



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: January 2019

Obtained Date: 06th February 2019

Publication Date: 06th February 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	17/12/18	06/02/19	-	-	-	1.6
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	06/02/19	18.7	24.98	262	31.6
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	06/02/19	15.9	22.26	21.7	30.8
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	0						
	Oil and Grease	mg/L		0						
	Total Organic Carbon	mg/L		0						
	Total Suspended Solids	mg/L		0						
	pH	pH		0						



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
pH	pH	-	-	-						
9	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	



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EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	
10	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	

Table 3 – Monitoring (Quarterly Noise – Limits Apply)



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1			15 min		N/M	35dBA			
			15 min		I/A	35dBA			
			15 min		34	35dBA			
			1 min	45		45dBA			

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: February 2019

Obtained Date: 12th March 2019

Publication Date: 12th March 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	18/12/18	22/02/19	-	-	-	1.0
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	06/02/19	16.1	45.02	24.7	105
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	06/02/19	15.0	40.52	18.4	108
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	1	14/02/19	21/02/2019				1600
	Oil and Grease	mg/L		1	14/02/19	21/02/2019				<5
	Total Organic Carbon	mg/L		1	14/02/19	21/02/2019				3
	Total Suspended Solids	mg/L		1	14/02/19	21/02/2019				30
	pH	pH		1	14/02/19	21/02/2019				8.45



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
pH	pH	-	-	-						
9	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	
10	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	

Table 3 – Monitoring (Quarterly Noise – Limits Apply)



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1			15 min		N/M	35dBA		Not available at time of publishing	
			15 min		I/A	35dBA			
			15 min		34	35dBA			
			1 min	45		45dBA			

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: March 2019

Obtained Date: 9th April 2019

Publication Date: 16th April 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	18/12/18	08/03/19	-	-	-	1.2
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	09/03/19	12.1	21.88	27.4	29.7
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	06/02/19	9.4	15.48	16.3	22.5
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	-						
	Oil and Grease	mg/L		-						
	Total Organic Carbon	mg/L		-						
	Total Suspended Solids	mg/L		-						
	pH	pH		-						



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	1			-	-	-	0.06
	Bicarbonate	mg/L					-	-	-	1290
	Calcium	mg/L					-	-	-	30
	Chloride	mg/L					-	-	-	1210
	Conductivity	µs/cm					-	-	-	8310
	Lead	mg/L					-	-	-	0.04
	Magnesium	mg/L					-	-	-	120
	Nitrate	mg/L					-	-	-	1.3
	Potassium	mg/L					-	-	-	17
	Sodium	mg/L					-	-	-	1670
	Standing Water Level	m					-	-	-	6.76
	Sulphate	mg/L					-	-	-	568
pH	pH	-	-	-	8.63					
9	Ammonia	mg/L	Quarterly	1			-	-	-	1.77
	Bicarbonate	mg/L					-	-	-	654
	Calcium	mg/L					-	-	-	233
	Chloride	mg/L					-	-	-	1060
	Conductivity	µs/cm					-	-	-	6620
	Lead	mg/L					-	-	-	0.001
	Magnesium	mg/L					-	-	-	233
	Nitrate	mg/L					-	-	-	1.18



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	120
	Sodium	mg/L					-	-	-	703
	Standing Water Level	m					-	-	-	2.04
	Sulphate	mg/L					-	-	-	589
	pH	pH					-	-	-	7.65
10	Ammonia	mg/L	Quarterly	1			-	-	-	0.04
	Bicarbonate	mg/L					-	-	-	656
	Calcium	mg/L					-	-	-	164
	Chloride	mg/L					-	-	-	1250
	Conductivity	µs/cm					-	-	-	6410
	Lead	mg/L					-	-	-	0.001
	Magnesium	mg/L					-	-	-	217
	Nitrate	mg/L					-	-	-	10.6
	Potassium	mg/L					-	-	-	62
	Sodium	mg/L					-	-	-	716
	Standing Water Level	m					-	-	-	0.85
	Sulphate	mg/L					-	-	-	289
	pH	pH					-	-	-	7.91

Table 3 – Monitoring (Quarterly Noise – Limits Apply)



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				LA1, 1 minute	L _{Aeq} , 15 minute				
N1			15 min		N/M	35dBA		Not available at time of publishing	
			15 min		I/A	35dBA			
			15 min		34	35dBA			
			1 min	45		45dBA			

