



Environmental Monitoring Report

Condong Biomass Power Plant 153 McLeod Street Condong NSW

Licencee Cape Byron Management Pty Ltd
Address 153 McLeod Street Condong NSW
EPL No 20424 <http://www.epa.nsw.gov.au/prpoeoapp/>

This data is published under section 66(6) of the *Protection of the Environment Operations Act 1997*

Sampling Point:

Licencee

Location

EPL No

Parameters Monitored

Frequency & Method

Limits

Monitoring Point 1 - No 1 Boiler Stack Emissions

Cape Byron Management Pty Ltd

Condong Cogeneration Power Plant

20424 www.environment.nsw.gov.au

see individual parameters in table

Annually in accordance with EPA protocols

see individual parameters in table



Results Table

	AE 13192	AE 13401	AE 13475	
Test Number				
Sampling Date	17/07/2020	11/11/2020	10/02/2021	
Date Received	25/08/2020	23/11/2020	2/03/2002	
Date Published	28/08/2020	3/12/2020	12/03/2021	

Measured Parameters	Units	Concentration Limit				
dry @ STP and corrected to 7% O₂						
Average stack gas temperature	°C	Not Applicable	50.00	66.00	60.00	
Average velocity at sampling plane	m/s	Not Applicable	10.90	13.40	12.90	
Dry Gas Volumetric Flowrate	m ³ /sec	Not Applicable	50.90	57.85	54.85	
Dry Gas Density	kg/m ³	Not Applicable	1.30	1.34	1.33	
Molecular Weight of Stack Gases	g/g mole	Not Applicable	29.10	30.00	29.80	
Moisture content	%	Not Applicable	13.10	15.30	18.00	
Concentration of carbon dioxide	%	Not Applicable	2.75	10.00	7.74	
Total Solid Particles	mg/m ³	100.00	97.00	38.50	20.20	
Sulphuric Acid Mist & Sulphur Trioxide as SO ₃	mg/m ³	30.00	4.45	1.85	3.57	
Nitrogen Oxides (NO _x)	mg/m ³	500.00	102.00	241.00	186.00	

Sampling Point: **Monitoring Point 2 - Ambient Air Monitoring Fuel Stockpile**
 Licencee Cape Byron Management Pty Ltd
 Location Condong Cogeneration Power Plant
 EPL No 20424
 Parameters Monitored [Particulates - Deposited Matter](#)
 Monitoring Frequency Continuous with sample results extrapolated from sample period of 30 ± 2 days
 Limits Not Applicable
 Comments Laboratory Analysis



Date Sample Collected	Date Received	Date Published	Results (g/m ² /month)	Notes
06-Jan-21	25-Jan-21	29-Jan-21	0.78	35 day sample. Bottles stuck in transit (0.67g/m ² /month)
05-Feb-21	12-Feb-21	26-Feb-21	0.77	
04-Mar-21	12-Mar-21	08-Apr-21	3.51	
06-Apr-21	16-Apr-21	22-Apr-21	1.06	

Sampling Point: Monitoring Point 2 - Ambient Air Monitoring Fuel Stockpile
 Licencee Cape Byron Management Pty Ltd
 Location Condong Cogeneration Power Plant
 EPL No 20424
 Parameters Monitored PM10
 Monitoring Frequency Once every 6 days when operating at stockpile
 Limits Not Applicable
 Comments



Date Sample Collected	Date Received	Date Published	Results (ug/m ³)	Notes
05-Jan-21	12-Feb-21	26-Feb-21	22.2	
11-Jan-21	12-Feb-21	26-Feb-21	10.2	
17-Jan-21	12-Feb-21	26-Feb-21	17.4	
23-Jan-21	12-Feb-21	26-Feb-21	9.9	
29-Jan-21	12-Feb-21	26-Feb-21	13.4	
04-Feb-21	09-Mar-21	12-Mar-21	18.7	
10-Feb-21	09-Mar-21	12-Mar-21	19.9	
16-Feb-21	09-Mar-21	12-Mar-21	11.4	
22-Feb-21	09-Mar-21	12-Mar-21	13.0	
28-Feb-21	09-Mar-21	12-Mar-21	6.9	
06-Mar-21	14-Apr-21	22-Apr-21	6.6	
12-Mar-21	14-Apr-21	22-Apr-21	7.7	
18-Mar-21	14-Apr-21	22-Apr-21	8.9	
24-Mar-21	14-Apr-21	22-Apr-21	6.3	
30-Mar-21	14-Apr-21	22-Apr-21	8.0	
05-Apr-21	14-Apr-21	22-Apr-21	13.4	

