



# Eraring Power Station - EPA Licence 1429

Rocky Point Rd, Dora Creek NSW 2264

## Environmental Monitoring Data

July 2020



## Unit 1 Boiler Continuous Emission Monitoring Summary

EPA Identification no.3 - Air emissions monitoring, Boiler 1 stack discharge to air

	NOX			Particulates			SOX		
	ppm (7% O <sub>2</sub> )			mg/m <sup>3</sup>			ppm (7% O <sub>2</sub> )		
	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly
1 July	142	191	112	20.3	31.3	13.2	234	260	212
2 July	145	170	110	16.9	22.9	12.3	246	273	218
3 July	143	174	124	19.2	26.1	14.3	246	260	217
4 July	139	157	111	20.4	26.9	16.1	230	246	207
5 July	137	197	114	19.4	25.1	14.6	208	240	182
6 July	144	168	122	18.7	24.8	14.3	222	256	199
7 July	131	160	111	18.3	23.2	13.9	243	279	215
8 July	138	161	111	18.8	24.6	14.9	237	258	213
9 July	145	157	122	18.7	26.4	14.1	202	235	178
10 July	146	166	123	19.6	26.8	12.6	184	219	169
11 July	137	172	117	21.3	28.6	15.6	181	189	155
12 July	136	172	115	20.4	30.4	15.6	192	203	182
13 July	148	182	115	23.3	39.6	15.3	174	188	164
14 July	168	200	134	21.7	37.4	16.4	178	189	169
15 July	160	200	131	18.5	22.0	16.2	182	206	168
16 July	156	178	129	17.9	21.1	7.1	202	223	188
17 July	163	186	135	9.7	14.6	6.5	191	226	176
18 July	133	177	112	10.1	16.6	5.6	194	232	178
19 July	131	155	100	13.4	36.5	4.7	200	243	181
20 July	129	147	104	9.6	14.6	5.5	208	239	198
21 July	132	156	106	8.4	13.3	5.3	207	235	184
22 July	133	147	108	7.8	11.2	4.8	200	229	179
23 July	137	156	117	8.8	13.3	5.3	201	245	159
24 July	133	163	110	11.9	16.4	7.6	223	265	202
25 July	129	140	112	11.8	25.7	5.8	204	225	180
26 July	139	162	102	23.8	36.7	10.4	177	187	166
27 July	157	182	124	16.5	37.8	5.9	180	195	169
28 July	144	178	110	17.4	45.4	7.1	183	199	174
29 July	143	171	107	11.7	19.1	6.1	202	240	180
30 July	149	183	124	9.2	16.2	5.3	221	248	193
31 July	146	169	121	6.7	9.9	4.7	238	252	213

## Unit 2 Boiler Continuous Emission Monitoring Summary

EPA Identification no. 4 - Air emissions monitoring, Boiler 2 stack discharge to air

	NOX			Particulates			SOX		
	ppm (7% O <sub>2</sub> )			mg/m <sup>3</sup>			ppm (7% O <sub>2</sub> )		
	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly
1 July	156	193	135	19.6	24.1	15.8	241	274	205
2 July	136	159	116	18.7	23.8	15.5	246	278	134
3 July	150	177	119	18.5	22.4	15.6	246	274	196
4 July	146	173	116	19.7	23.4	17.5	245	276	190
5 July	154	174	136	20.1	26.8	16.9	239	263	196
6 July	146	162	127	19.2	25.2	15.8	244	274	195
7 July	138	155	125	19.0	23.3	16.3	242	273	192
8 July	143	163	123	18.5	24.1	15.9	231	298	165
9 July	160	192	137	19.9	25.4	16.5	194	224	172
10 July	156	203	138	19.5	25.4	15.5	175	216	158
11 July	149	170	133	18.9	22.9	15.6	170	181	161
12 July	154	176	134	19.7	26.1	16.4	176	186	164
13 July	159	177	143	21.6	30.3	15.8	164	174	155
14 July	148	173	131	17.9	22.3	15.3	162	189	147
15 July	139	161	124	18.3	23.0	15.5	183	208	158
16 July	146	170	132	18.7	21.7	16.5	188	212	160
17 July	153	178	132	19.2	22.9	16.6	187	217	163
18 July	148	188	125	17.9	22.0	15.8	189	208	177
19 July	148	171	129	19.7	23.6	15.7	204	246	173
20 July	158	184	127	20.0	24.3	16.9	189	212	178
21 July	147	169	132	24.4	30.8	19.0	186	217	149
22 July	155	173	134	20.1	28.4	15.7	186	244	161
23 July	138	177	118	22.0	28.8	16.1	192	227	143
24 July	158	173	133	20.0	25.6	15.5	221	256	178
25 July	154	173	134	19.6	23.9	15.7	188	217	168
26 July	153	174	133	18.8	24.7	16.3	172	179	164
27 July	154	192	129	17.4	21.2	14.0	163	172	134
28 July	163	185	135	18.6	23.6	16.0	184	201	163
29 July	162	182	143	19.6	24.9	15.6	197	221	167
30 July	174	195	157	18.8	22.9	14.9	223	245	186
31 July	170	185	150	18.2	23.3	16.1	234	246	213

