



## Eraring Power Station - EPA Licence 1429

Rocky Point Rd, Dora Creek NSW 2264

### Environmental Monitoring Data

August 2018



## Unit 1 Boiler Continuous Emission Monitoring Summary

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

NOx unit out of service 9-10 August 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 August	132	159	102	17.9	21.8	16.0	181	204	155
2 August	112	123	107	17.8	19.6	17.1	187	201	159
3 August	131	150	118	18.3	22.6	16.4	182	190	169
4 August	126	135	111	16.9	17.9	15.9	154	178	128
5 August	104	108	100	17.7	19.5	17.0	172	193	152
6 August	106	139	100	17.2	18.6	16.5	183	196	158
7 August	127	147	102	17.9	22.1	16.4	203	242	146
8 August	101	101	101	16.9	16.9	16.9	157	176	144
9 August	-	-	-	17.3	18.4	16.9	157	184	143
10 August	-	-	-	18.1	22.0	17.3	150	192	127
11 August	127	138	104	18.3	20.5	17.3	175	205	145
12 August	130	146	107	23.4	37.6	16.6	175	214	149
13 August	151	176	134	17.3	22.3	15.4	209	219	200
14 August	147	159	124	16.3	20.2	15.4	234	245	216
15 August	168	195	116	16.2	20.3	15.5	233	251	218
16 August	140	155	123	29.7	33.8	28.7	210	232	173
17 August	141	157	121	16.8	21.0	16.3	216	261	171
18 August	131	155	102	16.6	19.5	15.8	235	282	195
19 August	128	148	115	17.5	20.3	16.0	259	330	224
20 August	147	169	125	16.9	20.8	16.0	190	220	159
21 August	147	162	136	16.8	18.5	15.9	229	260	213
22 August	139	160	123	17.4	24.1	15.9	232	256	219
23 August	139	153	111	16.8	20.2	15.3	247	267	227
24 August	148	172	121	17.3	25.6	15.2	237	249	205
25 August	109	121	100	17.4	19.3	15.6	157	198	136
26 August	111	116	102	19.7	26.6	17.2	178	204	124
27 August	135	166	112	17.0	21.1	15.0	202	234	166
28 August	130	162	119	19.2	23.7	15.5	214	235	198
29 August	127	132	115	19.7	21.3	18.8	200	217	162
30 August	122	129	109	19.4	21.8	18.8	221	231	193
31 August	122	128	113	19.0	19.8	18.2	215	229	198

## Unit 2 Boiler Continuous Emission Monitoring Summary

*EPA Identification no. 12 - 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 August	137	165	102	3.5	4.5	2.4	204	218	191
2 August	142	158	125	4.5	7.0	2.7	199	208	188
3 August	145	164	122	9.9	16.2	4.5	205	226	196
4 August	128	143	102	11.7	21.2	4.6	228	233	220
5 August	147	179	122	9.4	15.1	5.4	229	244	215
6 August	157	176	121	7.6	12.0	5.3	224	244	209
7 August	151	170	123	6.3	10.3	4.0	221	237	198
8 August	145	167	128	7.6	14.6	4.6	212	218	206
9 August	144	164	114	8.4	16.6	5.3	215	247	195
10 August	149	177	120	9.2	18.7	5.5	246	280	215
11 August	148	171	129	8.9	15.8	5.6	251	263	237
12 August	153	184	124	9.6	14.1	6.2	243	260	214
13 August	168	211	136	9.3	15.4	5.3	215	228	202
14 August	148	173	128	9.9	17.0	5.8	250	276	223
15 August	153	168	130	8.3	17.0	3.7	274	291	259
16 August	151	167	122	15.7	21.9	10.0	260	291	238
17 August	155	171	123	17.9	33.1	4.8	279	293	261
18 August	143	168	118	14.7	38.1	3.5	273	290	251
19 August	139	166	114	6.8	10.4	4.0	250	258	222
20 August	139	164	128	6.1	7.8	4.7	237	257	207
21 August	149	172	123	6.4	12.3	4.2	240	275	214
22 August	140	148	116	7.1	11.4	4.9	255	283	235
23 August	133	145	110	7.9	13.6	4.8	267	288	237
24 August	134	147	103	6.9	12.1	4.2	257	269	239
25 August	140	155	118	7.0	13.7	4.1	243	272	215
26 August	140	156	102	7.2	14.6	5.8	223	235	196
27 August	141	155	118	6.4	10.7	5.1	223	245	202
28 August	133	142	115	7.4	11.6	5.7	239	262	225
29 August	145	162	116	7.9	15.6	5.0	236	252	219
30 August	136	158	113	8.2	17.4	4.1	265	279	244
31 August	134	148	115	7.0	14.6	5.0	265	275	256

