



## **WERRIS CREEK COAL PTY LTD**

### **ENVIRONMENTAL MONITORING**

### **QUARTERLY REPORT**

**October, November, December 2008**

This report covering the period 1<sup>st</sup> October 2008 to 31<sup>st</sup> December 2008 is the second quarterly Environmental Monitoring Report for the 2008/9 Annual Environmental Management Report (AEMR) reporting period (1 April 2008 to 31 March 2009).

The report includes environmental monitoring results for the on-site Weather Station, Air Quality, Noise (operational and blasting), Surface and Ground Water together with complaints received and general detail covering site environmental matters.

**Note:** Monitoring results with any non compliance of monitoring criteria are highlighted in **yellow**.

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## **1.0 WEATHER STATION**

### **WEATHER**

Werris Creek Coals (WCC) on site weather station experienced significant data loss over the period and this was directly due to faulty hardware. WCC have since rectified this fault by upgrading the weather station with new hardware and software in early January 2009.

Weather data was available for 87% of October.

Weather data was available for 98% of November.

Weather data was unavailable for the month of December due to the above mentioned fault. This is recorded as a non conformance with licence requirements.

## **2.0 AIR QUALITY**

### **2.1 HVAS (PM10) Monitoring**

High Volume Air Sample (HVAS) monitoring for particulate matter less than 10 micron in size (PM10) is conducted at four sites listed below.

WCHV1 – “Old Colliery” or Marquettes

WCHV2 – Pattersons

WCHV3 – “Railway View” or Ryans

WCHV4 – “Eurunderee”

In addition a fifth site WCHV5 at “Railway View” continues to sample total suspended particulate (TSP) matter to monitor the PM10/TSP relationship on a voluntary basis to assist with government departmental air quality data collection and correlation.

Sample data is scheduled for 24 hours every 6 days in accordance with DECC – EPA protocols and results are reported as micro grams per cubic metre of air sampled or ug/m<sup>3</sup>.

#### **2.1.1 Monitoring Data Results**

Please see PM10 High Volume Air Sampler monitoring data under Appendix 1

#### **2.1.2 Discussion - Compliance / Non Compliance**

All individual PM10 24 hour average results, at all sites, were equal to or below the short term 24 hour impact criteria of 50ug/m<sup>3</sup>.

All PM10 sites are below the long term impact and land acquisition annual impact criteria of 30ug/m<sup>3</sup>.

The TSP site is below the long term impact and land acquisition annual impact criteria of 90ug/m<sup>3</sup>.

## **2.2 DEPOSITED DUST**

Limits were removed from Environment Protection Licence 12290 pertaining to mean annual dust deposition, however, in accordance with commitments within the approved Air Quality Monitoring Programme, monthly routine air quality monitoring for Werris Creek Coal continues to be undertaken for deposited dust.

## 2.2.1 Monitoring Data Results

TABLE 1

Sample Num	Sample Location	Sample Date	Sampler	Ash g/m <sup>2</sup> /m <sup>th</sup>	NO SAMPLE: (d)	Time: (d)	Total Insoluble Matter g/m <sup>2</sup> /m <sup>th</sup>	Volume Collected m Ls
31771.01	WC1 - Escott	04-Nov-08	Client	0.1		1555	0.2	1900
31771.02	WC2 - Cintra	04-Nov-08	Client	0.7		1545	1.3	2275
31771.03	WC3 - The Colliery	04-Nov-08	Client	1.8		1530	9.6	2490
31771.04	WC4 - Hillview	04-Nov-08	Client		No sample	Not recorded		
31771.05	WC5 - Railway View	04-Nov-08	Client	0.7		1515	1.1	2405
31771.06	WC6 - Sth Boundary	04-Nov-08	Client	5.5		1445	7.8	2235
31771.07	WC7 - Patterson	04-Nov-08	Client	0.9		Not recorded	1.3	1880
31771.08	WC8 - Quirindi Rd	04-Nov-08	Client	1.1		1500	1.6	1845
32019.01	WC1 - Escott	28-Nov-08	Client	0.6		1440	0.8	2405
32019.02	WC2 - Cintra	28-Nov-08	Client	0.5		1430	1.0	2455
32019.03	WC3 - The Colliery	28-Nov-08	Client	1.9		1400	6.3	2360
32019.04	WC4 - Hillview	28-Nov-08	Client	0.7		1420	1.0	2795
32019.05	WC5 - Railway View	28-Nov-08	Client	0.7		1355	1.0	2205
32019.06	WC6 - Sth Boundary	28-Nov-08	Client	4.5		1430	6.6	2025
32019.07	WC7 - Patterson	28-Nov-08	Client	0.7		1410	1.0	2410
32019.08	WC8 - Quirindi Rd	28-Nov-08	Client	1.6		1350	2.1	1620
32514.01	WC1 - Escott	05-Jan-09	Client	0.4		1230	0.5	1790
32514.02	WC2 - Cintra	05-Jan-09	Client	1.0		1315	2.4	1765
32514.03	WC3 - The Colliery	05-Jan-09	Client	1.0		1200	1.7	1965
32514.04	WC4 - Hillview	05-Jan-09	Client	0.7		1305	0.9	1875
32514.05	WC5 - Railway View	05-Jan-09	Client	0.7		1135	1.0	2035
32514.06	WC6 - Sth Boundary	05-Jan-09	Client	3.1		1100	5.0	2055
32514.07	WC7 - Patterson	05-Jan-09	Client	0.6		1250	0.9	1475
32514.08	WC8 - Quirindi Rd	05-Jan-09	Client	1.6		1120	2.0	2290