## Unit 3 Boiler Continuous Emission Monitoring Summary

EPA Identification no. 5 - Air emissions monitoring, Boiler 3 stack discharge to air

	NOX			Particulates			SOX		
	ppm (7% O <sub>2</sub> )			mg/m <sup>3</sup>			ppm (7% O <sub>2</sub> )		
	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly
1 July	167	239	118	16.6	22.1	11.2	244	259	191
2 July	183	214	129	19.3	23.7	14.2	258	293	226
3 July	189	250	148	14.4	20.9	9.8	252	275	199
4 July	172	226	129	15.7	23.8	8.6	246	286	203
5 July	172	235	138	14.4	18.4	7.7	234	266	217
6 July	174	212	141	13.4	17.1	9.3	240	265	215
7 July	163	196	136	13.1	16.6	9.6	262	279	244
8 July	165	199	135	12.9	17.7	9.3	247	260	214
9 July	169	202	137	14.6	21.7	11.0	222	255	202
10 July	173	222	135	14.9	21.2	10.8	202	240	180
11 July	151	196	126	15.7	19.6	11.4	191	197	182
12 July	163	241	116	15.1	22.9	9.4	212	225	199
13 July	215	292	149	15.6	32.0	9.3	186	205	178
14 July	201	281	140	16.4	20.9	10.7	188	203	180
15 July	190	260	144	15.2	18.5	11.5	205	224	190
16 July	185	241	149	15.5	19.7	12.1	216	244	148
17 July	200	283	155	16.0	22.5	11.3	211	236	159
18 July	166	207	135	16.1	22.5	9.7	210	234	153
19 July	161	240	135	23.4	60.2	12.6	220	250	183
20 July	183	254	138	19.6	27.3	12.6	225	238	217
21 July	158	181	130	20.0	25.6	14.5	231	257	208
22 July	159	186	118	13.2	21.6	9.9	215	259	170
23 July	209	265	119	11.7	18.1	8.6	221	264	182
24 July	183	235	130	14.6	54.8	8.6	255	299	210
25 July	194	257	118	14.4	27.1	8.2	218	250	166
26 July	176	205	130	22.3	39.2	15.0	200	227	184
27 July	162	198	120	15.9	25.4	9.8	193	209	186
28 July	189	253	132	15.9	25.5	7.6	200	208	187
29 July	181	243	133	13.6	18.8	7.7	221	253	189
30 July	184	255	146	13.7	17.8	8.5	234	266	190
31 July	175	234	142	13.4	16.8	7.8	259	294	245

## Unit 4 Boiler Continuous Emission Monitoring Summary

*EPA Identification no. 6 - Air emissions monitoring, Boiler 4 stack discharge to air  
Unit 4 out of service 28 to 31 July 2020*

	NOX			Particulates			SOX		
	ppm (7% O <sub>2</sub> )			mg/m <sup>3</sup>			ppm (7% O <sub>2</sub> )		
	Daily	Max	Min	Daily	Max	Min	Daily	Max	Min
1 July	204	219	178	23.6	30.7	13.7	258	287	234
2 July	210	234	184	12.6	20.3	7.6	262	284	240
3 July	220	239	204	8.9	13.7	5.3	261	283	237
4 July	210	253	165	10.4	18.4	6.0	251	283	221
5 July	217	259	183	11.8	22.2	6.7	253	279	232
6 July	202	222	187	11.9	16.2	8.5	252	304	223
7 July	194	217	170	6.9	8.6	5.4	256	292	218
8 July	189	213	166	8.4	10.7	5.4	258	288	230
9 July	199	215	172	13.9	21.1	6.9	221	256	200
10 July	201	213	192	19.2	27.0	12.9	195	229	177
11 July	185	200	167	18.7	23.7	14.4	191	206	181
12 July	203	226	173	13.0	22.3	9.0	203	212	195
13 July	218	253	194	10.8	15.9	8.7	186	205	175
14 July	214	241	193	10.0	13.6	8.3	186	213	172
15 July	207	236	174	9.9	12.0	8.9	206	233	177
16 July	199	210	187	9.9	11.9	8.9	207	232	181
17 July	210	233	186	10.4	12.0	9.4	208	241	176
18 July	200	228	171	10.2	14.1	7.2	207	232	192
19 July	214	255	182	12.1	21.8	7.6	228	271	207
20 July	218	278	197	10.9	21.9	7.1	221	238	206
21 July	213	232	193	9.3	12.2	7.6	224	243	202
22 July	214	238	195	8.6	11.7	7.6	212	260	184
23 July	213	233	185	10.5	14.2	9.0	217	276	190
24 July	213	228	198	12.3	16.3	10.0	257	299	204
25 July	188	221	159	11.3	15.1	8.9	228	262	198
26 July	179	195	165	12.1	15.2	8.4	192	199	181
27 July	192	221	171	9.3	14.0	6.7	180	189	173
28 July	-	-	-	-	-	-	-	-	-
29 July	-								
30 July	-	-	-	-	-	-	-	-	-
31 July	-	-	-	-	-	-	-	-	-