## Unit 3 Boiler Continuous Emission Monitoring Summary

*EPA Identification no. 13 - Air emissions monitoring, Boiler 3 stack discharge to air*  
SOx and NOx units out of service 14-21 August 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 August	155	192	111	10.2	11.8	9.6	205	221	184
2 August	160	197	121	10.7	11.8	9.7	205	225	164
3 August	166	193	120	10.8	13.8	9.7	215	252	153
4 August	129	173	106	10.1	10.7	9.7	228	257	204
5 August	134	161	112	10.5	11.7	9.7	245	285	178
6 August	170	203	116	11.2	12.6	9.7	243	294	180
7 August	169	200	115	10.7	11.6	9.5	245	263	193
8 August	164	201	134	8.1	10.7	7.3	241	251	220
9 August	155	187	121	7.7	9.0	7.3	249	268	179
10 August	150	167	116	7.8	9.5	7.0	228	265	192
11 August	130	182	105	7.8	9.5	6.9	227	249	176
12 August	142	173	115	7.1	8.6	6.0	223	244	179
13 August	142	164	111	8.6	14.4	6.2	207	237	157
14 August	-	-	-	16.3	23.5	10.5	-	-	-
15 August	-	-	-	10.8	12.9	10.3	-	-	-
16 August	-	-	-	10.4	10.8	10.3	-	-	-
17 August	-	-	-	10.7	11.3	10.3	-	-	-
18 August	-	-	-	10.8	11.3	10.3	-	-	-
19 August	-	-	-	10.5	10.8	10.3	-	-	-
20 August	-	-	-	10.8	11.8	10.3	-	-	-
21 August	-	-	-	11.3	14.7	9.8	-	-	-
22 August	155	182	122	9.1	13.8	7.9	205	224	177
23 August	159	179	118	9.2	12.1	7.9	230	246	192
24 August	157	175	118	9.9	14.2	7.9	232	242	209
25 August	160	183	119	11.2	16.4	8.9	220	253	185
26 August	168	187	118	15.7	24.7	8.0	204	221	182
27 August	137	154	119	7.0	10.0	6.3	197	215	182
28 August	133	147	104	6.8	7.9	6.3	214	233	184
29 August	143	160	128	7.5	12.2	6.0	229	250	194
30 August	144	169	120	7.5	9.0	6.4	252	294	223
31 August	155	174	119	8.3	11.2	7.6	262	307	238

