

## **Minutes of the 8<sup>th</sup> Meeting of the Maules Creek Coal Community Consultative Committee**

**Meeting Held:** 4<sup>th</sup> of March 2015, 2.00pm

**Venue:** Maules Creek Coal Boggabri Office, 121 Merton Street, Boggabri, NSW, 2382

**Present:**

- Mr John Turner, Chair for CCC (JT)
- Clr Cath Collyer, Narrabri Shire Rep (CC) (Alternate for Clr Lloyd Finlay)
- Ms Carolyn Nancarrow, Community Rep (CN)
- Mr Peter Watson, Community Rep (PWa)
- Mr Jason Davis, Community Rep (JD)
- Mr Rod Woolford, Community Rep (RW)
- Mr Craig Simmons, Area Manager Services (CS)
- Mr Brian Cole, Executive General Manager – Project Delivery (BC)
- Mr Peter Wilkinson, General Manager – Maules Creek (PWl)

**Apologies:** Nil

**Observer** Nil

**Guest** Nil

### **1 Declaration of pecuniary or other interests**

JT declared he received a fee for chairing the meeting

### **2 Confirmation of Last Minutes**

Minutes confirmed CN, second PW



### **3 Business Arising from Previous Minutes**

- MCCC comments on Biodiversity Management Plan – No further comments item can be removed from agenda.
- Gomeroi Traditional Custodians (GTC) letter to CCC;
  - JT said that previous minutes noted that the matter was referred to DPI. No further correspondence has been received. He said separate written comments on behalf of GTC made at the joint meeting of the CCC's of the Leards Forest Mining Precinct in November had also been referred to DPI with no further correspondence to date.
- Environmental Trust Fund;
  - JT said he had received a proposed work flow document from NSC which needed clarification. He had written to NSC clarifying matters and asking for the expediting of the matter.

### **4 Correspondence**

- DP&E Approval of the Box Gum Woodland and Threatened Fauna Implementation Plans
- DP&E Letter to facilitate access to cultural heritage site for GTC.

### **5 Company Reports and overview of activities**

- Update on construction activities

BC updated the CCC on recent activities.

BC – advised that the construction process was well advanced and nearing completion.

- Rail effectively finished with signalling being commissioned in coming month
- Crushing facility operating, washer is well underway anticipate early May for commissioning
- First coal railed in December 2014
- Commissioning of main 132kV and 22kV underway
- Mine access road near complete with line marking occurring at the moment
- Water pipe line has been completed
- Bulk earthworks effectively complete at end of March with earthworks contractor demobilising from site



PWi updated the CCC on recent operation activities.

- Current workforce is approximately 180 employees including contract labour
- 26 indigenous employees engaged approximately 15% of the workforce, ahead of company target of 10%
- Also 19 female employees engaged on the site
- MCC has increased its mining equipment fleet to meet the current production requirements as the mine ramps up
- Coal production and overburden removal progressing as per mining schedule.

CS presented monitoring results which included:

- Attended noise
- Blasting
- Air quality
- Groundwater – standing water levels, pH and electrical conductivity (EC) levels;
- Surface water - total suspended solids (TSS), pH and EC;
- Rehabilitation
- Summary of Community Complaints Register

## **6 General Business**

### **A) Revised Biodiversity Management Plan (BMP).**

CS advised that MCC is currently revising the BMP and presented an overview of the requirements and inclusions in the revised BMP including:

- revising the sites BMP including the Biodiversity Offset Strategy (BOS) as required by condition 53 of Schedule 3 of PA 10\_0138 and incorporates:
- the inclusion of the revised NSW Biodiversity Offset Strategy prepared in accordance with Condition 45 of Schedule 3 to PA 10\_0138;
- the outcomes of an Agricultural Suitability Assessment for the offset properties in accordance with Condition 46(a) of Schedule 3 to PA 10\_0138;
- the approved MCCM Threatened Fauna Implementation Plan in accordance with Condition 50(c) of Schedule 3 to PA 10\_0138; and
- the approved MCCM Box-Gum Woodland Endangered Ecological Community Implementation Plan in accordance with Condition 48(d) of Schedule 3 to PA 10\_0138.

CS advised that copies of the revised BMP and revised BOS will be provided to the CCC members as part of the stakeholder consultation process and comments are requested



## **B) Social Impact Management Plan (SIMP)**

MCC is currently updating the SIMP for the project which

- identifies the social impact resulting from the various stages of the MCCM
- documents the management and mitigation program to minimise and/or mitigate them
- reflects the transition from construction to operation phase

CS advised that copies of the updated SIMP will be provided to the CCC members as part of the stakeholder consultation process and comments are requested

## **C) General Questions raised from the CCC**

PW – Advised that he had not felt any blasts and the text notification was good.

PW – Queried with the low water levels in Keepit Dam how does the mine manage water pumping windows

CS advised that MCC has constructed water storages on site and is in regular contact with Office of Water and discuss pumping windows, releases and the site requirements

CC – queried whether the mine had water bore licences

CS advised that the mine holds water bore licences, however the current source of raw water comes from the river

CN – queried when will the mine cease using Goobri Road

BC advised that Boggabri Coal are still using the haul road, however this should stop in mid- April and that is when MCC will use Therribri Road and the new mine access road and stop using Goonbri Road

RW – noted that vehicles are speeding on Goonbri Road and has heard examples of passing cars having their windscreens cracked by stones

CC – noted to the CCC that NSC had put in an expression of interest for the ex-Bowling Club site in Boggabri with intent to turn it into a child care facility.

CC – noted that the Regional dust monitoring should be the responsibility of the DPI and EPA, and requested that the chair send a letter to DPI and EPA for a status update.

JT – recalled a letter from the EPA mid-2014, that they were looking to implement the regional monitoring in late 2014- early 2015, JT offered to write to the minister and local members to follow up in the status on behalf of the CCC.

## **Next meeting**

Tentatively dates for the remaining 2015 meetings have been scheduled as below

- 20 May 2015
- 12 August 2015
- 18 November 2015
- 19 November 2015 (Joint BTM CCC)

**Meeting Closed:** 3:20pm

# Maules Creek Coal Mine Community Consultative Committee Meeting #8

## Environmental Monitoring Report Q4, October – December 2014

### Noise Monitoring

Noise monitoring was undertaken at the locations as per the approved noise management plan on the 23<sup>rd</sup> October, 26<sup>th</sup> November and 29<sup>th</sup> December 2014. The measured noise level (LAeq15) attributed to Maules Creek Coal and applicable criteria for each location are shown in the Tables below. The results show that mine operations did not exceed the applicable LAeq15 criteria at any time.

During this reporting period, noise monitoring has transitioned from construction to operational with additional Evening and Night time monitoring taking place.

### Tables - LAeq, 15minute GENERATED BY MCC AGAINST OPERATIONAL DAYTIME NOISE CRITERIA – OCTOBER TO DECEMBER 2014.

#### October Noise Monitoring – Day

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	23/10/2014	2:33 PM	3.9	0	40	N	IA	NA
NM2	23/10/2014	2:04 PM	3.5	0	40	N	IA	NA
NM3	23/10/2014	1:01 PM	5.5	0	40	N	IA	NA
NM4	23/10/2014	1:37 PM	3	0	40	Y	IA	NA
NM5	23/10/2014	2:58 PM	3.1	0	40	N	IA	NA
Cooboobindi	23/10/2014	12:20 PM	6	0	45	N	<35	NA

#### November Noise Monitoring – Day

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	26/11/2014	1:46 PM	3.7	0	40	No	IA	NA
NM2	26/11/2014	12:29 PM	3	0	40	Yes	IA	Nil
NM3	26/11/2014	11:41 AM	2.1	0	40	Yes	IA	Nil
NM4	26/11/2014	1:15 PM	3.9	0	40	No	IA	NA
NM5	26/11/2014	2:10 PM	4.1	0	40	No	IA	NA
Cooboobindi	26/11/2014	11:16 AM	1.8	0	45	Yes	30	Nil

#### December Noise Monitoring – Day

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	10/12/2014	5:19 PM	2.7	0	40	Yes	IA	Nil
NM2	11/12/2014	9:53 AM	8.1	0	40	No	IA	NA
NM3	10/12/2014	5:55 PM	2	0	40	Yes	IA	Nil
NM4	11/12/2014	10:20 AM	7	0	40	No	IA	NA
NM5	10/12/2014	4:54 PM	4	0	40	No	IA	NA
Cooboobindi	11/12/2014	9:12 AM	4.2	0	45	No	<40	NA

**Tables - LAeq, 15minute GENERATED BY MCC AGAINST OPERATIONAL EVENING AND NIGHT NOISE CRITERIA  
– OCTOBER TO DECEMBER 2014.**

**October Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	23/10/2014	8:42 PM	1.3	0	35	Yes	<25	Nil
NM1	23/10/2014	10:43 PM	1.9	0	35	Yes	<25	Nil
NM2	23/10/2014	7:47 PM	0.4	0	39	Yes	<20	Nil
NM2	23/10/2014	11:41 PM	2.3	0	39	Yes	24	Nil
NM3	23/10/2014	6:45 PM	0.8	0	35	Yes	1A	Nil
NM3	24/10/2014	12:40 AM	1.8	0	35	Yes	1A	Nil
NM4	23/10/2014	8:14 PM	1	0	35	Yes	<20	Nil
NM4	23/10/2014	11:12 PM	1.7	0	35	Yes	<20	Nil
NM5	23/10/2014	9:37 PM	1.8	0	35	Yes	1A	Nil
NM5	23/10/2014	10:17 PM	1.5	0	35	Yes	28	Nil
NM6	23/10/2014	7:19 PM	0.6	0	35	Yes	1A	Nil
NM6	24/10/2014	12:10 AM	2.2	0	35	Yes	<20	Nil

**November Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	25/11/2014	21:16	1.8	0	35	Yes	20	Nil
NM1	25/11/2014	22:26	2.4	0	35	Yes	<20	Nil
NM2	25/11/2014	20:21	2.2	0	39	Yes	27	Nil
NM2	25/11/2014	23:56	1.1	0	39	Yes	26	Nil
NM3	25/11/2014	19:22	0.8	0	35	Yes	1A	Nil
NM3	25/11/2014	23:22	0.4	0	35	Yes	<20	Nil
NM4	25/11/2014	20:49	1.7	0	35	Yes	22	Nil
NM4	26/11/2014	0:23	0.5	0	35	Yes	21	Nil
NM5	25/11/2014	21:41	2.1	0	35	Yes	NM	Nil
NM5	25/11/2014	22:01	1.8	0	35	Yes	<20	Nil
NM6	25/11/2014	19:54	3	0	35	No	1A	NA
NM6	25/11/2014	22:54	2	0	35	Yes	1A	Nil

**December Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	10/12/2014	17:19	2.7	0	35	Yes	1A	Nil
NM1	10/12/2014	23:04	1.9	0	35	Yes	1A	Nil
NM2	10/12/2014	20:34	0.6	0	39	Yes	1A	Nil
NM2	11/12/2014	0:01	2.5	0	39	Yes	<25	Nil
NM3	10/12/2014	18:15	3.3	0	35	No	1A	NA
NM3	11/12/2014	1:21	2.7	0	35	Yes	26	Nil
NM4	10/12/2014	20:58	4.1	0	35	No	1A	NA
NM4	10/12/2014	23:33	1.4	0	35	Yes	22	Nil
NM5	10/12/2014	16:54	4	0	35	No	1A	NA
NM5	10/12/2014	22:40	3	0	35	Yes	<20	Nil
NM6	10/12/2014	18:43	2	0	35	Yes	1A	Nil
NM6	11/12/2014	0:53	3.8	0	35	No	1A	NA

In addition to the 15 minute average for Day Evening and Night, the Maules Creek Coal (MCC) EPL20221 also has a '1 Minute - Night' criteria (LA1) that applies from 10pm to 7am Monday to Saturday & 10pm 8am Sundays and Public Holidays. The results for the LA1 monitoring are shown below in Table 2. The results show that mine operations did not exceed the applicable LA1 criteria at any time.

**Tables – LA1, 1minute GENERATED BY MCC AGAINST OPERATIONAL EVENING NOISE CRITERIA – OCTOBER TO DECEMBER 2014.**

**October Noise Monitoring – Night**

<b>LA1 (1min)</b>		OCTOBER						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LA1(1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	23/10/2014 0:00	22:43	1.9	0	45	Yes	28	Nil
NM2	23/10/2014 0:00	23:41	2.3	0	45	Yes	35	Nil
NM3	24/10/2014 0:00	0:40	1.8	0	45	Yes	1A	Nil
NM4	23/10/2014 0:00	23:12	1.7	0	45	Yes	<25	Nil
NM5	23/10/2014 0:00	22:17	1.5	0	45	Yes	36	Nil
NM6	24/10/2014 0:00	0:10	2.2	0	45	Yes	<20	Nil

**November Noise Monitoring – Night**

<b>LA1 (1min)</b>		NOVEMBER						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LA1(1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	25/11/2014 0:00	22:26	2.4	0	45	Yes	24	Nil
NM2	25/11/2014 0:00	23:56	1.1	0	45	Yes	33	Nil
NM3	25/11/2014 0:00	23:22	0.4	0	45	Yes	24	Nil
NM4	26/11/2014 0:00	0:23	0.5	0	45	Yes	28	Nil
NM5	25/11/2014 0:00	22:01	1.8	0	45	Yes	20	Nil
NM6	25/11/2014 0:00	22:54	2	0	45	Yes	1A	Nil

**December Noise Monitoring – Night**

<b>LA1 (1min)</b>		DECEMBER						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LA1(1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	10/12/2014 0:00	23:04	1.9	0	45	Yes	1A	Nil
NM2	11/12/2014 0:00	0:01	2.5	0	45	Yes	33	Nil
NM3	11/12/2014 0:00	1:21	2.7	0	45	Yes	29	Nil
NM4	10/12/2014 0:00	23:33	1.4	0	45	Yes	31	Nil
NM5	10/12/2014 0:00	22:40	3	0	45	Yes	23	Nil
NM6	11/12/2014 0:00	0:53	3.8	0	45	No	1A	NA

**Evening LAeq15min Night LAeq15min, Night LA1min**

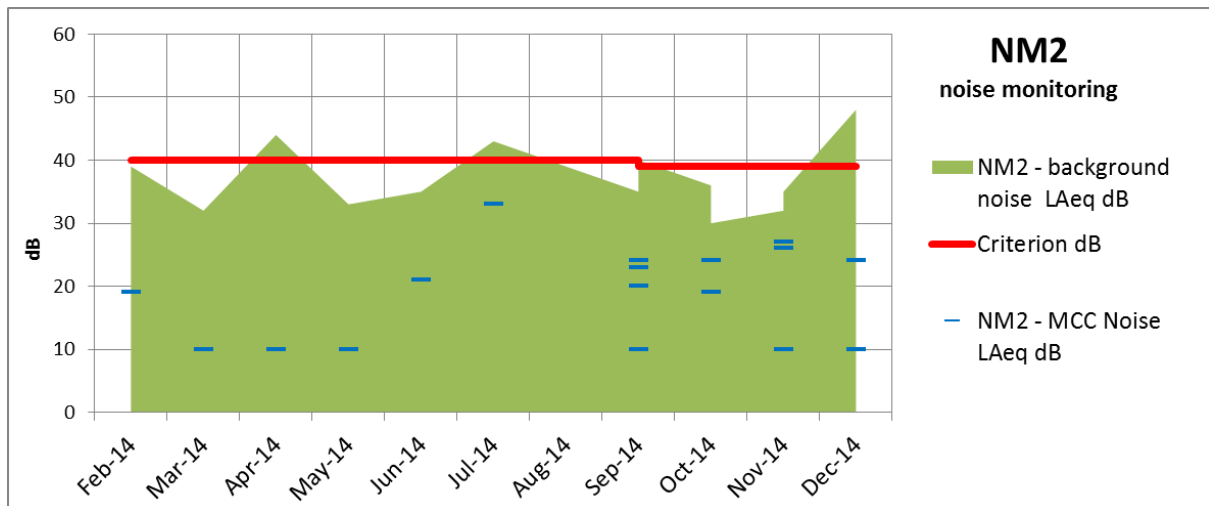
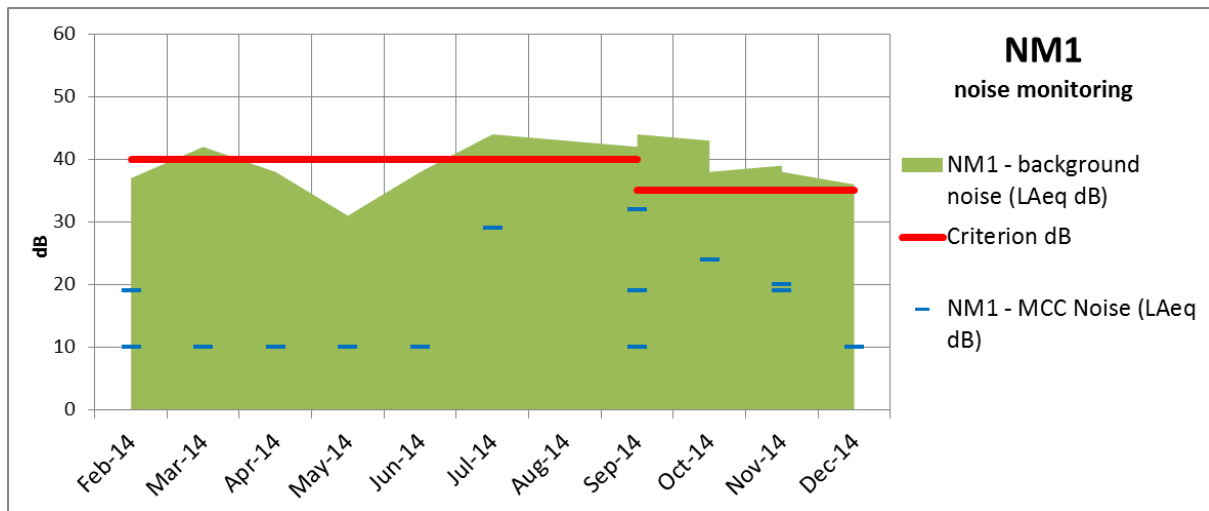
**Notes:**

1. Noise emission limits do not apply during periods of rainfall or wind speeds greater than 3 metres per second (at 10 metres);
2. Estimated or measured LAeq,15minute attributed to Maules Creek Coal (MCC);
3. Estimated or measured LA1,1minute attributed to Maules Creek Coal (MCC);
4. NA in exceedance column means atmospheric conditions outside those specified in project approval and criterion is not applicable;

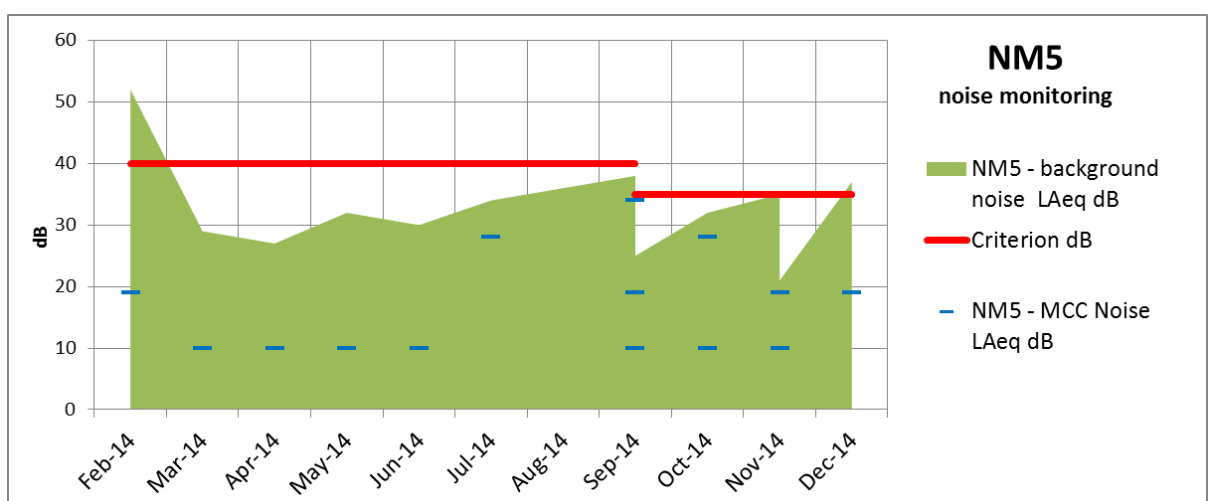
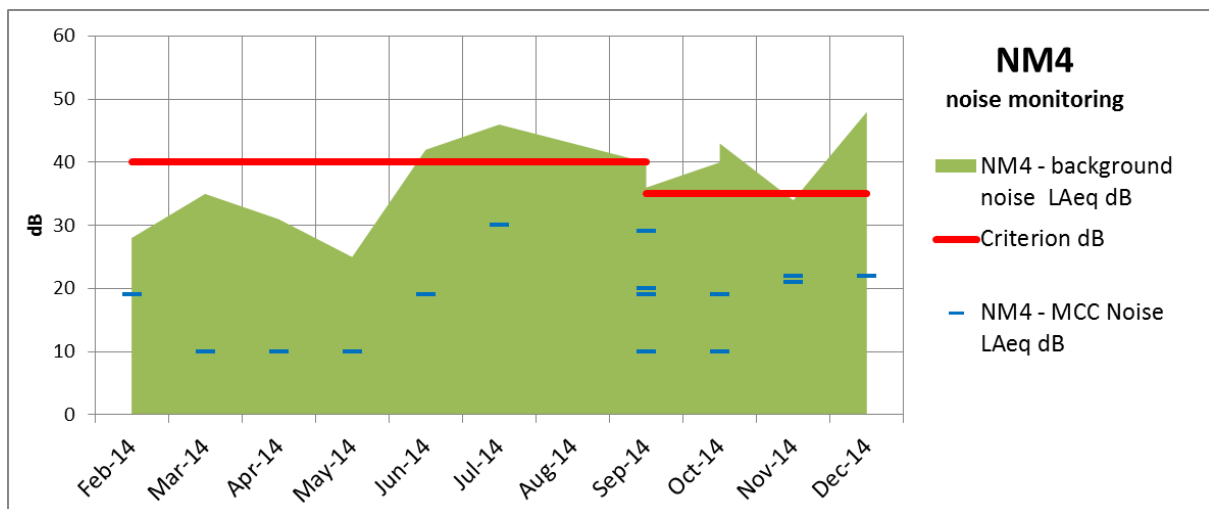
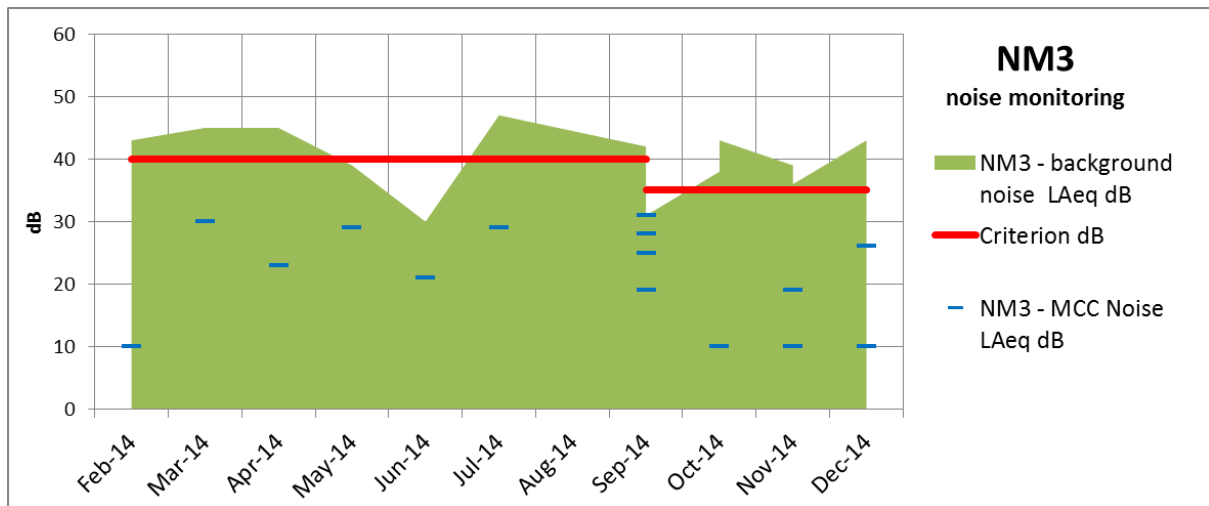
### Attended Noise Monitoring

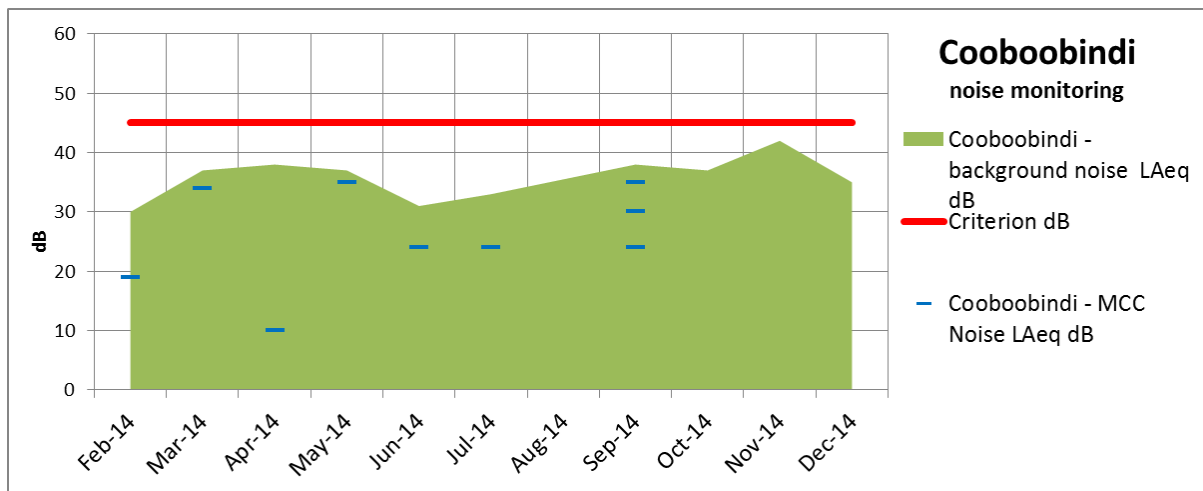
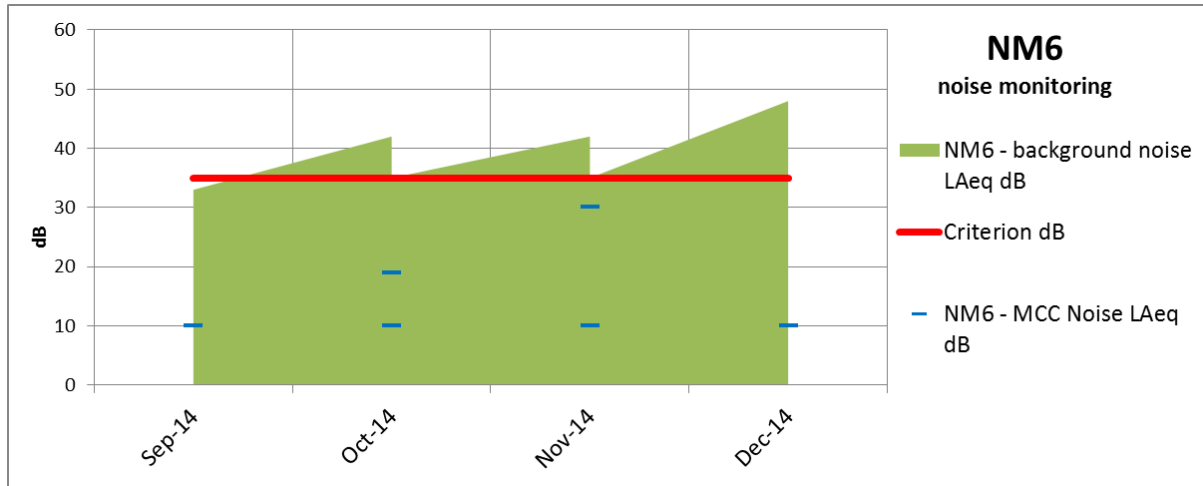
The following seven (7) figures below show the 'attended' noise monitoring results recorded since construction began in earnest in January 2014. During the construction phase, noise monitoring was also conducted at the private property closest to the rail construction, Cooboobindi. Monitoring at Cooboobindi will cease at the conclusion of construction related activities.

Green shading shows the  $LA_{eq(15\text{minute})}$  background noise and the blue dash is the portion of the  $L_{Aeq}$  likely attributed to the mine according to the sound engineer. The criteria shown in red, was updated to align with the transition from construction to operations / mining.









### Blast Monitoring

Mine operations commenced in August 2014 and there have been 28 blast events to date (w/e 30<sup>th</sup> December 2014). All operational blast events have been within the applicable Noise and Ground Vibration limits.

All blast monitoring results have been within the MCC EPL limits.