Sampling Point: **Monitoring Point 4 - Ambient Air Monitoring North of Bowling Club**
 Licencee Cape Byron Management Pty Ltd
 Location Condong Cogeneration Power Plant
 EPL No 20424
 Parameters Monitored [Particulates - Deposited Matter](#)
 Monitoring Frequency Continuous with sample results extrapolated from sample period of 30 ± 2 days



Limits Not Applicable

Comments Laboratory Analysis

Date Sample Collected	Date Received	Date Published	Results (g/m ² /month)	Notes
06-Jan-21	25-Jan-21	29-Jan-21	1.59	35 day sample. Bottles stuck in transit (1.36g/m2/month)
05-Feb-21	12-Feb-21	26-Feb-21	0.32	
04-Mar-21	12-Feb-21	08-Apr-21	1.65	
06-Apr-21		22-Apr-21	N/A	Sample was void

Sampling Point: Monitoring Point 5 - Ambient Air Monitoring South of Mill

Licencee Cape Byron Management Pty Ltd
Location Condong Cogeneration Power Plant
EPL No 20424

Parameters Monitored [Particulates - Deposited Matter](#)

Monitoring Frequency Continuous with sample results extrapolated from sample period of 30 ± 2 days



Limits Not Applicable

Comments Laboratory Analysis

Date Sample Collected	Date Received	Date Published	Results (g/m ² /month)	Notes
06-Jan-21	25-Jan-21	29-Jan-21	2.73	35 day sample. Bottles stuck in transit (2.34g/m ² /month)
05-Feb-21	12-Feb-21	26-Feb-21	0.83	
04-Mar-21	12-Mar-21	08-Apr-21	2.53	Ants
06-Apr-21	16-Apr-21	22-Apr-21	4.30	

Sampling Point: Monitoring Point 6 - O₂ Boiler Prior to Primary Air Heater

Licencee Cape Byron Management Pty Ltd
 Location Condong Cogeneration Power Plant
 EPL No 20424

Parameter/s Monitored **Oxygen**

Frequency & Method Continuous Online Sampling

Limit No Limits Prescribed

Comments The results in the table provide a summary of the minimum, maximum and mean daily values for the period indicated



MONITORING PERIOD		Oxygen (%)				Notes
Date Start	Date Finish	Date Published	Minimum Value	Maximum Value	Mean Value	
28-Dec-20	3-Jan-21	6-Jan-21	n/a	n/a	n/a	Boiler Offline
4-Jan-21	10-Jan-21	20-Jan-21	n/a	n/a	n/a	Boiler Offline
11-Jan-21	17-Jan-21	20-Jan-21	2.95	19.69	10.07	Boiler Online 11/01/21
18-Jan-21	24-Jan-21	29-Jan-21	4.77	20.35	8.42	
25-Jan-21	31-Jan-21	10-Feb-21	4.81	20.56	10.61	
1-Feb-21	7-Feb-21	10-Feb-21	4.98	20.57	10.79	
8-Feb-21	14-Feb-21	26-Feb-21	-0.01	20.61	9.57	
15-Feb-21	21-Feb-21	26-Feb-21	4.66	16.39	8.60	
22-Feb-21	28-Feb-21	12-Mar-21	4.75	20.53	9.68	
1-Mar-21	7-Mar-21	12-Mar-21	4.82	20.58	11.83	
8-Mar-21	14-Mar-21	8-Apr-21	4.19	20.43	9.37	
15-Mar-21	21-Mar-21	8-Apr-21	4.58	20.15	12.79	
22-Mar-21	28-Mar-21	8-Apr-21	5.05	20.48	14.98	Offline 26/03/21
29-Mar-21	4-Apr-21	8-Apr-21	6.61	20.37	17.84	Online 29/03/21 and and 30/03/21
5-Apr-21	11-Apr-21	22-Apr-21	N/A	N/A	N/A	Boiler offline
12-Apr-21	18-Apr-21	22-Apr-21	N/A	N/A	N/A	Boiler offline

Sampling Point: **Monitoring Point 8 - Injection Water Inlet, Background River Water Temperature**
 Licence: Cape Byron Management Pty Ltd
 Location: Condong Cogeneration Power Plant
 EPL No: 20424
 Parameters Monitored: **Temperature (°C)**
 Frequency & Method: Fortnightly Representative Sample
 Limit/s: Not Applicable - Background river data is used to determine temperature of cooling water discharged at monitoring point 9



