



Eraring Power Station - EPA Licence 1429

Rocky Point Rd, Morristown NSW 2264

Coal Unloader - EPA Licence 4297

Eraring Coal Delivery Facility, Construction Rd, Dora Creek NSW 2264

Environmental Monitoring Data

October 2015



Unit 1 Boiler Continuous Emission Monitoring Summary

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

- 4th - 19th Nox and Sox out of service.

	NOX			Particulates			SOX		
	ppm (7% O2)			mg/m3			ppm (7% O2)		
	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly
1 - Oct	161	195	148	12	18	9	179	195	159
2 - Oct	148	176	111	13	16	9	191	235	165
3 - Oct	134	166	130	12	20	8	164	186	159
4 - Oct	0	0	0	10	15	6	0	0	0
5 - Oct	0	0	0	10	17	5	0	0	0
6 - Oct	0	0	0	9	15	5	0	0	0
7 - Oct	0	0	0	14	18	9	0	0	0
8 - Oct	0	0	0	15	21	12	0	0	0
9 - Oct	0	0	0	14	19	10	0	0	0
10 - Oct	0	0	0	12	18	8	0	0	0
11 - Oct	0	0	0	12	18	9	0	0	0
12 - Oct	0	0	0	11	16	7	0	0	0
13 - Oct	0	0	0	13	15	11	0	0	0
14 - Oct	0	0	0	13	17	10	0	0	0
15 - Oct	0	0	0	11	17	8	0	0	0
16 - Oct	0	0	0	10	18	6	0	0	0
17 - Oct	0	0	0	12	14	9	0	0	0
18 - Oct	0	0	0	13	16	11	0	0	0
19 - Oct	0	0	0	11	17	8	0	0	0
20 - Oct	157	174	126	11	17	6	181	208	151
21 - Oct	135	149	118	10	13	7	174	199	160
22 - Oct	152	193	131	12	17	10	165	173	153
23 - Oct	154	180	132	13	20	10	160	177	146
24 - Oct	150	165	137	13	19	9	161	181	142
25 - Oct	139	151	112	13	19	9	146	154	136
26 - Oct	148	198	111	11	16	7	163	214	142
27 - Oct	151	176	128	14	19	13	180	192	161
28 - Oct	159	197	134	13	19	10	189	200	169
29 - Oct	140	160	127	14	19	10	191	227	165
30 - Oct	125	146	111	13	18	10	209	230	187
31 - Oct	117	141	102	12	17	10	200	232	168

Unit 2 Boiler Continuous Emission Monitoring Summary

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

- 1st - 2nd - Unit out of service,
- 30th - 31st - Sox instrument out of service

	NOX			Particulates			SOX		
	ppm (7% O2)			mg/m3			ppm (7% O2)		
	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly
1 - Oct	0	0	0	0	0	0	0	0	0
2 - Oct	0	0	0	0	0	0	0	0	0
3 - Oct	103	105	101	13	16	11	171	183	157
4 - Oct	116	130	103	13	17	8	164	185	133
5 - Oct	116	174	100	13	23	8	175	190	162
6 - Oct	117	143	98	9	16	6	169	180	153
7 - Oct	122	139	102	10	14	8	200	220	165
8 - Oct	119	132	100	11	16	10	194	208	173
9 - Oct	118	127	103	11	15	8	216	240	192
10 - Oct	117	139	101	11	16	9	192	227	161
11 - Oct	87	105	76	12	17	9	189	223	165
12 - Oct	112	140	101	11	13	7	198	243	161
13 - Oct	118	128	112	11	14	10	208	257	169
14 - Oct	119	127	110	11	12	9	232	256	182
15 - Oct	117	128	106	11	15	9	209	258	166
16 - Oct	118	130	107	10	14	8	206	234	168
17 - Oct	121	129	107	11	14	9	215	241	188
18 - Oct	118	128	110	11	14	9	209	236	172
19 - Oct	133	162	110	10	15	7	189	210	181
20 - Oct	136	166	105	10	15	5	208	233	186
21 - Oct	124	144	102	10	14	7	206	232	170
22 - Oct	134	159	103	11	14	8	187	217	164
23 - Oct	133	152	104	11	14	10	180	190	167
24 - Oct	113	122	103	12	17	9	174	187	162
25 - Oct	114	123	107	13	21	9	160	172	141
26 - Oct	119	140	105	12	15	8	172	217	154
27 - Oct	118	151	109	15	18	13	197	232	175
28 - Oct	132	158	101	15	19	12	183	193	170
29 - Oct	129	144	102	15	21	13	212	238	180
30 - Oct	116	127	100	14	16	12	0	0	0
31 - Oct	122	130	104	14	16	12	0	0	0