## Unit 4 Boiler Continuous Emission Monitoring Summary

*EPA Identification no. 14 - Air emissions monitoring, Boiler 4 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 August	172	194	142	14.2	15.2	13.1	232	256	203
2 August	165	181	146	14.3	15.8	13.7	222	232	210
3 August	168	186	134	14.8	16.5	13.9	217	230	202
4 August	149	179	125	15.0	16.4	14.3	245	253	226
5 August	158	196	126	15.1	16.6	13.8	250	276	225
6 August	170	202	132	15.2	16.6	13.9	246	274	215
7 August	169	194	145	14.9	15.6	14.5	247	287	221
8 August	166	194	145	16.6	18.9	14.9	247	260	240
9 August	173	204	141	18.8	23.2	16.6	252	273	237
10 August	183	211	143	16.4	24.6	7.4	237	282	205
11 August	156	192	132	13.8	20.0	6.9	236	248	212
12 August	162	184	142	12.8	18.6	3.8	229	241	203
13 August	173	190	162	5.7	9.5	3.3	205	217	194
14 August	157	171	140	11.4	19.0	5.9	227	241	208
15 August	145	158	134	14.2	18.6	10.9	244	257	232
16 August	151	170	120	5.2	6.9	4.8	236	257	208
17 August	157	169	144	4.1	4.8	3.7	246	265	229
18 August	151	176	123	4.9	6.8	3.8	259	270	231
19 August	148	175	125	4.2	5.9	2.6	246	260	221
20 August	163	176	148	3.7	4.7	2.6	214	241	172
21 August	156	167	139	4.9	7.8	2.7	214	247	182
22 August	153	174	119	10.7	13.8	9.5	230	241	209
23 August	167	177	149	12.3	13.2	11.5	261	278	237
24 August	148	175	135	5.0	7.5	3.3	251	260	235
25 August	151	201	121	5.6	14.5	3.6	238	263	198
26 August	147	173	130	7.3	10.6	5.2	228	240	216
27 August	155	174	138	5.4	7.2	3.1	211	237	169
28 August	169	186	139	4.0	6.3	3.1	240	268	225
29 August	172	193	151	4.3	6.5	3.4	246	263	233
30 August	167	188	153	3.8	6.5	2.3	272	281	266
31 August	180	193	166	4.6	6.3	3.3	276	283	267

## Unit 1 Boiler Emission Test Results

*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

### Unit 3 Boiler Emission Test Results

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>	0.5	0.2	0.7
<b>E4</b>	0.5	0.4	0.9
<b>E6</b>	0.3	0.4	0.7
<b>U6</b>	0.5	0.2	0.7

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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
<b>Depth/Air</b>	17.92					
<b>010cm</b>	15.90	8.44	36.6	76.4	5.84	1.75
<b>050cm</b>	15.86	8.44	36.7	74.4	5.66	
<b>100cm</b>	15.85	8.46	36.7	75.0	5.74	
<b>150cm</b>	15.82	8.46	36.7	76.6	5.84	
<b>Bottom</b>	15.83	8.46	36.7	75.9	5.79	

## 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		Secchi
	degC		ppt	%	mg/L	m
<b>Depth/Air</b>	15.56					
<b>010cm</b>	16.01	8.38	36.5	74.1	5.23	2.25
<b>050cm</b>	16.04	8.41	36.5	75.9	5.79	
<b>100cm</b>	16.03	8.42	36.6	76.6	5.84	
<b>150cm</b>	16.02	8.43	36.6	76.5	5.83	
<b>200cm</b>	16.03	8.43	36.6	77.6	5.89	
<b>250cm</b>	16.02	8.44	36.6	77.4	5.89	
<b>300cm</b>	16.02	8.45	36.6	77.6	5.89	
<b>350cm</b>	16.02	8.44	36.6	79.2	6.03	
<b>400cm</b>	16.03	8.43	36.6	79.5	6.06	
<b>450cm</b>	16.02	8.45	36.6	80.1	6.11	
<b>500cm</b>	16.01	8.45	36.6	77.1	5.86	
<b>550cm</b>	15.99	8.46	36.7	75.8	5.76	
<b>600cm</b>	15.96	8.52	36.7	83.7	6.38	
<b>650cm</b>	15.97	8.49	36.7	83.3	6.35	
<b>Bottom</b>	15.96	8.49	36.7	82.2	6.27	

## 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		Secchi
	degC		ppt	%	mg/L	m
<b>Depth/Air</b>	12.81					
<b>010cm</b>	14.66	8.42	36.6	78.8	6.15	6.25
<b>050cm</b>	14.93	8.44	35.9	82.0	6.42	
<b>100cm</b>	14.93	8.44	35.9	81.2	6.35	
<b>150cm</b>	14.95	8.44	35.9	79.1	6.22	
<b>200cm</b>	14.95	8.44	35.9	78.6	6.21	
<b>250cm</b>	14.96	8.44	35.9	79.6	6.23	
<b>300cm</b>	14.96	8.44	35.9	79.4	6.21	
<b>350cm</b>	14.97	8.44	36.0	77.1	6.03	
<b>400cm</b>	14.96	8.44	36.0	76.5	5.98	
<b>450cm</b>	14.96	8.44	36.0	77.3	6.02	
<b>500cm</b>	14.96	8.45	36.0	76.9	6.00	
<b>550cm</b>	14.96	8.44	36.0	77.1	6.03	
<b>600cm</b>	14.96	8.45	36.1	74.7	5.76	
<b>650cm</b>	14.96	8.46	36.1	69.4	5.39	
<b>700cm</b>	14.96	8.47	36.1	75.8	5.92	
<b>750cm</b>	14.96	8.47	36.1	74.8	5.83	
<b>800cm</b>	14.96	8.47	36.1	75.1	5.82	
<b>850cm</b>	14.96	8.47	36.1	69.1	5.40	
<b>Bottom</b>	14.95	8.47	36.1	73.5	5.73	

## 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		Secchi
	degC		ppt	%	mg/L	m
<b>Depth/Air</b>	16.04					
<b>010cm</b>	18.01	8.40	36.7	75.3	5.51	3.25
<b>050cm</b>	18.11	8.40	36.6	78.6	5.75	
<b>100cm</b>	18.07	8.41	36.6	83.4	6.08	
<b>150cm</b>	17.98	8.41	36.6	82.7	6.04	
<b>200cm</b>	17.78	8.42	36.6	85.1	6.25	
<b>250cm</b>	17.71	8.41	36.6	86.9	6.37	
<b>300cm</b>	17.64	8.42	36.6	79.4	5.86	
<b>350cm</b>	17.55	8.43	36.6	86.8	6.42	
<b>400cm</b>	17.41	8.42	36.5	84.0	6.22	
<b>450cm</b>	17.17	8.42	36.5	85.0	6.35	
<b>500cm</b>	16.38	8.43	36.4	76.3	5.75	
<b>Bottom</b>	16.25	8.44	36.5	80.8	6.11	

## 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	-	02/08/2018
Copper	4.2	ug/L	-	02/08/2018
Iron	<2	ug/L	-	02/08/2018
Lead	<0.1	ug/L	-	02/08/2018
Manganese	9.1	ug/L	-	02/08/2018
Nitrite and Nitrate as N	6760	ug/L	-	02/08/2018
Phosphorus Reactive as P - Total	540	ug/L	-	02/08/2018
Phosphorus as P - Total	500	ug/L	-	02/08/2018
Selenium	13.6	ug/L	-	02/08/2018
Suspended Solids (SS)	4	mg/L	-	02/08/2018
Zinc	4	ug/L	-	02/08/2018
pH	7.75		-	02/08/2018

## 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	-	02/08/2018
Iron	<5	ug/L	-	02/08/2018
Selenium	<1	ug/L	-	02/08/2018
Temperature – Average	15.5	deg C	-	August 2018
Temperature – Minimum	11.6	deg C	-	August 2018
Temperature - Maximum	17.1	deg C	-	August 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	1.6	ug/L	5	02/08/2018
Iron	16	ug/L	300	02/08/2018
Selenium	<1	ug/L	2	02/08/2018
Temperature – Average	23.2	deg C	37.5	August 2018
Temperature – Minimum	15.3	deg C	37.5	August 2018
Temperature - Maximum	26.4	deg C	37.5	August 2018
Maximum Daily Discharge from Ash Dam	0.86	ML	150	August 2018
Monthly Discharge from Ash Dam	0.9	ML	-	August 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	130	ug/L	-	02/08/2018
Phosphorus as P – Total	120	ug/L	-	02/08/2018
pH	6.75		-	02/08/2018

## 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