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

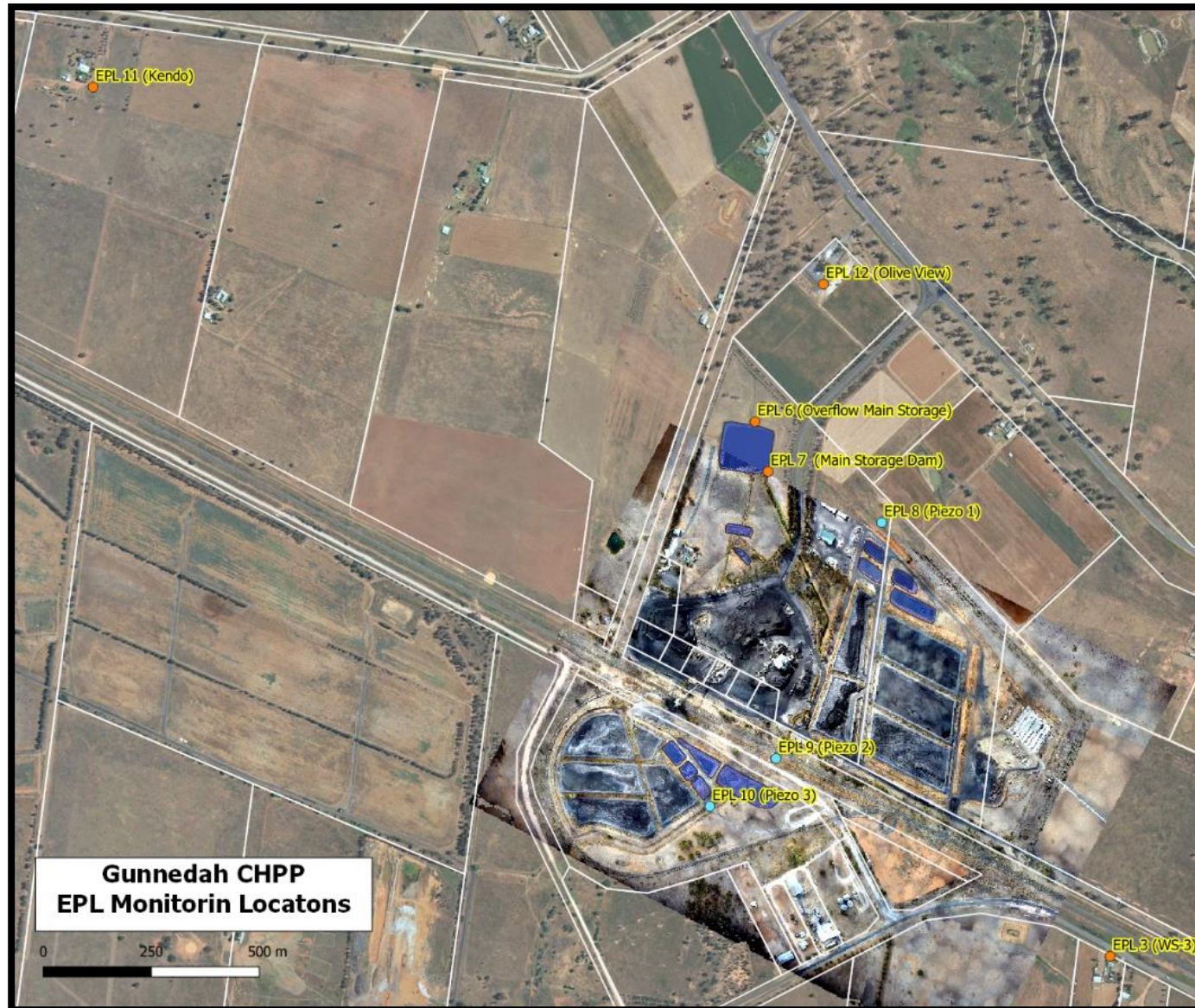
- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than L_{Aeq} 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: April 2019

Obtained Date: 13th May 2019

Publication Date: 20th May 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	18/12/18	08/03/19	-	-	-	0.9
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	06/04/19** One result outstanding	3.6	16.4	15.25	31.5
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	06/04/19** One result outstanding	0.6	22.4	11.85	65.4
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Total Suspended Solids	mg/L		-						
	pH	pH		-						

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
pH	pH	-	-	-						
9	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	
10	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

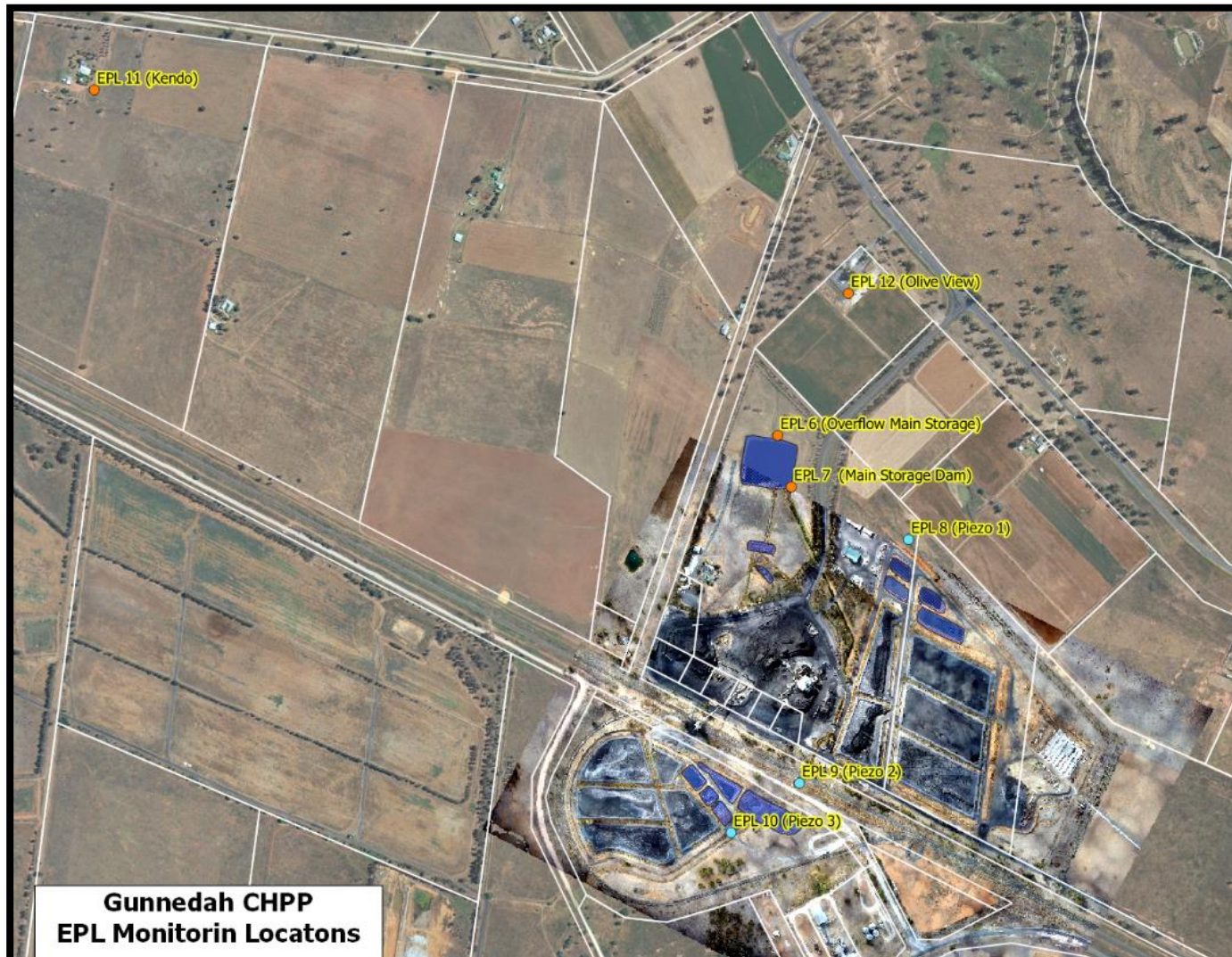
EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1	26/02/2019	13:32	15 min		25	35dBA	1.8 m/s S	Not available at time of publishing	Y
	26/02/2019	18:18	15 min		28	35dBA	1.9 m/s E		
	26/02/2019	22:26	15 min		35	35dBA	2.5 m/s ESE		
	26/02/2019	22:26	1 min	45	48	45dBA	2.5 m/s ESE		