**Table – Blast Results Summary Quarter 4 2014**

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	19	97.92	113.5	120	No
	Vibration	mm/s		19	0.25	0.77	10	No

**Air Quality**

**Deposited Dust**

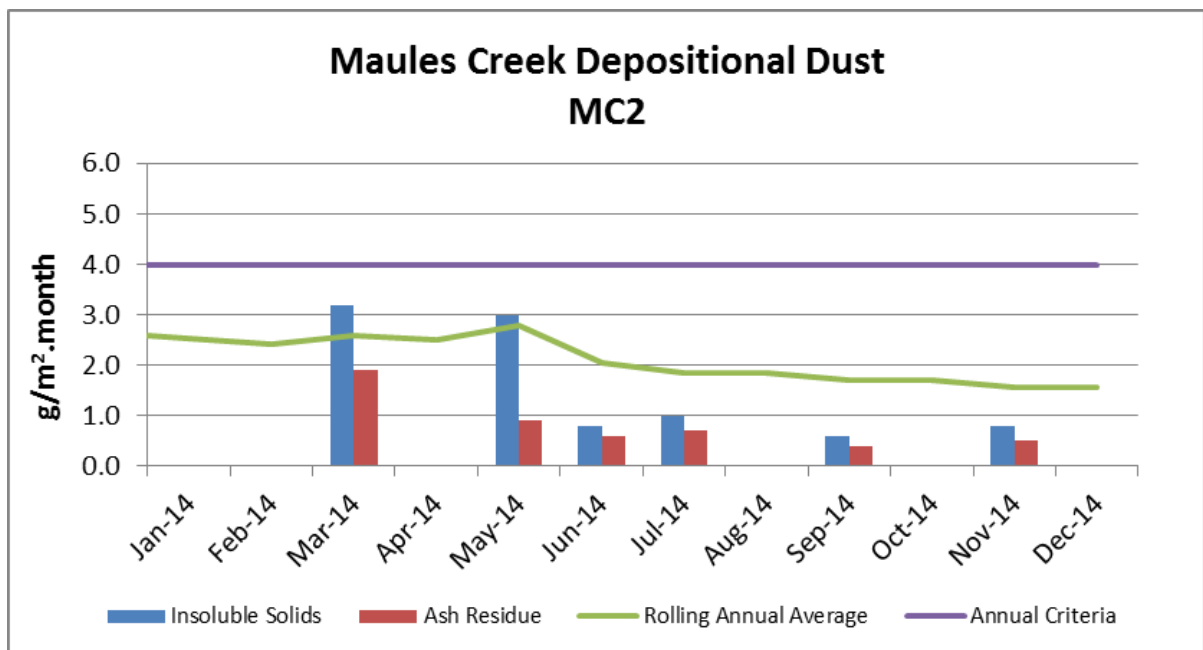
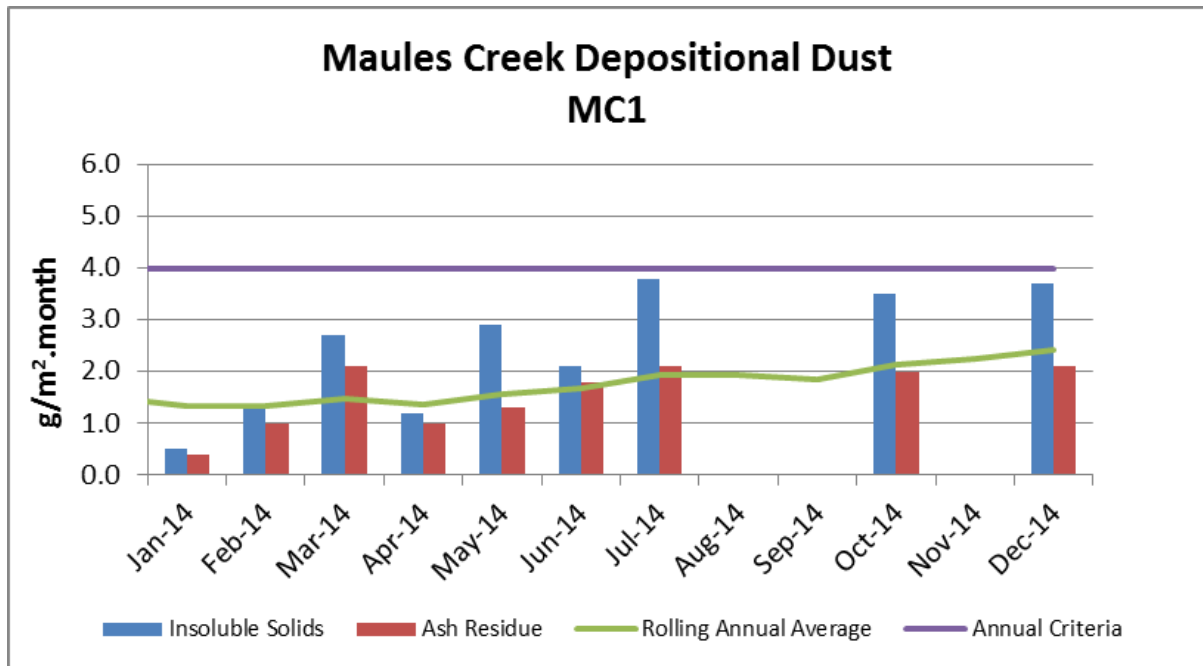
**Table - Deposited Dust Results \***

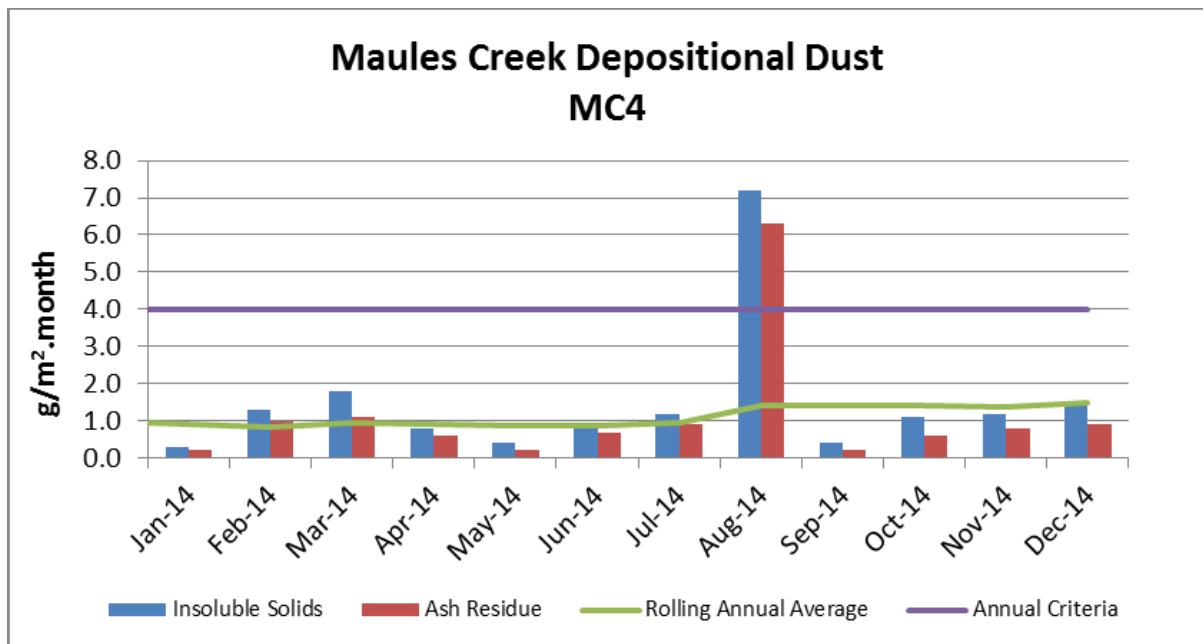
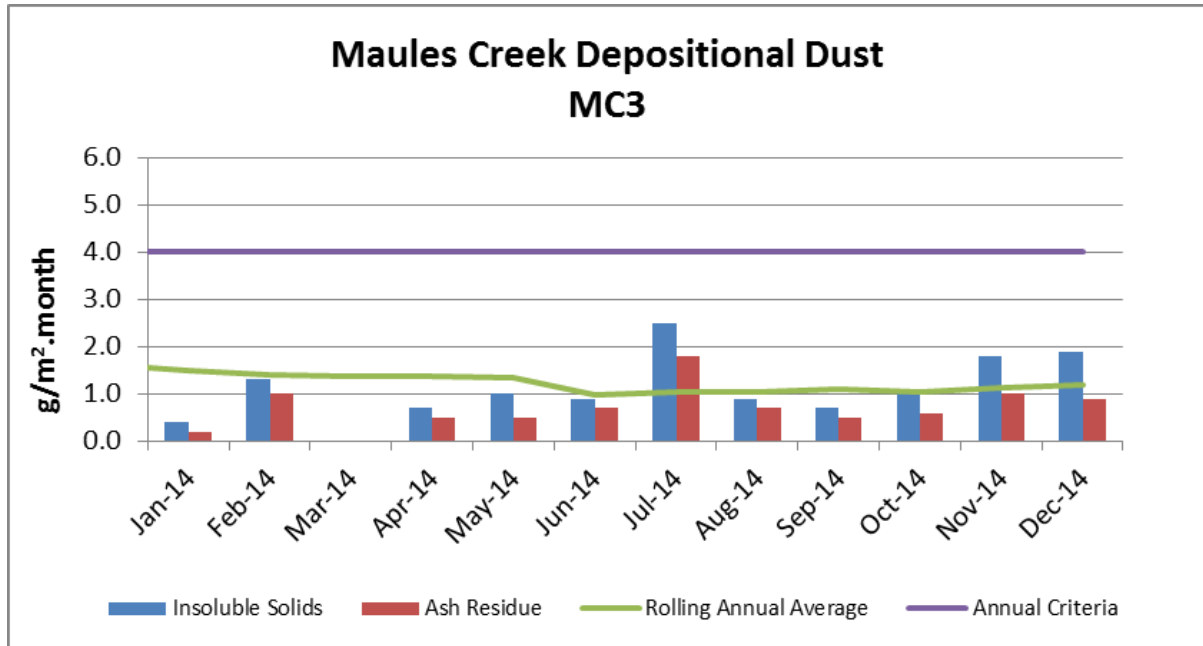
Month	MC1	MC2	MC3	MC4
Dec-13			1.1	0.6
Jan-14	0.5		0.4	0.3
Feb-14	1.3		1.3	1.3
Mar-14	2.7	3.2		1.8
Apr-14	1.2		0.7	0.8
May-14	2.9	3.0	1.0	0.4
Jun-14	2.1	0.8	0.9	0.9
Jul-14	3.8	1.0	2.5	1.2
Aug-14			0.9	7.2
Sep-14		0.6	0.7	0.4
Oct-14	3.5		1.0	1.1
Nov-14		0.8	1.8	1.2
Dec-14	3.7		1.9	1.4
<b>Annual Avg</b>	<b>2.4</b>	<b>1.6</b>	<b>1.2</b>	<b>1.4</b>
<b>Project Avg 2010 - 2015</b>	<b>2.3</b>	<b>1.9</b>	<b>1.6</b>	<b>1.3</b>

\* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated (insect larvae, bird droppings, vegetation etc.).

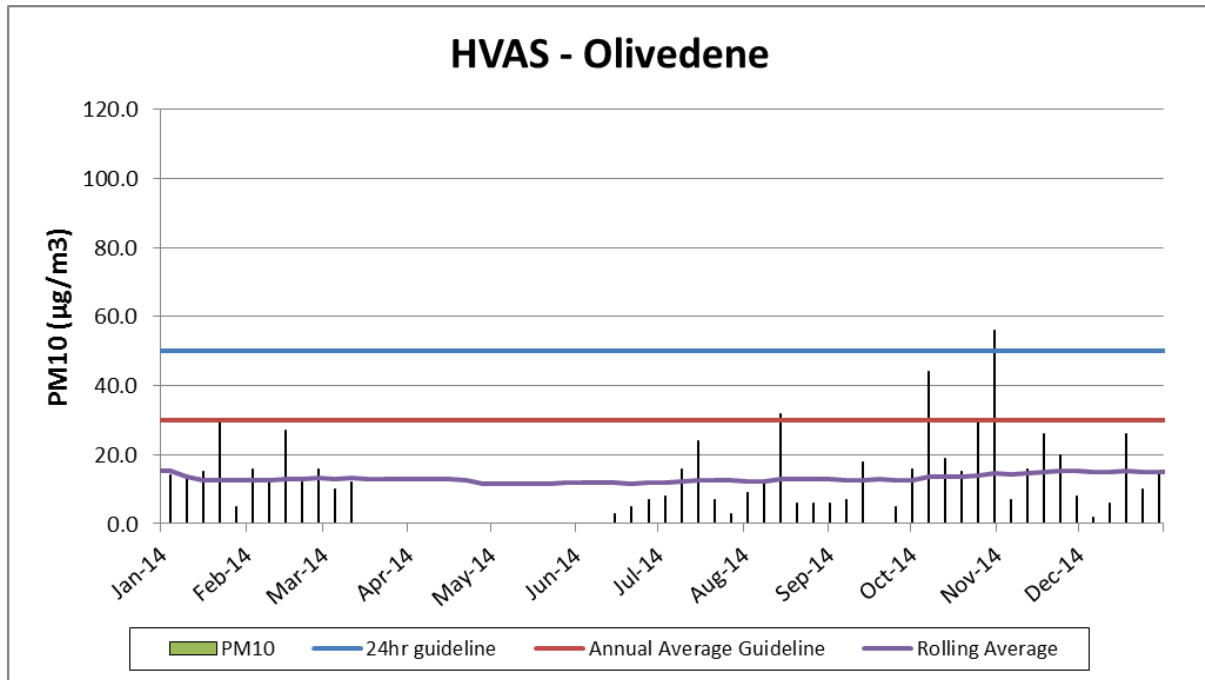
All deposited dust gauge (DDG) results as shown in Table above remain below the limit of 4gm/m<sup>2</sup>/month with the exception for MC4 which returned an anomalous result of 7.2gm/m<sup>2</sup>/month in August 2014 which has subsequently returned back to atypical levels. The exact cause of the elevated result is unable to be determined however, a site visit to this location identified additional agriculture practices being conducted during this period.

Deposited Dust Figures (MC1 – MC4)





### High Volume Air Sampling (HVAS)

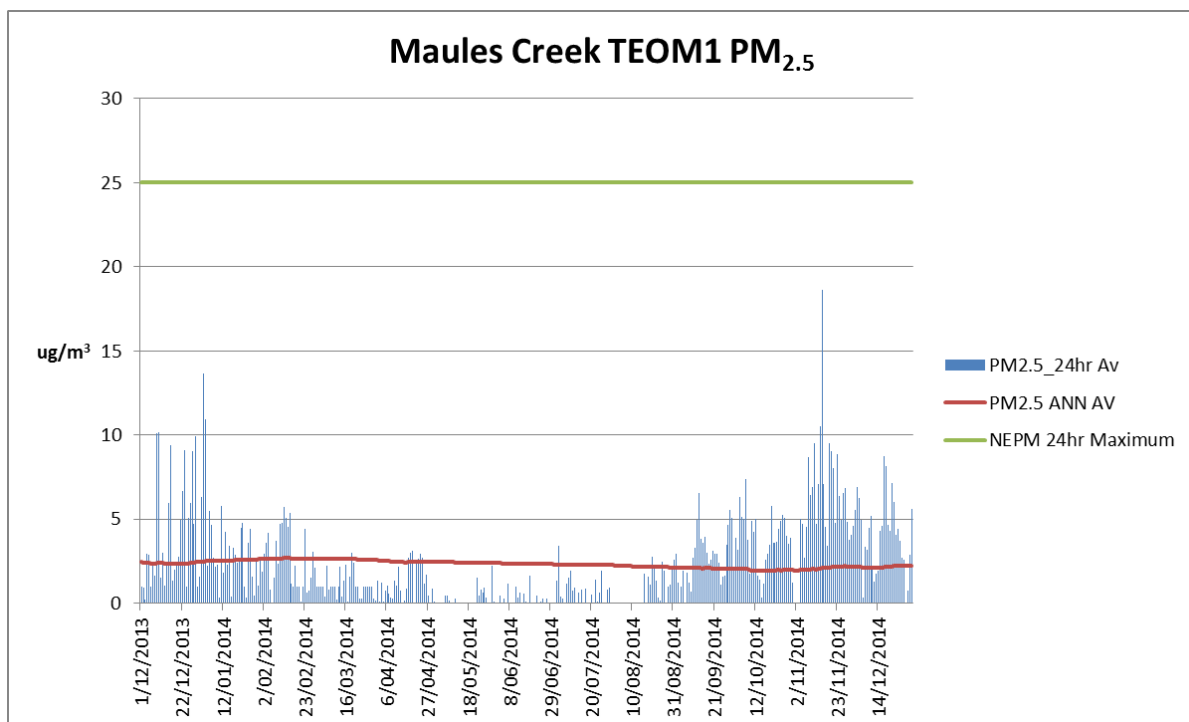
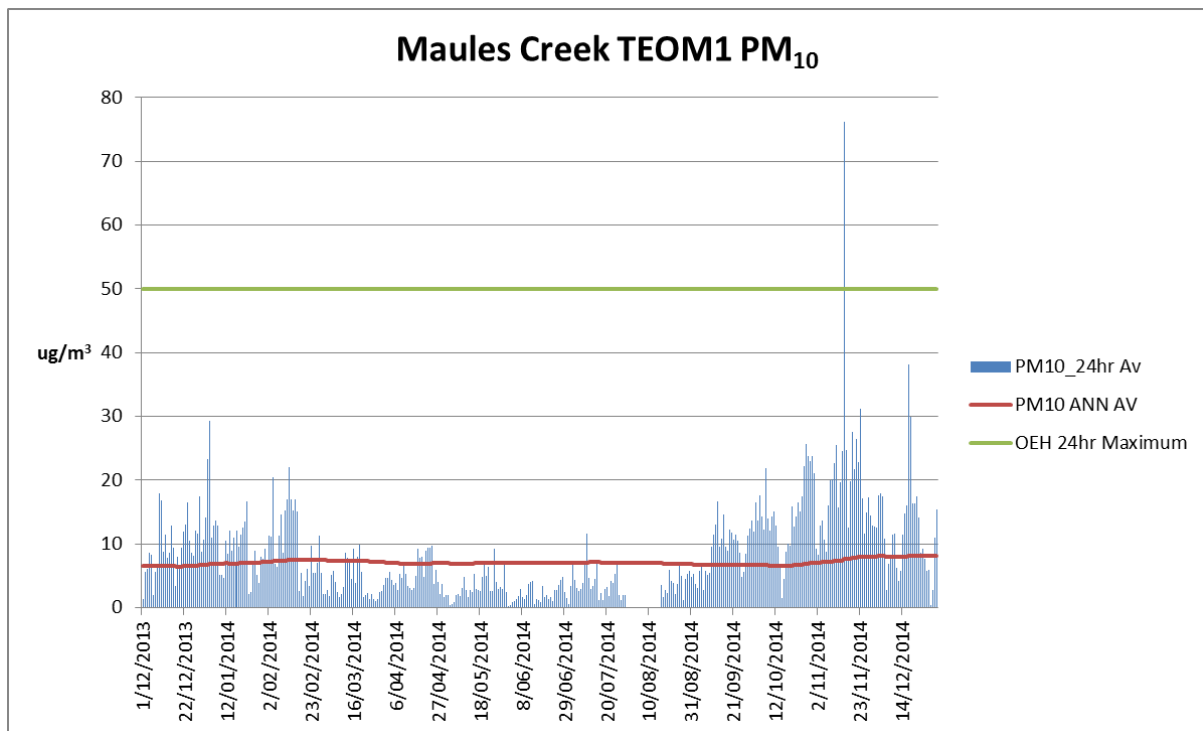


### TEOM - PM<sub>10</sub> Results

The annual average for PM<sub>10</sub> results at the Maules Creek Coal TEOM, is currently 8.2µg/m<sup>3</sup> which is significantly below the applicable NEPM / OEH maximum annual average criteria of 30.0µg/m<sup>3</sup> (at December 2014). The PM<sub>10</sub> results have remained below this criteria since the TEOM was commissioned in November 2011. The TEOM also captures continuous measurements of PM<sub>Course</sub>, PM<sub>2.5</sub>, and Meteorology which are all available to the mine in real time. The only periods when the TEOM is offline is during scheduled system maintenance regional power failures.

The following figures show the TEOM particulate matter results (PM<sub>10</sub>, PM<sub>2.5</sub>) for the previous 12 months. The two images illustrate that particulate matter 'Annual Averages' are largely unchanged over the last 12 months.

TEOM Figures – Particulate Matter  $PM_{10\mu g/m^3}$  and  $PM_{2.5\mu g/m^3}$



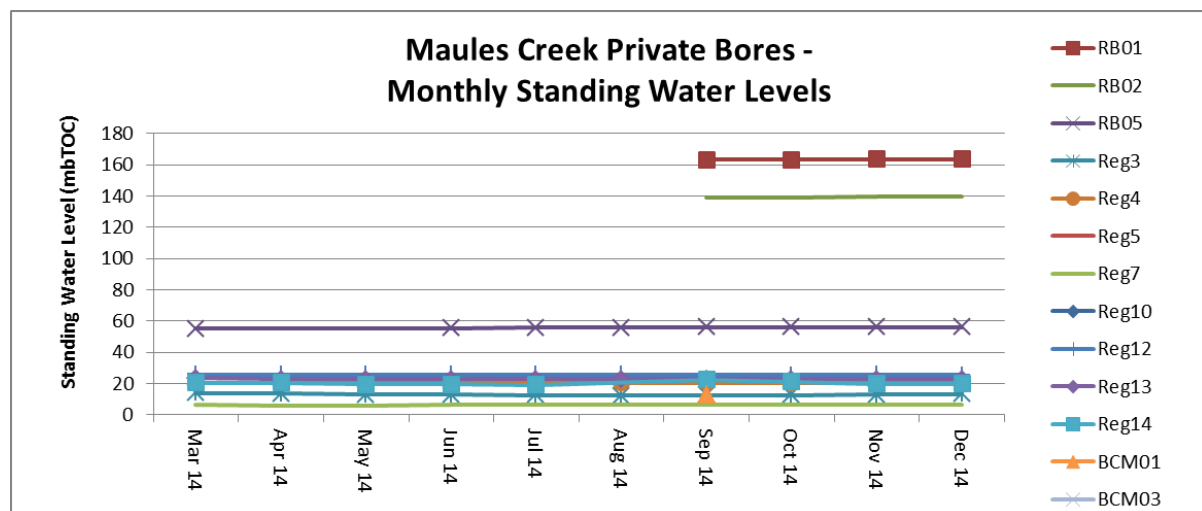
## Water Monitoring

### Ground Water

Groundwater monitoring results in open / standpipe piezometers show levels to be currently stable. 'RB' and 'Reg' series bores were installed between Q4 2013 and Q1 2014 and baseline data / conditions (12 months) is still being established. RB01 and RB02 groundwater levels were shown to be deeper than the field monitoring equipment could access >100m. REG5 has been inaccessible due to construction related activities, also now reinstated. BCM01, BCM03, Reg10 are dry.

**Table 5 – Groundwater Level**

SWL	RB01	RB02	RB05	Reg3	Reg4	Reg5	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			55.26	14	20.61		6.61		25.74	23.4	20.58		
Apr-14				13.54	20.56		6.19		25.7	22.97	20.54		
May-14				13.15	20.54		6.23		25.7	22.96	19.67		
Jun-14			55.54	12.86	20.6		6.28		25.74	23.04	19.45		
Jul-14			56	12.63	20.59		6.32		25.75	23.03	19.4		
Aug-14			55.99	12.26	20.56		6.37		25.76	22.97			
Sep-14	163.17	138.98	56.07	12.62	20.54		6.57			22.97	22.41	12.69	
Oct-14	163.34	139.37	56.34	12.67	20.54		6.58		25.68	23.01	21.2		
Nov-14	163.55	139.5	56.28	13.1	20.56		6.67		25.72	22.95	19.97		
Dec-14	163.67	139.75	56.3	13.36	20.48		6.69		25.64	22.87	19.85		



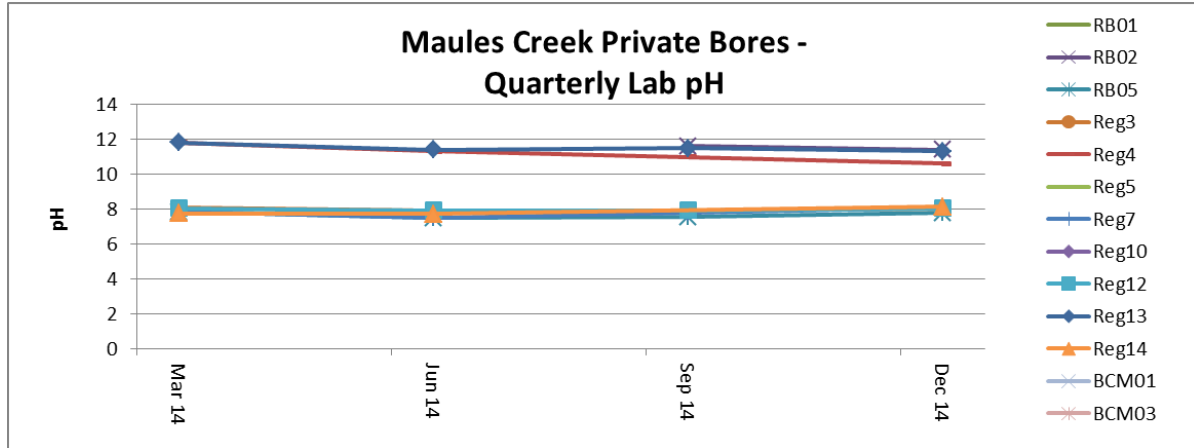
### Acidity / Alkalinity (pH)

Baseline groundwater conditions are still being established, however, 3 bores RB02, Reg4 and Reg13 show elevated pH levels (above pH 8.5) this has been determined to be a result of low recharge volumes within these bores since the drilling and installation. The two deep bores RB01 and RB02 were found to contain very little water in them during the September monitoring event and sand was preventing collection of sufficient volume for purging and sampling



**Table – Groundwater pH**

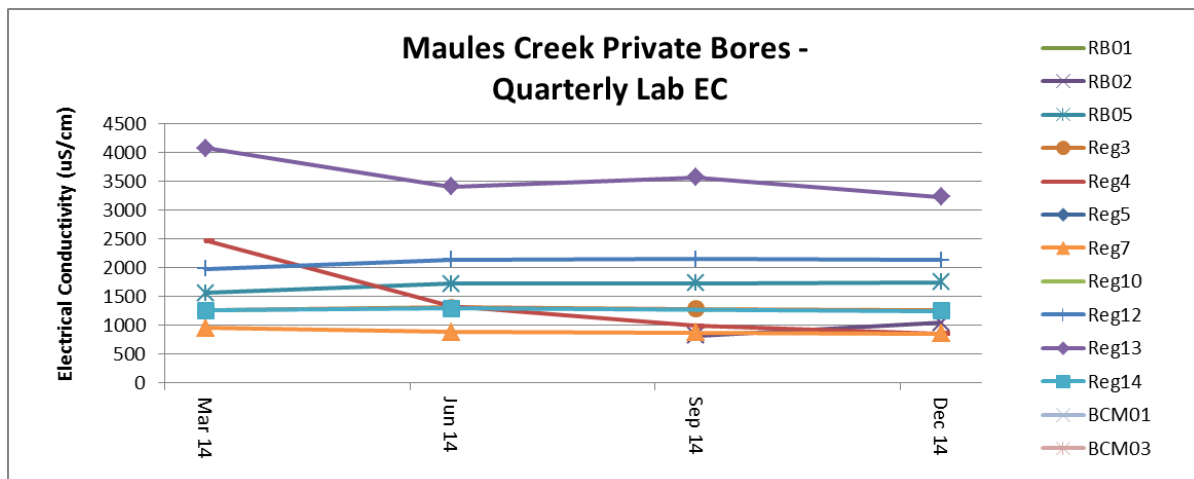
Lab pH	RB01	RB02	RB05	Reg3	Reg4	Reg5	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			7.84	8.08	11.8		7.83		8.05	11.8	7.76		
Jun-14			7.48	7.9	11.3		7.52		7.93	11.4	7.72		
Sep-14		11.6	7.54	7.93	11		7.77		7.91	11.5			
Dec-14		11.4	7.77	8.05	10.6		8.11		8.04	11.3	8.14		

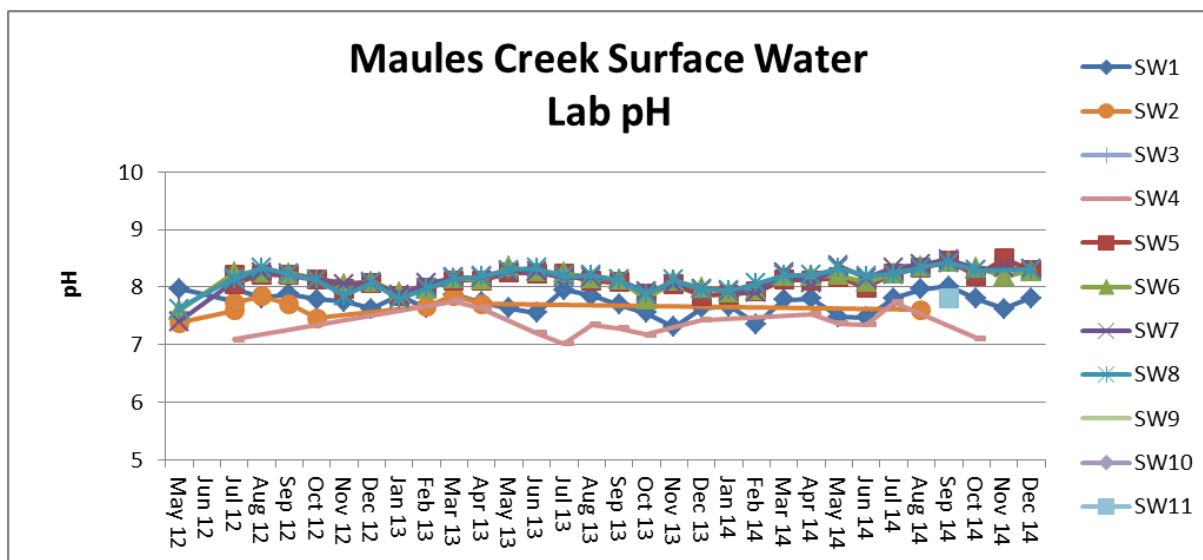


### Electrical Conductivity

Laboratory conductivity (EC) levels are all within historic groundwater EC range of 500<sub>µs/cm</sub> to 2500<sub>µs/cm</sub> with exception for Reg13.

Lab EC	RB01	RB02	RB05	Reg3	Reg4	Reg5	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			1560	1260	2470		950		1980	4080	1260		
Jun-14			1720	1310	1330		884		2140	3410	1290		
Sep-14		814	1730	1280	988		871		2150	3570			
Dec-14		1040	1750	1260	854		853		2130	3230	1250		

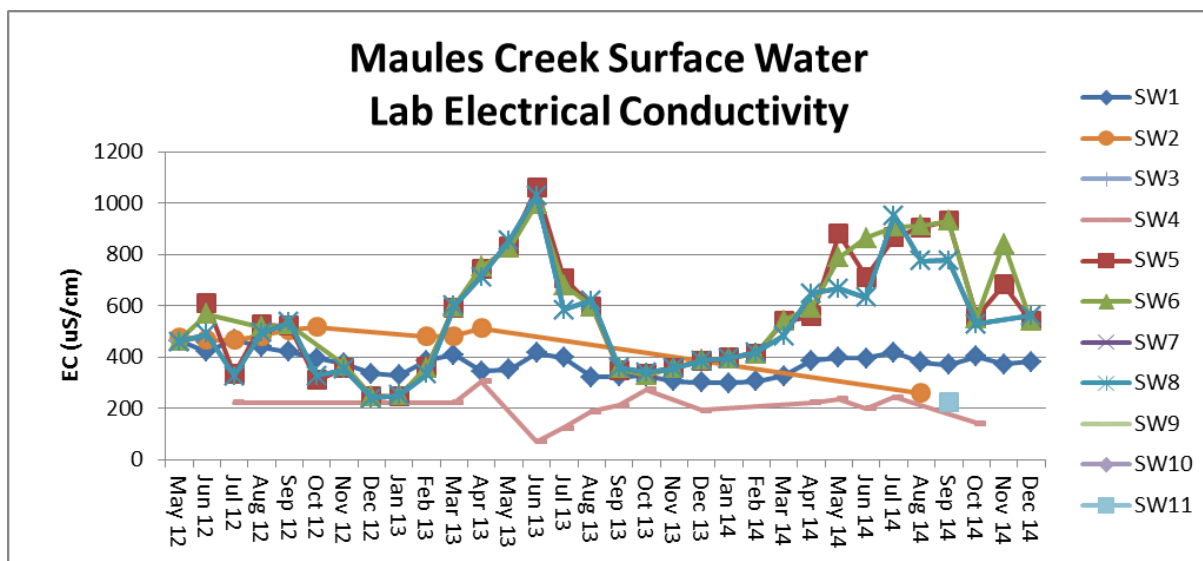




### Electrical Conductivity

Surface water EC trends have remained consistent with SW5, SW6, SW7 and SW8 all historically variable. SW5 to SW8 are stations along the Namoi River which is subject to regulated / variable flow regimes.

