



## Eraring Power Station - EPA Licence 1429

Rocky Point Rd, Dora Creek NSW 2264

### Environmental Monitoring Data

July 2018



## Unit 1 Boiler Continuous Emission Monitoring Summary

*EPA Identification no. 11 - Air emissions monitoring, Boiler 1 stack discharge to air  
Units out of service 22- 23 July 2018. NOx and SOx units out of service 21 July 2018*

	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	166	188	157	17.3	19.8	16.0	175	177	173
2 July	164	179	125	17.5	23.3	14.3	192	215	171
3 July	154	166	125	17.0	21.9	14.1	202	223	186
4 July	141	152	117	7.0	15.0	2.6	189	219	173
5 July	134	150	118	9.3	32.2	2.6	186	208	163
6 July	122	151	98	5.5	9.4	2.4	182	199	170
7 July	98	102	85	3.6	3.6	3.6	145	164	137
8 July	107	156	96	4.0	10.8	2.5	148	180	138
9 July	135	148	124	6.0	6.5	5.5	182	192	169
10 July	136	149	117	10.2	12.1	6.7	175	184	169
11 July	129	145	112	6.6	11.3	2.9	181	208	165
12 July	137	153	116	7.0	11.6	2.9	180	189	168
13 July	138	149	111	9.8	11.5	8.5	183	189	178
14 July	131	148	115	4.7	7.0	2.3	215	229	182
15 July	116	132	109	3.5	4.3	2.7	163	222	143
16 July	113	122	100	3.6	5.9	2.7	186	214	156
17 July	101	110	92	2.7	3.4	2.4	191	208	168
18 July	101	106	93	2.9	2.9	2.7	200	207	184
19 July	106	109	103	3.0	4.4	2.1	186	197	172
20 July	108	114	101	2.3	2.6	2.1	190	434	155
21 July	-	-	-	2.2	2.2	2.2	-	-	-
22 July	-	-	-	-	-	-	-	-	-
23 July	-	-	-	-	-	-	-	-	-
24 July	136	151	114	10.6	14.0	6.8	183	194	169
25 July	123	145	108	7.8	18.4	2.4	187	198	174
26 July	115	131	94	8.1	10.8	3.5	194	202	187
27 July	121	141	98	14.6	23.9	2.8	173	189	158
28 July	119	147	91	15.8	18.9	15.3	197	215	180
29 July	101	125	85	32.6	38.5	27.0	195	208	181
30 July	121	136	99	30.2	37.5	28.1	203	223	189
31 July	104	127	86	17.5	21.3	15.9	186	213	152

## Unit 2 Boiler Continuous Emission Monitoring Summary

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

*Particulate unit out of service 28, 30 and 31 July 2018*

	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	126	157	104	16.9	19.8	14.7	177	202	160
2 July	159	176	134	18.2	33.8	12.8	202	223	184
3 July	158	185	129	22.3	25.3	21.2	206	221	182
4 July	147	164	129	22.8	27.5	20.3	204	220	182
5 July	144	176	118	12.0	14.2	10.6	184	211	165
6 July	133	157	100	20.4	22.7	18.4	188	206	178
7 July	124	153	96	21.5	24.6	19.4	183	193	178
8 July	144	163	119	22.0	26.6	19.5	172	182	164
9 July	137	168	115	20.8	23.5	18.4	184	206	165
10 July	138	153	107	22.3	29.1	18.8	182	188	172
11 July	137	150	106	22.5	30.3	19.7	183	197	174
12 July	137	159	116	22.4	29.1	18.5	177	187	162
13 July	134	152	116	21.5	26.9	19.8	192	198	185
14 July	132	163	100	22.7	26.1	20.1	224	232	208
15 July	148	170	131	13.0	17.6	11.1	196	228	168
16 July	155	177	127	12.5	16.6	10.8	219	246	187
17 July	141	164	110	12.6	14.7	11.1	210	235	193
18 July	136	163	110	21.8	24.9	18.8	229	243	198
19 July	143	156	129	22.2	30.4	19.6	216	245	193
20 July	134	149	119	20.8	27.2	17.7	226	264	200
21 July	125	145	110	20.9	25.0	18.8	231	249	213
22 July	130	147	113	23.5	31.3	20.0	231	264	205
23 July	144	166	123	22.1	28.4	18.9	218	248	188
24 July	138	153	115	11.9	13.4	10.2	204	230	181
25 July	126	140	105	22.6	29.3	18.9	220	243	200
26 July	132	144	114	23.9	29.3	19.6	222	237	203
27 July	131	140	116	19.0	25.3	7.0	218	231	193
28 July	127	142	111	-	-	-	227	235	217
29 July	119	134	106	2.5	2.5	2.5	235	283	214
30 July	130	144	111	-	-	-	247	272	209
31 July	122	133	103	-	-	-	226	262	194