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: May2019

Obtained Date: 05th June 2019

Publication Date: 14th June 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	17/05/19	31/05/19	-	-	-	1.7
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	05/05/2019	15.2	23.3	18	43.1
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	05/05/2019	10.5	15.28	11.8	27.5
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	1	02/05/19	10/05/19				1140
	Oil and Grease	mg/L		1	02/05/19	10/05/19				<5
	Total Organic Carbon	mg/L		1	02/05/19	10/05/19				2
	Total Suspended Solids	mg/L		1	02/05/19	10/05/19				16



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	pH	pH		1	02/05/19	10/05/19				8.03

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
pH	pH	-	-	-						
9	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	
10	Ammonia	mg/L	Quarterly	0			-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	µs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	pH					-	-	-	



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1	26/02/2019					35dBA		Not available at time of publishing	Y
	26/02/2019					35dBA			
	26/02/2019					35dBA			
	26/02/2019					45dBA			

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

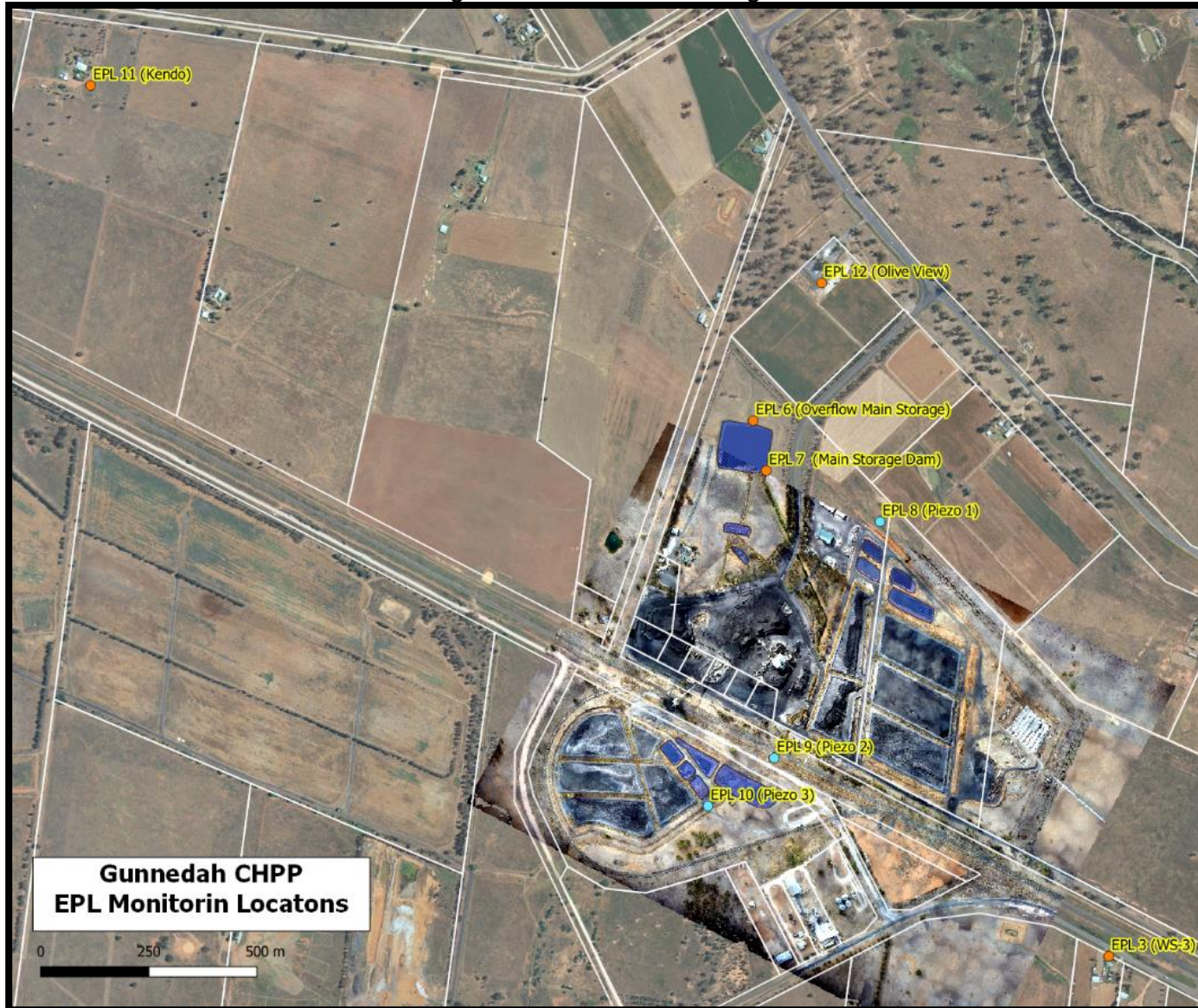
- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: June 2019