Unit 3 Boiler Continuous Emission Monitoring Summary

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

- 7th - 10th Unit out of service

	NOX			Particulates			SOX		
	ppm (7% O2)			mg/m3			ppm (7% O2)		
	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly
1 - Oct	145	166	134	10	12	9	194	212	167
2 - Oct	151	170	132	11	12	9	209	231	179
3 - Oct	157	183	133	10	13	9	184	212	174
4 - Oct	150	176	139	17	19	15	194	210	167
5 - Oct	143	170	135	10	11	9	202	243	177
6 - Oct	147	176	130	10	13	9	198	222	161
7 - Oct	0	0	0	0	0	0	0	0	0
8 - Oct	0	0	0	0	0	0	0	0	0
9 - Oct	0	0	0	0	0	0	0	0	0
10 - Oct	0	0	0	0	0	0	0	0	0
11 - Oct	156	214	141	12	16	10	237	264	183
12 - Oct	182	206	141	11	13	8	256	284	218
13 - Oct	176	199	141	10	14	9	0	0	0
14 - Oct	144	157	135	11	13	9	0	0	0
15 - Oct	168	202	145	11	15	8	0	0	0
16 - Oct	157	169	143	11	18	9	0	0	0
17 - Oct	169	191	146	10	12	9	0	0	0
18 - Oct	0	0	0	11	15	10	0	0	0
19 - Oct	0	0	0	10	14	9	0	0	0
20 - Oct	136	146	119	12	17	8	200	208	193
21 - Oct	161	193	119	14	20	8	216	243	159
22 - Oct	166	192	131	18	27	12	197	212	170
23 - Oct	172	197	141	20	29	16	194	211	164
24 - Oct	150	195	137	18	21	13	196	218	179
25 - Oct	142	157	131	18	22	16	181	194	159
26 - Oct	146	157	130	11	12	10	178	186	153
27 - Oct	145	200	125	11	13	9	190	202	110
28 - Oct	138	158	125	15	26	10	191	198	146
29 - Oct	147	181	124	21	24	18	204	238	147
30 - Oct	142	173	131	21	24	18	202	238	126
31 - Oct	139	180	120	21	23	18	193	236	174

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% O2)			mg/m3			ppm (7% O2)		
	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly	Daily Ave	Max Hourly	Min Hourly
1 - Oct	153	175	140	4	9	2	154	171	112
2 - Oct	142	179	116	4	10	2	158	197	119
3 - Oct	156	190	127	4	8	2	135	180	100
4 - Oct	166	204	124	3	5	2	143	189	102
5 - Oct	144	163	136	3	5	2	160	183	128
6 - Oct	161	182	125	4	7	2	159	183	110
7 - Oct	153	176	119	4	8	3	180	215	123
8 - Oct	157	188	129	4	8	3	173	190	123
9 - Oct	153	184	115	4	7	2	183	216	119
10 - Oct	149	185	121	3	7	2	174	204	125
11 - Oct	164	185	136	3	6	2	160	223	121
12 - Oct	172	209	149	4	6	2	173	230	112
13 - Oct	172	194	146	4	7	2	193	237	148
14 - Oct	175	197	140	4	8	2	199	230	137
15 - Oct	160	187	134	3	7	3	178	235	100
16 - Oct	149	172	135	3	7	2	178	219	126
17 - Oct	166	197	145	3	5	2	169	206	138
18 - Oct	168	221	152	3	6	2	146	208	103
19 - Oct	161	214	129	4	7	2	176	213	107
20 - Oct	153	178	121	3	7	2	194	237	128
21 - Oct	155	186	135	3	5	2	185	212	124
22 - Oct	175	214	141	4	7	2	159	195	112
23 - Oct	162	173	139	3	7	2	146	173	104
24 - Oct	163	197	150	4	6	3	134	152	109
25 - Oct	120	136	103	3	4	3	120	145	101
26 - Oct	161	190	140	4	6	3	146	186	103
27 - Oct	160	207	135	4	7	3	136	182	113
28 - Oct	164	224	135	3	6	2	144	161	111
29 - Oct	186	260	154	4	6	3	172	212	157
30 - Oct	135	191	111	4	6	3	187	214	168
31 - Oct	126	139	108	8	12	6	188	219	154