## Unit 3 Boiler Continuous Emission Monitoring Summary

*EPA Identification no. 13 - 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	169	194	109	9.1	11.7	8.0	200	232	166
2 July	192	211	131	9.1	10.7	8.1	200	234	142
3 July	163	197	119	13.2	16.8	7.0	214	241	174
4 July	173	195	117	9.0	16.1	6.2	203	233	182
5 July	153	206	110	13.8	32.4	9.6	189	214	171
6 July	142	191	101	11.2	13.9	9.7	195	215	160
7 July	158	195	112	7.5	8.6	6.6	186	196	158
8 July	174	223	110	11.7	13.5	10.4	181	195	149
9 July	190	227	114	11.9	14.7	10.4	180	204	148
10 July	177	203	120	12.6	13.6	11.6	190	205	160
11 July	176	198	110	9.7	19.7	7.5	193	207	167
12 July	146	198	95	15.3	20.8	11.7	189	209	171
13 July	168	202	111	11.6	13.6	6.3	193	208	109
14 July	157	159	156	18.7	19.2	18.2	173	184	163
15 July	167	200	137	20.2	24.2	16.0	210	237	126
16 July	201	241	127	26.1	31.3	19.8	233	251	135
17 July	171	226	143	30.1	38.0	22.6	242	283	144
18 July	172	211	121	36.3	39.6	30.1	247	264	135
19 July	184	209	123	11.1	12.5	10.5	240	261	136
20 July	180	208	150	10.3	11.5	9.5	239	264	146
21 July	167	197	109	10.6	11.5	9.4	237	271	139
22 July	153	189	105	11.0	12.5	10.4	202	250	166
23 July	169	189	135	11.2	14.6	10.4	188	223	120
24 July	156	172	120	10.5	11.5	9.4	201	231	132
25 July	156	182	112	10.2	11.5	9.5	216	251	140
26 July	164	190	124	10.2	12.5	9.5	215	238	152
27 July	156	178	111	10.0	11.5	9.5	206	230	161
28 July	159	190	113	10.4	10.5	9.5	222	251	152
29 July	127	180	99	10.3	10.5	9.4	223	244	147
30 July	151	196	113	9.7	10.6	8.6	224	258	157
31 July	147	175	118	10.1	10.6	9.6	229	260	157

## Unit 4 Boiler Continuous Emission Monitoring Summary

*EPA Identification no. 14 - Air emissions monitoring, Boiler 4 stack discharge to air.*  
SOx and NOx units out of service 15-19 July 2018 and 27-30 July 2018

	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	193	228	164	16.0	19.4	13.7	223	237	213
2 July	200	319	169	14.7	19.4	4.4	232	268	208
3 July	181	190	154	14.3	14.8	13.3	237	260	218
4 July	156	182	119	14.9	19.6	12.8	228	260	190
5 July	169	186	150	14.5	20.6	12.4	217	251	195
6 July	142	155	115	13.6	14.9	12.4	213	231	173
7 July	158	177	140	13.1	14.4	12.4	212	233	199
8 July	171	204	134	13.4	14.4	12.4	202	215	193
9 July	177	215	145	12.9	13.4	11.9	204	231	185
10 July	169	193	141	12.8	14.4	11.8	211	216	205
11 July	155	168	142	13.9	23.0	12.1	224	246	201
12 July	160	179	134	13.2	16.8	11.5	214	226	198
13 July	165	189	140	12.3	13.6	11.5	220	239	122
14 July	177	192	161	13.1	14.1	11.6	221	238	210
15 July	-	-	-	12.6	14.1	11.0	-	-	-
16 July	-	-	-	13.2	14.6	12.0	-	-	-
17 July	-	-	-	14.5	16.8	13.3	-	-	-
18 July	-	-	-	16.4	18.2	14.4	-	-	-
19 July	-	-	-	17.6	22.3	14.8	-	-	-
20 July	177	189	111	12.1	13.8	11.1	258	288	147
21 July	179	199	163	12.5	13.4	11.3	279	307	241
22 July	188	208	155	13.4	14.9	11.8	269	326	229
23 July	181	192	169	13.1	14.9	12.0	254	303	217
24 July	170	184	155	13.0	14.6	11.7	256	276	233
25 July	167	178	147	13.6	16.9	12.2	271	294	250
26 July	163	180	139	13.8	17.7	10.9	263	285	239
27 July	-	-	-	17.5	28.3	11.6	-	-	-
28 July	-	-	-	15.2	16.6	13.6	-	-	-
29 July	-	-	-	14.7	15.9	13.9	-	-	-
30 July	-	-	-	14.6	15.4	14.4	-	-	-
31 July	170	188	146	14.6	22.4	10.6	255	262	225