Obtained Date: 9th July 2019

Publication Date: 10th July 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	18/06/19	7/07/19	-	-	-	1.2
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	09/07/19	3.7	8.5	8.6	11.5
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	09/07/19	3.9	7.2	7.4	9.6
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	1	12/06/19		-	-	-	<0.01
	Bicarbonate	mg/L					-	-	-	1040
	Calcium	mg/L					-	-	-	46
	Chloride	mg/L					-	-	-	1700
	Conductivity	µs/cm					-	-	-	8100
	Lead	mg/L					-	-	-	0.001
	Magnesium	mg/L					-	-	-	154
	Nitrate	mg/L					-	-	-	1.37
	Potassium	mg/L					-	-	-	22
	Sodium	mg/L					-	-	-	1890
	Standing Water Level	m					-	-	-	8.52
	Sulphate	mg/L					-	-	-	1190
pH	pH	-	-	-	8.4					
9	Ammonia	mg/L		1	12/06/19		-	-	-	0.001
	Bicarbonate	mg/L					-	-	-	818
	Calcium	mg/L					-	-	-	250
	Chloride	mg/L					-	-	-	1190
	Conductivity	µs/cm					-	-	-	5650
	Lead	mg/L					-	-	-	0.001
	Magnesium	mg/L					-	-	-	248
	Nitrate	mg/L					-	-	-	0.76



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	121
	Sodium	mg/L					-	-	-	748
	Standing Water Level	m					-	-	-	2.5
	Sulphate	mg/L					-	-	-	791
	pH	pH					-	-	-	7.6
10	Ammonia	mg/L	Quarterly	1	12/06/19		-	-	-	<0.1
	Bicarbonate	mg/L					-	-	-	501
	Calcium	mg/L					-	-	-	168
	Chloride	mg/L					-	-	-	1480
	Conductivity	µs/cm					-	-	-	5370
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	232
	Nitrate	mg/L					-	-	-	13.3
	Potassium	mg/L					-	-	-	60
	Sodium	mg/L					-	-	-	762
	Standing Water Level	m					-	-	-	2.26
	Sulphate	mg/L					-	-	-	222
	pH	pH					-	-	-	8.0



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				LA1, 1 minute	LAeq, 15 minute				
N1	17/05/19	8:43	15 min		34	35dBA	2.2m/s		N
	17/05/19	19:18	15 min		30	35dBA	2.6m/s		
	17/05/19	22:00	15 min		28	35dBA	1.6m/s		
	17/05/19	22:00	1 min	35		45dBA	1.6m/s		

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations



**Gunnedah CHPP
EPL Monitorin Locatons**



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: July 2019

Obtained Date: 13th August 2019

Publication Date: 19th August 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	19/07/19	1/08/19	-	-	-	0.4
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	13/09/18	4.6	24.1	21.5	62.1
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	13/09/18	2.6	7.4	7.8	11.8
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
pH	pH	-	-	-	-					
9	Ammonia	mg/L		0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-
10	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				LA1, 1 minute	LAeq, 15 minute				
N1	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

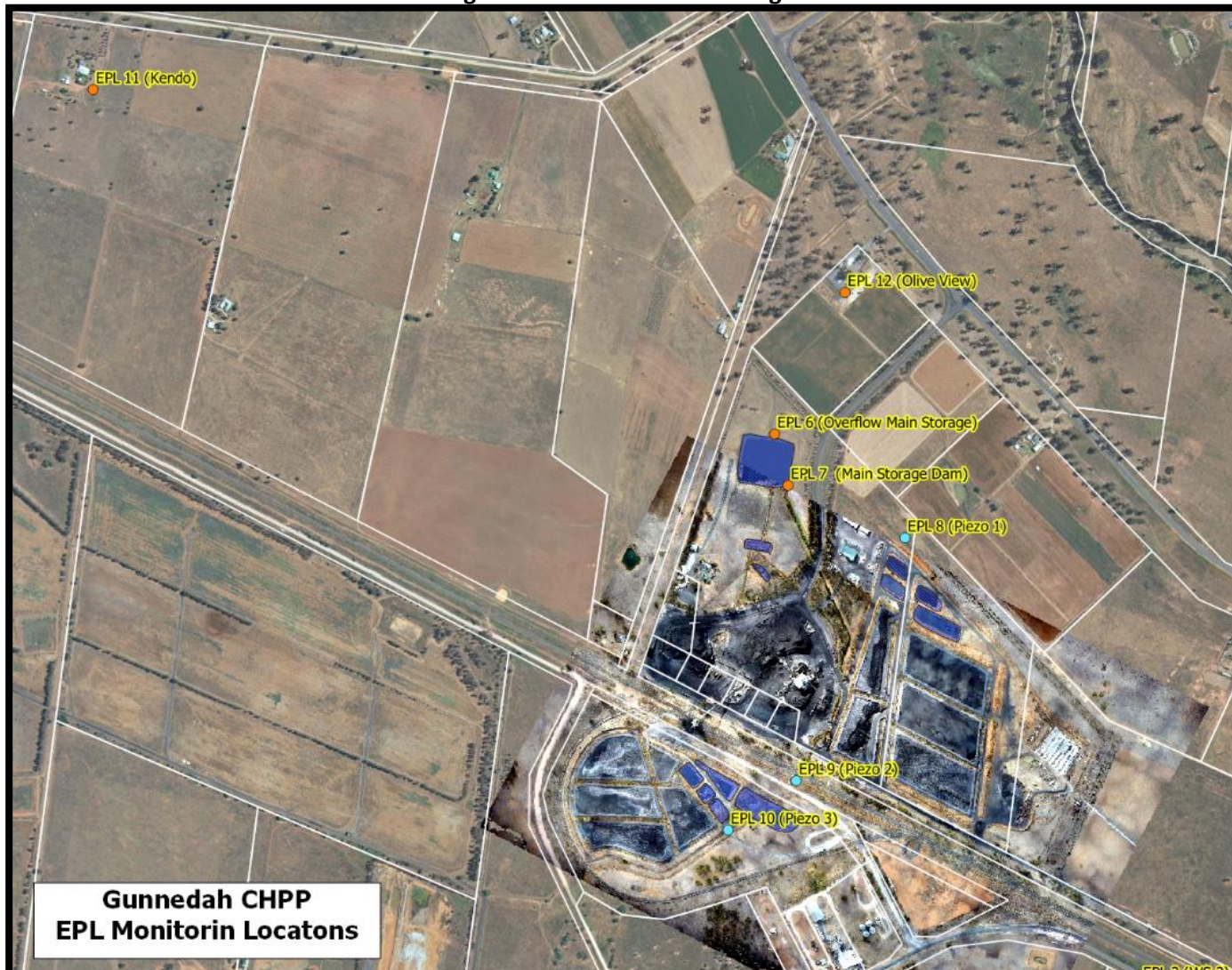
- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: August 2019