Elevated results recorded at the South Boundary monitor from samples taken on the 4<sup>th</sup> and 28<sup>th</sup> of November.

## 2.3 AIR QUALITY COMPLAINTS

No complaints received regarding excessive dust for the period.

## 3.0 NOISE

Noise Monitoring is conducted by Spectrum Acoustics at the following locations:

R2: **Zeolite**, R3: **Cinta**, R4: **Old Colliery** (mine owned residence), R5: **Mountain View**, R6: **Hillview** (mine owned residence) R7: **Railway View** (mine owned residence), R8: **Hazeldene**, and R10: **Escott**. Three sets of measurements are made over the "circuit", one during the day time period, (before 6pm), one during the evening period (from 6pm – 10pm) and one at night (after 10pm).

The noise emission criterion for WCC is 35dB(A) unless otherwise subject to a current, legally binding agreement between WCC and the occupant of the affected residential property.

Hillview, Railway View and Old Colliery (Marquett) are mine owned residences and as such monitoring results above 35dB(A) are not recorded as non-compliances.

WCC environmental licence conditions indicate that compliance with noise emission criteria is not applicable under atmospheric conditions where wind speeds are higher than 3m/s and/or there is temperature inversion of greater than +3 degreesC/100m.

### **3.1 OPERATIONAL NOISE**

#### **3.1.1 Monitoring Data Results**

Please see noise monitoring data under Appendix 2

#### **3.1.2 Discussion - Compliance / Non Compliance**

There were no noise exceedances recorded for the period.

Any elevated levels represented in the results are not recorded exceedances and this is directly due to one or a combination of the factors listed below.

- Temperature inversion of greater than +3 degreesC/100m.
- Wind speeds greater than 3m/s.
- Old Colliery, Railway View and Hillview are mine owned properties.
- A private agreement with the landholder.

#### **3.1.3 Action Taken**

No actions necessary regarding routine noise monitoring.

There were ongoing complaints received from Mr Noel Taylor of the Park Hill property located to the south of the mine throughout November and December. Additional monitoring was undertaken through this period to determine the levels of noise being received at the Park Hill residence and all monitoring returned values under the licence limits of 35dB(A),Leq. Ongoing discussions between WCC and the Taylors peaked towards the end of December with a meeting between Whitehaven senior staff and the Taylors where by a resolution was reached. Since this time no additional complaints have been received.

### 3.2 NOISE COMPLAINTS

Six complaints were received regarding noise.

### 4.0 BLAST

During this reporting period a total of 19 blasts numbered ORICA 127 to ORICA 146 were fired.

#### 4.1 BLAST MONITORING

##### 4.1.1 Monitoring Data Results

TABLE 2

Shot number	Shot ID	Date fired	Time Fired	Environmental Monitor Results							
				Glenala		Railway View		Old Colliery		Escott Road	
				Vib (mm/s)	OP (dB)	Vib (mm/s)	OP (dB)	Vib (mm/s)	OP (dB)	Vib (mm/s)	OP (dB)
127	S8_678_355B	3/10/2008	1.02	-	-	0.66	105	-	-		
128	S9_12_385	9/10/2008	1.18	-	-	-	-	1.55	113	0.36	106
129	S7_78_Frider	16/10/2008	1.08	-	-	1.1	111	0.35	106	0.08	101
130	S7_56_Frider	23/10/2008	1pm	-	-	0.33	102	0.38	101	-	
131	S9_56_412	22/10/2008	11am	-	-	0.83	114	0.33	104		
132	S8_910_C seam	29/10/2008	1.19	-	-	2.17	113	2.31	112	-	
133	S9_34_385	31/10/2008	1.07	-	-	1.57	113	1.15	113	-	
134	S7_4_frider	5/11/2008	1.02	-	-	0.77	110	0.97	106		
135	S7_3_320	6/12/2008	1.04	-		1.1	111	1.62	107	1.7	108

