



WHITEHAVEN COAL

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15th August 2014

Mr Robert O'Hern
Head – Regional Operations Unit – North West
Environmental Protection Authority
PO BOX 494
ARMIDALE, NSW 2350

Dear Mr O'Hern

Submission of Pollution Reduction Program U1 & U2 Reports

In accordance with Conditions U1 and U2 of Environment Protection Licence 12870, Whitehaven Coal Mining (WCM) has attached a report prepared by Pacific Environment Limited "Rocglen Coal Mine PRP U1: Monitoring Results – Wheel Generated Dust" dated 7th August 2014 and enclosed with this letter "Rocglen Letter Report on Disturbing and Handling Overburden under Adverse Weather".

Should you have any queries in relation to this matter, please do not hesitate to contact Jill Johnson, Group Environment Manager, on 02 6741 9321 or by email at jjohnson@whitehavencoal.com.au.

Yours sincerely,

Whitehaven Coal Mining Ltd

A handwritten signature in black ink, appearing to read "Jake Hodgkins".

Jake Hodgkins
Environmental Officer

Ref: JH00214



15th August 2014

Mr Robert O'Hern
Head – Regional Operations Unit – North West
Environmental Protection Authority
PO BOX 494
ARMIDALE, NSW 2350

Dear Mr O'Hern

Whitehaven Coal Mining - Rocglen Letter Report on Disturbing and Handling Overburden under Adverse Weather

Whitehaven Coal Mining's (WCM) Environment Protection Licence (EPL) 12870 for Rocglen Coal Mine includes the following Condition U2 Particulate Matter Control Best Practice Implementation – Disturbing and Handling Overburden under Adverse Weather Conditions:

- U2.1 The licensee must alter or cease the use of equipment on overburden and the loading and dumping of overburden during adverse weather conditions to minimise the generation of particulate matter from 22 March 2013.
- U2.2 To assess compliance with Condition U2.1, the Licensee must:
 - undertake daily visual dust level assessments, continuously record real-time PM₁₀ levels and continuously measure and record real-time meteorological conditions; and
 - record changes to mining activities due to adverse weather conditions.
- U2.3 The Licensee must submit a report to the EPA which documents the results of the actions taken in accordance with Condition U2.1. The report must include an assessment of the effectiveness of changes made to mining activities due to adverse weather and document meteorological conditions and the resultant dust levels. The report must be submitted by the Licensee to the Environment Protection Authority Regional Manager Armidale, at PO Box 494, ARMIDALE by 15 August 2014.
- U2.4 The report required by Condition U2.3 must be made publicly available by the Licensee on the Licensee's website by (two weeks from submission date in 2.3 above).

The following letter report has been prepared to satisfy the EPL 12870 Condition U2 by reporting the results completed by WCM for the Rocglen Coal Mine (RCM).

1 INTRODUCTION

WCM engaged Pacific Environment Limited to prepare a report "Rocglen PRP – Identification of Adverse Weather Conditions for Overburden Handling" dated 20th January 2014 (**Appendix A**). The report identified the wind conditions that would generate excessive dust at the mine boundary from seven mining locations, two representing the Northern out of pit dump, three representing Northern in pit dumping locations, and two representing the Western out of pit dump. The trigger for investigative level action to be taken was determined to be 6m/s, and the trigger for action to prevent excessive dust generation was defined at 8m/s.

Using this information for quantifying adverse weather, WCM developed a trigger action response plan (TARP) for overburden handling during mining operations, included in **Appendix B**. This TARP was developed to form a part of the visual dust level assessments undertaken in accordance with Condition U2.2 of the EPL 12870.

The real time data as measured by the Rocglen meteorological station (EPL ID# W1) is monitored by the Rocglen OCEs, and Environmental Officer. The OCE on duty or the Environmental Officer initiates the TARP in the event that wind speeds at or above the wind speed triggers determined for the site are sustained for six consecutive 5 minute periods. It is determined whether operations within the pit are generating excessive dust and what action



is required, depending on the level of existing dust control and generation, the mining location and the prevailing wind conditions.

2 RESULTS

From 1st January 2014 to 31st July 2014, WCM documented daily visual dust level assessment, a daily summary of results from the real time air quality monitor and any SMS alerts triggered at the monitor (EPL ID# 17), and if any changes to mining activities were undertaken.

The below table summarises the information documented for the 30 occasions that the adverse weather was recorded by the site weather station, requiring actions to be taken to manage overburden dust. The wind speed and direction listed in the table below was the average for the 15 minutes prior to the time of the adverse weather. The PM₁₀ dust levels listed in the table below were calculated based on the 24 hour average prior to and following the time of the adverse weather event.