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## Unit 1 Boiler Emission Test Results

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*EPA Identification no. 11 - Air emissions monitoring, Boiler 1 stack discharge to air*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Cadmium	<0.0002	mg/m <sup>3</sup>	0.2	
Carbon Dioxide (Wet)	12.3	%	-	25-26/02/2020
Carbon Monoxide	<2	ppm	-	25-26/02/2020
Chlorine	0.015	mg/m <sup>3</sup>	200	25-26/02/2020
Copper	0.00062	mg/m <sup>3</sup>	-	25-26/02/2020
Dry Gas Density	1.33	kg/m <sup>3</sup>	-	25-26/02/2020
Fluoride As HF - Total	9.2	mg/m <sup>3</sup>	50	25-26/02/2020
Hazardous Substances (Metals) - Total	<0.011	mg/m <sup>3</sup>	1	25-26/02/2020
Hydrogen Chloride	7.2	mg/m <sup>3</sup>	100	25-26/02/2020
Mercury	0.00019	mg/m <sup>3</sup>	0.2	25-26/02/2020
Moisture	6.3	%	-	25-26/02/2020
Particulates - Total	3.0	mg/m <sup>3</sup>	50	25-26/02/2020
Stack Gas Molecular Weight	29.6	kg/k-mole	-	25-26/02/2020
Temperature	120	degC	-	25-26/02/2020
Velocity	15.5	m/sec	-	25-26/02/2020
Volatile Organic Compounds (VOC) - Total	0.01	ppm	-	25-26/02/2020
Volumetric Flow Rate (Dry At STP)	375	m <sup>3</sup> /sec	-	25-26/02/2020

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## Unit 2 Boiler Emission Test Results

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*EPA Identification no. 12 - Air emissions monitoring, Boiler 2 stack discharge to air*

<u>Name</u>		<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Cadmium	<0.0005	mg/m <sup>3</sup>	0.2	19/02/2019
Carbon Dioxide (Wet)	11.9	%	-	19/02/2019
Carbon Monoxide	<40	ppm	-	19/02/2019
Chlorine	<0.007	mg/m <sup>3</sup>	200	6/06/2019
Copper	0.0036	mg/m <sup>3</sup>	-	19/02/2019
Dry Gas Density	1.32	kg/m <sup>3</sup>	-	19/02/2019
Fluoride As HF - Total	5.4	mg/m <sup>3</sup>	50	6/06/2019
Hazardous Substances (Metals) - Total	<0.033	mg/m <sup>3</sup>	1	19/02/2019
Hydrogen Chloride	4.6	mg/m <sup>3</sup>	100	6/06/2019
Mercury	0.00057	mg/m <sup>3</sup>	0.2	19/02/2019
Moisture	6.8	%	-	19/02/2019
Particulates - Total	4.2	mg/m <sup>3</sup>	50	19/02/2019
Stack Gas Molecular Weight	29.6	Kg/k-mole	-	19/02/2019
Temperature	124	degC	-	19/02/2019
Velocity	15.5	m/sec	-	19/02/2019
Volatile Organic Compounds (VOC) - Total	0.033	ppm	-	6/06/2019
Volumetric Flow Rate (Dry At STP)	351	m <sup>3</sup> /sec	-	19/02/2019

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### Unit 3 Boiler Emission Test Results

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*EPA Identification no. 13 - Air emissions monitoring, Boiler 3 stack discharge to air*

<u>Name</u>		<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Cadmium	<0.0002	mg/m <sup>3</sup>	0.2	7-8 May 2019
Carbon Dioxide (Wet)	13	%	-	7-8 May 2019
Carbon Monoxide	126	ppm	-	7-8 May 2019
Chlorine	0.007	mg/m <sup>3</sup>	200	7-8 May 2019
Copper	0.00064	mg/m <sup>3</sup>	-	7-8 May 2019
Dry Gas Density	1.32	kg/m <sup>3</sup>	-	7-8 May 2019
Fluoride As HF - Total	10	mg/m <sup>3</sup>	50	7-8 May 2019
Hazardous Substances (Metals) - Total	<0.010	mg/m <sup>3</sup>	1	7-8 May 2019
Hydrogen Chloride	9.5	mg/m <sup>3</sup>	100	7-8 May 2019
Mercury	<0.0002	mg/m <sup>3</sup>	0.2	7-8 May 2019
Moisture	6.7	%	-	7-8 May 2019
Particulates - Total	5.9	mg/m <sup>3</sup>	50	7-8 May 2019
Stack Gas Molecular Weight	29.6	kg/k-mole	-	7-8 May 2019
Temperature	122	degC	-	7-8 May 2019
Velocity	15	m/sec	-	7-8 May 2019
Volatile Organic Compounds (VOC) - Total	<0.008	ppm	-	7-8 May 2019
Volumetric Flow Rate (Dry At STP)	345	m <sup>3</sup> /sec	-	7-8 May 2019