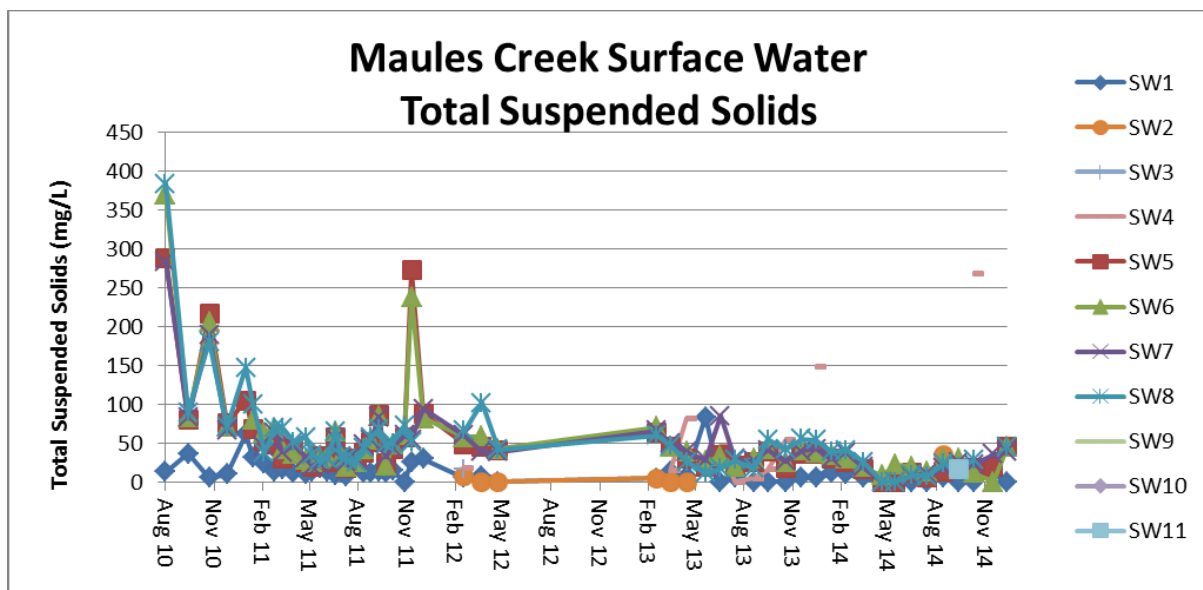
Lab EC	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
19/12/2013	301			193	385	388	386	386			
17/01/2014	299				398	396	398	396			
14/02/2014	306				413	415	409	418			
18/03/2014	326				540	542	528	482			
23/04/2014	386			223	560	594	617	649			
19/05/2014	397			238	881	789	711	667			
19/06/2014	395			201	712	865	950	632			
18/07/2014	419			245	866	909	886	953			
18/08/2014	379	260			907	913	945	775			
16/09/2014	371				932	932	910	778			223
14/10/2014	403			142	557	553	547	529			
20/11/2014	372				684	842	670				
16/12/2014	381				540	541	554	561			



### Total Suspended Solids (TSS)

Surface TSS trends have remained consistent with SW5, SW6, SW7 and SW8 are also historically variable. SW5 to SW8 are stations along the Namoi River which is subject to regulated / variable flow regimes.

TSS	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
19/12/2013	6			148	36	38	43	54			
17/01/2014	12				30	35	30	39			
14/02/2014	10				26	30	38	41			
18/03/2014	6				17	19	19	26			
23/04/2014	<5			<5	<5	9	<5	<5			
19/05/2014	<5			<5	<5	22	<5	<5			
19/06/2014	<5			8	12	20	8	9			
18/07/2014	<5			<5	6	13	11	8			
18/08/2014	6	35			13	30	18	24			
16/09/2014	<5				17	31	25	20			17
14/10/2014	<5			268	18	12	22	28			
20/11/2014	10				20	<5	36				
16/12/2014	<5				45	46	39	46			



### **Rehabilitation**

Construction at Maules Creek Coal commenced in December 2013 and is expected to conclude in March 2015. Progressive rehabilitation of laydown areas, batters and drains has commenced and will continue construction activities are completed.

Mining commenced in August 2014, as such no rehabilitation has commenced during this period.

### **Complaints**

For full detail of each Complaint please refer to the Community Complaints Register.

This information can be found on the Whitehaven Coal – Maules Creek website.

[http://www.whitehavencoal.com.au/environment/maules\\_creek\\_environmental\\_management.cfm](http://www.whitehavencoal.com.au/environment/maules_creek_environmental_management.cfm)



## **Minutes of the 9<sup>th</sup> Meeting of the Maules Creek Coal Community Consultative Committee**

**Meeting Held:** 20<sup>th</sup> May 2015, 2.00pm

**Venue:** Boggabri RSL, 73-77 Laidlaw Street, Boggabri, NSW, 2382

**Present:**

- Mr John Turner, Chair for CCC (JT)
- Clr Lloyd Finlay, Narrabri Shire Rep (LF)
- Ms Carolyn Nancarrow, Community Rep (CN)
- Mr Peter Watson, Community Rep (PWa)
- Mr Craig Simmons, Area Manager Services (CS)
- Mr Peter Wilkinson, General Manager – Maules Creek (PWi)

**Apologies:**

- Mr Jason Davis, Community Rep (JD)
- Mr Rod Woolford, Community Rep (RW)
- Mr Brian Cole, Executive General Manager – Project Delivery (BC)

**Observer** Mrs Kellie Maslen, Administration Assistant – Maules Creek Coal

**Guest**

- Simon Smith – EPA (SS)
- Stephen O'Donoghue – Dept of Planning/EPA (SO)

### **1 Declaration of pecuniary or other interests**

JT declared he received a fee for chairing the meeting

### **2 Confirmation of Last Minutes**

Minutes confirmed PWa, second CN



### **3 Business Arising from Previous Minutes**

- Environmental Trust Fund;
  - JT has enquired with the NSC a number of times in relation to the requirements for applications and advertising schedules for the program. JT has had limited responses however CI Collyer advised in another CCC meeting that he should have a response by Friday week (29 May 2015)

### **4 Correspondence**

- DoPE – Audit conducted during February on Cultural Heritage and Biodiversity Management Plans
- EPA – Notice to provide information related to a dust complaint on the 26 March 2015
- DoPE – Issued Penalty Infringement Notice (PIN) – non-compliance with 90% of workforce being bussed to site

PWa asked what requirements didn't pass the audit and when that information would be made available to the committee

CS advised that the auditors request evidence of activities undertaken and MCC supply these records or the auditor makes observations as part of the site visits that were conducted. MCC has an opportunity to provide additional evidence post the site visit that the auditors can consider. Once the audit is finalised DoPE will provide a summary of the findings, these can then be discussed as the next CCC meeting.

### **5 Company Reports and overview of activities**

- Update on construction activities

CS updated the CCC on recent activities.

CS – advised that the construction process was almost complete.

- Rail line complete. Signalling is not fully automated at this stage.
- Coal crushing facility has been operating from December 2015, washery component is currently being commissioned and completed a "wet run", (being first coal through the plant) on Monday 19 May 2015, and will continue commissioning until maximum capacity is reached.

PWa asked how much water is used to wash the coal

PWi to report this figure to the committee next meeting

- Commissioning of main 132kV is complete and 22kV is in the final stages

LF asked if the Switch Yard would change the direction of power coming in to Maules Creek as he has noticed changes to the power supply during storms.

CS and PWi advised they did not think it would change the power supply direction.



- Bulk earthworks effectively complete and earthworks contractor had demobilised from site. All remaining remediation work will be completed by MCC.
- Only outstanding works are the MIA, permanent workshop and administration buildings.

PWi updated the CCC on recent operation activities.

- Operations have now reached the 6MT rate with 4 excavators fully manned
- Current workforce is approximately 230 employees including contract labour
- 36 indigenous employees engaged approximately 15% of the workforce, ahead of company target of 10%
- 25 female employees engaged on the site
- Production to ramp up to 8-9MT later this year pending Joint Venture partner approval
- Aim is to remove the coal cleaner with less contamination to be able to bypass the washery.
- Investigations on the use of bore water during low river water availability and pumping flow restrictions to supplement site water supply.

PWa noted concerns that if the mine was to use bore water that communication between mine and other water users in Zone 5 are held to inform all users.

LF asked if the 3000ML from the MCC high security licence comes out of Keepit regardless.

CS advised that the mine only uses the water it needs and orders – in previous years prior to MCC starting construction and operations this water allocation had been sold and allocated to a user downstream.

CS presented monitoring results which included:

- Attended noise

CN asked where the NM4 is located

CS advised it is at the end of Ellerslie Lane.

SO suggested that wind direction could also be included in reporting.

- Blasting

PWa asked if the water resistant explosives were still being used

PWi explained the patented design of the explosives used by MCC blasting contractor and that this was still in use where needed.

PWa asked how long the shots can be delayed.

PWi advised using this water resistant explosive that a sleeping shot would be fine for up to a month.

PWa advised that he had not felt any blasts.

- Air quality

The spikes in November were attributed to regional dust and the burn off of the Pilliga Forrest.

SS enquired how the data was used as a management tool onsite.





CS advised that daily air quality, spikes and other activities are presented at the daily in-pit meetings along with the meteorology forecast data. Following this the OCE will advise of any relevant responses and changes in production undertaken to minimise the effects of the operation on air quality.

- Groundwater – standing water levels, pH and electrical conductivity (EC) levels;
- Surface water - total suspended solids (TSS), pH and EC;
- Rehabilitation
- Summary of Community Complaints Register

## **6 General Business**

### **A) Social Impact Management Plan (SIMP)**

CS advised that the SIMP has been submitted to the Department of Planning and Environment at the end of April for review and approval. Once approved the SIMP will be provided to the CCC members.

### **B) Revised Biodiversity Management Plan (BMP) and revised Biodiversity Offset Strategy (BOS)**

CS advised that the revised BMP and BOS has been submitted to the Department of Planning and Environment at the end of April for review and approval.

### **C) General Questions raised from the CCC**

PW<sub>a</sub> asked about work on the Staff access – Therribri Road

CS advised NSC will be completing the works and have split the project to be completed in two sections with completion expecting early in the next financial year.

PW<sub>a</sub> asked about the use of the Boggabri Coal access from the highway.

CS advised that the mines current approval does not include the use of this road and would then require a commercial agreement with Boggabri Coal to use the road.

PW<sub>a</sub> asked if the stop sign could be changed from the public road to the private road

CS and PW<sub>i</sub> advised that it would be the responsibility of the NSC to facilitate any changes and would make the decision based on safety requirements and longer term traffic movements at the intersection

It is up to individuals to make representation to the NSC Traffic committee in regards to implementing a give way intersection due to the changes in the traffic conditions.

CN enquired as to where the employee buses run from.

PW<sub>i</sub> advised that the Civeo carpark was designed to accommodate additional cars and act as a collection point for the buses.

LF asked if there were double decker buses being used to transport workers.

PW<sub>i</sub> advised that the Downer contractors use this bus.

### **D) Guest Presentation**

EPA representatives' response to request for Air Quality Monitor in the area.



The original idea to install Air Quality Monitors was developed in the Strategic Land Use Management Plan

The EPA originally envisaged that the Air Quality monitoring network was based on the Upper Hunter and would be implemented in the Gunnedah region and be funded by industry and monitored by Office of Environment and Heritage (OEH)

The Industry (mining) currently provides comprehensive monitoring results around the immediate operations and at this stage the EPA do not see the need for further publicly funded monitoring to be installed as the current results do not shown exceeding levels.

The initial three options for the monitoring equipment and website were;

1. OEH own, operate and maintain
2. Industry fund the purchase of equipment and OEH operate and maintain
3. Industry own, operate and maintain

The Air Quality Monitoring network would be for the benefit of majority of the population and not specifically mine related.

Current regional information for this area is provided by the OEH monitoring site in Tamworth.

The OEH do not see the need for a publicly funded network extended to this area – unless funding is sourced from Industry.

The Act requires evidence of the need to justify the expense to be presented to a panel to impose a levy, through EPL's to set up monitors.

There is no mechanism or regulation for it to happen.

Expectation is that there are no funds for a network in this area.

Evidence including a meteorological study of air flow patterns and climate change connection to locations would be required to justify need.

Due to population factors, monitors for this area would be located at Gunnedah, Narrabri and possibly Mullaaley.

There are a number of existing monitors currently located in the area at mine operated sites. These units have been audited and comply with monitoring and maintenance requirements.

The EPA is confident that information sourced from mine sites is accurate.

If a monitor network was to go ahead a relative contribution would be required to fund the network from Mining, Agriculture and Quarries – dust producing industries.

The concern is that the public cannot see real time data. An alternative would require a formal approach to the Mines to share information allowing the public to access real time monitoring and not the construction and implementation of an additional Regional Network.

The EPA concedes that it is unlikely that they are going to be able to deliver findings to justify expanding the publically funded network – it may not happen.

Community groups are installing transportable monitors. However they cannot ensure compliance with conditions and best practice using these recording methods.

The EPA role now will be to investigate and facilitate the possibility of developing a joint website from the existing monitoring equipment with live access to air quality data.

CS suggested that an education process would be required to allow the public to correctly understand and interpret the information being provided in real time.



Previous EPA cameras installed on sites had changed the culture of the employees and they are encouraged to implement a combination of technologies to better monitor environmental conditions.

PWa stated the Hunter network allows for movement for mines to change practises and stop mining if conditions require.

CS advised that MCC currently use site observations and real time information as a management tool to review onsite activities and if necessary modify or cease particular areas of the operation. SMS alerts can also be sent to inform management of monitoring results. MCC are currently analysing the Meteorological data to update the sites Trigger Action Response Plan (TARP) and set relevant trigger levels to review onsite activities and implemented additional mitigation measures which can included ceasing or modifying operations.

The CCC can contribute to the community education process by communicating the process the mine undertakes in relation to environmental monitoring.

PWa does not agree that monitors are only required in big centres but believes the combined website with real time data would be a win for everyone and allow people to have confidence.

CN the website would need to be user friendly for older people.

The website would be similar to the OEH website that is very easy to interpret.

The EPA is prepared to contribute money and conduct talks with industry to facilitate an OEH website for Air Quality Monitoring.

### **Next meeting**

Time for next meeting will remain as 2pm

Pending available facilities the next meeting will be conducted onsite with a tour of the mine for CCC members.

Dates for the remaining 2015 meetings have been scheduled as below

- 12 August 2015
- 18 November 2015
- 19 November 2015 (Joint BTM CCC)

**Meeting Closed:** 3.50pm

# Maules Creek Coal Mine Community Consultative Committee Meeting #9

## Environmental Monitoring Report Q1, January – March 2015

### Noise Monitoring

Noise monitoring was undertaken at the locations as per the approved noise management plan on the 29<sup>th</sup> & 30<sup>th</sup> January, 23<sup>rd</sup> & 24<sup>th</sup> February and 29<sup>th</sup> & 30<sup>th</sup> March 2015. The measured noise level (LAeq15) attributed to Maules Creek Coal and applicable criteria for each location are shown in the Tables below. The results show that mine operations did not exceed the applicable LAeq15 criteria at any time.

**Tables - LAeq, 15minute GENERATED BY MCC AGAINST OPERATIONAL DAYTIME NOISE CRITERIA – JANUARY 2015.**

#### January Noise Monitoring – Day

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	30/01/2015	11:46 AM	3.8	0	40	No	IA	NA
NM2	30/01/2015	10:48 AM	2.6	0	40	Yes	IA	Nil
NM3	30/01/2015	10:15 AM	2.5	0	40	Yes	IA	Nil
NM4	30/01/2015	11:18 AM	4.1	0	40	No	IA	NA
NM5	30/01/2015	12:11 PM	4.5	0	40	No	IA	NA
Cooboobindi	30/01/2015	9:48 AM	1.8	0	45	Yes	24	Nil

**Tables - LAeq, 15minute GENERATED BY MCC AGAINST OPERATIONAL EVENING AND NIGHT NOISE CRITERIA – JANUARY TO MARCH 2015.**

#### January Noise Monitoring – Evening & Night

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	29/01/2015	21:18	1.3	0	35	Yes	23	Nil
NM1	29/01/2015	22:30	0.2	0	35	Yes	29	Nil
NM2	29/01/2015	20:22	1.4	0	39	Yes	24	Nil
NM2	29/01/2015	22:59	0.4	0	39	Yes	28	Nil
NM3	29/01/2015	19:26	2.4	0	35	Yes	20	Nil
NM3	30/01/2015	0:24	0.9	0	35	Yes	22	Nil
NM4	29/01/2015	20:48	0.5	0	35	Yes	23	Nil
NM4	29/01/2015	23:28	0.5	0	35	Yes	29	Nil
NM5	29/01/2015	21:43	0.3	0	35	Yes	<20	Nil
NM5	29/01/2015	22:05	0.3	0	35	Yes	23	Nil
NM6	29/01/2015	19:54	1.3	0	35	Yes	IA	Nil
NM6	29/01/2015	23:55	0.2	0	35	Yes	20	Nil

**February Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	23/02/2015	20:29	2.4	0	35	Yes	<20	Nil
NM1	23/02/2015	22:29	2.7	0	35	Yes	1A	Nil
NM2	23/02/2015	19:27	2.6	0	39	Yes	23	Nil
NM2	23/02/2015	23:24	4.1	0	39	No	<25	NA
NM3	23/02/2015	18:31	1.7	0	35	Yes	1A	Nil
NM3	24/02/2015	0:20	5.1	0	35	No	<20	NA
NM4	23/02/2015	19:58	2.5	0	35	Yes	<25	Nil
NM4	23/02/2015	22:56	3.7	0	35	No	1A	NA
NM5	23/02/2015	20:58	4.5	0	35	No	1A	NA
NM5	23/02/2015	22:02	2.8	0	35	Yes	1A	Nil
NM6	23/02/2015	18:59	1.7	0	35	Yes	1A	Nil
NM6	23/02/2015	23:53	4.1	0	35	No	1A	NA

MCC contribution measured at Olivedene has been adjusted for distance loss at NM3; and

Met data for this measurement NM4 23/02/2015 19:58 was unavailable. The nearest available met data either side of the 19:58 timestamp was used instead.

**March Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	29/03/2015	23:48	0.5	0	35	Yes	<30	Nil
NM1	30/03/2015	19:54	2.1	0	35	Yes	<20	Nil
NM1	30/03/2015	20:09	2.2	0	35	Yes	<20	Nil
NM1	30/03/2015	20:26	1.3	0	35	Yes	<20	Nil
NM2	29/03/2015	21:46	0.7	0	39	Yes	<20	Nil
NM2	29/03/2015	22:02	0.5	0	39	Yes	<20	Nil
NM2	29/03/2015	22:17	0.6	0	39	Yes	<20	Nil
NM2	30/03/2015	21:40	1.6	0	39	Yes	<20	Nil
NM3	29/03/2015	19:09	0.4	0	35	Yes	1A	Nil
NM3	29/03/2015	19:24	0.5	0	35	Yes	1A	Nil
NM3	29/03/2015	19:39	0.1	0	35	Yes	1A	Nil
NM3	30/03/2015	22:40	0.5	0	35	Yes	1A	Nil
NM4	29/03/2015	22:46	0.7	0	35	Yes	<20	Nil
NM4	29/03/2015	23:02	0.2	0	35	Yes	<20	Nil
NM4	29/03/2015	23:17	0.5	0	35	Yes	<20	Nil
NM4	30/03/2015	21:14	1.1	0	35	Yes	<20	Nil
NM5	30/03/2015	0:14	1.3	0	35	Yes	<20	Nil
NM5	30/03/2015	18:57	1	0	35	Yes	<20	Nil
NM5	30/03/2015	19:12	1.5	0	35	Yes	<20	Nil
NM5	30/03/2015	19:27	2	0	35	Yes	<20	Nil
NM6	29/03/2015	20:11	0.4	0	35	Yes	1A	Nil
NM6	29/03/2015	20:27	0.8	0	35	Yes	1A	Nil
NM6	29/03/2015	20:43	1.1	0	35	Yes	1A	Nil
NM6	30/03/2015	22:10	1.2	0	35	Yes	<20	Nil

In addition to the 15 minute average for Day Evening and Night, the Maules Creek Coal (MCC) EPL20221 also has a '1 Minute - Night' criteria (LA1) that applies from 10pm to 7am Monday to Saturday & 10pm 8am

Sundays and Public Holidays. The results for the LA1 monitoring are shown below in Table 2. The results show that mine operations did not exceed the applicable LA1 criteria at any time.

**Tables – LA1, 1minute GENERATED BY MCC AGAINST OPERATIONAL EVENING NOISE CRITERIA – JANUARY TO MARCH 2015.**

**January Noise Monitoring – Night**

<b>L<sub>A1</sub> (1min)</b>		January						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC L <sub>A1</sub> (1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	29/01/2015	22:30	0.2	0	45	Yes	40	Nil
NM2	29/01/2015	22:59	0.4	0	45	Yes	34	Nil
NM3	30/01/2015	0:24	0.9	0	45	Yes	28	Nil
NM4	29/01/2015	23:28	0.5	0	45	Yes	35	Nil
NM5	29/01/2015	22:05	0.3	0	45	Yes	30	Nil
NM6	29/01/2015	23:55	0.2	0	45	Yes	24	Nil

**February Noise Monitoring – Night**

<b>L<sub>A1</sub> (1min)</b>		February						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC L <sub>A1</sub> (1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	23/02/2015	22:29	2.7	0	45	Yes	1A	Nil
NM2	23/02/2015	23:24	4.1	0	45	No	29	NA
NM3	24/02/2015	0:20	5.1	0	45	No	<25	NA
NM4	23/02/2015	22:56	3.7	0	45	No	1A	NA
NM5	23/02/2015	22:02	2.8	0	45	Yes	1A	Nil
NM6	23/02/2015	23:53	4.1	0	45	No	1A	NA

**March Noise Monitoring – Night**

<b>L<sub>A1</sub> (1min)</b>		March						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC L <sub>A1</sub> (1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	29/03/2015	23:48	0.5	0	45	Yes	<30	Nil
NM2	29/03/2015	22:02	0.5	0	45	Yes	23	Nil
NM3	30/03/2015	22:40	0.5	0	45	Yes	1A	Nil
NM4	29/03/2015	22:46	0.7	0	45	Yes	25	Nil
NM5	30/03/2015	0:14	1.3	0	45	Yes	<20	Nil
NM6	30/03/2015	22:10	1.2	0	45	Yes	23	Nil

**Evening L<sub>Aeq15min</sub> Night L<sub>Aeq15min</sub>, Night L<sub>A1min</sub>**

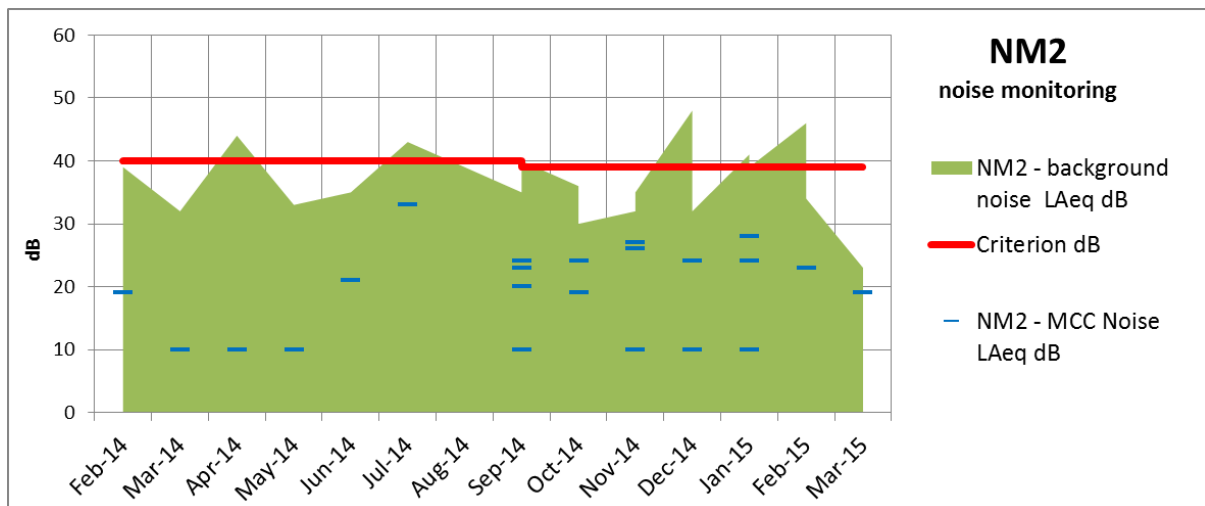
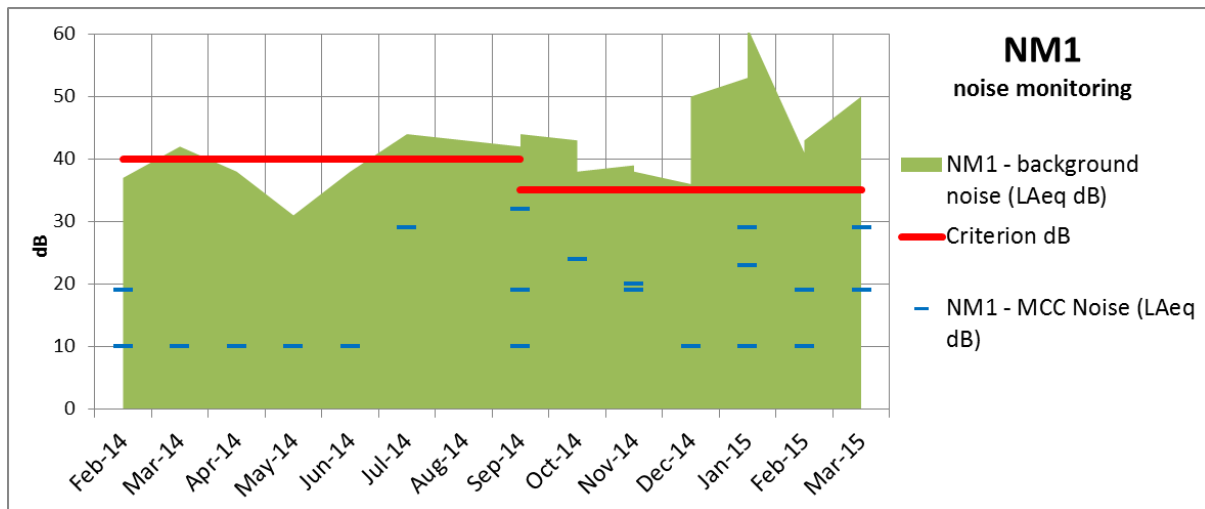
**Notes:**

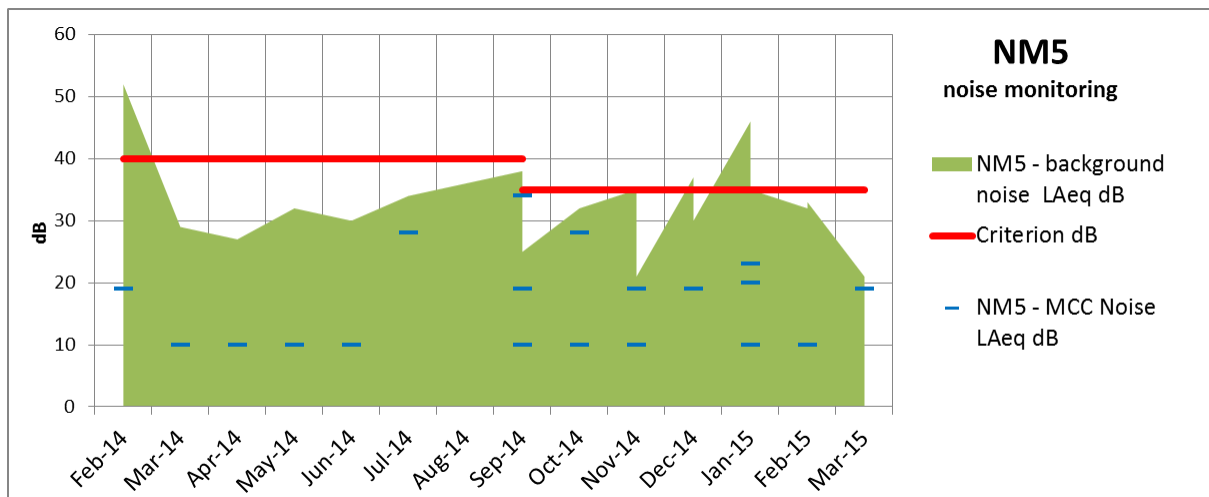
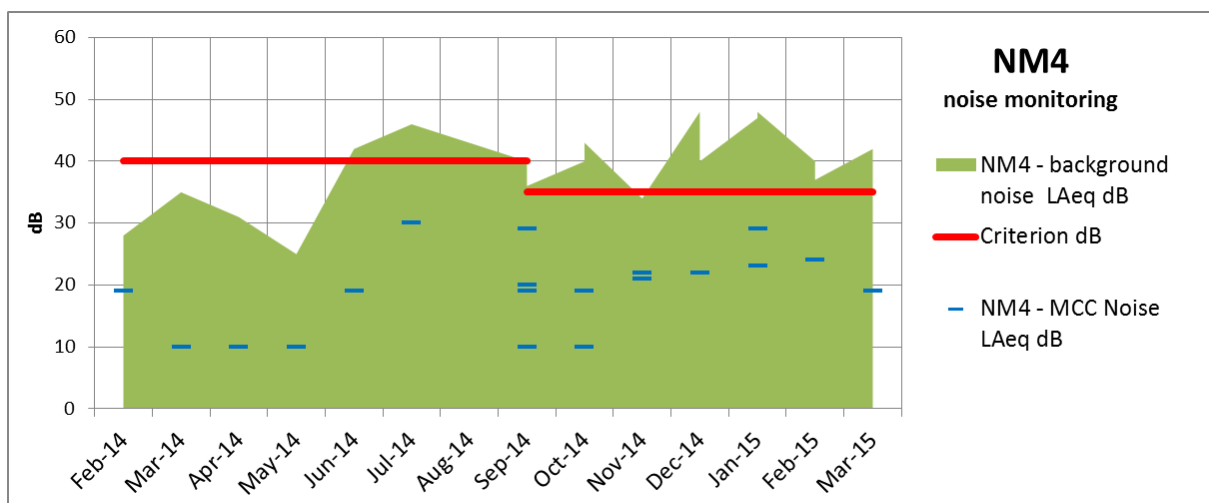
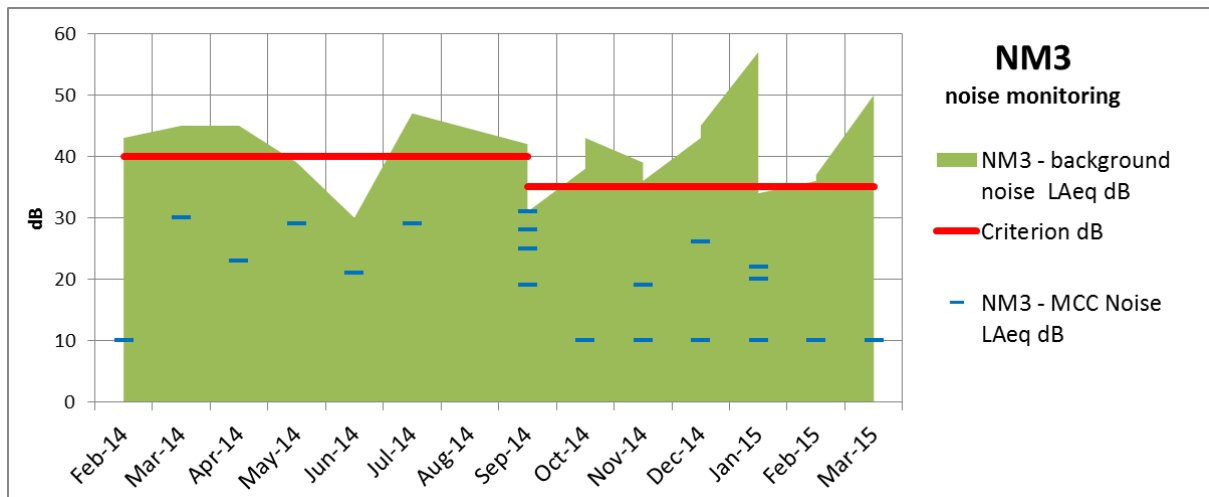
- Noise emission limits do not apply during periods of rainfall or wind speeds greater than 3 metres per second (at 10 metres) as such a No will appear in Criteria Applies Column ;
- Estimated or measured LAeq,15minute attributed to Maules Creek Coal (MCC);
- Estimated or measured LA1,1minute attributed to Maules Creek Coal (MCC);
- NA in exceedance column means atmospheric conditions outside those specified in project approval and criterion is not applicable;
- 1A – Inaudible

### Attended Noise Monitoring

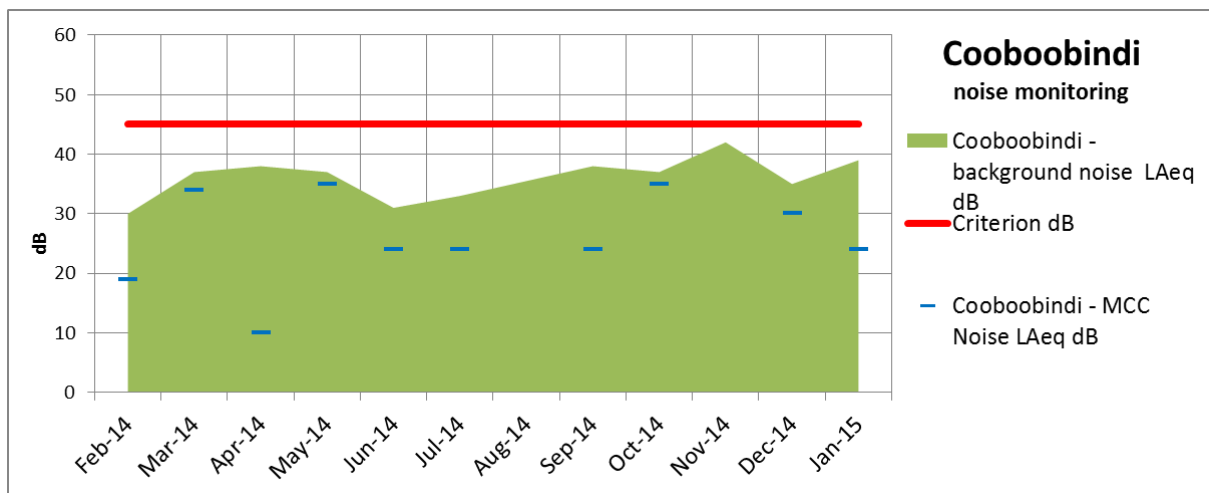
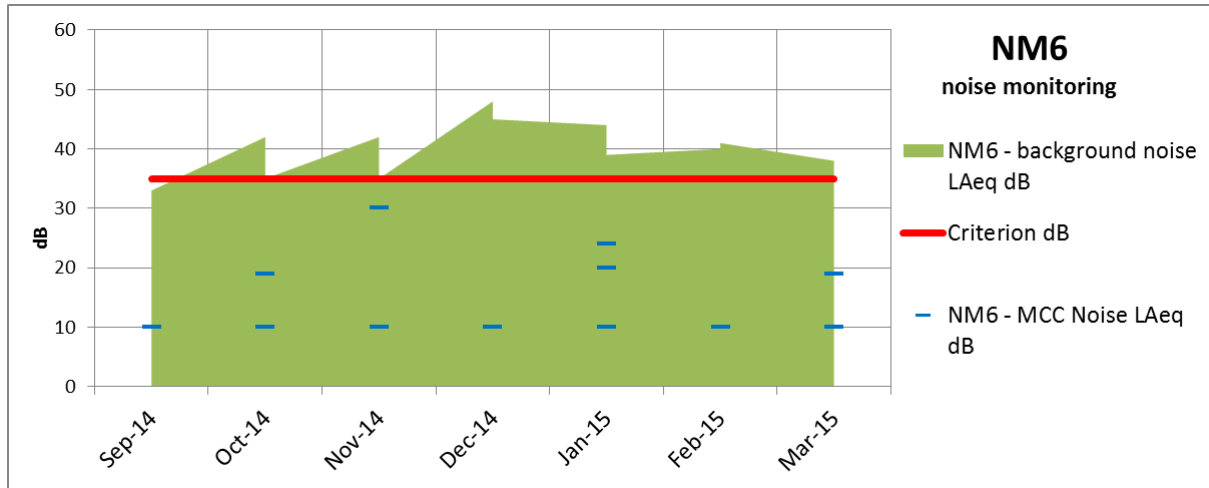
The following seven (7) figures below show the 'attended' noise monitoring results recorded since construction began in earnest in January 2014. During the construction phase, noise monitoring was also conducted at the private property closest to the rail construction, Cooboobindi. Monitoring at Cooboobindi will cease in after January due to the conclusion of construction related activities.