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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	0.019	mg/m <sup>3</sup>	0.2	15/08/2017
Carbon Dioxide (Wet)	12.6	%	-	15/08/2017
Carbon Monoxide	14	ppm	-	15/08/2017
Chlorine	0.083	mg/m3	200	15/08/2017
Copper	0.0014	mg/m3	-	15/08/2017
Dry Gas Density	1.35	kg/m3	-	15/08/2017
Fluoride As HF - Total	8.7	mg/m3	50	15/08/2017
Hazardous Substances (Metals) - Total	0.030	mg/m3	1	15/08/2017
Hydrogen Chloride	2.6	mg/m3	100	15/08/2017
Mercury	<0.000096	mg/m3	0.2	15/08/2017
Moisture	5.3	%	-	15/08/2017
Particulates - Total	1.9	mg/m3	50	15/08/2017
Stack Gas Molecular Weight	30.3	kg/k-mole	-	15/08/2017
Temperature	107	degC	-	15/08/2017
Velocity	15	m/sec	-	15/08/2017
Volatile Organic Compounds (VOC) - Total	<0.08	ppm	-	15/08/2017
Volumetric Flow Rate (Dry At STP)	343	m3/sec	-	15/08/2017

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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>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Cadmium	<0.0002	mg/m <sup>3</sup>	0.2	27-28/02/2018
Carbon Dioxide (Wet)	12.9	%	-	27-28/02/2018
Carbon Monoxide	14	ppm	-	27-28/02/2018
Chlorine	0.033	mg/m <sup>3</sup>	200	27-28/02/2018
Copper	0.0009	mg/m <sup>3</sup>	-	27-28/02/2018
Dry Gas Density	1.4	kg/m <sup>3</sup>	-	27-28/02/2018
Fluoride As HF - Total	10.4	mg/m <sup>3</sup>	50	27-28/02/2018
Hazardous Substances (Metals) - Total	≤0.0097	mg/m <sup>3</sup>	1	27-28/02/2018
Hydrogen Chloride	9.6	mg/m <sup>3</sup>	100	27-28/02/2018
Mercury	0.00051	mg/m <sup>3</sup>	0.2	27-28/02/2018
Moisture	7.2	%	-	27-28/02/2018
Particulates - Total	3.4	mg/m <sup>3</sup>	50	27-28/02/2018
Stack Gas Molecular Weight	30.5	Kg/k-mole	-	27-28/02/2018
Temperature	122	degC	-	27-28/02/2018
Velocity	14	m/sec	-	27-28/02/2018
Volatile Organic Compounds (VOC) - Total	<0.06	ppm	-	27-28/02/2018
Volumetric Flow Rate (Dry At STP)	336	m <sup>3</sup> /sec	-	27-28/02/2018

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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>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Cadmium	<0.0002	mg/m <sup>3</sup>	0.2	29-30/05/2018
Carbon Dioxide (Wet)	13.2	%	-	29-30/05/2018
Carbon Monoxide	5.4	ppm	-	29-30/05/2018
Chlorine	<0.014	mg/m <sup>3</sup>	200	29-30/05/2018
Copper	<0.00046	mg/m <sup>3</sup>	-	29-30/05/2018
Dry Gas Density	1.36	kg/m <sup>3</sup>	-	29-30/05/2018
Fluoride As HF - Total	9.5	mg/m <sup>3</sup>	50	29-30/05/2018
Hazardous Substances (Metals) - Total	<0.011	mg/m <sup>3</sup>	1	29-30/05/2018
Hydrogen Chloride	11.5	mg/m <sup>3</sup>	100	29-30/05/2018
Mercury	<0.00033	mg/m <sup>3</sup>	0.2	29-30/05/2018
Moisture	7.2	%	-	29-30/05/2018
Particulates - Total	5.3	mg/m <sup>3</sup>	50	29-30/05/2018
Stack Gas Molecular Weight	30.5	kg/k-mole	-	29-30/05/2018
Temperature	117	degC	-	29-30/05/2018
Velocity	15.0	m/sec	-	29-30/05/2018
Volatile Organic Compounds (VOC) - Total	<0.006	ppm	-	29-30/05/2018
Volumetric Flow Rate (Dry At STP)	361	m <sup>3</sup> /sec	-	29-30/05/2018