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## Unit 4 Boiler Emission Test Results

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*EPA Identification no. 14 - Air emissions monitoring, Boiler 4 stack discharge to air*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Cadmium	<0.0002	mg/m <sup>3</sup>	0.2	10-11/12/2019
Carbon Dioxide (Wet)	12.1	%	-	10-11/12/2019
Carbon Monoxide	13.8	ppm	-	10-11/12/2019
Chlorine	0.025	mg/m <sup>3</sup>	200	10-11/12/2019
Copper	0.0029	mg/m <sup>3</sup>	-	10-11/12/2019
Dry Gas Density	1.32	kg/m <sup>3</sup>	-	10-11/12/2019
Fluoride As HF - Total	10.5	mg/m <sup>3</sup>	50	10-11/12/2019
Hazardous Substances (Metals) - Total	<0.013	mg/m <sup>3</sup>	1	10-11/12/2019
Hydrogen Chloride	25.5	mg/m <sup>3</sup>	100	10-11/12/2019
Mercury	0.00052	mg/m <sup>3</sup>	0.2	10-11/12/2019
Moisture	6.5	%	-	10-11/12/2019
Particulates - Total	9.7	mg/m <sup>3</sup>	50	10-11/12/2019
Stack Gas Molecular Weight	29.6	kg/k-mole	-	10-11/12/2019
Temperature	127	degC	-	10-11/12/2019
Velocity	16.0	m/sec	-	10-11/12/2019
Volatile Organic Compounds (VOC) - Total	<0.008	ppm	-	10-11/12/2019
Volumetric Flow Rate (Dry At STP)	357	m <sup>3</sup> /sec	-	10-11/12/2019

## Eraring Depositional Dust Gauges

*EPA Identification no. 17, 18, 19 & 20- Depositional dust monitoring within 1km of the coal handling operations*

Eraring Identification	EPA Identification No	Deposited Matter		
		g/m <sup>2</sup> /month		
		Ash	Combustible	Insoluble
E2	17	0.3	0.5	0.8
E4	18	0.4	0.4	0.8
E6	19	0.2	0.1	0.3
U6	20	0.3	0.1	0.4

## Water Quality - Lake Monitoring LM10

*EPA Identification no. 27 - The waters of Lake Macquarie located midway between cooling water inlet and Hungary Point*

	Temp	pH	Salinity	Dissolved Oxygen		Secchi
	degC		ppt	%	mg/L	m
Depth/Air	13.59					
050cm	14.45	8.11	33.8	59.1	4.74	2.65

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Date</u>
Aluminium	0.046	mg/L	21/07/2020
Ammonia	<0.010	mg/L	21/07/2020
Arsenic III	<0.005	mg/L	21/07/2020
Arsenic V	<0.005	mg/L	21/07/2020
Cadmium	<0.0002	mg/L	21/07/2020
Chromium (Trivalent)	<0.001	mg/L	21/07/2020
Chromium (VI) Compounds	<0.01	mg/L	21/07/2020
Copper	0.001	mg/L	21/07/2020
Iron	0.068	mg/L	21/07/2020
Lead	<0.0002	mg/L	21/07/2020
Manganese	0.0033	mg/L	21/07/2020
Nickel	<0.0005	mg/L	21/07/2020
pH	8.12	pH /units	21/07/2020
Selenium	<0.002	mg/L	21/07/2020
Total Suspended Solids	<5	mg/L	21/07/2020
Vanadium	0.002	mg/L	21/07/2020
Zinc	<0.005	mg/L	21/07/2020

## Water Quality - Lake Monitoring LM12

*EPA Identification no. 29 - The waters of Lake Macquarie located at the Eraring/Vales Point mixing zone off Fishery Point*

	Temp	pH	Salinity	Dissolved Oxygen		Secchi
	degC		ppt	%	mg/L	m
Depth/Air	12.55					
050cm	14.82	8.10	34.1	58.7	4.67	2.25

Name	Reading	Units	Date
Aluminium	0.027	mg/L	21/07/2020
Ammonia	<0.010	mg/L	21/07/2020
Arsenic III	<0.005	mg/L	21/07/2020
Arsenic V	<0.005	mg/L	21/07/2020
Cadmium	<0.0002	mg/L	21/07/2020
Chromium (Trivalent)	<0.001	mg/L	21/07/2020
Chromium (VI) Compounds	<0.01	mg/L	21/07/2020
Copper	0.001	mg/L	21/07/2020
Iron	0.030	mg/L	21/07/2020
Lead	<0.0002	mg/L	21/07/2020
Manganese	0.0034	mg/L	21/07/2020
Nickel	<0.0005	mg/L	21/07/2020
pH	8.08	pH /units	21/07/2020
Selenium	<0.002	mg/L	21/07/2020
Total Suspended Solids	<5	mg/L	21/07/2020
Vanadium	0.0018	mg/L	21/07/2020
Zinc	<0.005	mg/L	21/07/2020

## Water Quality - Lake Monitoring LM4

*EPA Identification no. 30 - The northern waters of Lake Macquarie east off Lake Macquarie Yacht Club*

	Temp	pH	Salinity	Dissolved Oxygen		Secchi
	degC		ppt	%	mg/L	m
Depth/Air	7.7					
050cm	14.05	8.03	34.6	68.2	5.48	5.25

Name	Reading	Units	Date
Aluminium	0.017	mg/L	21/07/2020
Ammonia	<0.010	mg/L	21/07/2020
Arsenic III	<0.005	mg/L	21/07/2020
Arsenic V	<0.005	mg/L	21/07/2020
Cadmium	0.0002	mg/L	21/07/2020
Chromium (Trivalent)	<0.001	mg/L	21/07/2020
Chromium (VI) Compounds	<0.01	mg/L	21/07/2020
Copper	<0.001	mg/L	21/07/2020
Iron	0.013	mg/L	21/07/2020
Lead	<0.0002	mg/L	21/07/2020
Manganese	0.0021	mg/L	21/07/2020
Nickel	0.0007	mg/L	21/07/2020
pH	8.13	pH /units	21/07/2020
Selenium	<0.002	mg/L	21/07/2020
Total Suspended Solids	<5	mg/L	21/07/2020
Vanadium	0.002	mg/L	21/07/2020
Zinc	<0.005	mg/L	21/07/2020

## Water Quality - Lake Monitoring LM7

*EPA Identification no. 28 - The waters of Lake Macquarie located off old Wangi power station inlet point in Myuna Bay*

	Temp	pH	Salinity	Dissolved Oxygen		Secchi
	degC		ppt	%	mg/L	m
Depth/Air	11.54					
050cm	16.55	8.04	35.1	69.6	5.28	2.75

Name	Reading	Units	Date
Aluminium	0.040	mg/L	21/07/2020
Ammonia	<0.010	mg/L	21/07/2020
Arsenic III	<0.005	mg/L	21/07/2020
Arsenic V	<0.005	mg/L	21/07/2020
Cadmium	<0.0002	mg/L	21/07/2020
Chromium (Trivalent)	<0.001	mg/L	21/07/2020
Chromium (VI) Compounds	<0.01	mg/L	21/07/2020
Copper	0.001	mg/L	21/07/2020
Iron	0.059	mg/L	21/07/2020
Lead	<0.0002	mg/L	21/07/2020
Manganese	0.0043	mg/L	21/07/2020
Nickel	<0.0005	mg/L	21/07/2020
pH	8.11	pH /units	21/07/2020
Selenium	<0.002	mg/L	21/07/2020
Total Suspended Solids	<5	mg/L	21/07/2020
Vanadium	0.0016	mg/L	21/07/2020
Zinc	<0.005	mg/L	21/07/2020



## Eraring Ash Dam Effluent Quality Monitoring

*EPA Identification no. 22 - Discharge point below siphon pond weir at Ash Dam*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Aluminium	0.117	mg/L		22/07/2020
Ammonia	1.61	mg/L		22/07/2020
Arsenic III	<0.0005	mg/L		22/07/2020
Arsenic V	0.0066	mg/L		22/07/2020
Cadmium	0.0001	mg/L	-	22/07/2020
Chromium (Trivalent)	<0.001	mg/L		22/07/2020
Chromium (VI) Compounds	<0.01	mg/L		22/07/2020
Copper	0.0032	mg/L	-	22/07/2020
Iron	0.033	mg/L	-	22/07/2020
Lead	<0.0001	mg/L	-	22/07/2020
Manganese	0.0461	mg/L	-	22/07/2020
Nickel	0.0021	mg/L		22/07/2020
Nitrite and Nitrate as N	3.12	mg/L		22/07/2020
Nitrogen	5.1	mg/L		22/07/2020
pH	9.29	pH /units		22/07/2020
Phosphorus as P	0.44	mg/L		22/07/2020
Reactive Phosphorus as P	0.37	mg/L	-	22/07/2020
Selenium	0.0424	mg/L	-	22/07/2020
Total Kjeldahl Nitrogen	2.0	mg/L		22/07/2020
Total Suspended Solids	2	mg/L	-	22/07/2020
Vanadium	0.033	mg/L		22/07/2020
Zinc	0.001	mg/L	-	22/07/2020