Green shading shows the  $LA_{eq(15\text{minute})}$  background noise and the blue dash is the portion of the  $L_{Aeq}$  likely attributed to the mine according to the sound engineer. The criteria shown in red, was updated to align with the transition from construction to operations / mining.









### Blast Monitoring

Mine operations commenced in August 2014 and there have been 45 blast events to date (at 6<sup>th</sup> May 2015). All operational blast events have been within the applicable Noise and Ground Vibration limits set out in the Project Approval.

All blast monitoring results have been within the MCC EPL limits.

**Table – Blast Results Summary Quarter 1 2015**

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	17	99.86	111.90	120	No
	Vibration	mm/s		17	0.31	0.78	10	No

**Air Quality**

**Deposited Dust**

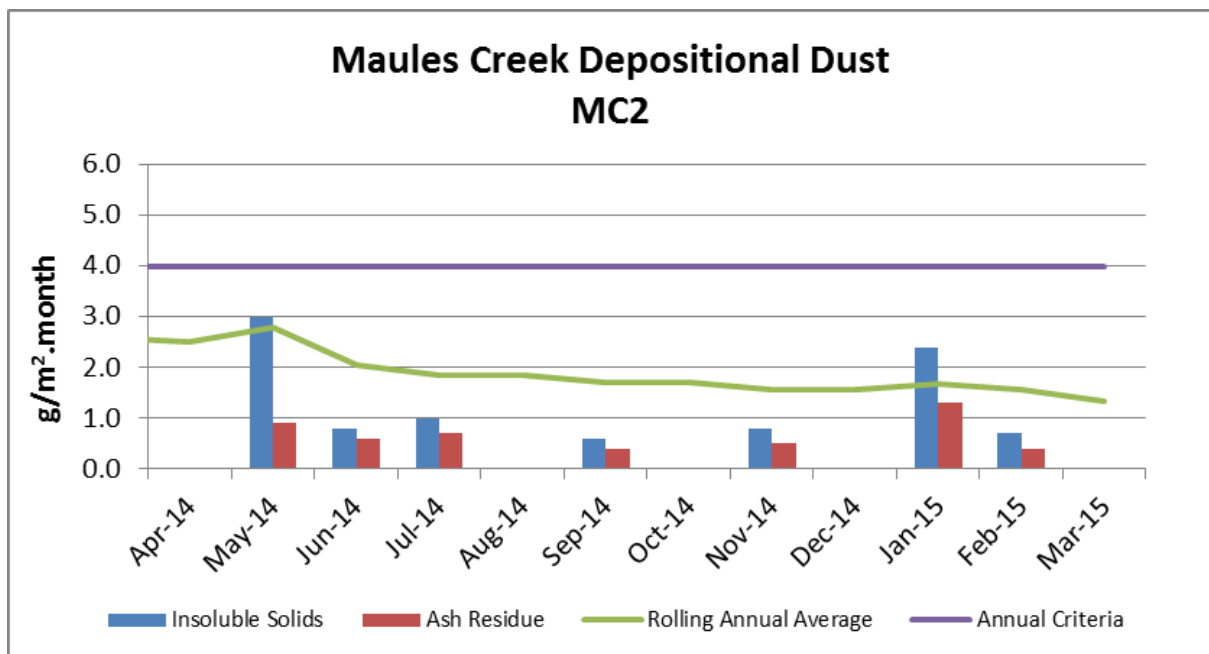
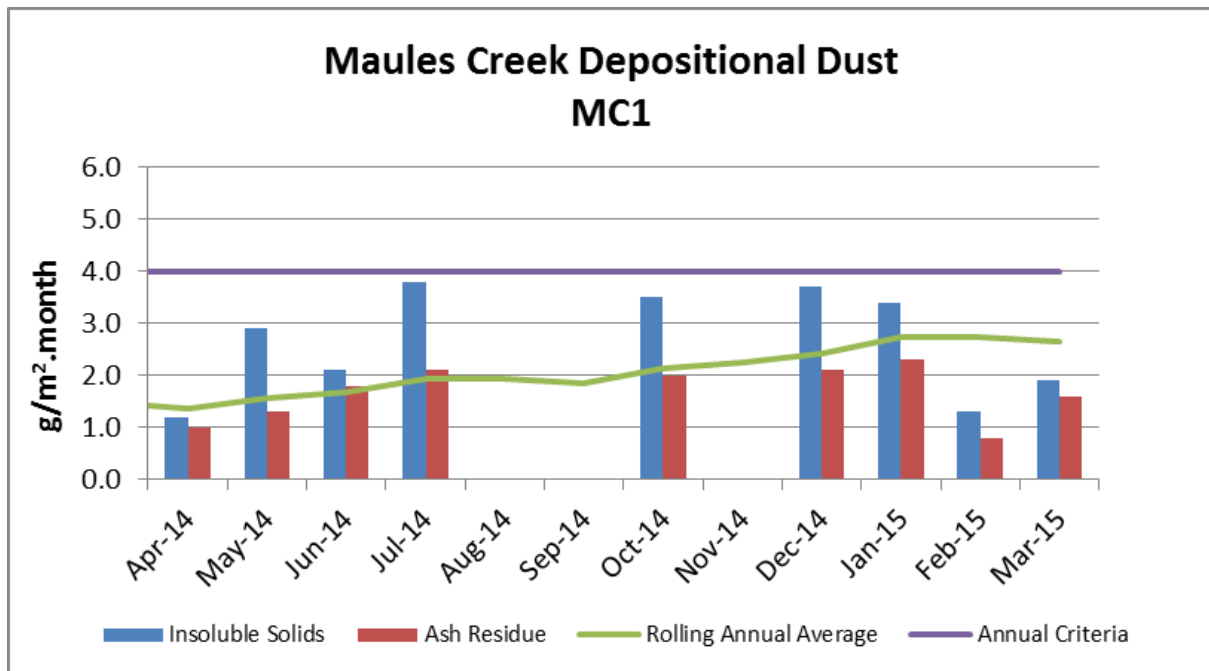
**Table - Deposited Dust Results \***

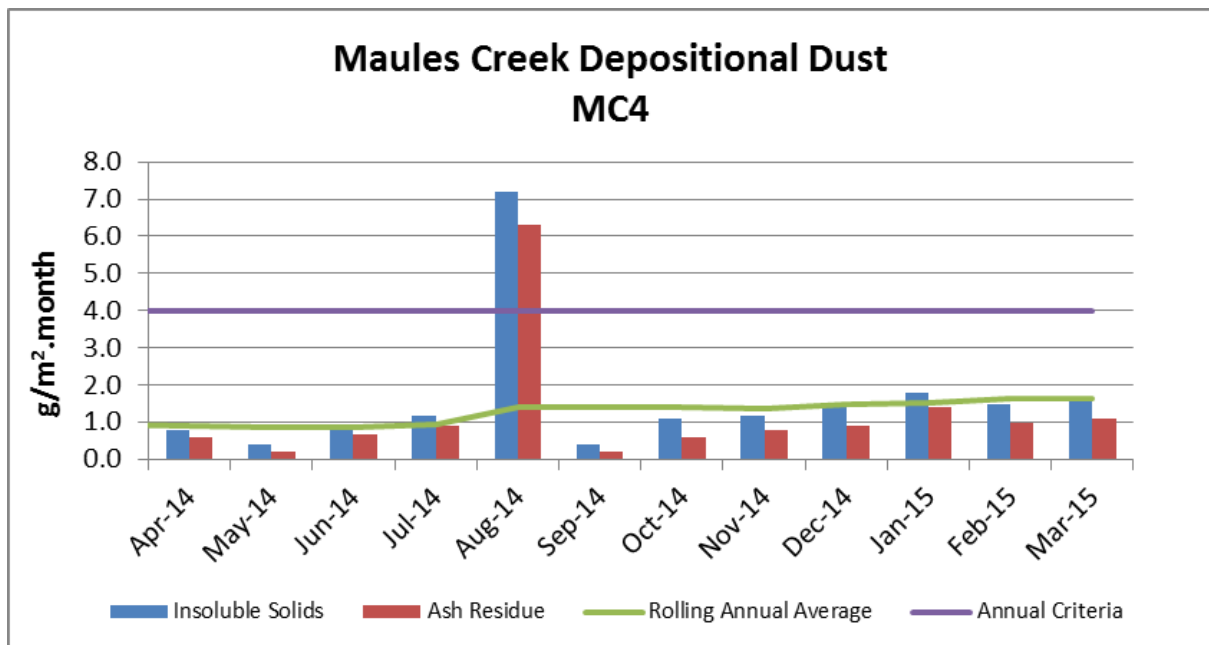
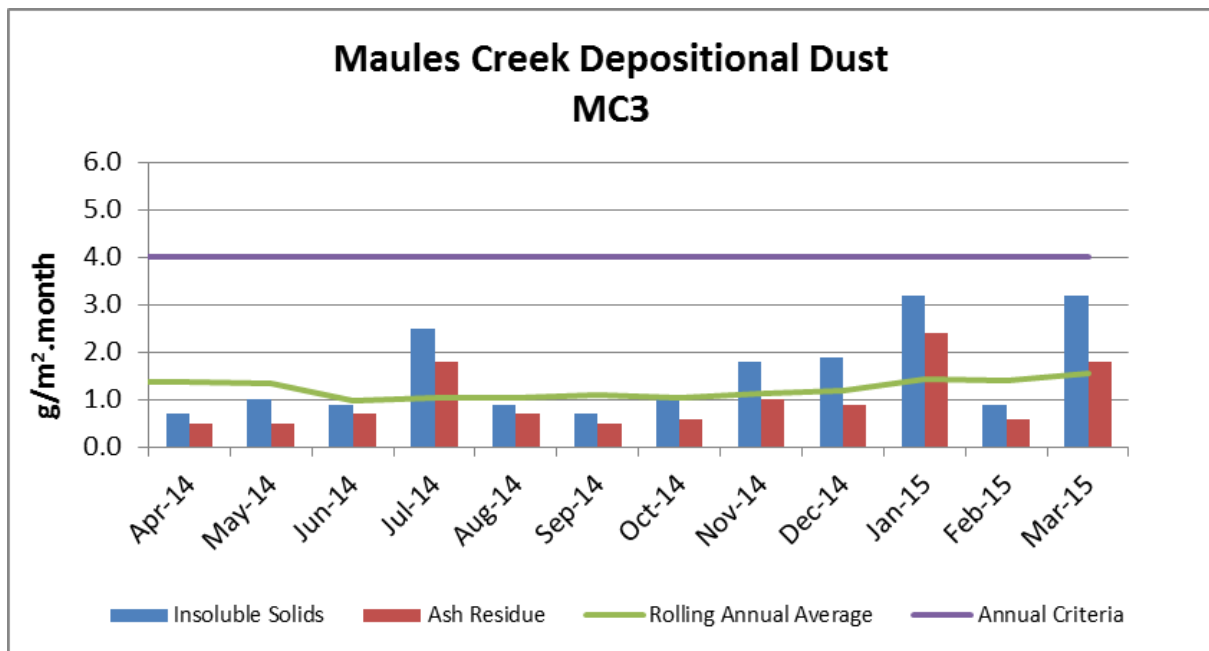
<b>Month</b>	<b>MC1</b>	<b>MC2</b>	<b>MC3</b>	<b>MC4</b>
Mar-14	2.7	3.2		1.8
Apr-14	1.2		0.7	0.8
May-14	2.9	3.0	1.0	0.4
Jun-14	2.1	0.8	0.9	0.9
Jul-14	3.8	1.0	2.5	1.2
Aug-14			0.9	7.2
Sep-14		0.6	0.7	0.4
Oct-14	3.5		1.0	1.1
Nov-14		0.8	1.8	1.2
Dec-14	3.7		1.9	1.4
Jan-15	3.4	2.4	3.2	1.8
Feb-15	1.3	0.7	0.9	1.5
Mar-15	1.9		3.2	1.7
<b>Annual Avg</b>	<b>2.65</b>	<b>1.56</b>	<b>1.56</b>	<b>1.65</b>
<b>Project Avg 2010 - 2015</b>	<b>2.27</b>	<b>1.89</b>	<b>1.69</b>	<b>1.35</b>

\* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated (insect larvae, bird droppings, vegetation etc.).

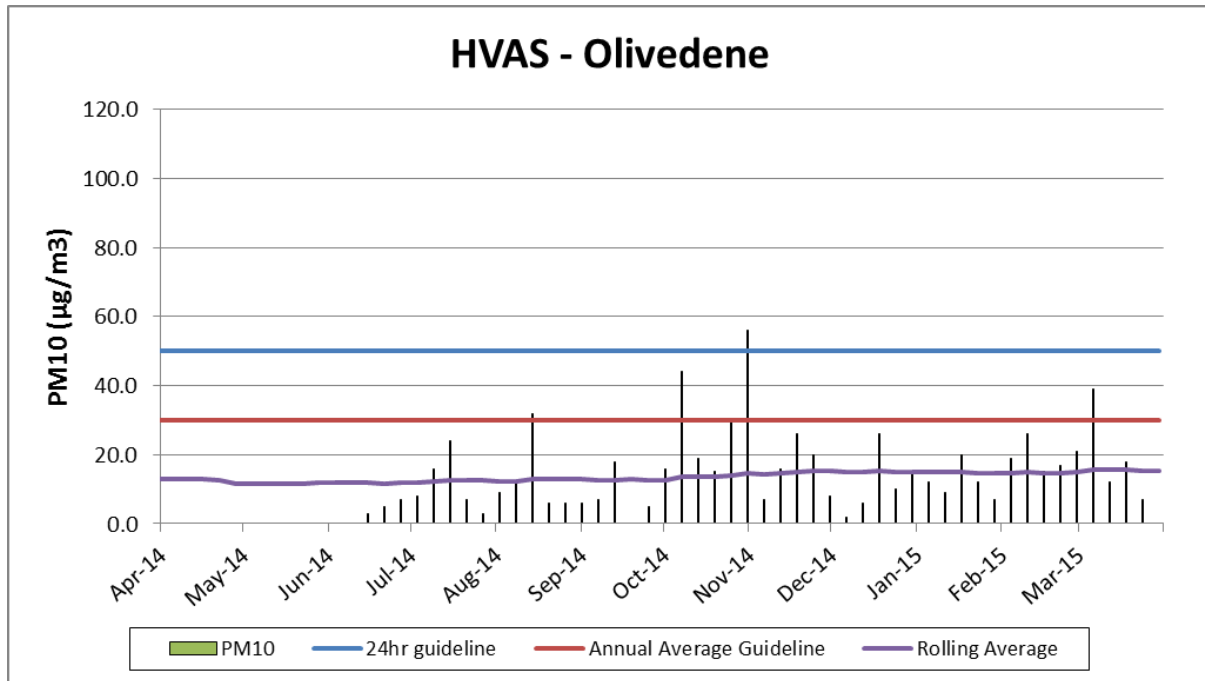
All deposited dust gauge (DDG) results as shown in Table above for the reporting period remain below the limit of 4gm/m<sup>2</sup>/month.

Deposited Dust Figures (MC1 – MC4)





### High Volume Air Sampling (HVAS)

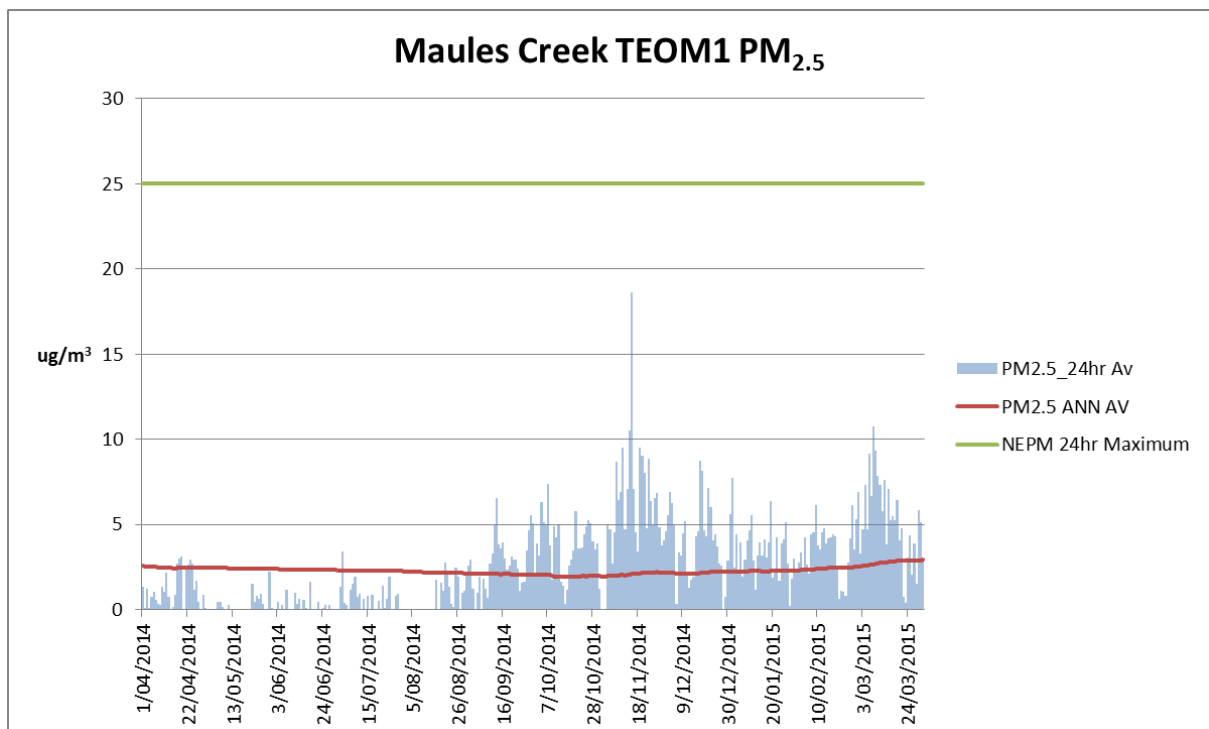
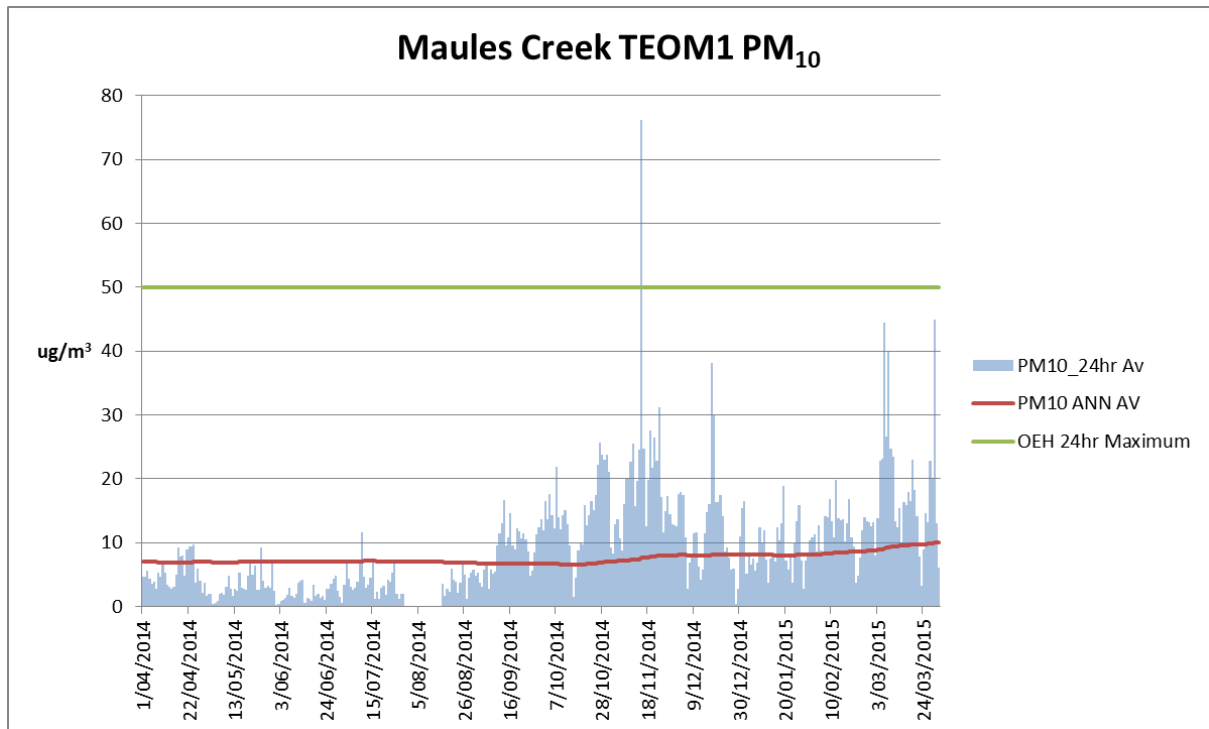


### TEOM - PM<sub>10</sub> Results

The annual average for PM<sub>10</sub> results at the Maules Creek Coal TEOM, is significantly below the applicable NEPM / OEH maximum annual average criteria of 30.0 $\mu\text{g}/\text{m}^3$  (at 31<sup>st</sup> March 2015). The PM<sub>10</sub> results have remained below this criteria since the TEOM was commissioned in November 2011. The TEOM also captures continuous measurements of PM<sub>Course</sub>, PM<sub>2.5</sub>, and Meteorology which are all available to the mine in real time. The only periods when the TEOM is offline is during scheduled system maintenance regional power failures.

The following figures show the TEOM particulate matter results (PM<sub>10</sub>, PM<sub>2.5</sub>) for the previous 12 months. The two images illustrate that particulate matter 'Annual Averages' are largely unchanged over the last 12 months.

**TEOM Figures – Particulate Matter  $PM_{10\mu g/m^3}$  and  $PM_{2.5\mu g/m^3}$**



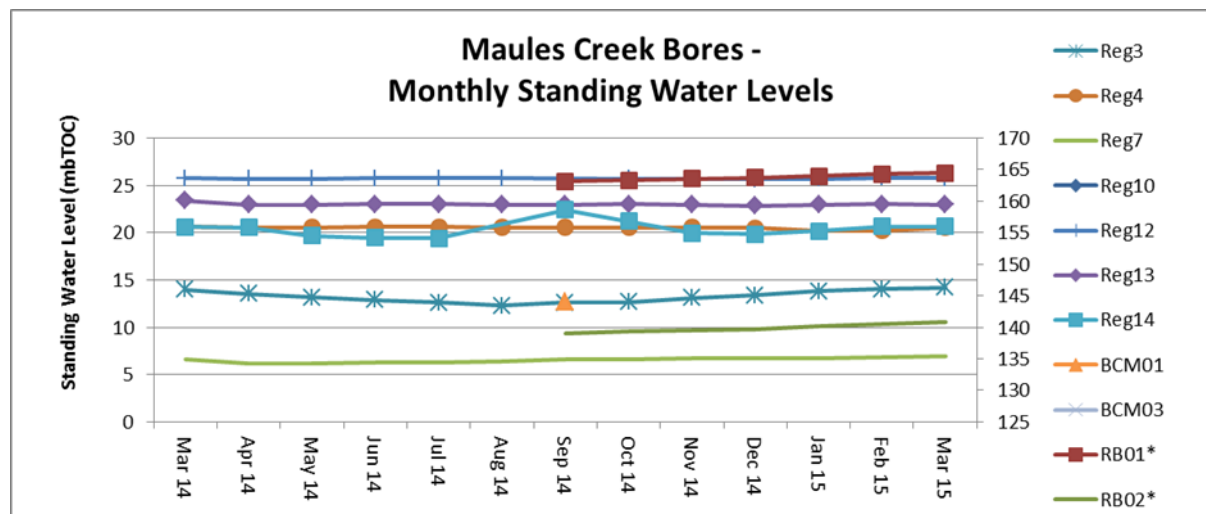
## Water Monitoring

### Ground Water

Groundwater monitoring results in open / standpipe piezometers show levels to be currently stable. 'RB' and 'Reg' series bores were installed between Q4 2013 and Q1 2014 and baseline data / conditions (12 months) is still being established. BCM01, BCM03, Reg10 are shallow bores which have been dry since construction in 2013.

Table 5 – Groundwater Level

SWL	RB01*	RB02*	RB05	Reg3	Reg4	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			55.26	14	20.61	6.61		25.74	23.4	20.58		
Apr-14				13.54	20.56	6.19		25.7	22.97	20.54		
May-14				13.15	20.54	6.23		25.7	22.96	19.67		
Jun-14			55.54	12.86	20.6	6.28		25.74	23.04	19.45		
Jul-14			56	12.63	20.59	6.32		25.75	23.03	19.4		
Aug-14			55.99	12.26	20.56	6.37		25.76	22.97			
Sep-14	163.17	138.98	56.07	12.62	20.54	6.57			22.97	22.41	12.69	
Oct-14	163.34	139.37	56.34	12.67	20.54	6.58		25.68	23.01	21.2		
Nov-14	163.55	139.5	56.28	13.1	20.56	6.67		25.72	22.95	19.97		
Dec-14	163.67	139.75	56.3	13.36	20.48	6.69		25.64	22.87	19.85		
Jan-15	163.95	140.1	55.83	13.81	20.19	6.76		25.72	22.94	20.14		
Feb-15	164.27	140.47	55.98	14.05	20.23	6.85		25.78	23	20.67		
Mar-15	164.42	140.77	56.5	14.18	20.57	6.93		25.77	22.97	20.67		



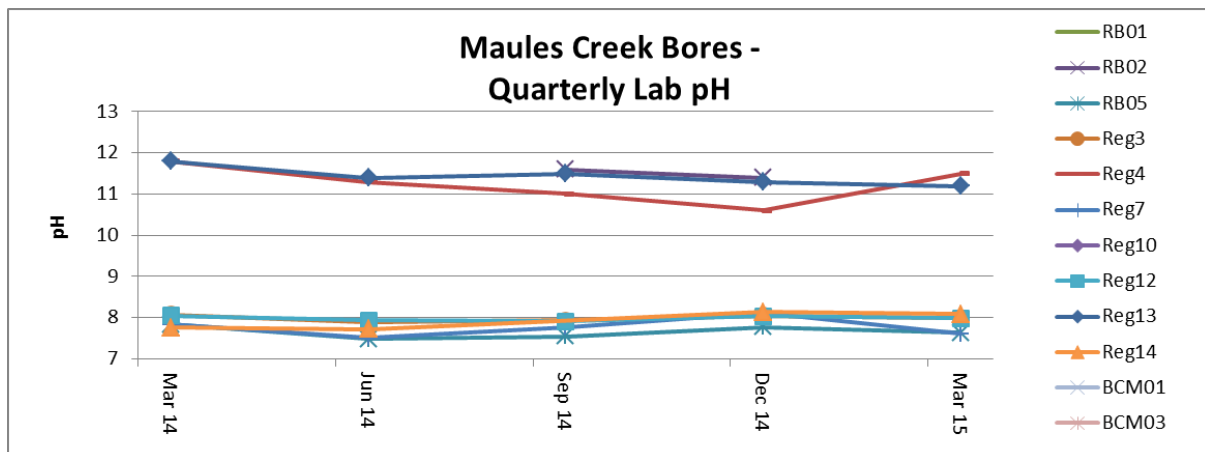
\* RB01 & RB02 bore depths are listed on the secondary axis.

### Acidity / Alkalinity (pH)

Baseline groundwater conditions are still being established, however, 3 bores RB02, Reg4 and Reg13 show elevated pH levels (above pH 8.5) this has been determined to be a result of low recharge volumes within these bores since the drilling and installation. The two deep bores RB01 and RB02 were found to contain very little water in them during the September monitoring event and sand was preventing collection of sufficient volume for purging and sampling.