136	S8_1011_355	12/11/2008	1.09	-	-	1.57	114	0.6	110	-	
137	S9_56_400	14/11/2008	1.07	-	-	3.41	110	1.65	87	-	
138	s8_3_Deseam	18/11/2008	1.22	-	-	0.95	114	1.14	112	-	
139	F7_910_Fseam	25/11/2008	1.06	-	-	1.12	110	0.4	102	-	-
140	S7_8_320	26/11/2008	1.02	-	-	1.42	106	1.27	111	-	-
141	S9_12_370	4/12/2008	1.22	-	-	1.59	115	0.7	110	-	-
142	S9_34_370	10/12/2008	1.08	1.07	113.5	1.27	115	0.4	105	-	-
143	S9_7_400	12/12/2008	10.37	-	-	0.4	113	1.17	114	-	-
144	S7_2_326	16/12/2008	1.11	-	-	0.85	114	0.28	103	-	-
145	S9_810_400	19/12/2008	2.10	-	-	1.07	114	1.06	112	-	-

#### **4.1.2 Discussion - Compliance / Non Compliance**

All blasts complied with licence limits. Columns with no value represent monitors which did not trigger a reading at that site for the given blast.

#### **4.1.3 Action Taken**

No Actions necessary.

#### **4.2 BLAST COMPLAINTS**

No complaints received regarding blasting.

### **5.0 WATER**

Surface and groundwater monitoring was undertaken in October 2008 by Ecowise Environmental.

## **4.1 GROUND WATER**

### **4.1.1 Monitoring Data Results**

See Appendix 3 - Groundwater Monitoring results.

### **4.1.2 Discussion - Compliance / Non Compliance**

No recorded exceedances.

## **4.2 SURFACE WATER**

### **4.2.1 Monitoring Data Results**

See Appendix 4 – Surface water monitoring results.

See Appendix 5 – Wet weather discharge monitoring results.

### **4.2.2 Discussion - Compliance / Non Compliance**

Ground water and routine surface water monitoring undertaken by Ecowise Environmental returned typical water quality results for the period.

Three wet weather discharges were recorded for the period which were a consequence of the heavy rainfall experienced during November and early December in 2008. The discharges occurred on the 21<sup>st</sup> and 28<sup>th</sup> of November and a third discharge on the 13<sup>th</sup> December. Surface waters discharged from Sediment Basins SB2 and SB9 located on the southern and mid western sides of the mine lease respectively. Licence limits at Werris Creek Coal state that Total Suspended Solids cannot exceed 50ppm. There were three exceedances of this criterion.

#### Discharge 21<sup>st</sup> November

- Small discharge from SB9 only.
- Discharge contained to project related property Eurunderee.
- Analysis of discharged water within licence limits.

#### Discharge 28<sup>th</sup> November

- Heavy rain experienced (189.4mm of rain recorded on site for the month) discharge from SB9 and SB2.
- Exceedance recorded from sample taken at SB9, Total Suspended Solids of 69ppm.
- Sample taken from SB2 within licence limits.

#### Discharge 13<sup>th</sup> December

- Heavy rainfall experienced, (58.8mm recorded at the Quirindi Bureau of Meteorology Station on the 13<sup>th</sup> December 08) discharge from SB9 and SB2.
- Exceedance recorded from sample taken at SB9, Total Suspended Solids of 68ppm.
- Exceedance recorded from sample taken at SB2, Total Suspended Solids of 154ppm.

Although three exceedances of the licence limits occurred during the above noted discharges, the DECC have stated through correspondence with the site Environmental Officer that, at this stage no action will be taken.

This is due to a new condition to be issued to Werris Creek Coals Environmental licence which disengages the Total Suspended Solids limit for EPA points 10, 12 & 14 (SB2, SB9 and SB10) where more than 39.2mm is received over any consecutive 5 day period immediately prior to a discharge occurring.