Obtained Date: 11th September 2019

Publication Date: 16th September 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	19/08/19	27/08/19	-	-	-	0.1
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	11/09/19	6.7	25.2	32.3	42
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	11/09/19	3	12.1	13.9	22.2
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	1	7/08/19	14/08/19	-	-	-	1860
	Oil and Grease	mg/L		1	7/08/19	14/08/19	-	-	-	<5
	Total Organic Carbon	mg/L		1	7/08/19	14/08/19	-	-	-	3
	Total Suspended Solids	mg/L		1	7/08/19	14/08/19	-	-	-	23
	pH	pH		1	7/08/19	14/08/19	-	-	-	7.5



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	1	29/08/19	5/09/18	-	-	-	<0.01
	Bicarbonate	mg/L					-	-	-	1220
	Calcium	mg/L					-	-	-	50
	Chloride	mg/L					-	-	-	1770
	Conductivity	µs/cm					-	-	-	9420
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	169
	Nitrate	mg/L					-	-	-	0.52
	Potassium	mg/L					-	-	-	24
	Sodium	mg/L					-	-	-	1940
	Standing Water Level	m					-	-	-	8.92
	Sulphate	mg/L					-	-	-	1190
pH	pH	-	-	-	8.1					
9	Ammonia	mg/L	Quarterly	1	29/08/19	5/09/18	-	-	-	<0.01
	Bicarbonate	mg/L					-	-	-	737
	Calcium	mg/L					-	-	-	225
	Chloride	mg/L					-	-	-	1190
	Conductivity	µs/cm					-	-	-	5970
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	244
	Nitrate	mg/L					-	-	-	0.42



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	123
	Sodium	mg/L					-	-	-	711
	Standing Water Level	m					-	-	-	2.59
	Sulphate	mg/L					-	-	-	702
	pH	pH					-	-	-	7.5
10	Ammonia	mg/L	Quarterly	1	29/08/19	5/09/18	-	-	-	0.06
	Bicarbonate	mg/L					-	-	-	533
	Calcium	mg/L					-	-	-	157
	Chloride	mg/L					-	-	-	1450
	Conductivity	µs/cm					-	-	-	5880
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	227
	Nitrate	mg/L					-	-	-	12.3
	Potassium	mg/L					-	-	-	64
	Sodium	mg/L					-	-	-	732
	Standing Water Level	m					-	-	-	2.20
	Sulphate	mg/L					-	-	-	293
	pH	pH					-	-	-	8.0



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

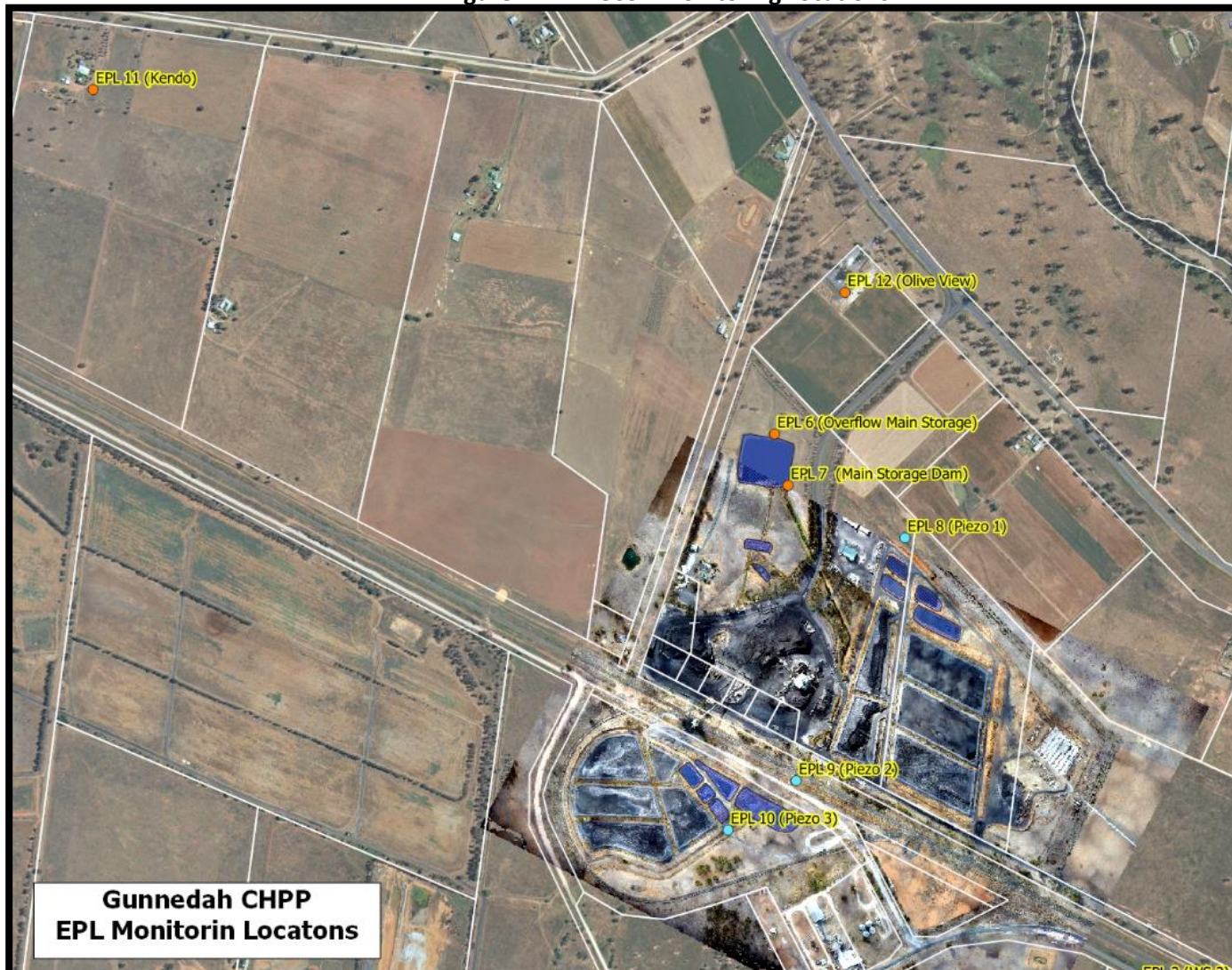
- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than L_{Aeq} 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: September 2019