Table – Groundwater pH

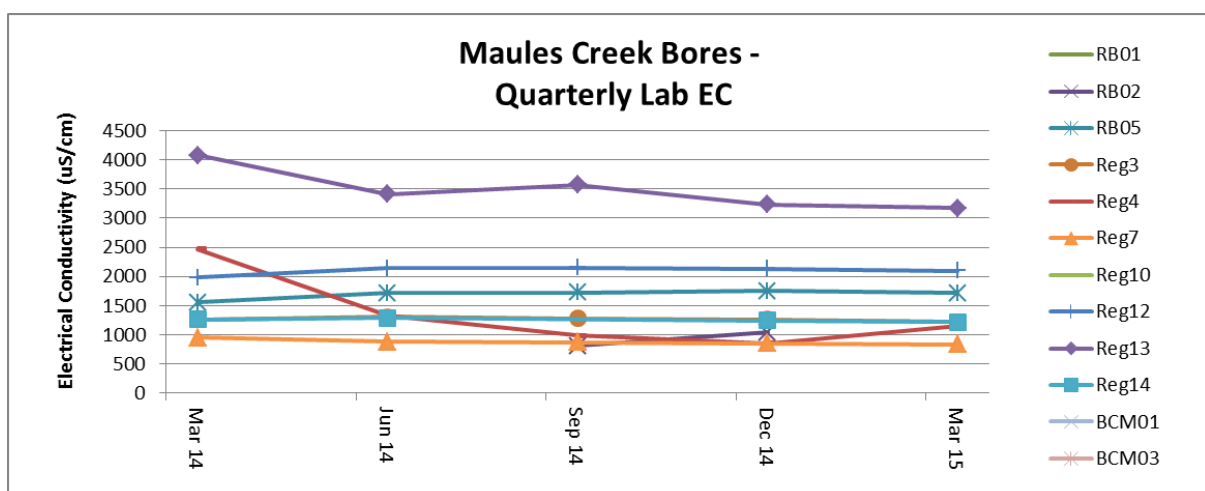
Lab pH	RB01	RB02	RB05	Reg3	Reg4	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			7.84	8.08	11.8	7.83		8.05	11.8	7.76		
Jun-14			7.48	7.9	11.3	7.52		7.93	11.4	7.72		
Sep-14		11.6	7.54	7.93	11	7.77		7.91	11.5			
Dec-14		11.4	7.77	8.05	10.6	8.11		8.04	11.3	8.14		
Mar-15			7.63	7.98	11.5	7.61		7.99	11.2	8.09		



### Electrical Conductivity

Laboratory conductivity (EC) levels are all within historic groundwater EC range of 500<sub>µs/cm</sub> to 2500<sub>µs/cm</sub> with exception for Reg13.

Lab EC	RB01	RB02	RB05	Reg3	Reg4	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			1560	1260	2470	950		1980	4080	1260		
Jun-14			1720	1310	1330	884		2140	3410	1290		
Sep-14		814	1730	1280	988	871		2150	3570			
Dec-14		1040	1750	1260	854	853		2130	3230	1250		
Mar-15			1720	1220	1160	834		2100	3170	1220		





### Wet Weather Discharge Sampling

In January 2015, Maules Creek Coal recorded 91.6mm of rainfall at the Weather Station, of which, 52.6mm fell in one day, the 27<sup>th</sup> January 2015. This volume of rainfall exceeds the 5 day 90<sup>th</sup> percentile Gunnedah rainfall event as listed detailed in the Maules Creek EPL20221. As such sedimentation dam EPL 'SD7' overflowed for period of less than 24 hours.

SD7 is located adjacent to the mine access road and rail spur. Water from SD7 flowed into a natural drainage line and into a series of existing farm dams on the mine owned 'Velyama' property.

Water samples from SD7 and the downstream environment were collected and analysed and results shown in the following 2 tables.

Sample ID	Field Parameters			
	pH	EC (µS/cm)	Temp (°C)	TSS (mg/L)
SW8	8.21	481	23.3	43
SW5	8.29	484	23.5	81
SD7	8.14	318	23.1	719

Laboratory Analysis Results	Units	LOR*	SW8	SW5	SD7
pH Value	pH Unit	0.01	8.08	8.15	7.7
Electrical Conductivity @ 25°C	µS/cm	1	493	492	328
Total Dissolved Solids @180°C	mg/L	10	235	230	354
Suspended Solids (SS)	mg/L	5	32	27	122
Hydroxide Alkalinity as CaCO3	mg/L	1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	162	164	95
Total Alkalinity as CaCO3	mg/L	1	162	164	95
Calcium	mg/L	1	37	37	19
Magnesium	mg/L	1	24	24	10
Sodium	mg/L	1	33	34	32
Potassium	mg/L	1	4	4	3
Aluminium	mg/L	0.01	1.39	0.79	11.5
Cadmium	mg/L	0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	0.001	0.003	<0.001	0.004
Copper	mg/L	0.001	0.003	0.002	0.008
Lead	mg/L	0.001	<0.001	<0.001	0.005
Manganese	mg/L	0.001	0.066	0.053	0.186
Nickel	mg/L	0.001	0.002	0.002	0.006
Selenium	mg/L	0.01	<0.01	<0.01	<0.01
Silver	mg/L	0.001	<0.001	<0.001	<0.001
Zinc	mg/L	0.005	0.008	<0.005	0.03
Boron	mg/L	0.05	<0.05	<0.05	<0.05
Iron	mg/L	0.05	1.32	0.82	7.9
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001
Total Nitrogen as N	mg/L	0.1	0.6	0.6	1.9
Total Phosphorus as P	mg/L	0.01	0.06	0.05	0.36
Oil & Grease	mg/L	5	<5	<5	<5
* LOR = Limit of Recording					
SD7 = MCC water retention dam					
SW5 = Namoi River upstream					
SW8 = Namoi River downstream					

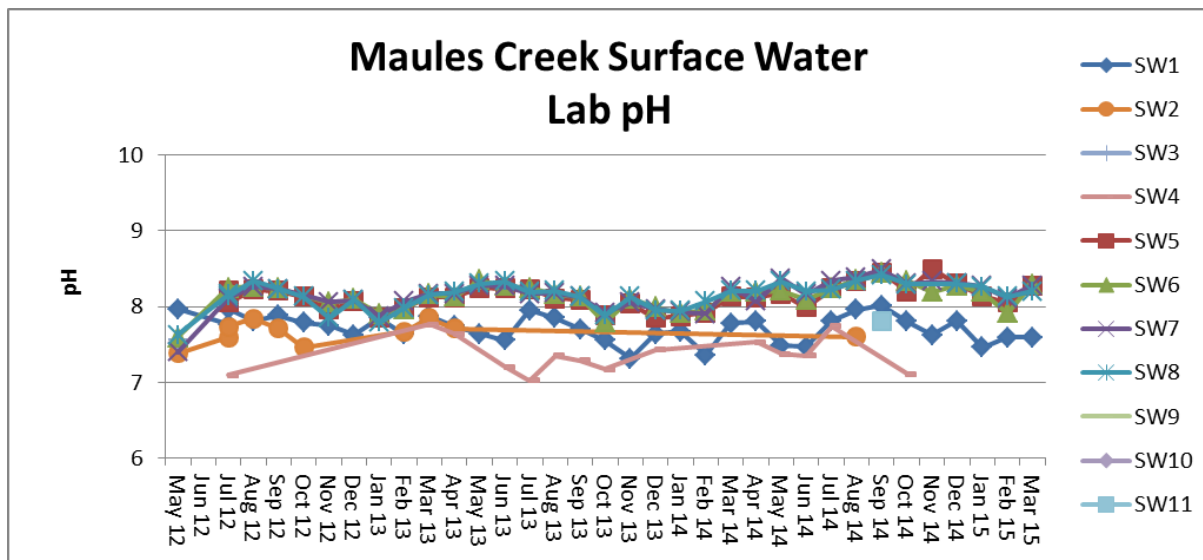
### Surface Water – Creeks and Rivers

Routine surface water monitoring is conducted in surrounding Creeks and Rivers on a monthly basis and pH, EC and TSS are shown in the tables and figures below.

#### Acidity / Alkalinity (pH)

Laboratory pH in creeks and rivers surrounding the project are all trending within the ANZECC acceptable range for Irrigation, Ecosystem Health and Recreation. Back Creek and upper Maules Creek are ephemeral and rarely contain flowing water.

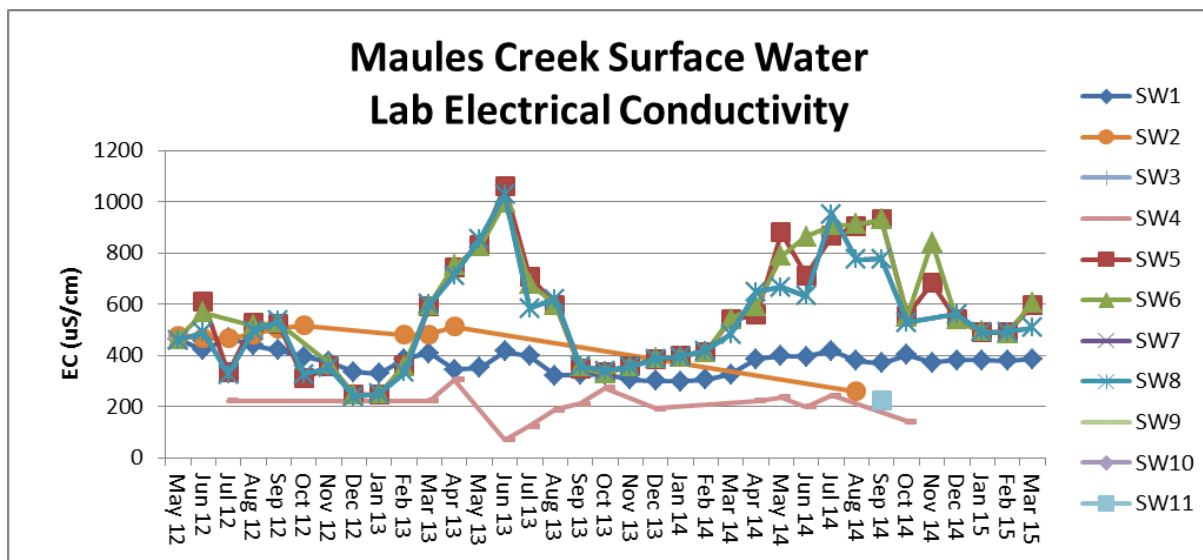
Lab pH	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
18/03/2014	7.78				8.13	8.19	8.26	8.21			
23/04/2014	7.8			7.53	8.12	8.19	8.07	8.21			
19/05/2014	7.48			7.37	8.17	8.21	8.37	8.33			
19/06/2014	7.47			7.35	7.99	8.09	8.16	8.2			
18/07/2014	7.81			7.74	8.24	8.24	8.34	8.22			
18/08/2014	7.96	7.6			8.33	8.36	8.39	8.34			
16/09/2014	8.01				8.45	8.44	8.49	8.42			7.8
14/10/2014	7.8			7.11	8.2	8.34	8.3	8.29			
20/11/2014	7.62				8.5	8.19	8.33				
16/12/2014	7.81				8.3	8.28	8.31	8.3			
14/01/2015	7.46				8.14	8.19	8.27	8.26			
11/02/2015	7.59				8.05	7.91	8.11	8.13			
11/03/2015	7.59				8.28	8.29	8.28	8.2			



### Electrical Conductivity

Surface water EC trends have remained consistent with SW5, SW6, SW7 and SW8 all historically variable. SW5 to SW8 are stations along the Namoi River which is subject to regulated / variable flow regimes.

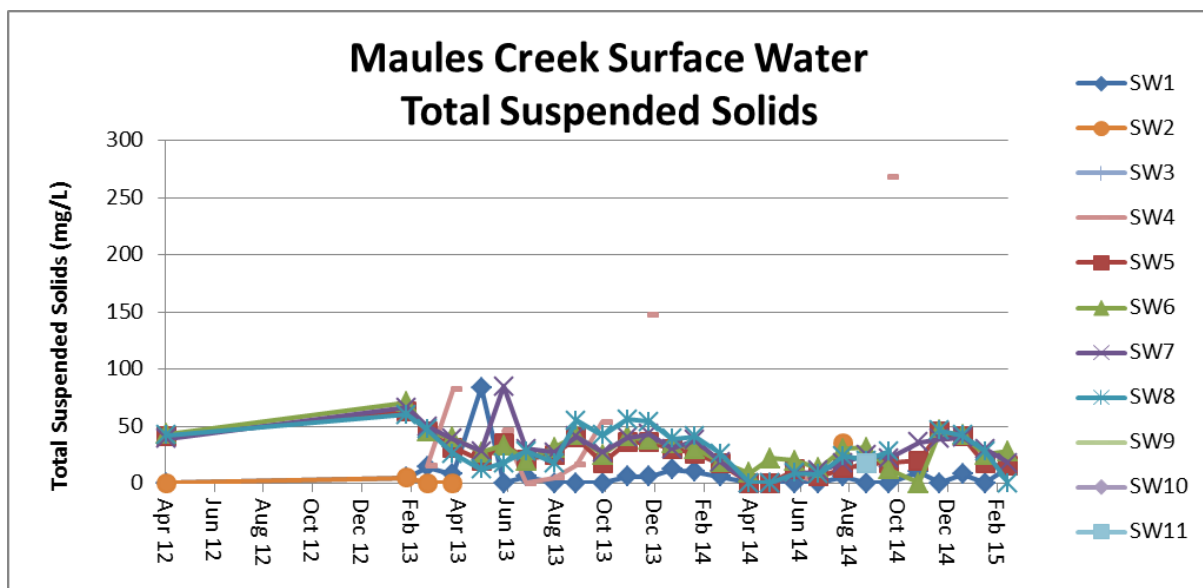
Lab EC	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
18/03/2014	326				540	542	528	482			
23/04/2014	386			223	560	594	617	649			
19/05/2014	397			238	881	789	711	667			
19/06/2014	395			201	712	865	950	632			
18/07/2014	419			245	866	909	886	953			
18/08/2014	379	260			907	913	945	775			
16/09/2014	371				932	932	910	778			223
14/10/2014	403			142	557	553	547	529			
20/11/2014	372				684	842	670				
16/12/2014	381				540	541	554	561			
14/01/2015	382				491	495	492	491			
11/02/2015	379				490	487	489	492			
11/03/2015	386				595	605	564	508			



### Total Suspended Solids (TSS)

Surface TSS trends have remained consistent with SW5, SW6, SW7 and SW8 are also historically variable. SW5 to SW8 are stations along the Namoi River which is subject to regulated / variable flow regimes.

TSS	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
18/03/2014	6				17	19	19	26			
23/04/2014	<5			<5	<5	9	<5	<5			
19/05/2014	<5			<5	<5	22	<5	<5			
19/06/2014	<5			8	12	20	8	9			
18/07/2014	<5			<5	6	13	11	8			
18/08/2014	6	35			13	30	18	24			
16/09/2014	<5				17	31	25	20			17
14/10/2014	<5			268	18	12	22	28			
20/11/2014	10				20	<5	36				
16/12/2014	<5				45	46	39	46			
14/01/2015	8				41	42	40	42			
11/02/2015	<5				17	25	30	28			
11/03/2015	14				15	28	18	<5			



### **Rehabilitation**

Construction at Maules Creek Coal commenced in December 2013 and is expected to conclude in June 2015. Progressive rehabilitation of laydown areas, batters and drains has commenced and will continue construction activities are completed.

Mining commenced in August 2014, as such rehabilitation has been restricted to areas associated with rail and infrastructure areas during this period.

### **Complaints**

For full detail of each Complaint please refer to the Community Complaints Register.

This information can be found on the Whitehaven Coal – Maules Creek website.

[http://www.whitehavencoal.com.au/environment/maules\\_creek\\_environmental\\_management.cfm](http://www.whitehavencoal.com.au/environment/maules_creek_environmental_management.cfm)



## **Minutes of the 10<sup>th</sup> Meeting of the Maules Creek Coal Community Consultative Committee**

**Meeting Held:** 12<sup>th</sup> August 2015, 2.00pm

**Venue:** Maules Creek Coal Mine, CHPP Boardroom, Therribri Rd, via Boggabri, NSW, 2382

**Present:**

- Mr John Turner, Chair for CCC (JT)
- Clr Lloyd Finlay, Narrabri Shire Rep (LF)
- Ms Carolyn Nancarrow, Community Rep (CN)
- Mr Peter Watson, Community Rep (PWa)
- Mr Craig Simmons, Area Manager Services (CS)
- Mr Peter Wilkinson, General Manager – Maules Creek (PWi)
- Mr Jason Davis, Community Rep (JD)
- Mrs Jill Johnson, Group Manager Environment, WHC (JJ)
- Ms Lexie Frankham, Group Environmental Superintendent, WHC (LFr)

**Apologies:**

- Mr Rod Woolford, Community Rep (RW)
- Mr Brian Cole, Executive General Manager – Project Delivery (BC)

**Observer** Ms Libby Laird, Maules Creek resident

**Guest** Nil

### **1 Declaration of pecuniary or other interests**

LF said he may have land within zone of affectation (ZOA), CS noted that LF's land is not in the ZOA as listed in the MCC project approval

JT declared he received a fee for chairing the meeting

### **2 Confirmation of Last Minutes**

- PWa said he can't download minutes in their current format. There is one sentence in the minutes attributed to the EPA which he believes PWi said (regarding other industries possibly contributing to



funding). PWi disagreed and said it was the EPA that said it. PWa wants the committee to seek further clarification from the EPA. It was noted Simon Smith had retired from the EPA. PWa said in the Hunter they don't require other industry and agriculture to pay so why should they pay here. PWa said he believes the impact is from mining. JT said he clearly remembers it being attributed to the EPA. Post the meeting JT reviewed minutes from the Tarrawonga CCC meeting which also indicated this comment was made by the EPA.

Minutes moved by LF, second by CN

### **3 Business Arising from Previous Minutes**

- Environmental Trust Fund;
  - JT advised that each mine in the BTM complex is required to contribute \$100,000 to the Environmental Trust Fund. The sub-committee formed by the mines' CCC's met the previous day with NSC. The application form and application process was finalised and NSC will provide the advertising schedule and budget. The sub-committee will take the information to the BTM CCC meeting in November for consideration. The criteria has been determined that projects to be within 25km of the Leard Forest precinct (applicants outside this range may be considered).

### **4 Correspondence**

- MCC Social Impact Management Plan approval letter
- DoPE requested MCC update the Blast Management Plan
- Toni Comber has resigned as a member of the MCC CCC

### **5 Company Reports and overview of activities**

- CS – advised that the construction process was effectively complete and activities on site are operations based from now on
- PWi advised that the mine was continuing to operate at a 6MTPA rate with 4 excavators, with 2 additional excavators planned to commence towards the end of this year, with approx. 80 additional people required to operate the additional excavators and trucks. PWi reiterated the emphasis on employing local people including Aboriginal and women.
- The workforce currently comprises approximately 20% Aboriginals. PWi said that there is a positive group of people.
- PWa asked if the extra diggers means increased tonnes. PWi said the site will increase to 8 Mtpa production rate towards the end of this year.
- PWa asked if blasting increases with the increased production. PWi said blasting will remain fairly consistent as the site is building an inventory of shot ground ready for the additional excavators towards the end of this year.
- JD asked about rail capacity. PWi said there is enough trains and rail passes with all mines going. He said a big wheat harvest may have some impact. He said 6Mtpa is equivalent to an average of about 2 trains per day.



- PWi said that following noise concerns from near residents, dumping has been set up differently, with the site now dumping up high during the day and down lower at night to use the higher dump as a noise bund. In addition equipment is being shut down when required.
- LFi said he could hear the horns of the excavators. PWi replied the excavators no longer use the horns at night and now flash their lights, the trucks occasionally use their horns for safety reasons when they are moving. There is also someone watching the monitoring data and pit and listening and coaching the operators. The trucks sound a horn when they start up to warn people but the truck horns are quieter than the excavator horns.
- CS provided the environmental monitoring data for the quarter April - June 2015, and discussed each of the items and results.
- CS provided a summary of the number of the complaints by the category of concern ie: Air, Noise Blast, Water, Traffic, Other. CS offered to go through each of them individually. PWA asked what the site does when they get complaints. CS said that the majority of complaints are going from residents via the EPA and not via the MCC 1800 Hotline. Information provided back to EPA generally contain an explanation of site activities being conducted at the time of the complaint, weather data and what operational responses where undertaken at the time of the complaint eg modification to activities or equipment shut down. PWi said the mine has received comments that the noise levels has dropped. PWA said it had in the last couple of weeks maybe. But there is still train noise.
- PWA said his wife had complained about the substation and CS got back to her. If they look up the valley they can see the substation from their property. He said there were a couple of lights and now there's more and it's a change to the environment. CS said they had looked at the lights. The larger switchyard is operated by Transgrid (state owned) and has fluoro lights. The smaller one is owned by the mine and has amenity lights. PWA said it looks like more than fluoros from 5km away. CS said the mine will look into it.

## **6 General Business**

### **A) Letter from Roslyn Druce**

- JT said the property agreement is a legal matter and isn't relevant to the CCC. Committee agreed.
- A copy of the letter was provided to the attendees, and time was given for members to read the letter.
- CS said the dust depositional gauge results and attended noise monitoring results are reported in CCC meetings and are also available on the Whitehaven website. Real time noise monitoring is a management tool used by the mine and the monitoring location is in the ZOA (within the 35dBA noise contour). The real time noise results on the website are from the real time noise monitor to the East of the Maules Creek School and hall is at the 35dBA noise contour. Blast monitoring is also undertaken at this residence. A summary of blast monitoring is presented to the CCC and in the monthly EPL reports on the website. All blasts are reported in the AEMR.
- CS advised he intends to liaise with the individuals to advise where the data is available. PWA said he would report back to Roslyn Druce.
- CS explained that the attended monitoring results in the CCC reports is where a specialist noise consultant is in attendance to determine the mine's contribution to noise levels. The real time noise unit picks up all noise sources within a frequency range and it is more difficult to identify the exact source of the noise ie mine noise or noise from passing cars and other equipment. PWA asked about the 15 minute averages. CS said the monitor provides an





average result after every 15 minutes. JJ said real time monitoring is a management tool whereas attended monitoring is for compliance.

- PWA said Roslyn Druce told him that the results weren't on the website but he had seen them. PWA suggested said results should be published daily as the mine operates for 7 days a week. PWi said the mine will look at it and to get results published daily.
- JD asked about environmental group representation. PWA said the Committee had dropped the ball by not keeping the company to account and he asked for an update. PWA asked why the mine hadn't appointed one of the people who submitted an application initially. JJ said all applications were provided to the Department for consideration. The Department determines Committee members, not the Company. PWA asked what the Committee needed to do to find out why the previous applicants weren't appointed. JT said he didn't think that was the remit of the CCC. CN asked if there was someone from Greening Australia. PWA said there was but they weren't supported by Greening Australia.

### **B) Letter From Pat Murphy**

CS said he had received the letter earlier in the day. The letter was also tabled by LFi. The letter received was a submission to the MCC revised Biodiversity Management Plan (BMP) and revised Biodiversity Offset Strategy from Pat Murphy and Lachy Leitch.

### **C) Other items**

- LFi noted that Clr Collyer had suggested at the Boggabri Coal CCC meeting the previous day that state agency representatives be invited to the annual BTM CCC to provide general information. JT said he would discuss it further with Clr Collyer.
- LFi asked CS about the Therribri Road upgrade that NSC is undertaking. CS said NSC had appointed a project manager. A two coat seal was scheduled to be applied in the next couple of weeks (weather dependant) and that stage 2 (the remains length of road around the Cooboobindi bend to the old Boggabri haul road) has been brought forward and was scheduled to be complete by end of 2015. JD asked about the haul road over the river. CS said that section of road is owned by Boggabri Coal and is not available for use by MCC at this point in time.
- PWA asked what the schedule was for pumping water from the river. He said he'd heard it last night. PWi said the mine wasn't pumping last night. CS said the pump last ran around the 18th July 2015. CS advised that MCC is in regular contact with State Water about flows in the Namoi River with the view to extract river water when there were supplementary flows to assist in minimising the need for releases from Keepit dam where possible.
- JT thanked LL for attending the meeting and LL thanked the Committee.
- Attendees then were provided a site tour after the meeting closed.

### **Next meeting**

Time for next meeting will remain as 2pm

Dates for the remaining 2015 meetings have been scheduled as below

- 18 November 2015
- 19 November 2015 (Joint BTM CCC)

**Meeting Closed:** 3.30pm



**WHITEHAVEN COAL**

# Maules Creek Coal Mine Community Consultative Committee Meeting #10

## Environmental Monitoring Report Q2, April - June 2015

### Noise Monitoring

Noise monitoring was undertaken at the locations as per the approved noise management plan on the 22<sup>nd</sup> & 23<sup>rd</sup> April, 26<sup>th</sup> & 27<sup>th</sup> May and 18<sup>th</sup> to 21<sup>st</sup> June 2015. The measured noise level (LAeq15) attributed to Maules Creek Coal and applicable criteria for each location are shown in the Tables below.

There was a 1 dB exceedance of the LAeq,15minute criterion at NM1 on 22 April 2015. A continuum, exhaust and engine noise from MCC was responsible for the 'site only' LAeq of 36 dB. An exceedance of up to 2 dB is not considered significant as Chapter 11 of the NSW Industrial Noise Policy deems a development to be in non-compliance only when "the monitored noise level is more than 2 dB above the statutory noise limit specified in the consent or licence condition." This is based on the fact that 2 dB is less than that change in loudness, 3 dB, where the difference is just perceptible to the normal ear (Bies and Hansen, 1988). This was reported to the EPA and DoPE in accordance with the Maules Creek, Noise Management Plan. A second recording was taken immediately following the exceedance which record a level of 32 dB, which is below the noise criteria of 35dB LAeq, 15 minute.

### Tables - LAeq, 15minute GENERATED BY MCC AGAINST OPERATIONAL EVENING AND NIGHT NOISE CRITERIA – APRIL TO JUNE 2015.

#### April Noise Monitoring – Evening & Night

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	22/04/2015	23:15	0.4	0	35	Yes	36	1
NM1	22/04/2015	23:33	0.4	0	35	Yes	32	Nil
NM1	23/04/2015	20:15	1	0	35	Yes	27	Nil
NM1	23/04/2015	20:32	1.2	0	35	Yes	27	Nil
NM2	22/04/2015	21:45	0.3	0	39	Yes	<20	Nil
NM2	22/04/2015	22:02	0.6	0	39	Yes	23	Nil
NM2	23/04/2015	21:43	0.5	0	39	Yes	1A	Nil
NM2	23/04/2015	21:58	0.9	0	39	Yes	1A	Nil
NM3	22/04/2015	20:17	0.3	0	35	Yes	20	Nil
NM3	22/04/2015	20:32	0.3	0	35	Yes	22	Nil
NM3	23/04/2015	23:09	0.5	0	35	Yes	23	Nil
NM3	23/04/2015	23:25	0.8	0	35	Yes	23	Nil
NM4	22/04/2015	22:31	0.5	0	35	Yes	29	Nil
NM4	22/04/2015	22:46	0.3	0	35	Yes	27	Nil
NM4	23/04/2015	20:59	1.2	0	35	Yes	<20	Nil
NM4	23/04/2015	21:14	0.4	0	35	Yes	<20	Nil
NM5	22/04/2015	23:59	0.4	0	35	Yes	23	Nil
NM5	23/04/2015	0:15	0.3	0	35	Yes	23	Nil
NM5	23/04/2015	19:35	1.1	0	35	Yes	25	Nil
NM5	23/04/2015	19:51	0.4	0	35	Yes	29	Nil
NM6	22/04/2015	21:02	0.4	0	35	Yes	<20	Nil
NM6	22/04/2015	21:18	0.5	0	35	Yes	<20	Nil
NM6	23/04/2015	22:25	0.5	0	35	Yes	1A	Nil
NM6	23/04/2015	22:41	0.2	0	35	Yes	1A	Nil

**May Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	27/05/2015	0:40	0.8	0	35	Yes	25	Nil
NM1	27/05/2015	0:25	0.3	0	35	Yes	26	Nil
NM1	27/05/2015	19:17	0.4	0	35	Yes	28	Nil
NM1	27/05/2015	19:33	1.3	0	35	Yes	30	Nil
NM2	26/05/2015	22:58	0.6	0	39	Yes	27	Nil
NM2	26/05/2015	23:14	0.3	0	39	Yes	24	Nil
NM2	27/05/2015	20:43	0.4	0	39	Yes	30	Nil
NM2	27/05/2015	20:59	0.5	0	39	Yes	25	Nil
NM3	26/05/2015	21:19	0.6	0	35	Yes	31	Nil
NM3	26/05/2015	21:36	0.4	0	35	Yes	31	Nil
NM3	27/05/2015	22:10	0.3	0	35	Yes	24	Nil
NM3	27/05/2015	22:26	0.2	0	35	Yes	25	Nil
NM4	26/05/2015	23:39	0.1	0	35	Yes	24	Nil
NM4	26/05/2015	23:55	0.4	0	35	Yes	24	Nil
NM4	27/05/2015	20:00	0.8	0	35	Yes	29	Nil
NM4	27/05/2015	20:16	0.8	0	35	Yes	32	Nil
NM5	27/05/2015	1:05	1.4	0	35	Yes	21	Nil
NM5	27/05/2015	1:21	0.6	0	35	Yes	21	Nil
NM5	27/05/2015	18:35	0.9	0	35	Yes	<20	Nil
NM5	27/05/2015	18:51	0.5	0	35	Yes	<20	Nil
NM6	26/05/2015	22:03	0.3	0	35	Yes	<20	Nil
NM6	26/05/2015	22:19	0.5	0	35	Yes	<20	Nil
NM6	27/05/2015	21:26	0.2	0	35	Yes	<20	Nil
NM6	27/05/2015	21:42	0.3	0	35	Yes	<20	Nil

**June Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	18/06/2015	20:15	1.8	0	35	Yes	IA	Nil
NM1	18/06/2015	20:30	1	0	35	Yes	IA	Nil
NM1	19/06/2015	23:24	1.1	0	35	Yes	28	Nil
NM1	19/06/2015	23:58	0.2	0	35	Yes	29	Nil
NM2	18/06/2015	22:24	1.3	0	39	Yes	IA	Nil
NM2	18/06/2015	22:41	1.7	0	39	Yes	IA	Nil
NM2	19/06/2015	21:28	0.4	0	39	Yes	36	Nil
NM2	19/06/2015	21:47	0.3	0	39	Yes	35	Nil
NM3	19/06/2015	0:02	0.8	0	35	Yes	IA	Nil
NM3	19/06/2015	0:19	1.3	0	35	Yes	IA	Nil
NM3	19/06/2015	20:05	0.3	0	35	Yes	24	Nil
NM3	19/06/2015	20:21	0.6	0	35	Yes	27	Nil
NM4	18/06/2015	21:38	2.1	0	35	Yes	16	Nil
NM4	18/06/2015	21:53	0.9	0	35	Yes	NM	Nil
NM4	19/06/2015	22:32	1.4	0	35	Yes	31	Nil
NM4	19/06/2015	22:50	1.3	0	35	Yes	31	Nil
NM5	18/06/2015	20:55	1.3	0	35	Yes	22	Nil
NM5	18/06/2015	21:10	2	0.1	35	No	23	NA
NM5	20/06/2015	0:26	1	0	35	Yes	18	Nil
NM5	20/06/2015	0:45	0.4	0	35	Yes	16	Nil
NM6	18/06/2015	23:10	2.1	0	35	Yes	IA	Nil
NM6	18/06/2015	23:29	1.5	0	35	Yes	IA	Nil
NM6	19/06/2015	20:46	0.3	0	35	Yes	31	Nil
NM6	19/06/2015	21:02	0.2	0	35	Yes	30	Nil

In addition to the 15 minute average for Day Evening and Night, the Maules Creek Coal (MCC) EPL20221 also has a '1 Minute - Night' criteria (LA1) that applies from 10pm to 7am Monday to Saturday & 10pm 8am Sundays and Public Holidays. The results for the LA1 monitoring are shown below in Table 2.