A controlled discharge was also undertaken on the 10<sup>th</sup> of November from SB2. Retained waters captured in SB2 were analyzed and were within licence limits for all parameters. The DECC and neighboring properties to the south of the mine were notified and stored water was slowly discharged off site using a volume pump until approximately 70% of SB2 had been removed. Neighboring properties to the south were pleased to receive the additional water and it was used for stock watering and irrigation.

## 6.0 COMPLAINTS SUMMARY

6 Complaints were received during this period.

TABLE 3

Telephone Call to office received by Lisa Single	Mr. Noel Taylor "Park Hill"	No 36 05/10/2008 10.00am	Noise complaint. Dump trucks revving engines and changing gears on Tuesday night.	L. Cini called Taylors to discuss complaint, no answer left two messages. Mr Taylor returned phone call on Thursday 6th. LC explained environmental conditions on Tuesday night may have intensified noise at the Taylors property.  Advice sent to MME explaining nature of complaint and to ensure night shift crews are advised of potential effects excessive revving of engines has on neighbouring properties. MME asked to toolbox issue with crews.	Lynden Cini advised Les Latchem MME – toolbox meeting undertaken.
Message left on complaints line	Mr. Noel Taylor "Park Hill"	No 37 27/11/2008 10.00am	Noise Compliant. Noise between 7.30pm to aprox 3.00am over the last night had disturbed the Taylor's.	P. Easey to speak with Mr. Taylor today and offer additional monitoring on his property.	
Message left on complaints line	Mr. Noel Taylor "Park Hill"	No 38 02/12/2008 9.30am	Noise Compliant. Noise between 7.30pm to aprox 3.00am over the last night had disturbed the Taylor's. Dump trucks revving engines and changing gears.	L.Cini spoke to Mr Taylor on the phone 2 <sup>nd</sup> December to determine details of complaint. L.Cini and P. Easey visited Mr Taylor at his home that afternoon. Additional monitoring on the Taylors property was again offered, Mr Taylor was concerned that when monitoring occurs there is no noise. L.Cini explained that WCC has no control over when monitoring occurs so that data taken cannot be influenced by WCC. WCC agreed to look into hiring an unattended noise monitor to set up at Park Hill for an extended period however, WCC were dubious as to the accuracy of such an endeavour.	L. Cini spoke to WCC acoustic consultant and determined that an unattended noise logger will not give accurate results unless it is operated by a professional. It was also noted that data obtained from the "Mountain View" residence (located to the south and closer to the mine than "Park Hill") has only exceeded once in the 3+ year history of monitoring at WCC. The exceedance was of 1dB. Further negotiations will continue between WCC and the Taylors until a resolution has been reached.
Message left on complaints line	Mr. Noel Taylor "Park Hill"	No 39 04/12/2008 10.00am	Noise Compliant. Noise between 9.00pm to aprox 3.00am over the last night had disturbed the Taylor's.	L.Cini phoned the Taylor residence to discuss. Mr Taylor requested he would like to meet with the GM Mr Casper Deiben. L.Cini has arranged a meeting on the 15 <sup>th</sup> December between the Taylors, Casper Dieben, Danny Young and Peter Easy.  L.Cini discussed complaint in detail with Mick Post new projects manager and was shown where all work of the night in question was undertaken. During the shift on the night of the 4 <sup>th</sup> all dumping was within the confines of the pit.	

Message left on complaints line	Mr. Noel Taylor "Park Hill"	No 40 11/12/2008 3.00am	Noise Compliant. Noise between 2.00am to aprox 3.00am over the last night had disturbed the Taylor's.	No action taken pending outcome of the meeting set for Monday the 15th between the Taylors and senior Whitehaven staff. Additional monitoring to be undertaken today by acoustic consultant on Park Hill.	Noise monitoring at Park Hill was again within licence limits.
Telephone Message left on complaints line	Mr. Noel Taylor "Park Hill"	No 41 17/12/08 7.00am	Noise Compliant. Noise at 1.00am over the last night had disturbed the Taylor's.	Following a meeting held at the Taylors residence on Monday the 15th December between the Taylors and senior Whitehaven staff, additional noise monitoring had been undertaken. Mr Taylor seemed pleased to continue monitoring on his property and had also said he would continue to advise WCC every time he felt noise was excessive. Results of noise monitoring on Monday the 15 <sup>th</sup> are pending.	

## 7.0 GENERAL

Please feel free to ask any questions in relation to the information contained within this document during item 7 of the meeting agenda.

Sincerely

Lynden Cini