Obtained Date: 14th October 2019

Publication Date: 14th October 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	19/09/19	9/10/19	-	-	-	0.1
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	14/10/19	13.6	24.8	25.3	39.7
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	14/10/19	12.4	18	15.7	25.7
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	0	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
pH	pH	-	-	-	-					
9	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-
10	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1	3/09/19	13:58	15 mins	-	NM	35dBA	2.2	Not measurable	No
	3/09/19	20:44	15 mins	-	25	35dBA	0.5	-	
	3/09/19	22:00	15 mins	-	25	35dBA	0.9	-	
	3/09/19	22:00	1 min	35	-	45dBA	0.9	-	

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable (NM) indicates that some site noise was audible, but indeterminate due to one of the following reasons:

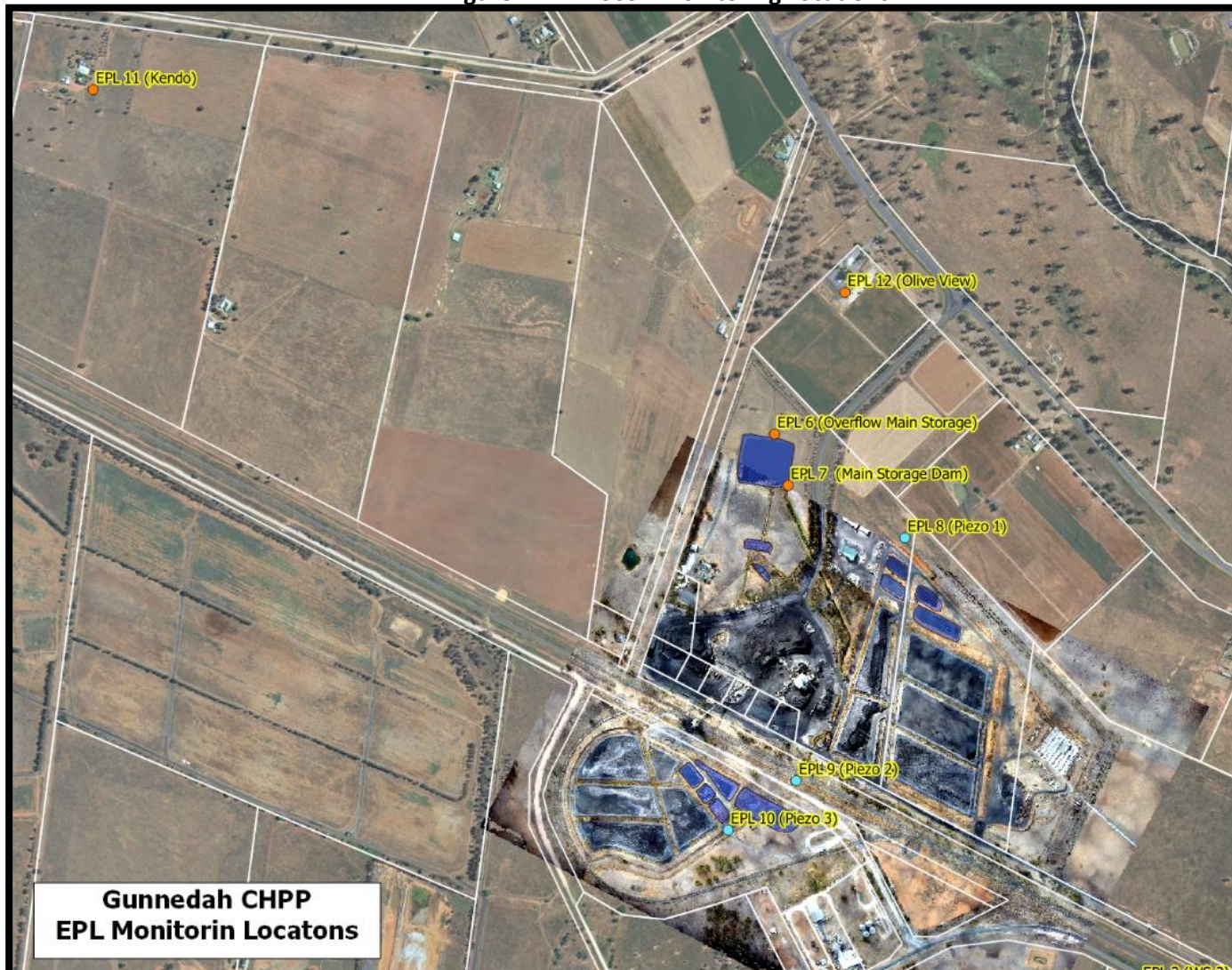
- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: October 2019

Obtained Date: 11th November 2019

Publication Date: 18th November 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	21/10/19	29/10/19	-	-	-	0.3
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	07/11/19	18.4	51.3	54.2	98.6
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	07/11/19	12.8	41.6	37.2	59.1
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	0	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
pH	pH	-	-	-	-					
9	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-
10	Ammonia	mg/L	Quarterly	0	-	-	-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				LA1, 1 minute	LAeq, 15 minute				
N1									

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable (NM) indicates that some site noise was audible, but indeterminate due to one of the following reasons:

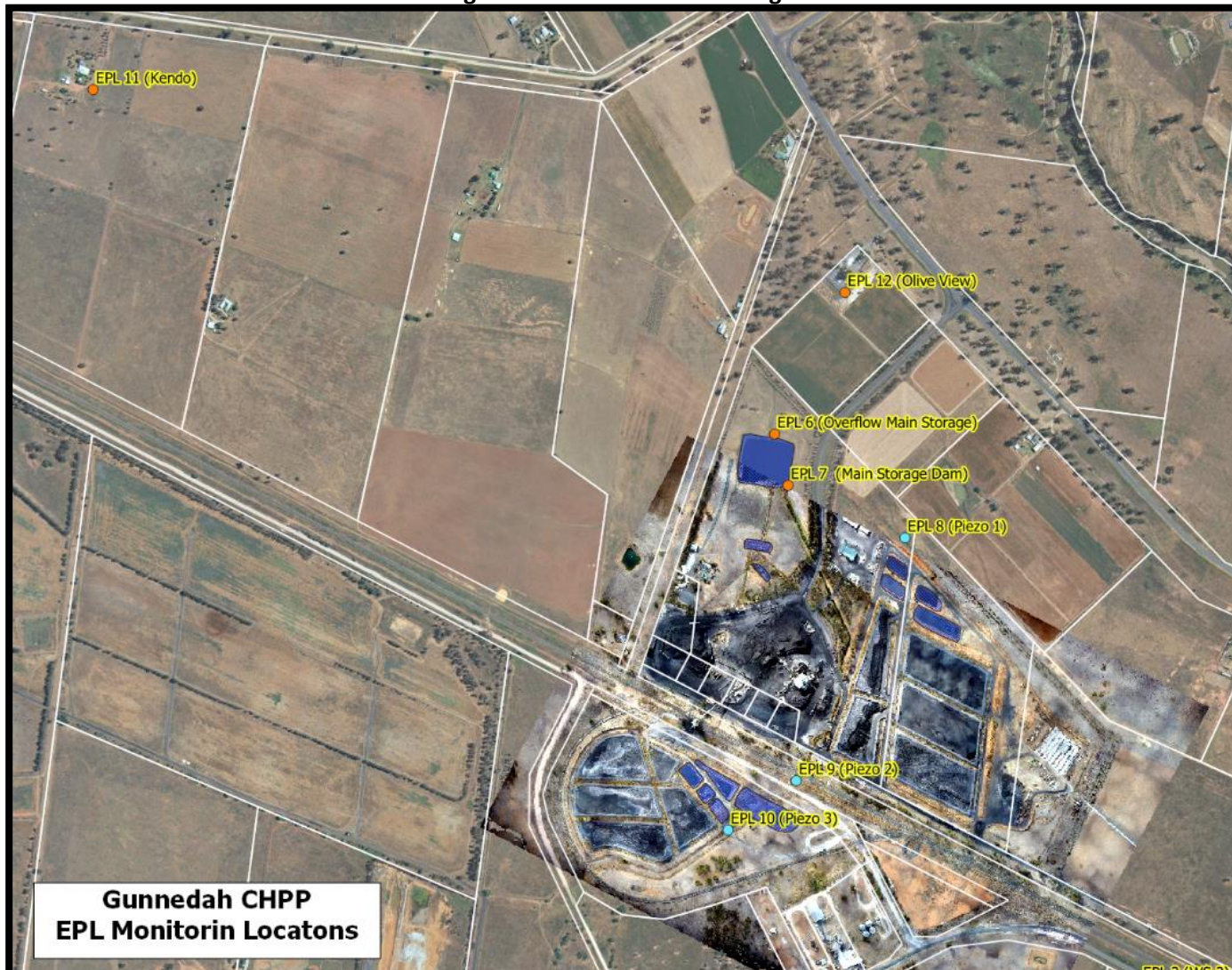
- *site noise levels were insignificant and unlikely, in many cases, to be even noticed; or*
- *site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.*



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: November 2019

Obtained Date: 12th December 2019

Publication Date: 18th December 2019

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	20/11/19	27/11/19	-	-	-	0.8
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	12/12/2019	5.6	62.1	36.6	142
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	12/12/2019	8.6	59.6	26.1	147
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	1	12/11/19	20/11/19	-	-	-	1060
	Oil and Grease	mg/L			12/11/19	20/11/19	-	-	-	<5
	Total Organic Carbon	mg/L			12/11/19	20/11/19	-	-	-	3
	Total Suspended Solids	mg/L			12/11/19	20/11/19	-	-	-	53
	pH	pH			12/11/19	20/11/19	-	-	-	8.39



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	0			-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
pH	pH	-	-	-	-					
9	Ammonia	mg/L	Quarterly	0			-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-
10	Ammonia	mg/L	Quarterly	0			-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	µs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	pH					-	-	-	-