Comments

Date Sampled & Received	Date Published	Temp (°C)	Notes
6-Jan-21	20-Jan-21	27.0	
27-Jan-21	29-Jan-21	28.0	
8-Feb-21	10-Feb-21	28.0	
22-Feb-21	26-Feb-21	28.0	
8-Mar-21	12-Mar-21	27.0	
15-Mar-21	08-Apr-21	27.0	
29-Mar-21	08-Apr-21	27.0	
6-Apr-21	08-Apr-21	25.0	
19-Apr-21	22-Apr-21	24.5	

Sampling Point: Monitoring Point 9 - Cogeneration Cooling Water Discharge

Licencee Cape Byron Management Pty Ltd
 Location Condong Cogeneration Power Plant
 EPL No 20424

Parameter/s Monitored See Table

Frequency & Method Weekly Composite (Laboratory Analysis) samples required during periods that the cooling tower is operational only

Limit/s See Table

Comments A 90 percentile limit means 90% of results must comply with the specified limit. No result may exceed the maximum limit.

Total Residual Chlorine analysis is performed on site immediately from a grab sample. Therefore the results are received on the date of sampling



Date Sampled	Date Received	Date Published		BOD ₅ (mg/L)	TSS (mg/L)	Phosphorus (mg/L)	Nitrogen (mg/L)	Total Residual Chlorine (mg/L)	Notes
				90 Percentile Limit Maximum Limit	30 100	40 100	2.5 7.0	45 70	
23-Dec-20	29-Dec-20	06-Jan-21		7.5	8.0	0.46	13.4	0.10	
04-Jan-20	14-Jan-21	20-Jan-21		5.7	4.0	0.3	10.8	0.01	Cooling tower not operational 26/12/20 to 3/01/21
13-Jan-21	21-Jan-21	29-Jan-21		6.0	14.0	0.4	15.6	0.08	
19-Jan-21	29-Jan-21	10-Feb-21		2.7	19.0	0.3	24.4	0.01	
27-Jan-21	02-Feb-21	10-Feb-21		8.0	18.0	0.3	24.3	0.10	
01-Feb-21	12-Feb-21	26-Feb-21		2.0	12.0	0.2	19.2	0.03	
08-Feb-21	18-Feb-21	26-Feb-21		2.2	17.0	0.2	18.9	0.12	
16-Feb-21	23-Feb-21	12-Mar-21		<1.0	11.0	0.2	25.1	0.01	
22-Feb-21	02-Mar-21	12-Mar-21		1.3	9.0	0.2	25.6	0.02	
01-Mar-21	12-Mar-21	08-Apr-21		1.8	11.0	0.2	22.3	0.13	
08-Mar-21	16-Mar-21	08-Apr-21		2.8	13.0	0.2	23.7	0.03	
15-Mar-21	22-Mar-21	08-Apr-21		2.3	17.0	0.5	30.6	0.01	
24-Mar-21	01-Apr-21	08-Apr-21		6.5	4.6	0.36	16.3	0.16	
30-Mar-21	15-Apr-21	22-Apr-21		5.1	13.0	0.6	24.4	0.20	
									Cooling tower not operational from 31/03/2021

Sampling Point: **Monitoring Point 12 - Stormwater Discharge From Stockpile Catchment Basin**
 Licence: Cape Byron Management Pty Ltd
 Location: Condong Cogeneration Power Plant
 EPL No: 20424
 Parameter/s Monitored: See Table
 Frequency & Method: Sampling any discharge, whether controlled or otherwise, which has not occurred from rainfall exceeding 82mm over any consecutive five day period
 Limit/s: See Table
 Comments: A 90 percentile limit means 90% of results must comply with the specified limit. No result may exceed the maximum limit.



				BOD ₅ (mg/L)	Nitrogen (mg/L)	pH	Phosphorus (mg/L)	TSS (mg/L)	
Date Sampled	Date Received	Date Published	90 Percentile Limit	30	10				Notes
			Maximum Limit	55	20	6.5 - 8.5	No Limit	50.0	
19-Jan-21	28-Jan-21	29-Jan-21		8.2	1.3	7.88	0.3	32.00	
23-Feb-21	01-Mar-21	12-Mar-21		10.0	2.1	7.17	0.9	37.00	
15-Mar-21	22-Mar-21	08-Apr-21		5.5	1.2	7.47	0.5	44.00	
25-Mar-21	31-Mar-21	08-Apr-21		15.0	0.9	6.99	0.4	38.00	

Licencee
Location
EPL No

Cape Byron Management Pty Ltd
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MONITORING REPORT CORRECTIONS LOG

Date / Period	Monitoring Point	Pollutant/Parameter	Original Data	Corrected Data	Date Corrected	Date Originally Published	Reason