Date	Time	Production Actions Taken to Adverse Weather	Wind		Particulate Matter <10µm (PM ₁₀ - µg/m ³)		
			Direction °	Speed m/s	RCM potential source	PM ₁₀ 24 hour average prior to event	PM ₁₀ 24 hour average following event
03/01/14	13:00	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	317	8.2	No	33.7	34.5
07/01/14	18:30	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	156	9.4	No	30.6	35.3
08/01/14	17:30	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	63	8.4	No	29.3	29.8
19/01/14	17.45	Not operating	227	8.0	No	17.6	23.0
20/01/14	23:00	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	181	9.3	No	26.6	28.9
22/01/14	04:00	Not operating	184	8.0	No	22.1	23.4
22/01/14	15:45	Water cart directed to scraper road. Continue monitoring situation.	171	9.4	No	25.9	28.3
25/01/14	21:45	Not operating	132	9.1	No	10	10.7
26/01/14	03:00	Not operating	93	9.5	No	12.1	12.3
26/01/14	18:30	Not operating	173	8.8	No	13	13.1
27/01/14	21:00	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	72	8.4	No	12.1	11.6
03/02/14	01:00	Not operating	77	8.1	No	20.6	20.5
04/02/14	17:00	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	171	8.5	No	27.1	28.7
10/02/14	21:30	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	120	9.6	No	27.8	28.4
12/02/14	23:15	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	88	8.9	No	30.2	31.5
16/02/14	16:30	Not operating	181	12.4	No	35	37.4
16/02/14	19:45	Not operating	72	9.3	No	34.3	33.2
23/02/14	22:00	Not operating	88	8.3	No	16.9	13.2
25/02/14	00:15	Actions to minimise dust already in place. Continue monitoring	179	8.5	No	8.3	8.8



Date	Time	Production Actions Taken to Adverse Weather	Wind		Particulate Matter <10µm (PM ₁₀ - µg/m ³)		
			Direction °	Speed m/s	RCM potential source	PM ₁₀ 24 hour average prior to event	PM ₁₀ 24 hour average following event
		effectiveness of actions.					
02/03/14	16:00	Not operating	172	8.7	No	5.6	5.3
03/03/14	18:45	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	74	8.5	No	5.4	5.7
04/03/14	04:15	Not operating	343	8.6	No	5.4	5.5
16/03/14	12:15	Not operating	93	9.3	No	16.2	18.2
20/03/14	19:30	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	13	9.0	Yes	10.7	10.2
23/03/14	14:45	Not operating	179	8.3	No	8.1	8.4
23/03/14	17:15	Not operating	86	8.8	No	9.6	10.0
23/03/14	21:45	Not operating	76	10.1	No	8.1	8.0
07/04/14	18:30	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	121	9.8	No	8.3	8
27/05/14	11:45	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	335	8.2	Yes	17.3	18.4
10/06/14	18:15	Actions to minimise dust already in place. Continue monitoring effectiveness of actions.	127	9	No	9.9	9.6

It should be noted that the RCM is north of the real time dust monitor, located at the closest private residence to RCM, therefore the source to receiver direction for dust emissions is between 320° and 40°. Two of the adverse weather triggers during the period were of a wind direction that could affect the closest private residence, with one further incidence of adverse weather of wind direction within this range, however outside of the operating hours of the RCM. It should be further noted that actions already in place to minimise dust included in pit handling and dumping of overburden, with machinery pulled up when dust generation is unable to be minimised. This occurs independently of adverse weather conditions.

3 ASSESSMENT OF EFFECTIVENESS AND CONCLUSION

A review of the pre and post (resultant) dust levels to adverse weather alerts did not identify any air quality impacts at the receiver location prior to or after any actions were undertaken by WCM. All measured PM₁₀ levels where operations may have had an impact were below 25µg/m³, well below the 24 hour limit of 50µg/m³. The reasons there were no impacts at the private receivers location are:

- On 20th March operations were already occurring with actions to minimise dust in place. In pit overburden handling was taking place this day, which further reduces the potential for dust generation due to adverse weather conditions due to reduced wind speeds in the pit compared to at ground level. The PM₁₀ 24 hour average decreased by 0.5µg/m³ between the pre and post adverse weather measurements
- On 27th May operations were already occurring with dust minimisation actions in place. On this occasion, the PM₁₀ 24 hour average increased by 1.1µg/m³ between the pre and post adverse weather measurements.
- As mentioned in Section 2; in all other instances of adverse weather conditions the wind was not blowing towards the receiver.



While there was some change in the resultant dust levels between the pre and resultant dust measurements, it is not possible to correlate these changes in measurement with modification to overburden handling on site. The inconsistency between pre and resultant dust levels on the two occasions RCM was a potential source of dust at the receiving location, as well as the increase in recorded dust levels on the 4th March (while the site was not operational and the wind direction was blowing from site to receiver) also supports a lack of evidence for correlation between recorded dust levels and modification to overburden handling on site. Although it was not possible to form a causative relationship between site operations and recorded dust levels, the dust modelling undertaken to develop the adverse weather TARP (**Appendix A**) indicates that the existing actions to minimise dust, such as in pit dumping, would have reduced dust emissions if measured at the mine boundary.

Should you have any queries in relation to this matter, please do not hesitate to contact Jill Johnson, Group Environment Manager, on 02 6741 9321 or by email at jjohnson@whitehavencoal.com.au.

Yours sincerely,

Whitehaven Coal Mining Ltd

Jake Hodgkins
Environmental Officer

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