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

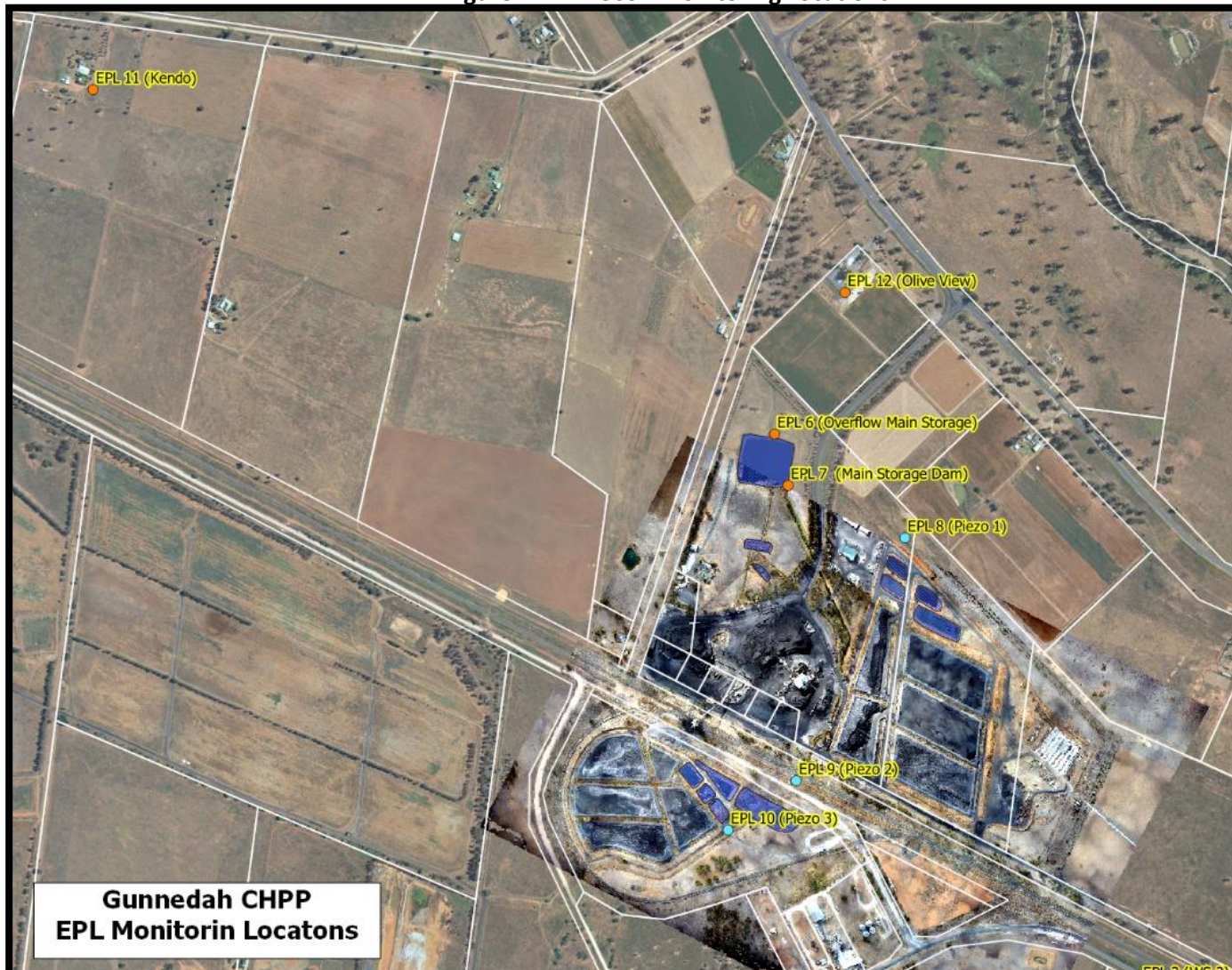
EPL ID	Date	Start Time	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
				L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1									

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable (NM) indicates that some site noise was audible, but indeterminate due to one of the following reasons:

- site noise levels were insignificant and unlikely, in many cases, to be even noticed; or
- site noise levels were masked by another relatively loud noise source, but were estimated to be less than L_{Aeq} 30 dB, which is insignificant in terms of any applicable criterion.

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: December 2019

Obtained Date: 13th January 2019

Publication Date: 13th January 2020

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m ² /month	Continuous	1	19/12/19	31/12/19	-	-	-	0.9
11	PM ₁₀	µg/m ³	Every 6 days	5	Various	10/01/20	33.2	89.6	88.9	175
12	PM ₁₀	µg/m ³	Every 6 days	5	Various	10/01/20	34.4	84.22	88.9	144
6	Conductivity	ms/cm	Each overflow event	-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
7	Conductivity	ms/cm	Quarterly	0	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
	Total Organic Carbon	mg/L		-	-	-	-	-	-	-
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-



WHITEHAVEN COAL

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
8	Ammonia	mg/L	Quarterly	1	3/12/19	11/12/19	-	-	-	0.04
	Bicarbonate	mg/L					-	-	-	1350
	Calcium	mg/L					-	-	-	48
	Chloride	mg/L					-	-	-	1820
	Conductivity	µs/cm					-	-	-	9520
	Lead	mg/L					-	-	-	0.002
	Magnesium	mg/L					-	-	-	182
	Nitrate	mg/L					-	-	-	0.31
	Potassium	mg/L					-	-	-	30
	Sodium	mg/L					-	-	-	2020
	Standing Water Level	m					-	-	-	8.72
	Sulphate	mg/L					-	-	-	1470
pH	pH	-	-	-	7.8					
9	Ammonia	mg/L	Quarterly	1	3/12/19	11/12/19	-	-	-	0.01
	Bicarbonate	mg/L					-	-	-	800
	Calcium	mg/L					-	-	-	214
	Chloride	mg/L					-	-	-	1130
	Conductivity	µs/cm					-	-	-	5840
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	245
	Nitrate	mg/L					-	-	-	0.38



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	133
	Sodium	mg/L					-	-	-	746
	Standing Water Level	m					-	-	-	2.92
	Sulphate	mg/L					-	-	-	794
	pH	pH					-	-	-	7.5
10	Ammonia	mg/L	Quarterly	1	3/12/19	11/12/19	-	-	-	6.39
	Bicarbonate	mg/L					-	-	-	693
	Calcium	mg/L					-	-	-	171
	Chloride	mg/L					-	-	-	1360
	Conductivity	µs/cm					-	-	-	5730
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	226
	Nitrate	mg/L					-	-	-	<0.01
	Potassium	mg/L					-	-	-	64
	Sodium	mg/L					-	-	-	763
	Standing Water Level	m					-	-	-	2.44
	Sulphate	mg/L					-	-	-	246
	pH	pH					-	-	-	7.8



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Measurement Period	Measured levels – CHPP – dB(A)		Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-compliance /breach
			L _{A1} , 1 minute	L _{Aeq} , 15 minute				
N1	25/11/19	15 mins	-	I/A	35dBA	5.5 m/s WSW	-	N
	25/11/19	15 mins	-	N/M	35dBA	1.5 m/s E	Dozer Operation barely audible	
	25/11/19	15 mins	-	25	35dBA	1 m/s ESE	-	
	25/11/19	1 min	28	-	45dBA	1 m/s ESE	-	

When site noise is noted as inaudible (I/A), no site noise was audible at the monitoring location. Not Measurable (NM) indicates that some site noise was audible, but indeterminate due to one of the following reasons:

- site noise levels were insignificant and unlikely, in many cases, to be even noticed; or
- site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations