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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	0.0028	mg/m <sup>3</sup>	0.2	24-25/10/2017
Carbon Dioxide (Wet)	12.3	%	-	24-25/10/2017
Carbon Monoxide	10	ppm	-	24-25/10/2017
Chlorine	0.051	mg/m <sup>3</sup>	200	24-25/10/2017
Copper	0.00055	mg/m <sup>3</sup>	-	24-25/10/2017
Dry Gas Density	1.36	kg/m <sup>3</sup>	-	24-25/10/2017
Fluoride As HF - Total	5.8	mg/m <sup>3</sup>	50	24-25/10/2017
Hazardous Substances (Metals) - Total	0.0075	mg/m <sup>3</sup>	1	24-25/10/2017
Hydrogen Chloride	1.8	mg/m <sup>3</sup>	100	24-25/10/2017
Mercury	0.000091	mg/m <sup>3</sup>	0.2	24-25/10/2017
Moisture	5.1	%	-	24-25/10/2017
Particulates - Total	1.2	mg/m <sup>3</sup>	50	24-25/10/2017
Stack Gas Molecular Weight	30.4	kg/k-mole	-	24-25/10/2017
Temperature	121	degC	-	24-25/10/2017
Velocity	15.5	m/sec	-	24-25/10/2017
Volatile Organic Compounds (VOC) - Total	<0.07	ppm	-	24-25/10/2017
Volumetric Flow Rate (Dry At STP)	376	m <sup>3</sup> /sec	-	25-25/10/2017

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## Eraring Depositional Dust Gauges

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*EPA Identification no. 18, 25, 26 & 27 - Depositional dust monitoring within 1km  
of the coal handling operations*

	Deposited Matter		
	g/m <sup>2</sup> /month		
	Ash	Combustible	Insolubles
<b>E2</b>	0.2	0.4	0.6
<b>E4</b>	0.1	0.3	0.4
<b>E6</b>	0.1	0.1	0.2
<b>U6</b>	0.1	0.2	0.3

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## Water Quality - Lake Monitoring LM10

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*EPA Identification no. 4 - 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	12.50					
010cm	15.13	8.44	35.9	96.0	7.15	2.35
050cm	15.03	8.41	35.9	89.1	6.92	
100cm	15.06	8.43	35.9	78.2	6.10	
150cm	15.04	8.42	36.0	80.9	6.30	
200cm	14.98	8.42	36.0	80.7	6.28	
Bottom	15.03	8.43	36.2	73.3	5.70	

## Water Quality - Lake Monitoring LM12

*EPA Identification no. 6 - 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
<b>Depth/Air</b>	13.74					
<b>010cm</b>	15.09	8.42	36.1	76.6	6.06	3.75
<b>050cm</b>	15.29	8.42	36.1	79.5	6.19	
<b>100cm</b>	15.29	8.44	36.2	80.3	6.22	
<b>150cm</b>	15.29	8.45	36.2	79.9	6.20	
<b>200cm</b>	15.28	8.46	36.2	81.5	6.34	
<b>250cm</b>	15.28	8.46	36.2	81.8	6.36	
<b>300cm</b>	15.28	8.46	36.2	81.7	6.32	
<b>350cm</b>	15.29	8.46	36.2	82.7	6.45	
<b>400cm</b>	15.29	8.46	36.2	83.5	6.45	
<b>450cm</b>	15.29	8.47	36.2	78.4	6.08	
<b>500cm</b>	15.32	8.41	36.2	75.3	5.80	
<b>550cm</b>	15.71	8.44	36.7	72.5	5.56	
<b>600cm</b>	15.67	8.44	36.6	75.9	5.82	
<b>650cm</b>	15.72	8.43	36.8	70.0	5.33	
<b>700cm</b>	15.81	8.40	36.8	66.9	5.07	
<b>Bottom</b>	15.81	8.39	36.9	58.2	4.45	

## Water Quality - Lake Monitoring LM4

*EPA Identification no. 7 - The northern waters of Lake Macquarie east off Lake Macquarie Yacht Club*