There was a 1 dB exceedance of the LA1,1minute criterion at NM4 on 19 June 2015 at 22:32. Engine continuum was audible throughout this measurement, along with engine surges, horns, dozer tracks, and impact noise caused by bucket loads into empty truck bodies. The resulting LAeq,15minute complied with the impact assessment criterion. The measured LA1,1minute was generated by a first pass load from an excavator bucket into an empty truck body. An exceedance of up to 2 dB is not considered significant as Chapter 11 of the NSW Industrial Noise Policy deems a development to be in non-compliance only when "the monitored noise level is more than 2 dB above the statutory noise limit specified in the consent or licence condition." This is based on the fact that 2 dB is less than that change in loudness, 3 dB, where the difference is just perceptible to the normal ear (Bies and Hansen, 1988). A second recording was taken immediately following the exceedance which record a level of 39 dB, which is below the noise criteria of 45dB LAeq, 15 minute.

**Tables – LA1, 1minute GENERATED BY MCC AGAINST OPERATIONAL EVENING NOISE CRITERIA – APRIL TO JUNE 2015.**

**April Noise Monitoring – Night**

<b>LA1 (1min)</b>		<b>April</b>						
		<b>Time</b>	<b>Wind Speed</b>	<b>Rainfall</b>	<b>Criterion</b>	<b>Criterion</b>	<b>MCC LA1(1min)</b>	<b>Exceedance</b>
			<b>m/s</b>	<b>mm</b>	<b>dB</b>	<b>Applies</b>	<b>dB</b>	<b>dB 3,4</b>
NM1	22/04/2015	23:15	0.4	0	45	Yes	42	Nil
NM2	22/04/2015	22:02	0.6	0	45	Yes	27	Nil
NM3	23/04/2015	23:09	0.5	0	45	Yes	25	Nil
NM4	22/04/2015	22:31	0.5	0	45	Yes	44	Nil
NM5	22/04/2015	23:59	0.4	0	45	Yes	30	Nil
NM6	23/04/2015	22:25	0.5	0	45	Yes	1A	Nil

**May Noise Monitoring – Night**

<b>LA1 (1min)</b>		<b>May</b>						
		<b>Time</b>	<b>Wind Speed</b>	<b>Rainfall</b>	<b>Criterion</b>	<b>Criterion</b>	<b>MCC LA1(1min)</b>	<b>Exceedance</b>
			<b>m/s</b>	<b>mm</b>	<b>dB</b>	<b>Applies</b>	<b>dB</b>	<b>dB 3,4</b>
NM1	27/05/2015	0:40	0.8	0	45	Yes	33	Nil
NM1	27/05/2015	0:25	0.3	0	45	Yes	38	Nil
NM2	26/05/2015	22:58	0.6	0	45	Yes	36	Nil
NM2	26/05/2015	23:14	0.3	0	45	Yes	32	Nil
NM3	27/05/2015	22:10	0.3	0	45	Yes	27	Nil
NM3	27/05/2015	22:26	0.2	0	45	Yes	30	Nil
NM4	26/05/2015	23:39	0.1	0	45	Yes	40	Nil
NM4	26/05/2015	23:55	0.4	0	45	Yes	35	Nil
NM5	27/05/2015	1:05	1.4	0	45	Yes	25	Nil
NM5	27/05/2015	1:21	0.6	0	45	Yes	29	Nil
NM6	26/05/2015	22:03	0.3	0	45	Yes	<20	Nil
NM6	26/05/2015	22:19	0.5	0	45	Yes	22	Nil

**June Noise Monitoring – Night**

<b>L<sub>A1</sub> (1min)</b>		<b>June</b>						
		<b>Time</b>	<b>Wind Speed</b>	<b>Rainfall</b>	<b>Criterion</b>	<b>Criterion</b>	<b>MCC L<sub>A1</sub>(1min)</b>	<b>Exceedance</b>
			<b>m/s</b>	<b>mm</b>	<b>dB</b>	<b>Applies</b>	<b>dB</b>	<b>dB 3,4</b>
NM1	19/06/2015	23:24	1.1	0	45	Yes	35	Nil
NM1	19/06/2015	23:58	0.2	0	45	Yes	34	Nil
NM2	18/06/2015	22:24	1.3	0	45	Yes	IA	Nil
NM2	18/06/2015	22:41	1.7	0	45	Yes	IA	Nil
NM3	19/06/2015	0:02	0.8	0	45	Yes	IA	Nil
NM3	19/06/2015	0:19	1.3	0	45	Yes	IA	Nil
<b>NM4</b>	<b>19/06/2015</b>	<b>22:32</b>	<b>1.4</b>	<b>0</b>	<b>45</b>	<b>Yes</b>	<b>46</b>	<b>1</b>
NM4	19/06/2015	22:50	1.3	0	45	Yes	39	Nil
NM5	20/06/2015	0:26	1	0	45	Yes	23	Nil
NM5	20/06/2015	0:45	0.4	0	45	Yes	23	Nil
NM6	18/06/2015	23:10	2.1	0	45	Yes	IA	Nil
NM6	18/06/2015	23:29	1.5	0	45	Yes	IA	Nil

**Evening L<sub>Aeq15min</sub> Night L<sub>Aeq15min</sub>, Night L<sub>A1min</sub>**

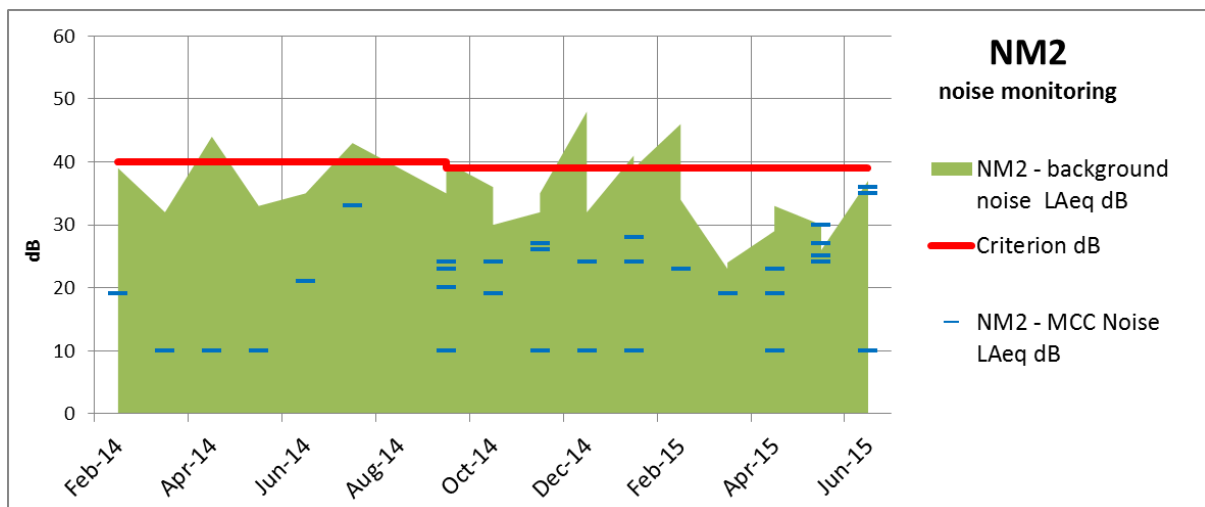
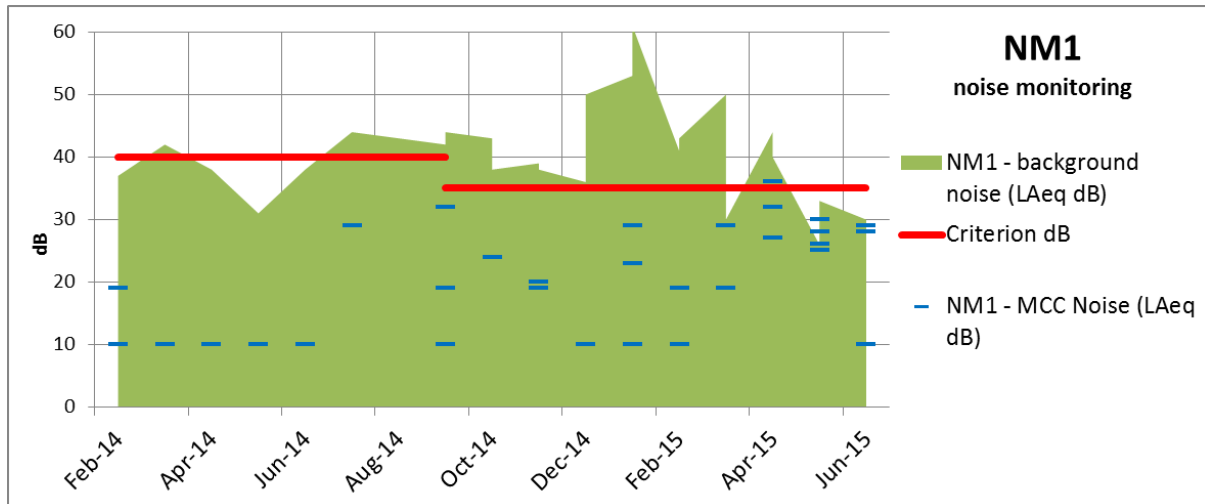
**Notes:**

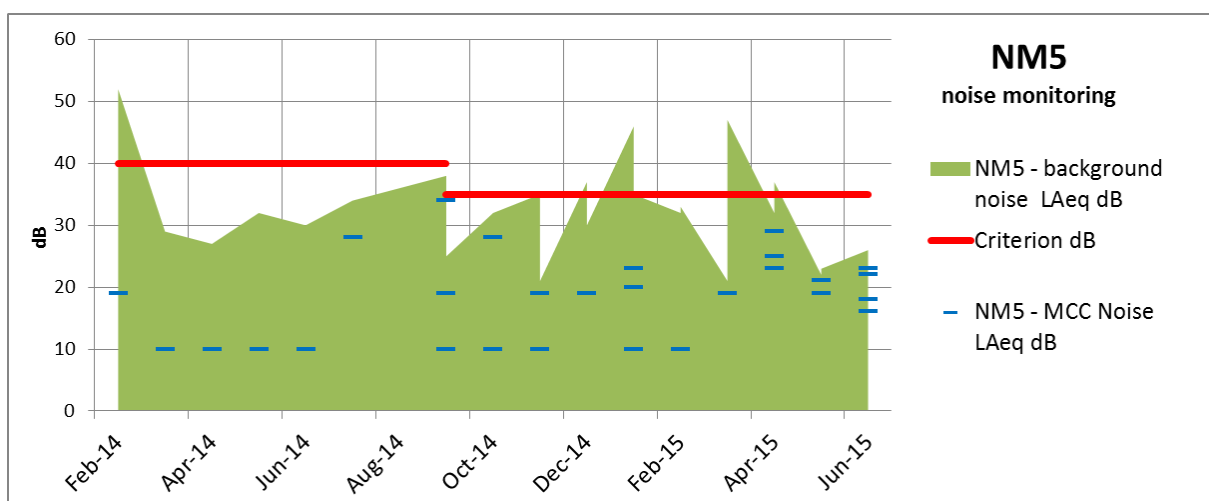
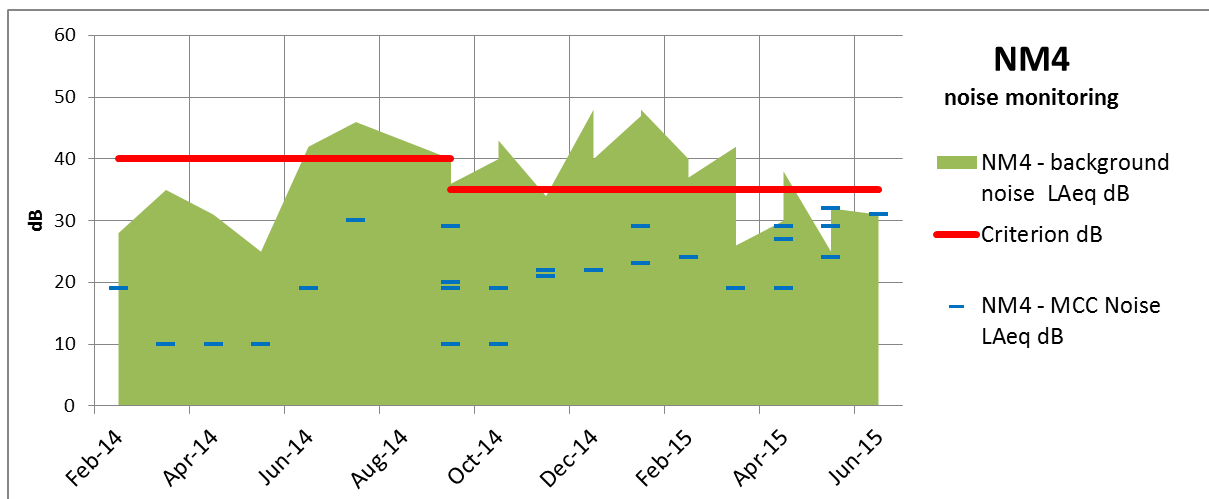
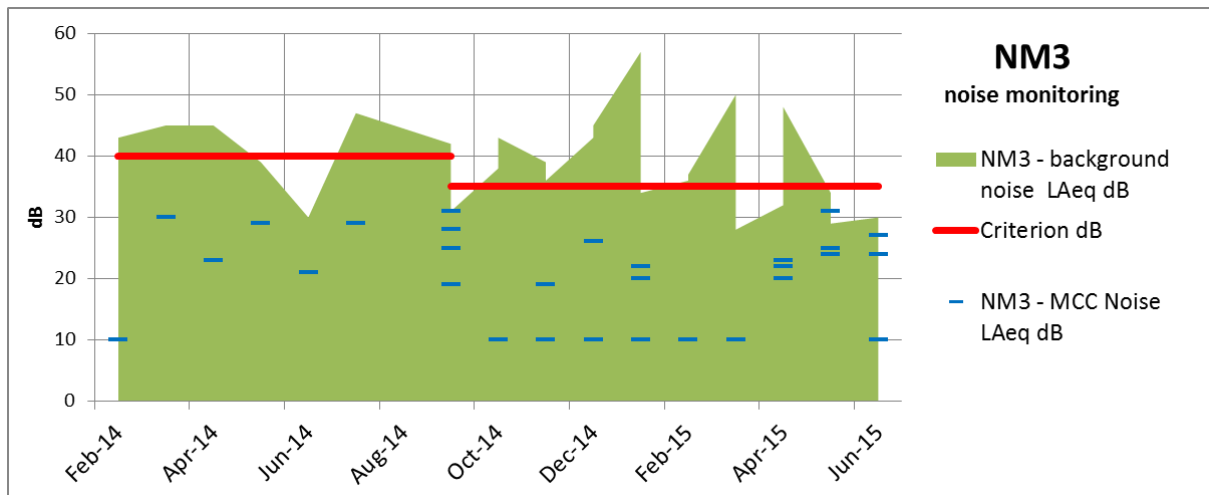
- Noise emission limits do not apply during periods of rainfall or wind speeds greater than 3 metres per second (at 10 metres) as such a No will appear in Criteria Applies Column ;
- Estimated or measured L<sub>Aeq,15min</sub> attributed to Maules Creek Coal (MCC);
- Estimated or measured L<sub>A1,1min</sub> attributed to Maules Creek Coal (MCC);
- NA in exceedance column means atmospheric conditions outside those specified in project approval and criterion is not applicable;
- IA – Inaudible
- NM – Not measurable

### Attended Noise Monitoring

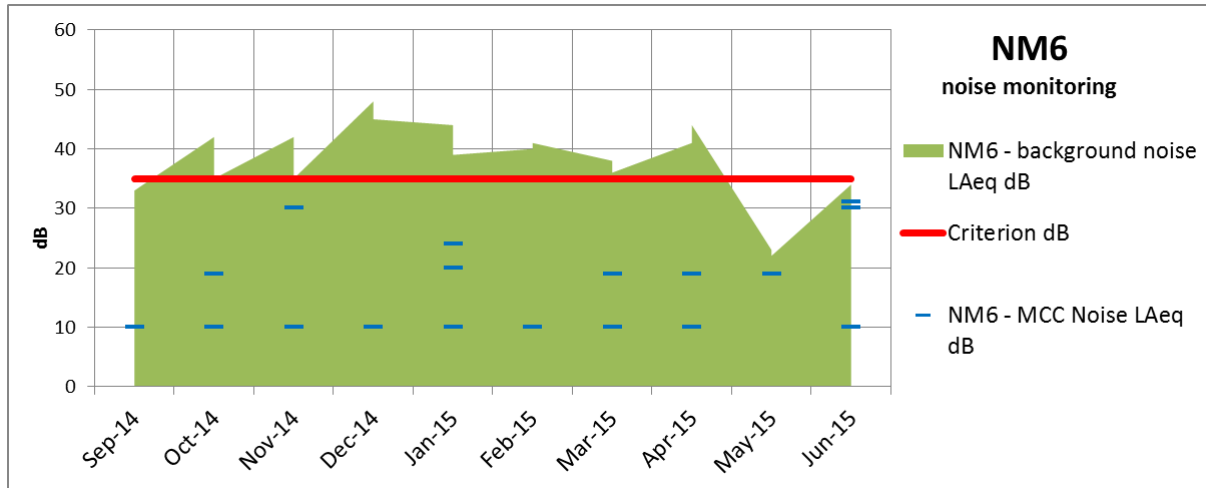
The following six (6) figures below show the 'attended' noise monitoring results recorded since construction began in earnest in January 2014.

Green shading shows the  $LA_{eq(15\text{minute})}$  background noise and the blue dash is the portion of the  $L_{Aeq}$  likely attributed to the mine according to the sound engineer. The criteria shown in red, was updated to align with the transition from construction to operations / mining.









### Blast Monitoring

Mine operations commenced in August 2014 and there have been 73 blast events to date (at 27<sup>th</sup> July 2015). All operational blast events have been within the applicable Noise and Ground Vibration limits set out in the Project Approval.

All blast monitoring results have been within the MCC EPL limits.

**Table – Blast Results Summary Quarter 2 2015**

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db <small>(Lin Peak)</small>	All	21	99.92	113.6	120	No
	Vibration	mm/s		21	0.22	0.87	10	No

Air Quality

**Deposited Dust**

**Table - Deposited Dust Results \***

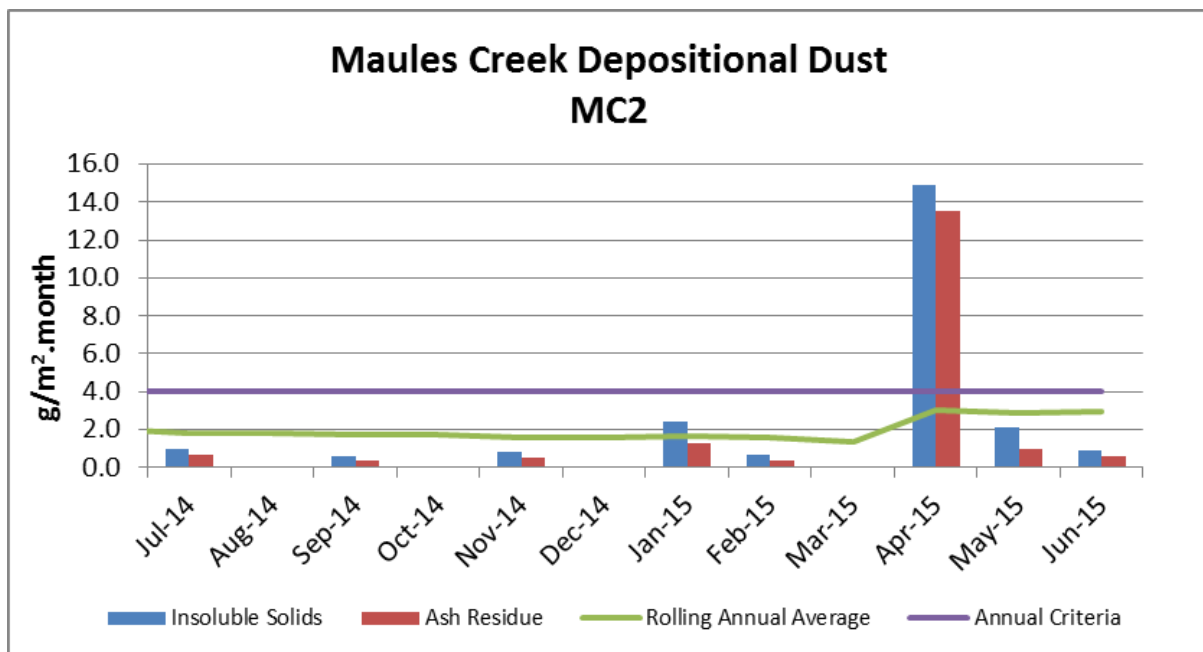
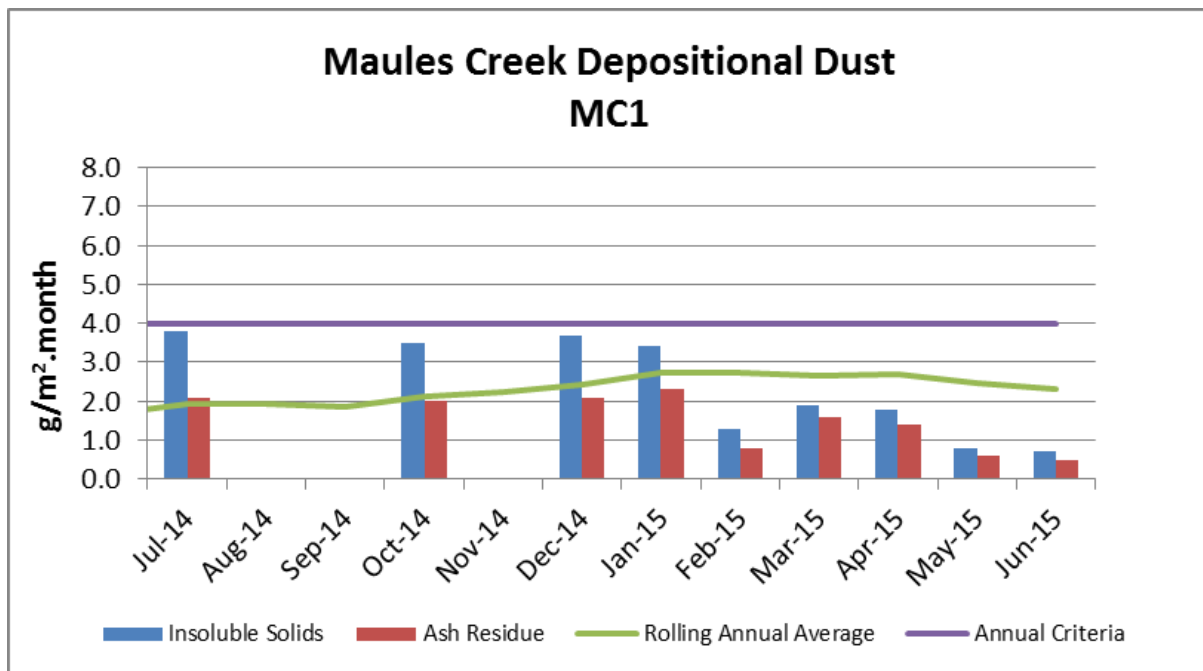
Month	MC1	MC2	MC3	MC4
Jun-14	2.1	0.8	0.9	0.9
Jul-14	3.8	1.0	2.5	1.2
Aug-14			0.9	7.2
Sep-14		0.6	0.7	0.4
Oct-14	3.5		1.0	1.1
Nov-14		0.8	1.8	1.2
Dec-14	3.7		1.9	1.4
Jan-15	3.4	2.4	3.2	1.8
Feb-15	1.3	0.7	0.9	1.5
Mar-15	1.9		3.2	1.7
Apr-15	1.8	14.9	2.6	2.0
May-15	0.8	2.1	1.3	0.7
Jun-15	0.7	0.9	0.5	1.2
<b>Annual Avg</b>	<b>2.30</b>	<b>2.69</b>	<b>1.65</b>	<b>1.72</b>
<b>Project Avg 2010 - 2015</b>	<b>2.20</b>	<b>2.21</b>	<b>1.68</b>	<b>1.35</b>

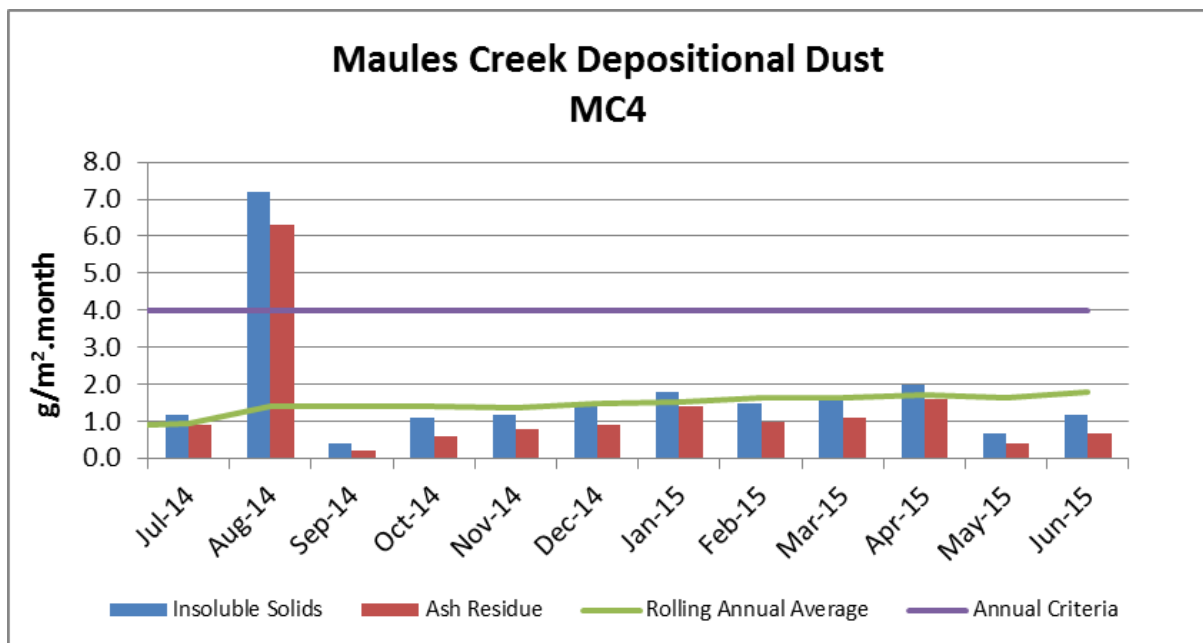
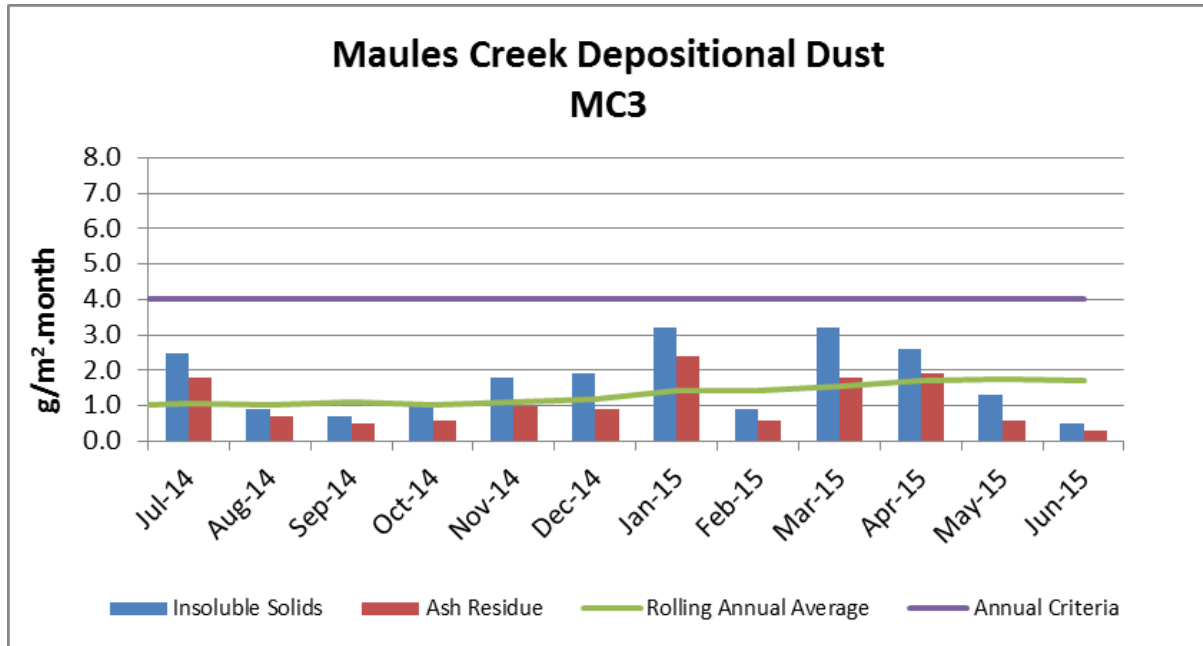
\* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated (insect larvae, bird droppings, vegetation etc.).

One deposited dust gauge (DDG) result at MC02 Q2 2015 shown in Table above, was above the limit of  $4\text{gm/m}^2/\text{month}$ . MC02 is located at Fairfax Public School – Maules Creek. MC02 was placed out on the 11<sup>th</sup> March and collected again on the 10<sup>th</sup> April 2015 for analysis. This sample window also captures the Maules Creek Campdraft held at the Community Hall beside the Fairfax Public School on the weekend of the 28<sup>th</sup> & 29<sup>th</sup> March 2015. The elevated dust generated by the Maules Creek Campdraft was also picked up by the Maules Creek Coal PM10 dust monitoring station TEOM1 500m east. All MC02 results since this event have returned to the normal levels below the  $4\text{gm/m}^2/\text{month}$ .

All other results including the Annual Average and Project Averages are below  $4\text{gm/m}^2/\text{month}$ .

Deposited Dust Figures (MC1 – MC4)

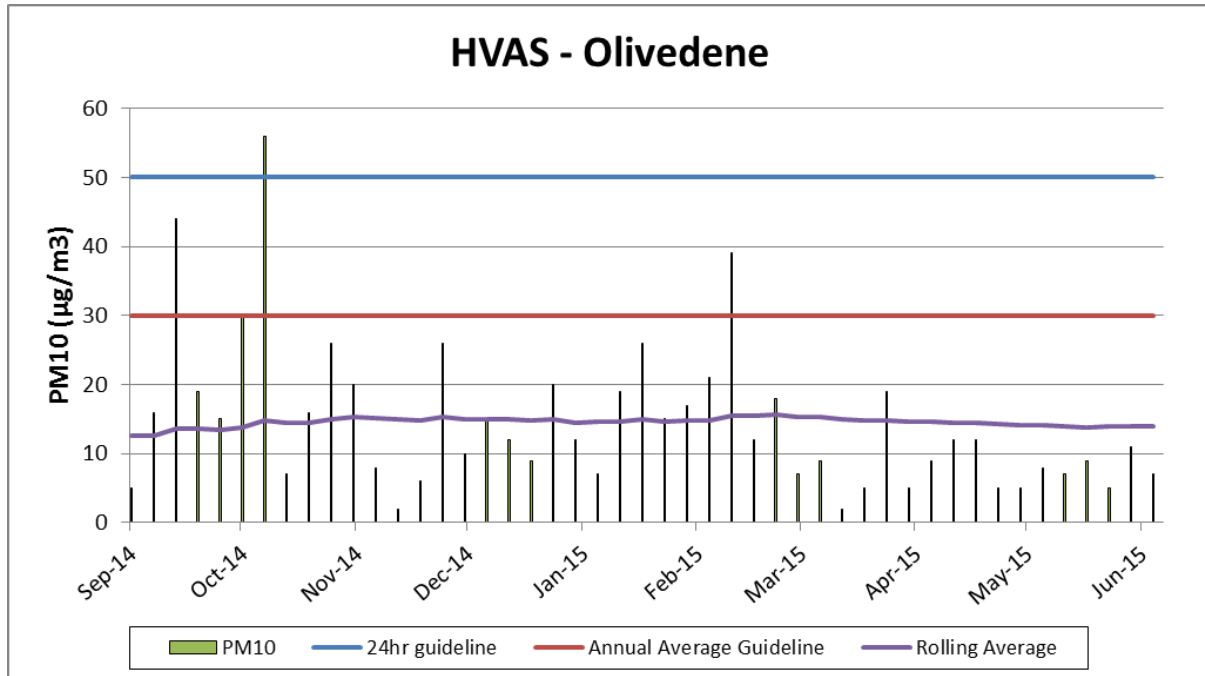




### High Volume Air Sampling (HVAS)

The HVAS is located on the 'Olivedene' property on Therribri Road since September 2014. Olivedene is a mine owned property.

HVAS PM<sub>10</sub> Rolling Annual Average results remain well below the Annual Average Guideline 30 µg/m<sup>3</sup>.

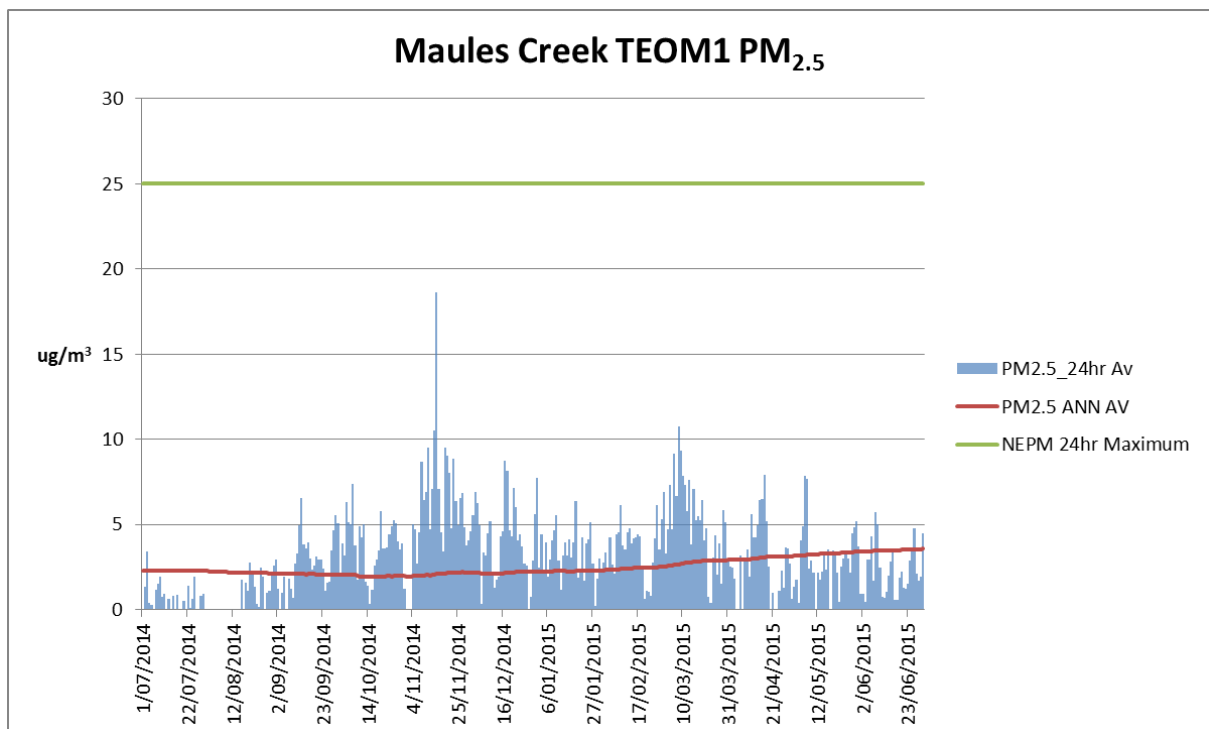
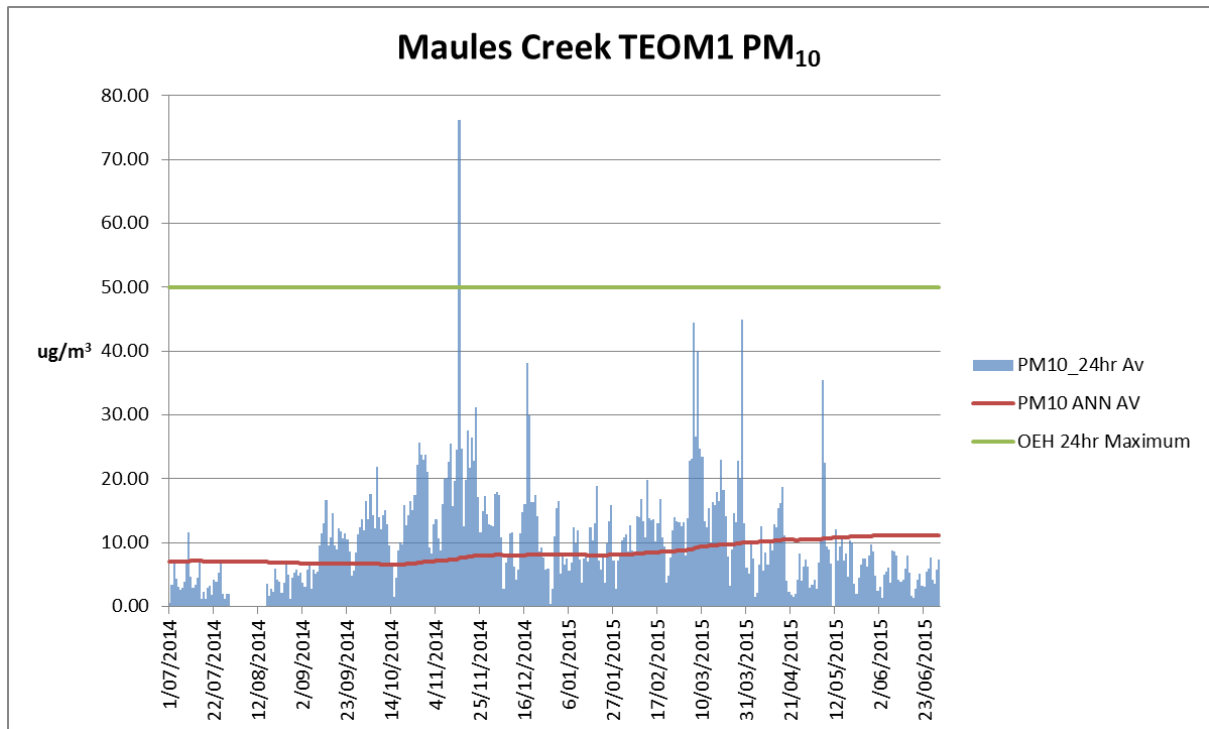


### TEOM - PM<sub>10</sub> Results

The annual average for PM<sub>10</sub> results at the Maules Creek Coal TEOM, is significantly below the applicable NEPM / OEH maximum annual average criteria of 30.0µg/m<sup>3</sup> (at 30<sup>th</sup> June 2015). The PM<sub>10</sub> results have remained below the criteria since the TEOM was commissioned in November 2011 with exception for the regional dust event of November 15<sup>th</sup> 2014. The TEOM also captures continuous measurements of PM<sub>Course</sub>, PM<sub>2.5</sub>, and Meteorology which are all available to the mine in real time. The only periods when the TEOM is offline is during scheduled system maintenance and regional power failures.

The following figures show the TEOM particulate matter results (PM<sub>10</sub>, PM<sub>2.5</sub>) for the previous 12 months. The two images illustrate that particulate matter 'Annual Averages'

**TEOM Figures – Particulate Matter  $PM_{10\mu g/m^3}$  and  $PM_{2.5\mu g/m^3}$**



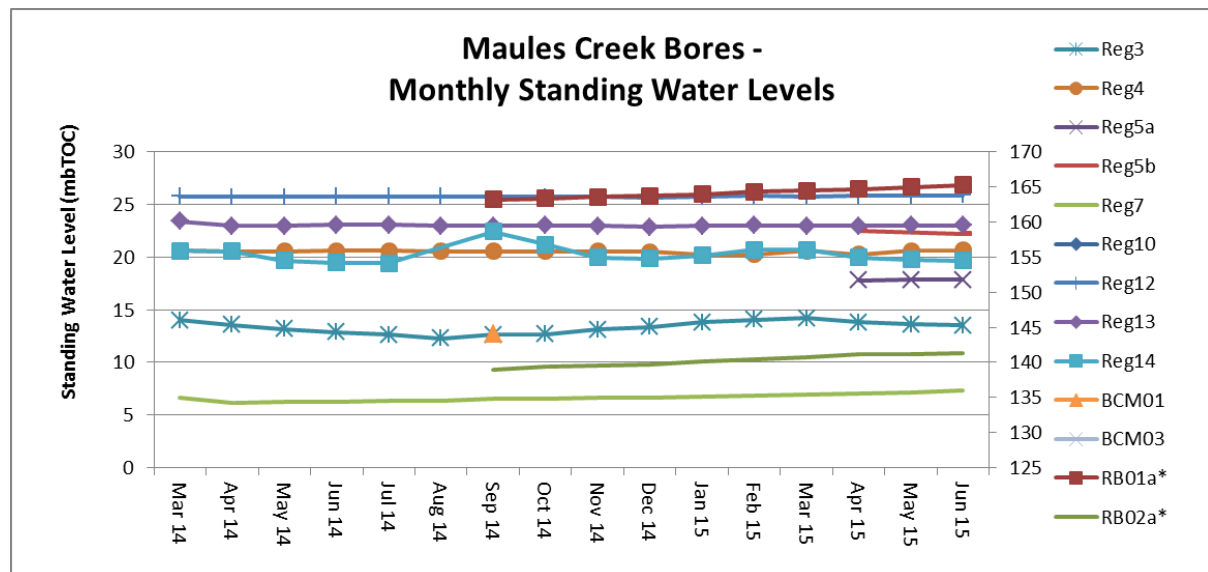
## Water Monitoring

### Ground Water

Groundwater monitoring results in open / standpipe piezometers show levels to be currently stable. 'RB' and 'Reg' series bores were installed between Q4 2013 and Q1 2014 and baseline data / conditions (12 months) is still being established. BCM01, BCM03, Reg10 are shallow bores which have been dry since construction in 2013.

Table 5 – Groundwater Level

SWL	RB01a	RB02a	RB05	Reg3	Reg4	Reg5a	Reg5b	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			55.26	14	20.61			6.61		25.74	23.4	20.58		
Apr-14				13.54	20.56			6.19		25.7	22.97	20.54		
May-14				13.15	20.54			6.23		25.7	22.96	19.67		
Jun-14			55.54	12.86	20.6			6.28		25.74	23.04	19.45		
Jul-14			56	12.63	20.59			6.32		25.75	23.03	19.4		
Aug-14			55.99	12.26	20.56			6.37		25.76	22.97			
Sep-14	163.17	138.98	56.07	12.62	20.54			6.57			22.97	22.41	12.69	
Oct-14	163.34	139.37	56.34	12.67	20.54			6.58		25.68	23.01	21.2		
Nov-14	163.55	139.5	56.28	13.1	20.56			6.67		25.72	22.95	19.97		
Dec-14	163.67	139.75	56.3	13.36	20.48			6.69		25.64	22.87	19.85		
Jan-15	163.95	140.1	55.83	13.81	20.19			6.76		25.72	22.94	20.14		
Feb-15	164.27	140.47	55.98	14.05	20.23			6.85		25.78	23	20.67		
Mar-15	164.42	140.77	56.5	14.18	20.57			6.93		25.77	22.97	20.67		
Apr-15	164.69	141.19	55.6	13.8	20.23	17.79	22.52	7.04		25.79	22.97	19.95		
May-15	164.99	141.24	56.78	13.6	20.6	17.82		7.19		25.81	22.99	19.77		
Jun-15	165.22	141.35	56.94	13.53	20.64	17.84	22.22	7.35		25.85	23.01	19.65		



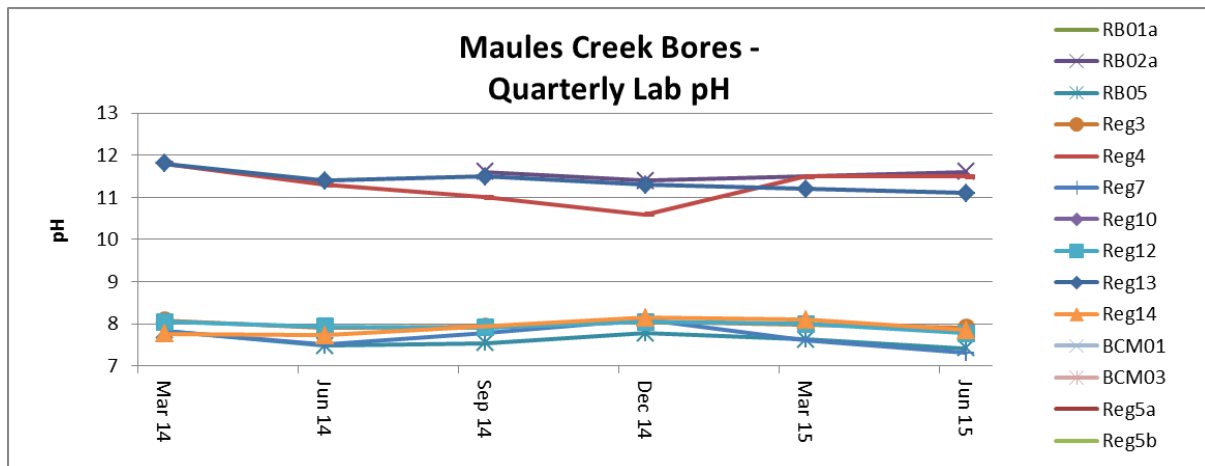
\* RB01 & RB02 bore depths are listed on the secondary axis.

### Acidity / Alkalinity (pH)

Baseline groundwater conditions are still being established, however, 3 bores RB02a, Reg4 and Reg13 show elevated pH levels (above pH 8.5) this has been determined to be a result of low recharge volumes within these bores since the drilling and installation. The two deep bores RB01a and RB02a were successfully sampled during the June monitoring event.

Table – Groundwater Lab pH

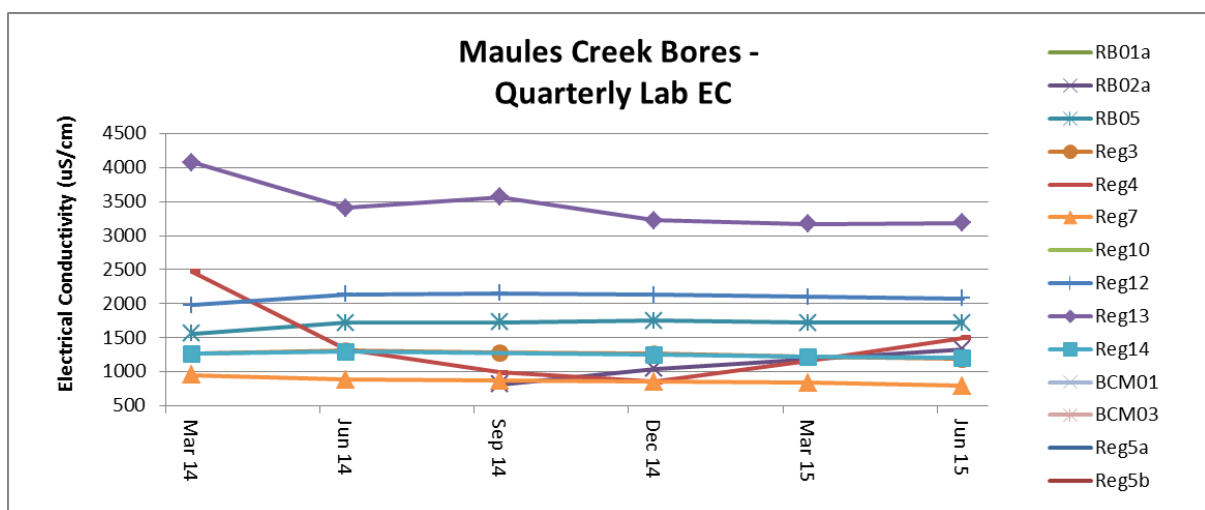
Lab pH	RB01a	RB02a	RB05	Reg3	Reg4	Reg5a	Reg5b	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			7.84	8.08	11.8			7.83		8.05	11.8	7.76		
Jun-14			7.48	7.9	11.3			7.52		7.93	11.4	7.72		
Sep-14		11.6	7.54	7.93	11			7.77		7.91	11.5			
Dec-14		11.4	7.77	8.05	10.6			8.11		8.04	11.3	8.14		
Mar-15			7.63	7.98	11.5			7.61		7.99	11.2	8.09		
Jun-15	9.26	11.6	7.42	7.91	11.5	6.54		7.31		7.78	11.1	7.85		



### Electrical Conductivity

Laboratory conductivity (EC) levels are all within historic groundwater EC range of 500<sub>µs/cm</sub> to 2500<sub>µs/cm</sub> with exception for Reg13.

Lab EC	RB01a	RB02a	RB05	Reg3	Reg4	Reg5a	Reg5b	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			1560	1260	2470			950		1980	4080	1260		
Jun-14			1720	1310	1330			884		2140	3410	1290		
Sep-14		814	1730	1280	988			871		2150	3570			
Dec-14		1040	1750	1260	854			853		2130	3230	1250		
Mar-15			1720	1220	1160			834		2100	3170	1220		
Jun-15	999	1330	1720	1190	1500	2890		793		2080	3190	1200		





### Wet Weather Discharge Sampling

There were no wet weather discharge events during Q2 2015 (April to June).

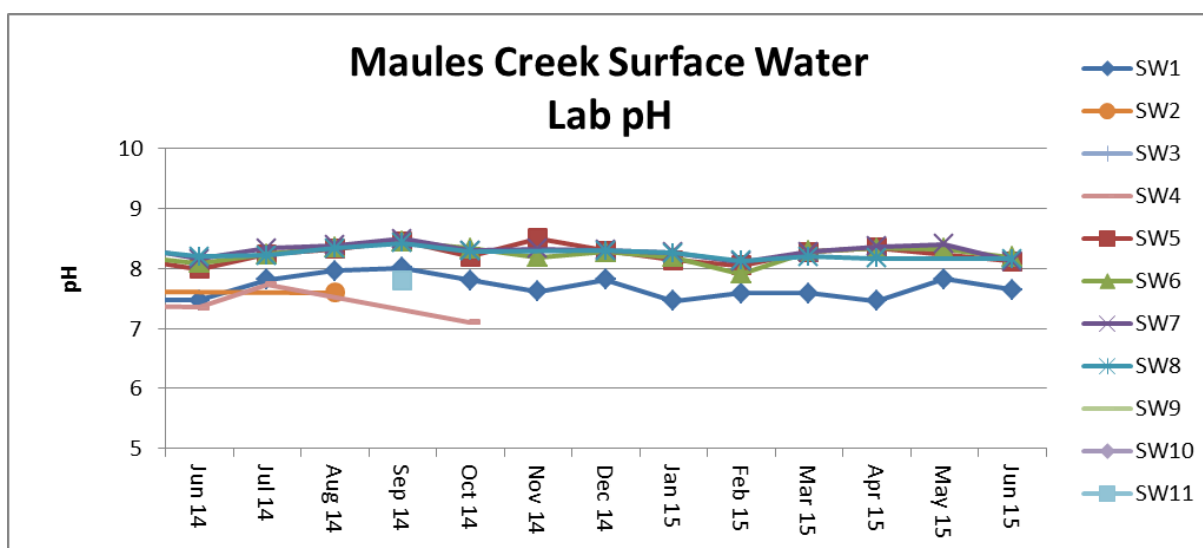
### Surface Water – Creeks and Rivers

Routine surface water monitoring is conducted in surrounding Creeks and Rivers on a monthly basis and pH, EC and TSS are shown in the tables and figures below.

### Acidity / Alkalinity (pH)

Laboratory pH in creeks and rivers surrounding the project are all trending within the ANZECC acceptable range for Irrigation, Ecosystem Health and Recreation. Back Creek and upper Maules Creek are ephemeral and rarely contain flowing water.

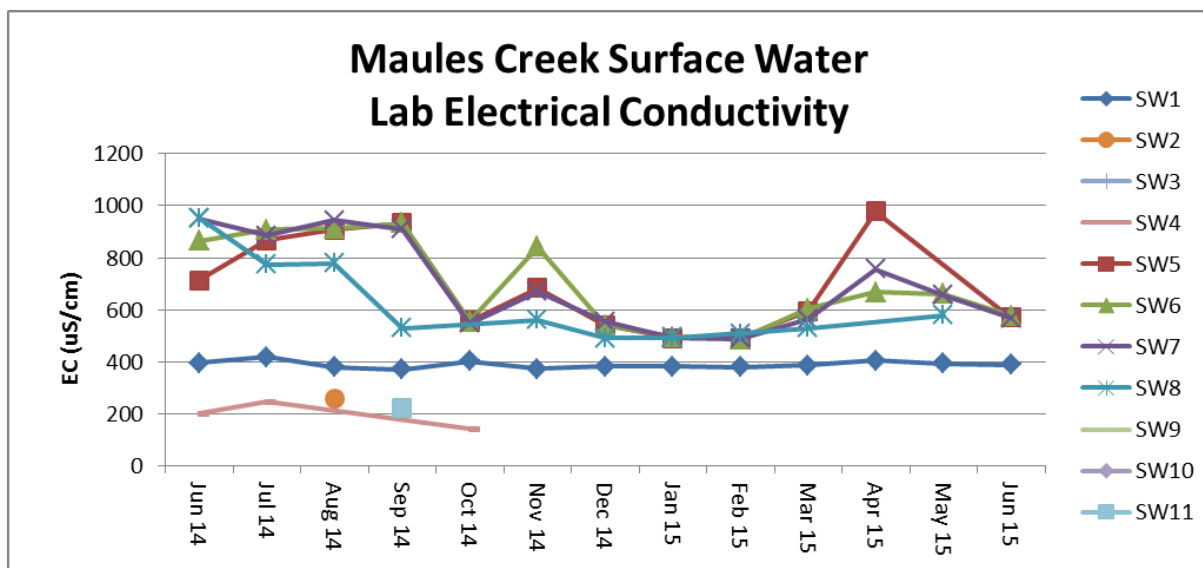
Lab pH	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
19/06/2014	7.47			7.35	7.99	8.09	8.16	8.2			
18/07/2014	7.81			7.74	8.24	8.24	8.34	8.22			
18/08/2014	7.96	7.6			8.33	8.36	8.39	8.34			
16/09/2014	8.01				8.45	8.44	8.49	8.42			7.8
14/10/2014	7.8			7.11	8.2	8.34	8.3	8.29			
20/11/2014	7.62				8.5	8.19	8.33				
16/12/2014	7.81				8.3	8.28	8.31	8.3			
14/01/2015	7.46				8.14	8.19	8.27	8.26			
11/02/2015	7.59				8.05	7.91	8.11	8.13			
11/03/2015	7.59				8.28	8.29	8.28	8.2			
14/04/2015	7.46				8.35	8.34	8.37	8.17			
19/05/2015	7.82					8.33	8.4				
11/06/2015	7.65				8.12	8.19	8.12	8.16			

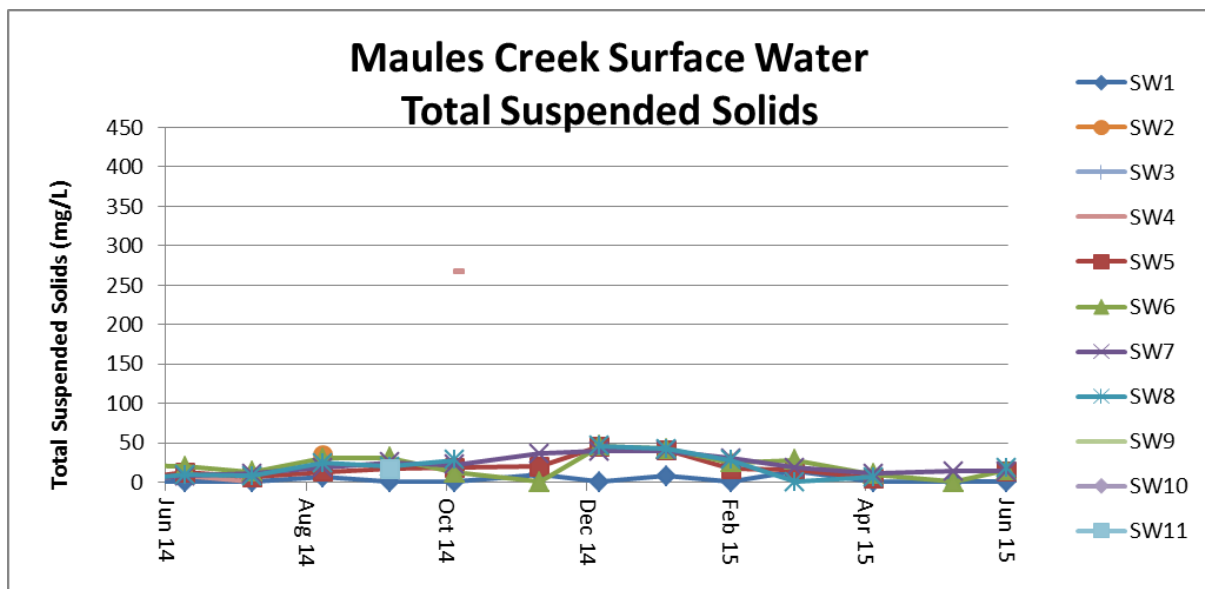


### Electrical Conductivity

Surface water EC trends have remained consistent with SW5, SW6, SW7 and SW8 all historically variable. SW5 to SW8 are stations along the Namoi River which is subject to regulated / variable flow regimes.

Lab EC	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
19/06/2014	395			201	712	865	950	632			
18/07/2014	419			245	866	909	886	953			
18/08/2014	379	260			907	913	945	775			
16/09/2014	371				932	932	910	778			223
14/10/2014	403			142	557	553	547	529			
20/11/2014	372				684	842	670				
16/12/2014	381				540	541	554	561			
14/01/2015	382				491	495	492	491			
11/02/2015	379				490	487	489	492			
11/03/2015	386				595	605	564	508			
14/04/2015	404				978	668	756	528			
19/05/2015	394					661	655				
11/06/2015	389				570	577	568	580			





### **Rehabilitation**

Construction at Maules Creek Coal commenced in December 2013 with majority of works completed by June 2015. Progressive rehabilitation of laydown areas, batters and drains has commenced and will continue as construction activities are completed.

Mining commenced in August 2014, as such rehabilitation has been restricted to areas associated with rail and infrastructure areas during this period.

### **Complaints**

For full detail of each Complaint please refer to the Community Complaints Register.

This information can be found on the Whitehaven Coal – Maules Creek website.

[http://www.whitehavencoal.com.au/environment/maules\\_creek\\_environmental\\_management.cfm](http://www.whitehavencoal.com.au/environment/maules_creek_environmental_management.cfm)



## **Minutes of the 11<sup>th</sup> Meeting of the Maules Creek Coal Community Consultative Committee**

**Meeting Held:** 18<sup>TH</sup> November 2015, 2.00pm

**Venue:** Maules Creek Coal Mine, CHPP Boardroom, Therribri Rd, via Boggabri, NSW, 2382

**Present:** Mr John Turner, Chair for CCC (JT)  
Ms Carolyn Nancarrow, Community Rep (CN)  
Clr Catherine Collyer, Narrabri Shire Council (CC) as alternate for Clr Finlay  
Dr Kerri Clarke, Sustainable Living Armidale (KC)  
Mr Craig Simmons, Area Manager Services (CS)  
Mr Peter Wilkinson, General Manager – Maules Creek (PWi)  
Ms Sally Henry – Maules Creek Coal

**Apologies:** Mr Jason Davis, Community Rep (JD)  
Mr Wayne Griffiths, Aboriginal Rep (WG)  
Mr Peter Watson, Community Rep (PW)  
Clr Lloyd Finlay (LF)

**Observer** Ms Libby Laird, Maules Creek resident

**Guest** Nil

### **1 Declaration of pecuniary or other interests**

JT declared he received a fee for chairing the meeting

### **2 Confirmation of Last Minutes**

JT formally welcomed Dr Kerri Clarke to the committee.

Minutes moved by CN, second by CS

### **3 Business Arising from Previous Minutes**

- Environmental Trust Fund;
  - JT discussed the criteria for the grants and the geographical area agreed upon (25km of the Leard Forest). Applications expected to be called in first quarter 2016 – grants expected to be distributed June 2016.

### **4 Correspondence**



- Updated Aboriginal Archaeological and Cultural Heritage Mgt Plan has been approved
- Show Cause letter was received from EPA, relating to noise issues at a privately owned residence.
- PIN was issued to MCC following DoPE Audit concluded that MCC had failed to implement the Biodiversity Mgt Plan relating to weed mgt and seed collection.
- Revised Biodiversity Offset Strategy approved.
- Endorsement of Aboriginal Stakeholder Representative – Wayne Griffiths
- Resignation from Rod Woolford as a MCC CCC member.
- Endorsement of Recognised Environmental Group - Sustainable Living Armidale represented by Kerri Clarke and Anna Christie as alternate.

#### Questions arising from Correspondence:

- KC queried what was being done about seed collection with the absence of seed collection to date (hence the fine). CS explained the process of seed collection which has commenced and will continue once a week until Christmas. Collection will also be undertaken once trees are felled with canopy accessible. With seasonal seed collection to occur throughout the year
- KC queried when clearing will commence, CS advised that under the currently approved Biodiversity Management Plan clearing can commence from 15 February through to 30 April

## **5 Company Reports and overview of activities**

- PWi advised that the mine was going well with no LTI's (Lost Time Injuries) to date being recorded.
- Current employee numbers are 296. Comprising of 16% indigenous and 14% female. Local employees are being sourced when possible from the Boggabri, Narrabri, Gunnedah areas. PWi mentioned that WHC has implemented a strong training system also highlighting that the 16% indigenous employees are mostly new to the industry.
- 8MT ROM coal is expected to be produced next year. Coal sales are currently good with a strong demand for high energy coal. WHC receive a premium for low ash coal with Japan, Taiwan currently the best markets for the product. WHC is hopeful they will gain stronger sales in the metallurgical market in the future.
- Monitoring & Environmental - CS went through the results for the previous quarter. CC requested property names be added to the locality map to assist with reading the monitoring results. CS agreed to do this.
- Blasting – property names to be added to locality map, CS to implement. The mine is currently blasting approximately 3 times per week. CC questioned what the trigger point is to delay or stop a blast. CS responded wind speed of 8 m/s or higher is the trigger point, also explaining that most blasting is scheduled for the middle of the day.
- Air Quality – KC asked if there are dust monitors located in the forest. CS responded that the Maules Creek monitors are located to the North, and that Tarrawonga & Boggabri Coal had



monitors in the South. Not possible to place monitors in the forest in compliant locations and that they would largely get contaminated with vegetative matter if they were placed with the forested areas.

