date Data Obtained		16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020
Date Data Published		24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020	24/06/2020
Analyte/Pollutant	Unit of Measure													
Aluminium - Al	mg/L	<0.01	0.03	<0.01	0.27	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02
Arsenic - As	mg/L	<0.001	0.001	<0.001	0.010	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	0.004	0.001	0.001
Cadmium - Cd	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium - Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Conductivity - EC	µS/cm ⁻¹	5,300	1,100	3,400	2,400	9,000	5,300	30,000	5,700	13,000	33,000	1,800	8,700	2,500
Copper - Cu	mg/L	<0.001	0.016	0.001	<0.001	0.003	0.004	<0.001	0.006	0.005	<0.001	<0.001	0.006	0.002
Cyanide - CN	mg/L	0.008	<0.004	<0.004	<0.004	0.100	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Lead - Pb	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese - Mn	mg/L	0.04	0.37	0.11	0.01	1.30	4.20	0.68	0.11	0.21	0.59	0.16	4.20	0.63
Mercury - Hg	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel - Ni	mg/L	0.003	0.004	0.001	0.002	0.011	<0.001	0.026	0.018	0.027	0.063	0.016	0.010	0.031
pH	pH	7.9	7.8	8.4	10.4	7.9	7.7	7.0	7.7	6.6	6.2	7.5	7.7	5.9
Phenol	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium - Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total PAH's	µg/L	0.1	0.3	1.3	1.5	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Total Petroleum Hydrocarbons - TPH	µg/L	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260
Zinc - Zn	mg/L	0.002	0.009	0.003	0.005	0.003	0.004	0.004	0.004	0.009	0.083	0.008	0.004	0.033

EPL MONITORING DATA: FINES DISPOSAL FACILITY

GROUNDWATER QUALITY MONITORING

EPA ID Number	14	18	20	21	22	26	30	31	33	35	37	38	39	40	41	42	43
PWCS ID	EPIW_U	EP6W_U	ESH1W_U	ESH2W_U	ESH3W_U	ESH8W_U	EH6W_L	EH7W_L	EHI1W_L	EHI4W_L	ESH5WA_U	ESH6WA_U	ESH7WA_U	ESH5W_L	ESH6W_L	ESH7W_L	ESH8W_L
Location	Port Waratah Fines Disposal Facility																
Sample Date	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	17/05/2021	20/5/2021	18/5/2021	18/5/2021	18/5/2021
Date Data Obtained	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021	17/06/2021
Date Data Published	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021	01/07/2021
Analyte/Pollutant	Unit of Measure																
Aluminium - Al	mg/L	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic - As	mg/L	0.002	0.004	0.002	0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.003	0.002	0.002	<0.001	<0.001	<0.001
Cadmium - Cd	mg/L	<0.0001	<0.0001	<0.0001	0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium - Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.001	0.001	<0.001
Conductivity - EC	µS/cm ¹	3,400	3,600	5,200	6,800	7,700	2,600	29,000	6,000	12,000	37,000	4,200	5,200	3,300	11,000	39,000	32,000
Copper - Cu	mg/L	<0.001	0.003	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide - CN	mg/L	<0.004	<0.004	<0.004	<0.004	0.081	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Lead - Pb	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese - Mn	mg/L	0.64	0.28	0.34	0.07	1.60	2.70	0.88	0.13	1.90	0.84	0.22	2.60	0.86	0.08	0.95	0.86
Mercury - Hg	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel - Ni	mg/L	0.012	0.010	0.010	0.004	0.009	0.007	0.034	0.017	0.012	0.075	0.036	0.013	0.006	0.005	0.009	0.023
pH	pH	7.1	7.4	7.7	7.4	7.8	7.5	6.8	7.4	7.5	6.8	6.4	7.1	7.5	7.3	6.7	6.8
Phenol	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium - Se	mg/L	<0.001	0.002	0.003	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
Total PAH's	µg/L	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Petroleum Hydrocarbons - TPH	µg/L	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260
Total Recoverable Hydrocarbons - TRH	µg/L	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260	<260
Zinc - Zn	mg/L	0.003	0.004	0.001	0.025	0.001	0.009	0.007	0.002	<0.001	<0.001	0.023	0.012	0.008	0.005	0.006	0.007

SITE MAP AND MONITORING LOCATIONS

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Figure I: Environment Protection Licence 5022 Monitoring Locations