Eraring Coal Unloader Dust Gauges

EPA Identification no. 18 - Depositional dust monitoring within 1 km of the coal handling operations

	Deposited Matter		
	g/m2/month		
	Ash	Combustible	Insolubles
U1	1.00	0.80	1.80
U2	0.50	0.20	0.70
U3	8.20	11.50	19.70
U4	0.90	0.30	1.20
U5	0.70	0.20	0.90
U6	1.00	0.30	1.30

Eraring Due Diligence Dust Gauges

EPA Identification no. 18 - Depositional dust monitoring within 1 km of the coal handling operations

	Deposited Matter		
	g/m2/month		
	Ash	Combustible	Insolubles
E1	0.50	0.20	0.70
E2	0.50	0.30	0.80
E3	0.20	0.20	0.40
E4	0.60	0.50	1.10
E5	4.30	0.60	4.90
E6	2.30	2.20	4.50

Water Quality - Lake Monitoring LM10

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	23.90					
010cm	22.72	8.67	35.40	124.30	8.49	2.75
050cm	22.21	8.72	35.50	119.60	8.23	
100cm	22.15	8.75	35.50	117.60	8.10	
150cm	21.61	8.81	35.50	113.90	7.93	
200cm	21.18	8.83	35.60	103.90	7.27	
250cm	21.20	8.83	35.60	88.20	6.17	
Bottom	21.08	8.83	35.60	85.50	5.99	

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
Depth/Air	23.09					
010cm	24.45	8.64	35.20	128.40	8.54	3.75
050cm	24.26	8.65	35.30	129.40	8.65	
100cm	23.01	8.73	35.20	128.70	8.78	
150cm	22.59	8.79	35.20	130.50	8.92	
200cm	22.22	8.82	35.30	131.50	9.04	
250cm	21.88	8.83	35.30	131.30	9.07	
300cm	21.65	8.84	35.40	133.30	9.25	
350cm	21.08	8.85	35.60	135.00	9.46	
400cm	20.48	8.86	35.50	134.40	9.59	
450cm	19.65	8.87	35.60	120.30	8.58	
500cm	19.33	8.87	35.70	120.10	8.68	
550cm	18.75	8.87	35.70	119.40	8.71	
600cm	18.63	8.86	35.70	108.70	7.96	
650cm	18.59	8.86	35.70	102.20	7.50	
700cm	18.38	8.86	35.90	110.30	8.11	
750cm	18.29	8.86	35.90	101.80	7.41	
Bottom	18.34	8.86	35.80	91.90	6.56	

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
Depth/Air	19.54					
010cm	19.56	8.39	35.40	115.70	8.32	6.75
050cm	19.59	8.41	35.40	113.40	8.16	
100cm	19.60	8.57	35.50	108.70	7.80	
150cm	19.60	8.58	35.20	132.30	9.54	
200cm	19.61	8.64	35.20	137.00	9.87	
250cm	19.61	8.65	35.20	141.20	10.19	
300cm	19.61	8.67	35.20	145.90	10.53	
350cm	19.61	8.65	35.80	150.00	10.78	
400cm	19.61	8.68	35.80	108.00	7.75	
450cm	19.61	8.69	35.80	108.90	7.78	
500cm	19.62	8.70	35.80	106.60	7.64	
550cm	19.63	8.71	35.90	107.40	7.64	
600cm	19.62	8.72	35.90	107.10	7.67	
650cm	19.68	8.75	36.10	101.50	7.24	
700cm	19.72	8.74	36.20	101.90	7.23	
750cm	19.60	8.76	36.30	104.00	7.41	
800cm	19.32	8.75	36.30	104.90	7.50	
850cm	19.12	8.77	36.30	104.20	7.47	
900cm	19.18	8.77	36.30	102.60	7.31	
950cm	19.21	8.73	36.50	90.10	6.41	
Bottom	19.21	8.72	36.50	80.90	5.72	