	Temp	pH	Salinity	Dissolved Oxygen		Secchi
	degC		ppt	%	mg/L	m
<b>Depth/Air</b>	12.80					
<b>010cm</b>	13.21	8.21	35.7	82.6	6.59	5.25
<b>050cm</b>	14.53	8.28	35.7	83.5	6.54	
<b>100cm</b>	14.56	8.30	35.7	84.5	6.68	
<b>150cm</b>	14.55	8.33	35.7	84.9	6.71	
<b>200cm</b>	14.55	8.35	35.7	85.3	6.71	
<b>250cm</b>	14.60	8.36	35.7	83.3	6.60	
<b>300cm</b>	14.55	8.37	35.7	83.3	6.55	
<b>350cm</b>	14.64	8.38	35.7	82.2	6.45	
<b>400cm</b>	14.64	8.38	35.8	80.9	6.38	
<b>450cm</b>	14.67	8.38	35.8	80.6	6.35	
<b>500cm</b>	14.69	8.39	35.7	80.7	6.34	
<b>550cm</b>	14.69	8.39	35.8	78.0	6.13	
<b>600cm</b>	14.69	8.40	35.8	77.8	6.12	
<b>650cm</b>	14.67	8.41	35.8	77.5	6.09	
<b>700cm</b>	14.69	8.42	35.8	78.4	6.18	
<b>750cm</b>	14.77	8.42	35.8	76.1	5.98	
<b>800cm</b>	14.77	8.42	35.8	75.0	5.71	
<b>850cm</b>	15.12	8.42	36.1	73.2	5.67	
<b>900cm</b>	15.22	8.41	36.2	69.1	5.35	
<b>Bottom</b>	15.26	8.41	33.2	65.1	5.04	

## Water Quality - Lake Monitoring LM7

*EPA Identification no. 5 - 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
<b>Depth/Air</b>	14.92					
<b>010cm</b>	19.92	8.36	36.1	77.8	5.71	3.25
<b>050cm</b>	19.94	8.35	36.0	87.1	6.20	
<b>100cm</b>	19.96	8.36	36.0	94.2	6.73	
<b>150cm</b>	19.51	8.38	36.2	105.7	7.60	
<b>200cm</b>	19.38	8.38	36.2	110.1	7.95	
<b>250cm</b>	18.64	8.40	36.1	120.3	8.78	
<b>300cm</b>	18.03	8.41	36.1	123.5	9.10	
<b>350cm</b>	17.18	8.42	36.1	127.9	9.40	
<b>400cm</b>	17.26	8.42	36.2	127.1	9.62	
<b>450cm</b>	16.86	8.43	36.0	129.4	9.81	
<b>500cm</b>	16.21	8.44	36.2	130.1	9.99	
<b>550cm</b>	16.00	8.43	36.2	131.0	10.02	
<b>Bottom</b>	15.93	8.42	36.3	129.8	9.93	

## Eraring Ash Dam Effluent Quality Monitoring

*EPA Identification no. 10 - Discharge point below siphon pond weir at Ash Dam*

<u>Name</u>		<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Cadmium	<0.05	ug/L	-	05/07/2018
Copper	5.7	ug/L	-	05/07/2018
Iron	5	ug/L	-	05/07/2018
Lead	<0.1	ug/L	-	05/07/2018
Manganese	68.3	ug/L	-	05/07/2018
Nitrite and Nitrate as N	4540	ug/L	-	05/07/2018
Phosphorus Reactive as P - Total	460	ug/L	-	05/07/2018
Phosphorus as P - Total	590	ug/L	-	05/07/2018
Selenium	9.1	ug/L	-	05/07/2018
Suspended Solids (SS)	8	mg/L	-	05/07/2018
Zinc	14	ug/L	-	05/07/2018
pH	8.24		-	05/07/2018

## Eraring Cooling Water Inlet Canal

*EPA Identification no. 8 - Inlet canal of the cooling water intake from Lake Macquarie*

<u>Name</u>		<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Copper	1.2	ug/L	-	05/07/2018
Iron	<5	ug/L	-	05/07/2018
Selenium	1	ug/L	-	05/07/2018
Temperature – Average	14.9	deg C	-	July 2018
Temperature – Minimum	13.4	deg C	-	July 2018
Temperature - Maximum	17.1	deg C	-	July 2018