## Eraring Cooling Water Inlet Canal

*EPA Identification no. 31 - Inlet canal of the cooling water intake from Lake Macquarie*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Aluminium	0.068	mg/L		22/07/2020
Ammonia	<0.005	mg/L		22/07/2020
Arsenic III	<0.005	mg/L		22/07/2020
Arsenic V	<0.005	mg/L		22/07/2020
Cadmium	<0.0002	mg/L		22/07/2020
Chromium (Trivalent)	<0.001	mg/L		22/07/2020
Chromium (VI) Compounds	<0.01	mg/L		22/07/2020
Copper	0.001	mg/L	-	22/07/2020
Iron	0.066	mg/L	-	22/07/2020
Lead	<0.0002	mg/L		22/07/2020
Manganese	0.0037	mg/L		22/07/2020
Nickel	0.0006	mg/L		22/07/2020
pH	8.12	pH units		22/07/2020
Selenium	0.002	mg/L	-	22/07/2020
Total suspended Solids	9	mg/L		22/07/2020
Vanadium	0.0012	mg/L		22/07/2020
Zinc	0.007	mg/L		22/07/2020
Dissolved Oxygen	16.23	mg/L		29/07/2020
Field Temperature	14.3	<b>degC</b>		29/07/2020
Salinity	29.2	ppt		29/07/2020
Secchi Disk	1.25	m		29/07/2020
Temperature – Average	15.7	deg C	-	July 2020
Temperature – Minimum	14.7	deg C	-	July 2020
Temperature - Maximum	17.5	deg C	-	July 2020

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## Eraring Cooling Water Outlet Canal

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*EPA Identification no. 21 - Cooling water outlet canal to Myuna Bay*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Copper	0.001	mg/L	0.005	22/07/2020
Iron	0.029	mg/L	0.3	22/07/2020
Selenium	0.001	mg/L	0.002	22/07/2020
Temperature – Average	23.1	deg C	37.5	July 2020
Temperature – Minimum	18.8	deg C	37.5	July 2020
Temperature - Maximum	27.0	deg C	37.5	July 2020
Maximum Daily Discharge from Ash Dam	55.63	ML	150	July 2020
Monthly Discharge from Ash Dam	401.4	ML	-	July 2020

## Emergency Discharge – Toe Drain Pond

EPA Identification no. 24 - Emergency discharge to toe drain collection pond

Name	Reading	Units	Licence Limit	Date
Aluminium	0.071	mg/L		22/07/2020
Ammonia	2.02	mg/L		22/07/2020
Arsenic III	0.001	mg/L		22/07/2020
Arsenic V	0.0007	mg/L		22/07/2020
Cadmium	<0.00005	mg/L	-	22/07/2020
Chromium (Trivalent)	<0.001	mg/L		22/07/2020
Chromium (VI) Compounds	<0.01	mg/L		22/07/2020
Copper	<0.0005	mg/L	-	22/07/2020
Iron	6.490	mg/L	-	22/07/2020
Lead	<0.0001	mg/L	-	22/07/2020
Manganese	0.931	mg/L	-	22/07/2020
Nickel	0.0017	mg/L		22/07/2020
Nitrite and Nitrate as N	0.060	mg/L		22/07/2020
Nitrogen	3.24	mg/L		22/07/2020
pH	6.82	pH /units	6-9.5	22/07/2020
Phosphorus as P	0.067	mg/L		22/07/2020
Reactive Phosphorus as P	0.018	mg/L	-	22/07/2020
Selenium	0.0006	mg/L	-	22/07/2020
Total Kjeldahl Nitrogen	3.18	mg/L		22/07/2020
Total Suspended Solids	23	mg/L	50	22/07/2020
Vanadium	0.0006	mg/L		22/07/2020
Zinc	0.008	mg/L	-	22/07/2020

## Rain Event Discharge

### Emergency Discharge – Toe Drain Pond

*EPA Identification no. 24 - Emergency discharge to toe drain collection pond*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Aluminium	1.140	mg/L		27/07/2020
Ammonia	0.402	mg/L		27/07/2020
Arsenic III	<0.0005	mg/L		27/07/2020
Arsenic V	<0.0005	mg/L		27/07/2020
Cadmium	<0.00005	mg/L	-	27/07/2020
Chromium (Trivalent)	<0.001	mg/L		27/07/2020
Chromium (VI) Compounds	<0.01	mg/L		27/07/2020
Copper	0.0015	mg/L	-	27/07/2020
Iron	1.870	mg/L	-	27/07/2020
Lead	0.0008	mg/L	-	27/07/2020
Manganese	0.200	mg/L	-	27/07/2020
Nickel	0.0016	mg/L		27/07/2020
Nitrite and Nitrate as N	0.477	mg/L		27/07/2020
Nitrogen	1.29	mg/L		27/07/2020
pH	6.52	pH /units	6-9.5	27/07/2020
Phosphorus as P	0.092	mg/L		27/07/2020
Reactive Phosphorus as P	0.011	mg/L	-	27/07/2020
Selenium	0.0002	mg/L	-	27/07/2020
Total Kjeldahl Nitrogen	0.81	mg/L		27/07/2020
Total Suspended Solids	<b>58</b>	mg/L	50	27/07/2020
Vanadium	0.002	mg/L		27/07/2020
Zinc	0.011	mg/L	-	27/07/2020