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
Depth/Air	20.00					
010cm	25.42	8.54	35.80	113.10	7.37	3.75
050cm	25.16	8.61	35.70	120.70	7.90	
100cm	24.39	8.66	35.80	129.40	8.57	
150cm	23.81	8.70	35.80	136.20	9.10	
200cm	23.43	8.72	35.80	109.30	7.40	
250cm	22.32	8.74	35.70	104.00	7.13	
300cm	22.21	8.76	35.70	103.50	7.10	
350cm	21.37	8.78	35.70	106.30	7.41	
400cm	19.71	8.81	35.60	90.20	6.47	
450cm	19.42	8.82	35.80	96.00	6.93	
500cm	19.10	8.83	35.80	100.50	7.25	
550cm	18.91	8.81	35.80	79.90	5.81	
Bottom	18.80	8.78	35.80	81.60	5.94	

Eraring Ash Dam Effluent Quality Monitoring

EPA Identification no. 10 - 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>
Cadmium	0.20	ug/L	-	01/10/2015
Copper	1.00	ug/L	-	01/10/2015
Iron	5.0	ug/L	-	01/10/2015
Lead	0.10	ug/L	-	01/10/2015
Manganese	33	ug/L	-	01/10/2015
Nitrite and Nitrate as N	76	ug/L	-	01/10/2015
Phosphorus Reactive as P - Total	98	ug/L	-	01/10/2015
Phosphorus as P - Total	159	ug/L	-	01/10/2015
Selenium	24.0	ug/L	-	01/10/2015
Suspended Solids (SS)	5.0	mg/L	-	01/10/2015
Zinc	5.0	ug/L	-	01/10/2015
pH	9.9	-	-	01/10/2015

Eraring Cooling Water Inlet Canal

EPA Identification no. 8 - 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>
Copper	1.00	ug/L	-	01/10/2015
Iron	5.0	ug/L	-	01/10/2015
Selenium	2.00	ug/L	-	01/10/2015
Temperature - Average	22.9	deg C	-	Oct 2015
Temperature - Minimum	19.1	deg C	-	Oct 2015
Temperature - Maximum	25.8	deg C	-	Oct 2015

Eraring Cooling Water Outlet Canal

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

- The 98.5% limit specified for temperature in the outlet canal means during normal electricity supply conditions, cooling water may be discharged over 35 degC but up to a max temperature of 37.5 degC for up to 131 hrs over the reporting period.

<u>Name</u>	<u>Reading</u>	<u>Units</u>	<u>Licence Limit</u>	<u>Date</u>
Copper	1.00	ug/L	5	01/10/2015
Iron	17.0	ug/L	300	01/10/2015
Selenium	0.20	ug/L	2	01/10/2015
Temperature - Average	29.3	deg C	35	Oct 2015
Temperature - Minimum	22.4	deg C	35	Oct 2015
Temperature - Maximum	35.0	deg C	35	Oct 2015
Maximum Daily Discharge from Ash Dam	14.2	ML	150	Oct 2015
Monthly Discharge from Ash Dam	239	ML	-	Oct 2015

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>
Cadmium	0.20	ug/L	-	28/10/2015
Copper	0.50	ug/L	-	28/10/2015
Iron	121	ug/L	-	28/10/2015
Lead	0.20	ug/L	-	28/10/2015
Manganese	772	ug/L	-	28/10/2015
Nitrite and Nitrate as N	120	ug/L	-	01/10/2015
Nitrite and Nitrate as N	195	ug/L	-	28/10/2015
Phosphorus as P - Total	77	ug/L	-	01/10/2015
Phosphorus as P - Total	163	ug/L	-	28/10/2015
Selenium	2.0	ug/L	-	28/10/2015
Zinc	10.0	ug/L	-	28/10/2015
pH	6.9		-	01/10/2015
pH	6.9		-	28/10/2015