## Eraring Cooling Water Outlet Canal

*EPA Identification no. 1 - Cooling water outlet canal to Myuna Bay*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Copper	1.8	ug/L	5	05/07/2018
Iron	17	ug/L	300	05/07/2018
Selenium	<1	ug/L	2	05/07/2018
Temperature – Average	22.0	deg C	37.5	July 2018
Temperature – Minimum	17.5	deg C	37.5	July 2018
Temperature - Maximum	26.5	deg C	37.5	July 2018
Maximum Daily Discharge from Ash Dam	22.41	ML	150	July 2018
Monthly Discharge from Ash Dam	236.8	ML	-	July 2018

## Emergency Discharge – Toe Drain Pond

*EPA Identification no. 17 - Emergency discharge to toe drain collection pond*

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Nitrite and Nitrate as N	100	ug/L	-	05/07/2018
Phosphorus as P – Total	320	ug/L	-	05/07/2018
pH	6.76		-	05/07/2018

## Groundwater Monitoring

### Groundwater Well – MW01

EPA Identification no. 21 – Groundwater Monitoring Well 01

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Name	Reading	Units	Date
Arsenic	0.3	ug/L	8/06/2018
Cadmium	<0.05	ug/L	8/06/2018
Calcium	2000	ug/L	8/06/2018
Chromium	<0.2	ug/L	8/06/2018
Copper	1.6	ug/L	8/06/2018
Electrical Conductivity	0.379	mS/cm	8/06/2018
Iron	270	ug/L	8/06/2018
Lead	0.2	ug/L	8/06/2018
Magnesium	4000	ug/L	8/06/2018
Manganese	102	ug/L	8/06/2018
Nickel	4.3	ug/L	8/06/2018
pH	5.67	pH	8/06/2018
Potassium	4000	ug/L	8/06/2018
Selenium	<0.2	ug/L	8/06/2018
Standing Water Level	10.17	metres	8/06/2018
Zinc	35	ug/L	8/06/2018

### Groundwater Well – MW02

EPA Identification no. 22 – Groundwater Monitoring Well 02

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Name	Reading	Units	Date
Arsenic	7.2	ug/L	8/06/2018
Cadmium	<0.05	ug/L	8/06/2018
Calcium	327000	ug/L	8/06/2018
Chromium	0.8	ug/L	8/06/2018
Copper	<0.5	ug/L	8/06/2018
Electrical Conductivity	15.800	mS/cm	8/06/2018
Iron	5140	ug/L	8/06/2018
Lead	<0.1	ug/L	8/06/2018
Magnesium	216000	ug/L	8/06/2018
Manganese	1090	ug/L	8/06/2018
Nickel	1.9	ug/L	8/06/2018
pH	6.46	pH	8/06/2018
Potassium	109000	ug/L	8/06/2018
Selenium	0.2	ug/L	8/06/2018
Standing Water Level	4.24	metres	8/06/2018
Zinc	13	ug/L	8/06/2018



## Groundwater Well – MW06

EPA Identification no. 23 – Groundwater Monitoring Well 06

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Name	Reading	Units	Date
Arsenic	6.4	ug/L	8/06/2018
Cadmium	<0.05	ug/L	8/06/2018
Calcium	451000	ug/L	8/06/2018
Chromium	0.7	ug/L	8/06/2018
Copper	<0.5	ug/L	8/06/2018
Electrical Conductivity	21.300	mS/cm	8/06/2018
Iron	11900	ug/L	8/06/2018
Lead	<0.1	ug/L	8/06/2018
Magnesium	270000	ug/L	8/06/2018
Manganese	390	ug/L	8/06/2018
Nickel	0.8	ug/L	8/06/2018
pH	6.58	pH	8/06/2018
Potassium	124000	ug/L	8/06/2018
Selenium	0.4	ug/L	8/06/2018
Standing Water Level	1.645	metres	8/06/2018
Zinc	2	ug/L	8/06/2018

EPA Identification no. 24 – Groundwater Monitoring Well D26

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Groundwater well was dry during sampling in June 2018

Name	Reading	Units	Date
Arsenic		ug/L	8/06/2018
Cadmium		ug/L	8/06/2018
Calcium		ug/L	8/06/2018
Chromium		ug/L	8/06/2018
Copper		ug/L	8/06/2018
Electrical Conductivity		mS/cm	8/06/2018
Iron		ug/L	8/06/2018
Lead		ug/L	8/06/2018
Magnesium		ug/L	8/06/2018
Manganese		ug/L	8/06/2018
Nickel		ug/L	8/06/2018
pH		pH	8/06/2018
Potassium		ug/L	8/06/2018
Selenium		ug/L	8/06/2018
Standing Water Level		metres	8/06/2018
Zinc		ug/L	8/06/2018