**MR217***EPA Identification no. 23 - Emergency discharge from ash dam outlet at culvert*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Aluminium	2.400	mg/L		27/07/2020
Ammonia	0.053	mg/L		27/07/2020
Arsenic III	<0.0005	mg/L		27/07/2020
Arsenic V	<0.0005	mg/L		27/07/2020
Cadmium	0.00007	mg/L	-	27/07/2020
Chromium (Trivalent)	<0.001	mg/L		27/07/2020
Chromium (VI) Compounds	<0.01	mg/L		27/07/2020
Copper	0.0029	mg/L	-	27/07/2020
Iron	1.720	mg/L	-	27/07/2020
Lead	0.0016	mg/L	-	27/07/2020
Manganese	0.197	mg/L	-	27/07/2020
Nickel	0.0024	mg/L		27/07/2020
Nitrite and Nitrate as N	0.188	mg/L		27/07/2020
Nitrogen	1.01	mg/L		27/07/2020
pH	6.03	pH /units	6-9.5	27/07/2020
Phosphorus as P	0.074	mg/L		27/07/2020
Reactive Phosphorus as P	0.005	mg/L	-	27/07/2020
Selenium	0.0011	mg/L	-	27/07/2020
Total Kjeldahl Nitrogen	0.82	mg/L		27/07/2020
Total Suspended Solids	<b>210</b>	mg/L	50	27/07/2020
Vanadium	0.0039	mg/L		27/07/2020
Zinc	0.034	mg/L	-	27/07/2020



## Groundwater Monitoring

### Groundwater Well – MW01

EPA Identification no. 21 – Groundwater Monitoring Well 01

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Name	Reading	Units	Date
Arsenic	0.4	ug/L	22/06/2020
Cadmium	<0.05	ug/L	22/06/2020
Calcium	2000	ug/L	22/06/2020
Chromium	1.0	ug/L	22/06/2020
Copper	1.3	ug/L	22/06/2020
Electrical Conductivity	0.468	mS/cm	22/06/2020
Iron	517	ug/L	22/06/2020
Lead	3.4	ug/L	22/06/2020
Magnesium	5000	ug/L	22/06/2020
Manganese	109	ug/L	22/06/2020
Nickel	4.4	ug/L	22/06/2020
pH	4.83	pH	22/06/2020
Potassium	4000	ug/L	22/06/2020
Selenium	<0.2	ug/L	22/06/2020
Standing Water Level	7.25	metres	22/06/2020
Zinc	33	ug/L	22/06/2020

### Groundwater Well – MW02

EPA Identification no. 22 – Groundwater Monitoring Well 02

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Name	Reading	Units	Date
Arsenic	1.9	ug/L	15/06/2020
Cadmium	<0.05	ug/L	15/06/2020
Calcium	290000	ug/L	15/06/2020
Chromium	1.5	ug/L	15/06/2020
Copper	1.6	ug/L	15/06/2020
Electrical Conductivity	22.4	mS/cm	15/06/2020
Iron	28100	ug/L	15/06/2020
Lead	2.0	ug/L	15/06/2020
Magnesium	361000	ug/L	15/06/2020
Manganese	621	ug/L	15/06/2020
Nickel	3.8	ug/L	15/06/2020
pH	6.24	pH	15/06/2020
Potassium	151000	ug/L	15/06/2020
Selenium	0.7	ug/L	15/06/2020
Standing Water Level	4.17	metres	15/06/2020
Zinc	13	ug/L	15/06/2020

### Groundwater Well – MW06

EPA Identification no. 23 – Groundwater Monitoring Well 06

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Name	Reading	Units	Date
Arsenic	4.8	ug/L	22/06/2020
Cadmium	<0.2	ug/L	22/06/2020
Calcium	483000	ug/L	22/06/2020
Chromium	<0.5	ug/L	22/06/2020
Copper	<1	ug/L	22/06/2020
Electrical Conductivity	19.1	mS/cm	22/06/2020
Iron	14500	ug/L	22/06/2020
Lead	0.2	ug/L	22/06/2020
Magnesium	293000	ug/L	22/06/2020
Manganese	392	ug/L	22/06/2020
Nickel	0.9	ug/L	22/06/2020
pH	6.64	pH	22/06/2020
Potassium	158000	ug/L	22/06/2020
Selenium	<2	ug/L	22/06/2020
Standing Water Level	1.750	metres	22/06/2020
Zinc	14	ug/L	22/06/2020

### Groundwater Well – EGM/D26

EPA Identification no. 24 – Groundwater Monitoring Well D26  
Groundwater well was dry during sampling in December 2019

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Name	Reading	Units	Date
Arsenic		ug/L	
Cadmium		ug/L	
Calcium		ug/L	
Chromium		ug/L	
Copper		ug/L	
Electrical Conductivity		mS/cm	
Iron		ug/L	
Lead		ug/L	
Magnesium		ug/L	
Manganese		ug/L	
Nickel		ug/L	
pH		pH	
Potassium		ug/L	
Selenium		ug/L	
Standing Water Level		metres	
Zinc		ug/L	

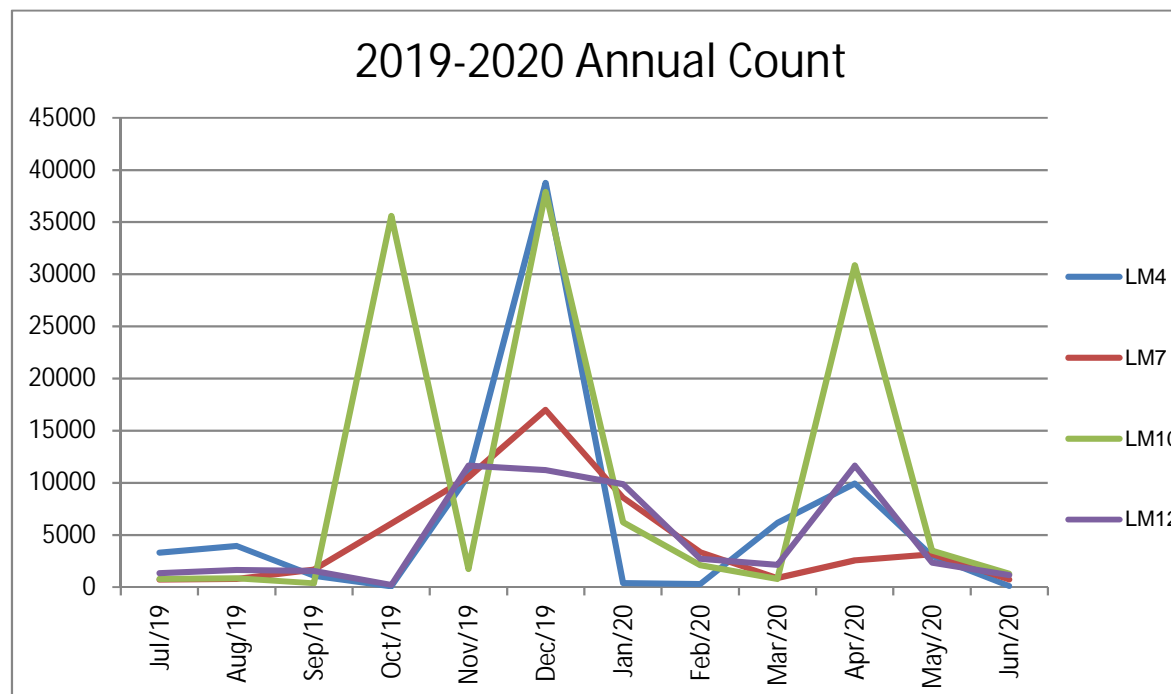
**EPA LICENCE 1429 CLAUSE M2.7**

**2019-2020 ZOOPLANKTON TOTAL COUNTS FOR  
 ERARING POWER STATION  
 EPA LICENCE TEST POINT 27, 28, 29 and 30**

NUMBER PER m<sup>3</sup>

Date	Sampling Site			
	LM4	LM7	LM10	LM12
4-Jul-19	3306	707	770	1346
8-Aug-19	3948	773	832	1647
2-Sep-19	1085	1676	364	1535
1-Oct-19	63	6107	35590	219
4-Nov-19	10710	10532	1730	11642
4-Dec-19	38775	17003	37895	11230
6-Jan-20	396	8594	6225	9882
3-Feb-20	292	3376	2094	2726
2-Mar-20	6149	885	785	2129
6-Apr-20	9933	2568	30873	11652
7-May-20	2989	3132	3476	2355
12-Jun-20	120	715	1272	1146
<b>Annual Total Count</b>	<b>77766</b>	<b>56068</b>	<b>121906</b>	<b>57509</b>

These counts do not include Noctiluca Scintillans



Samples taken by: Peter Waddingham, Emily Whitehead, James Enright, James Hughes, Sidnee Harris

Report Compiled by: Maree Welch  
 Report checked by: Paul Wenta