- Surface Water – Current water storage on site should be full by the end of next week (end of Nov), DPI Water have advised that the next expected release would be in January 2016. CS explained that the mine has appropriate storage to capture dirty water runoff should there be a rain fall event.
- Rehabilitation – stabilising batters from construction activities has occurred. No mine rehabilitation has commenced yet.
- Complaints- summary of the number of complaints was discussed, with full complaint log being located on the WHC website. CS explained complaints generally come from residents to the North and NorthWest of the mine. With most complaints being made to EPA who then pass these on to MCC.

CC asked how WHC handle visual fume events. PW responded every blast is videoed. Maules Ck currently use a fume resistant product.

## 6 General Business

### A) Proposed Explosives Storage Facility – Braymont Road

- CN enquired if WHC were involved with the proposed Explosives Storage Facility on Braymont road. PW advised LDE has submitted a DA to NSC to erect a storage compound, similar to the current Orica facility. Tarrawonga and Maule's Creek mine currently use LDE as their explosive supplier. LDE is not owned by WHC. The product used by Maule's Creek is not the cheapest on the market.

### Next meeting

Time for next meeting will remain as 2pm

Proposed dates for 2016 meetings scheduled below

- 2 March 2016
- 18 May 2016
- 10 August 2016
- 16 November 2016

**Meeting Closed:** 3.00pm

# Maules Creek Coal Mine Community Consultative Committee Meeting #11

## Environmental Monitoring Report Q3, July - September 2015

### Noise Monitoring

Noise monitoring was undertaken at the locations as per the approved noise management plan on the 29<sup>th</sup> & 30<sup>th</sup> July, 18<sup>th</sup> & 19<sup>th</sup> August and 28<sup>th</sup> & 29<sup>th</sup> September 2015. The measured noise level (LAeq15) attributed to Maules Creek Coal and applicable criteria for each location are shown in the Tables below. The results show that mine operations did not exceed the applicable LAeq15 criteria at any time.

**Tables - LAeq, 15minute GENERATED BY MCC AGAINST OPERATIONAL EVENING AND NIGHT NOISE CRITERIA – JULY TO SEPTEMBER 2015.**

### **July Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	30/07/2015	20:15	0.6	0	35	Yes	1A	Nil
NM1	30/07/2015	20:30	0.5	0	35	Yes	1A	Nil
NM1	29/07/2015	22:53	0.5	0	35	Yes	25	Nil
NM1	29/07/2015	23:13	0.9	0	35	Yes	29	Nil
NM2	29/07/2015	21:19	0.7	0	39	Yes	<20	Nil
NM2	29/07/2015	21:37	0.4	0	39	Yes	<20	Nil
NM2	30/07/2015	23:45	0.7	0	39	Yes	1A	Nil
NM2	31/07/2015	0:00	0.3	0	39	Yes	1A	Nil
NM3	29/07/2015	19:33	0.8	0	35	Yes	<20	Nil
NM3	29/07/2015	19:50	0.9	0	35	Yes	<20	Nil
NM3	30/07/2015	22:01	0.4	0	35	Yes	1A	Nil
NM3	30/07/2015	22:17	0.4	0	35	Yes	1A	Nil
NM4	30/07/2015	19:28	0.6	0	35	Yes	<20	Nil
NM4	30/07/2015	19:44	1.1	0	35	Yes	<20	Nil
NM4	29/07/2015	22:04	0.4	0	35	Yes	<25	Nil
NM4	29/07/2015	22:21	0.5	0	35	Yes	28	Nil
NM5	30/07/2015	20:59	0.6	0	35	Yes	<25	Nil
NM5	30/07/2015	21:16	0.4	0	35	Yes	<20	Nil
NM5	29/07/2015	23:40	0.8	0	35	Yes	<25	Nil
NM5	30/07/2015	0:04	0.4	0	35	Yes	<25	Nil
NM6	29/07/2015	20:22	0.9	0	35	Yes	<20	Nil
NM6	29/07/2015	20:44	0.8	0	35	Yes	<20	Nil
NM6	30/07/2015	22:50	0.5	0	35	Yes	1A	Nil
NM6	30/07/2015	23:06	0.5	0	35	Yes	1A	Nil



**August Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	19/08/2015	20:30	1.4	0	35	Yes	28	Nil
NM1	19/08/2015	20:47	0.2	0	35	Yes	29	Nil
NM1	18/08/2015	22:55	0.4	0	35	Yes	21	Nil
NM1	18/08/2015	23:15	0.1	0	35	Yes	24	Nil
NM2	18/08/2015	21:18	0.6	0	39	Yes	26	Nil
NM2	18/08/2015	21:36	0.6	0	39	Yes	24	Nil
NM2	19/08/2015	22:06	0.6	0	39	Yes	22	Nil
NM2	19/08/2015	22:24	0.5	0	39	Yes	22	Nil
NM3	18/08/2015	19:40	1.4	0	35	Yes	26	Nil
NM3	18/08/2015	19:57	0.6	0	35	Yes	24	Nil
NM3	19/08/2015	23:47	0.4	0	35	Yes	26	Nil
NM3	20/08/2015	0:05	1.1	0	35	Yes	25	Nil
NM4	19/08/2015	21:17	0.5	0	35	Yes	27	Nil
NM4	19/08/2015	21:34	0.3	0	35	Yes	25	Nil
NM4	18/08/2015	22:05	0.4	0	35	Yes	23	Nil
NM4	18/08/2015	22:24	1	0	35	Yes	22	Nil
NM5	19/08/2015	19:46	0.9	0	35	Yes	27	Nil
NM5	19/08/2015	20:03	1.1	0	35	Yes	22	Nil
NM5	18/08/2015	23:44	0.6	0	35	Yes	26	Nil
NM5	19/08/2015	0:00	0.4	0	35	Yes	25	Nil
NM6	18/08/2015	20:25	1.2	0	35	Yes	22	Nil
NM6	18/08/2015	20:44	0.8	0	35	Yes	21	Nil
NM6	19/08/2015	22:58	0.2	0	35	Yes	18	Nil
NM6	19/08/2015	23:15	0.3	0	35	Yes	17	Nil

**September Noise Monitoring – Evening & Night**

		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LAeq	Exceedance
			m/s	mm	dB	Applies 1	dB 2,4	dB 3,4
NM1	29/09/2015	20:38	0.6	0	35	Yes	25	Nil
NM1	29/09/2015	20:54	0.5	0	35	Yes	25	Nil
NM1	28/09/2015	22:51	0.4	0	35	Yes	27	Nil
NM1	28/09/2015	23:07	0.4	0	35	Yes	27	Nil
NM2	28/09/2015	21:00	0.5	0	39	Yes	<20	Nil
NM2	28/09/2015	21:16	0.3	0	39	Yes	<20	Nil
NM2	29/09/2015	22:15	0.5	0	39	Yes	<20	Nil
NM2	29/09/2015	22:30	0.4	0	39	Yes	<20	Nil
NM3	28/09/2015	19:26	0.9	0	35	Yes	1A	Nil
NM3	28/09/2015	19:42	1	0	35	Yes	1A	Nil
NM3	29/09/2015	23:47	0.4	0	35	Yes	1A	Nil
NM3	30/09/2015	0:02	0.2	0	35	Yes	1A	Nil
NM4	29/09/2015	19:42	1	0	35	Yes	25	Nil
NM4	29/09/2015	19:58	0.5	0	35	Yes	25	Nil
NM4	28/09/2015	22:00	0.9	0	35	Yes	<20	Nil
NM4	28/09/2015	22:16	0.6	0	35	Yes	28	Nil
NM5	29/09/2015	21:23	0.5	0	35	Yes	<20	Nil
NM5	29/09/2015	21:39	0.3	0	35	Yes	<20	Nil
NM5	28/09/2015	23:42	0.4	0	35	Yes	28	Nil
NM5	28/09/2015	23:58	0.3	0	35	Yes	29	Nil
NM6	28/09/2015	20:09	1.2	0	35	Yes	1A	Nil
NM6	28/09/2015	20:25	1	0	35	Yes	1A	Nil
NM6	29/09/2015	22:58	0.4	0	35	Yes	1A	Nil
NM6	29/09/2015	23:19	0.6	0	35	Yes	1A	Nil

In addition to the 15 minute average for Day Evening and Night, the Maules Creek Coal (MCC) EPL20221 also has a '1 Minute - Night' criteria (LA1) that applies from 10pm to 7am Monday to Saturday & 10pm 8am Sundays and Public Holidays. The results for the LA1 monitoring are shown below in Table 2. The results show that mine operations did not exceed the applicable LA1 criteria at any time.

**Tables – LA1, 1minute GENERATED BY MCC AGAINST OPERATIONAL EVENING NOISE CRITERIA – JULY TO SEPTEMBER 2015.**

**July Noise Monitoring – Night**

<b>LA1 (1min)</b>		July						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LA1(1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	29/07/2015	22:53	0.5	0	45	Yes	38	Nil
NM1	29/07/2015	23:13	0.9	0	45	Yes	36	Nil
NM2	30/07/2015	23:45	0.7	0	45	Yes	IA	Nil
NM2	31/07/2015	0:00	0.3	0	45	Yes	IA	Nil
NM3	30/07/2015	22:01	0.4	0	45	Yes	IA	Nil
NM3	30/07/2015	22:17	0.4	0	45	Yes	IA	Nil
NM4	29/07/2015	22:04	0.4	0	45	Yes	<25	Nil
NM4	29/07/2015	22:21	0.5	0	45	Yes	31	Nil
NM5	29/07/2015	23:40	0.8	0	45	Yes	29	Nil
NM5	30/07/2015	0:04	0.4	0	45	Yes	30	Nil
NM6	30/07/2015	22:50	0.5	0	45	Yes	IA	Nil
NM6	30/07/2015	23:06	0.5	0	45	Yes	IA	Nil

**August Noise Monitoring – Night**

<b>LA1 (1min)</b>		August						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC LA1(1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	18/08/2015	22:55	0.4	0	45	Yes	28	Nil
NM1	18/08/2015	23:15	0.1	0	45	Yes	29	Nil
NM2	19/08/2015	22:06	0.6	0	45	Yes	26	Nil
NM2	19/08/2015	22:24	0.5	0	45	Yes	27	Nil
NM3	19/08/2015	23:47	0.4	0	45	Yes	31	Nil
NM3	20/08/2015	0:05	1.1	0	45	Yes	30	Nil
NM4	18/08/2015	22:05	0.4	0	45	Yes	30	Nil
NM4	18/08/2015	22:24	1	0	45	Yes	30	Nil
NM5	18/08/2015	23:44	0.6	0	45	Yes	32	Nil
NM5	19/08/2015	0:00	0.4	0	45	Yes	31	Nil
NM6	19/08/2015	22:58	0.2	0	45	Yes	24	Nil
NM6	19/08/2015	23:15	0.3	0	45	Yes	24	Nil

**September Noise Monitoring – Night**

<b>L<sub>A1</sub> (1min)</b>		September						
		Time	Wind Speed	Rainfall	Criterion	Criterion	MCC L <sub>A1</sub> (1min)	Exceedance
			m/s	mm	dB	Applies	dB	dB 3,4
NM1	28/09/2015	22:51	0.4	0	45	Yes	32	Nil
NM1	28/09/2015	23:07	0.4	0	45	Yes	32	Nil
NM2	29/09/2015	22:15	0.5	0	45	Yes	<20	Nil
NM2	29/09/2015	22:30	0.4	0	45	Yes	<20	Nil
NM3	29/09/2015	23:47	0.4	0	45	Yes	IA	Nil
NM3	30/09/2015	0:02	0.2	0	45	Yes	IA	Nil
NM4	28/09/2015	22:00	0.9	0	45	Yes	21	Nil
NM4	28/09/2015	22:16	0.6	0	45	Yes	40	Nil
NM5	28/09/2015	23:42	0.4	0	45	Yes	33	Nil
NM5	28/09/2015	23:58	0.3	0	45	Yes	39	Nil
NM6	29/09/2015	22:58	0.4	0	45	Yes	IA	Nil
NM6	29/09/2015	23:19	0.6	0	45	Yes	IA	Nil

**Evening L<sub>Aeq</sub>15min Night L<sub>Aeq</sub>15min, Night L<sub>A1</sub>min**

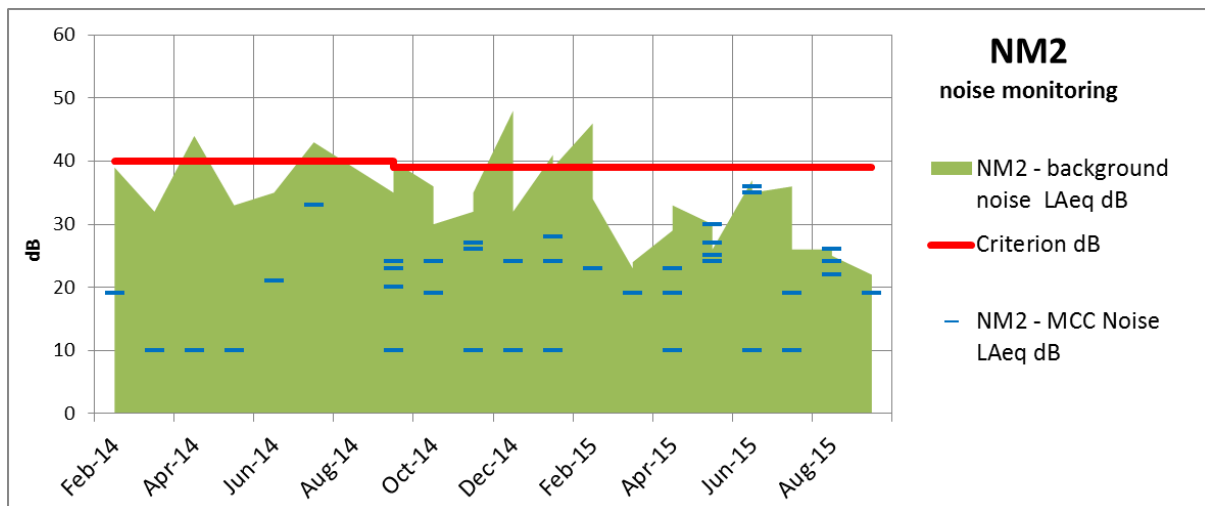
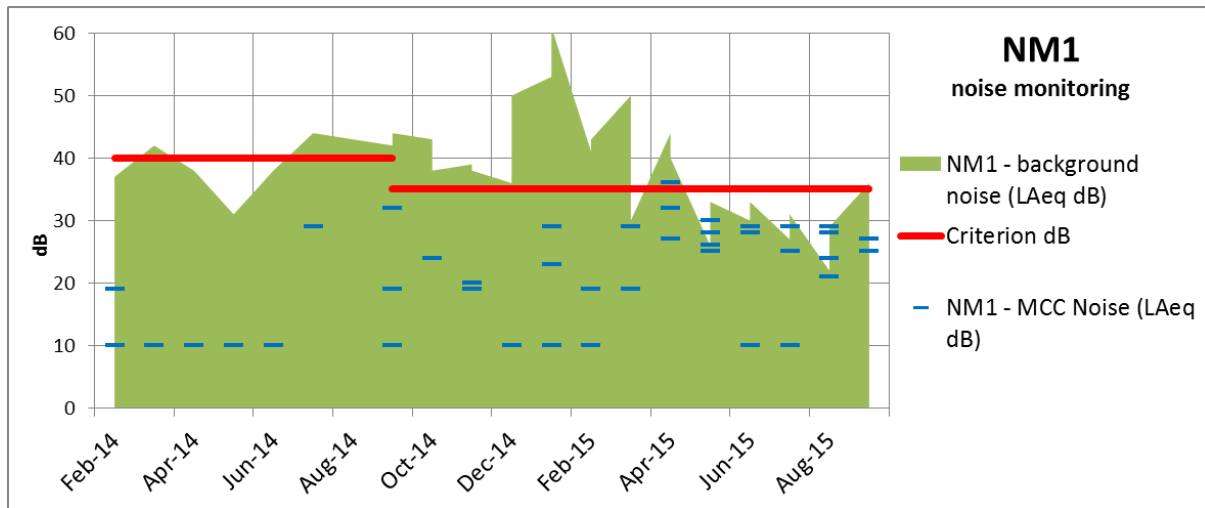
**Notes:**

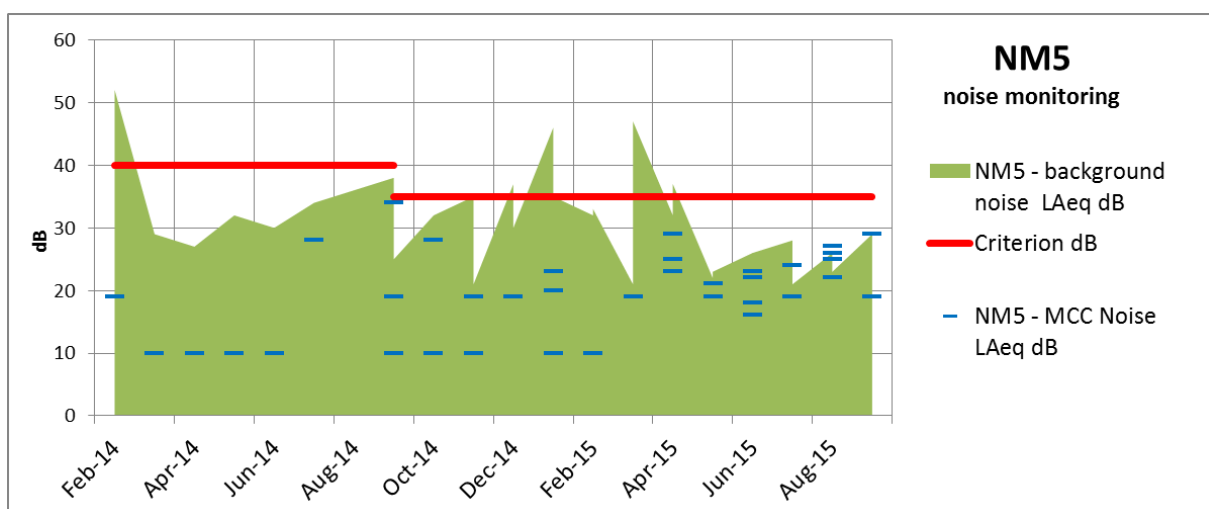
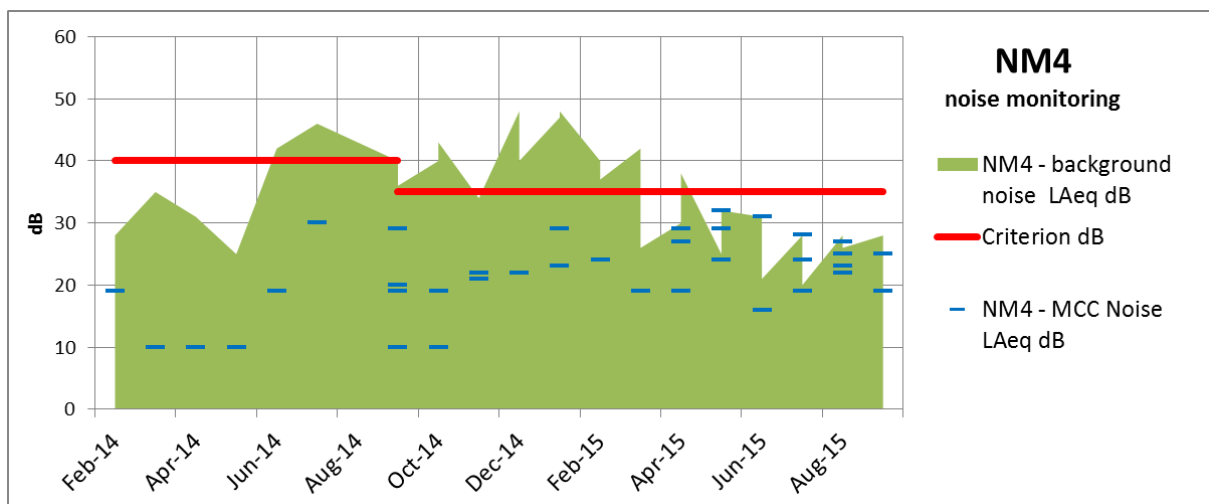
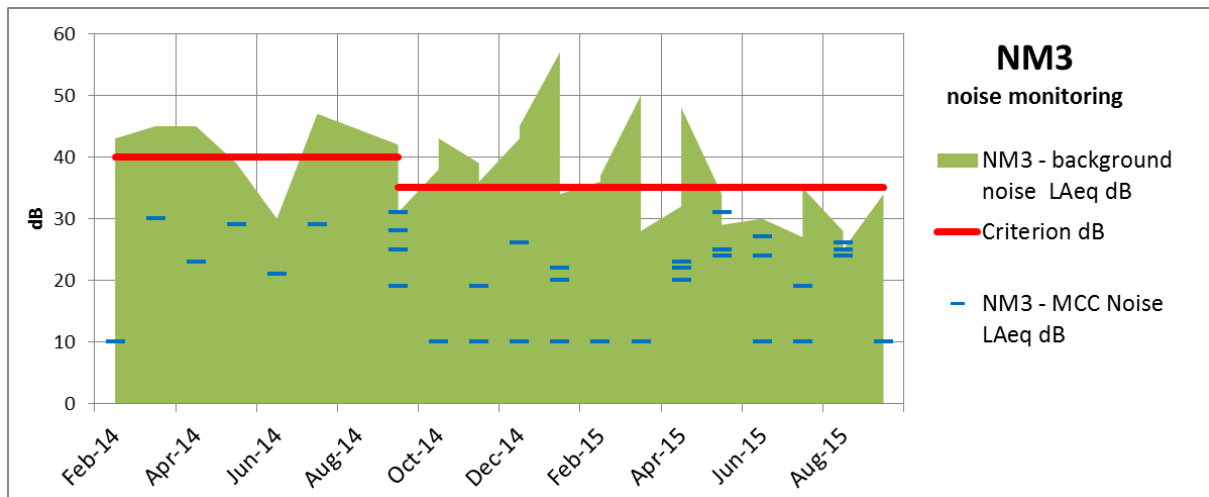
- Noise emission limits do not apply during periods of rainfall or wind speeds greater than 3 metres per second (at 10 metres) as such a No will appear in Criteria Applies Column ;
- Estimated or measured L<sub>Aeq</sub>,15minute attributed to Maules Creek Coal (MCC);
- Estimated or measured L<sub>A1</sub>,1minute attributed to Maules Creek Coal (MCC);
- NA in exceedance column means atmospheric conditions outside those specified in project approval and criterion is not applicable;
- IA – Inaudible
- NM – Not measurable

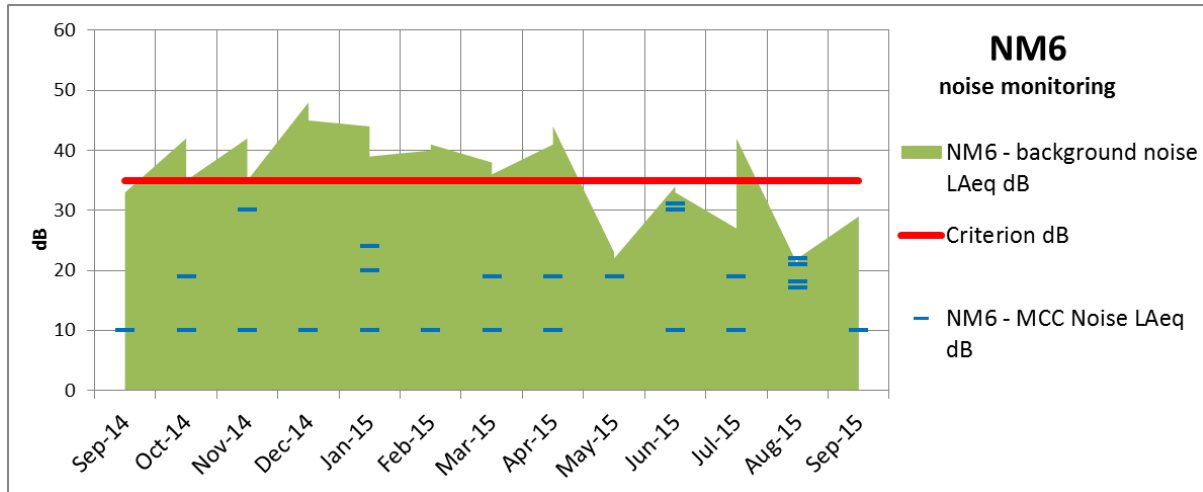
### Attended Noise Monitoring

The following six (6) figures below show the 'attended' noise monitoring results recorded since construction began in earnest in January 2014.

Green shading shows the  $L_{Aeq}$  (15minute) background noise and the blue dash is the portion of the  $L_{Aeq}$  likely attributed to the mine according to the sound engineer. The criteria shown in red, was updated to align with the transition from construction to operations / mining.







### Blast Monitoring

Mine operations commenced in August 2014 and there have been 104 blast events to date (at 4<sup>th</sup> November 2015). All operational blast events have been within the applicable Noise and Ground Vibration limits set out in the Project Approval.

All blast monitoring results have been within the MCC EPL limits.

**Table – Blast Results Summary Quarter 3 2015**

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	dB (Lin Peak)	All	25	96.68	110.0	120	No
	Vibration	mm/s		25	0.18	0.6	10	No

**Air Quality**

**Deposited Dust**

**Table - Deposited Dust Results \***

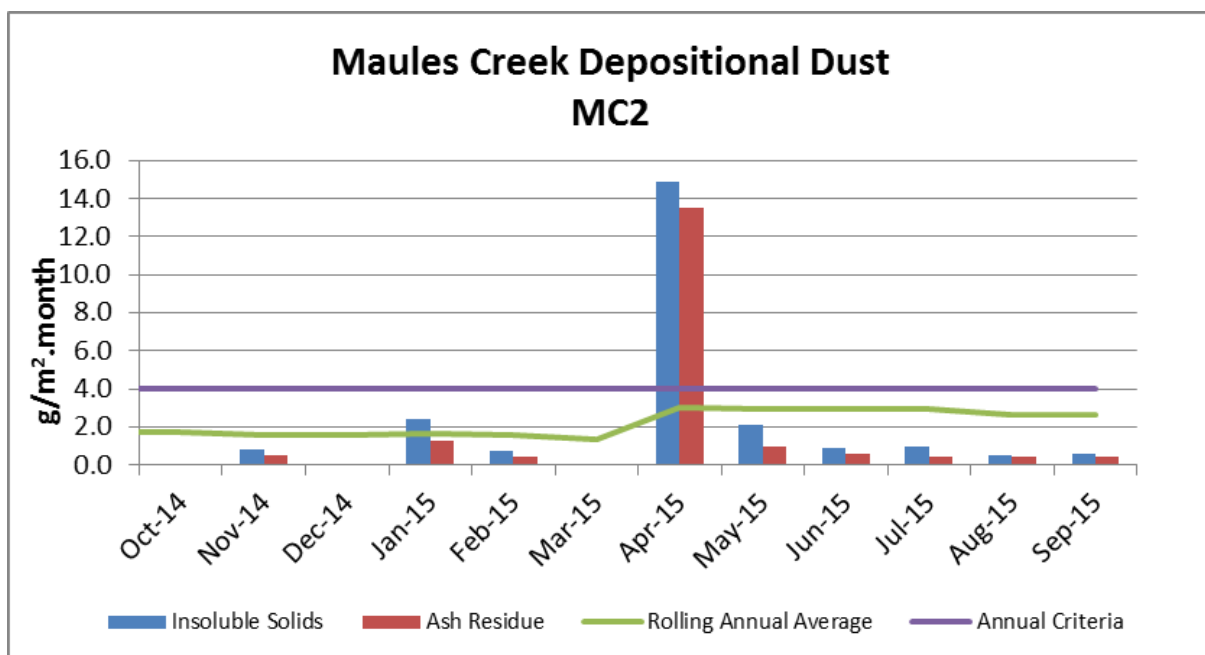
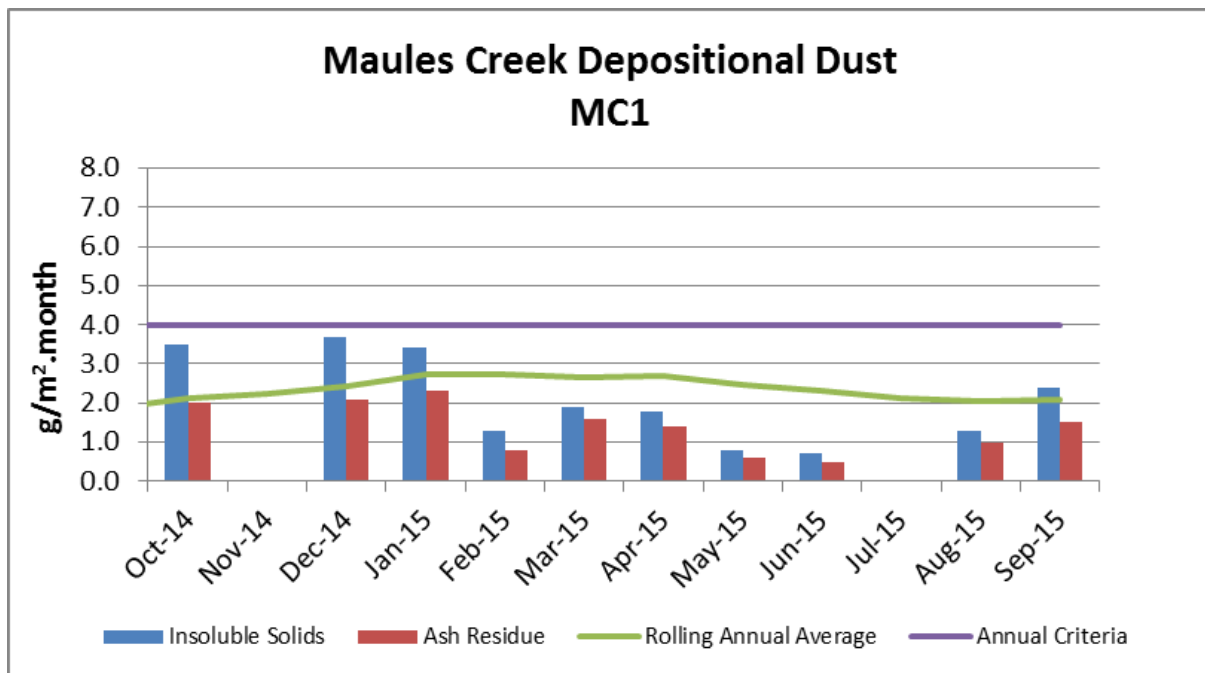
Month	MC1	MC2	MC3	MC4
Sep-14		0.6	0.7	0.4
Oct-14	3.5		1.0	1.1
Nov-14		0.8	1.8	1.2
Dec-14	3.7		1.9	1.4
Jan-15	3.4	2.4	3.2	1.8
Feb-15	1.3	0.7	0.9	1.5
Mar-15	1.9		3.2	1.7
Apr-15	1.8	14.9	2.6	2.0
May-15	0.8	2.1	1.3	0.7
Jun-15	0.7	0.9	0.5	1.2
Jul-15		1.0	0.8	0.8
Aug-15	1.3	0.5	0.5	0.4
Sep-15	2.4	0.6	0.5	0.7
<b>Annual Avg</b>	<b>2.08</b>	<b>2.66</b>	<b>1.52</b>	<b>1.15</b>
<b>Project Avg 2010 - 2015</b>	<b>2.19</b>	<b>2.12</b>	<b>1.62</b>	<b>1.30</b>

\* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated (insect larvae, bird droppings, vegetation etc.).

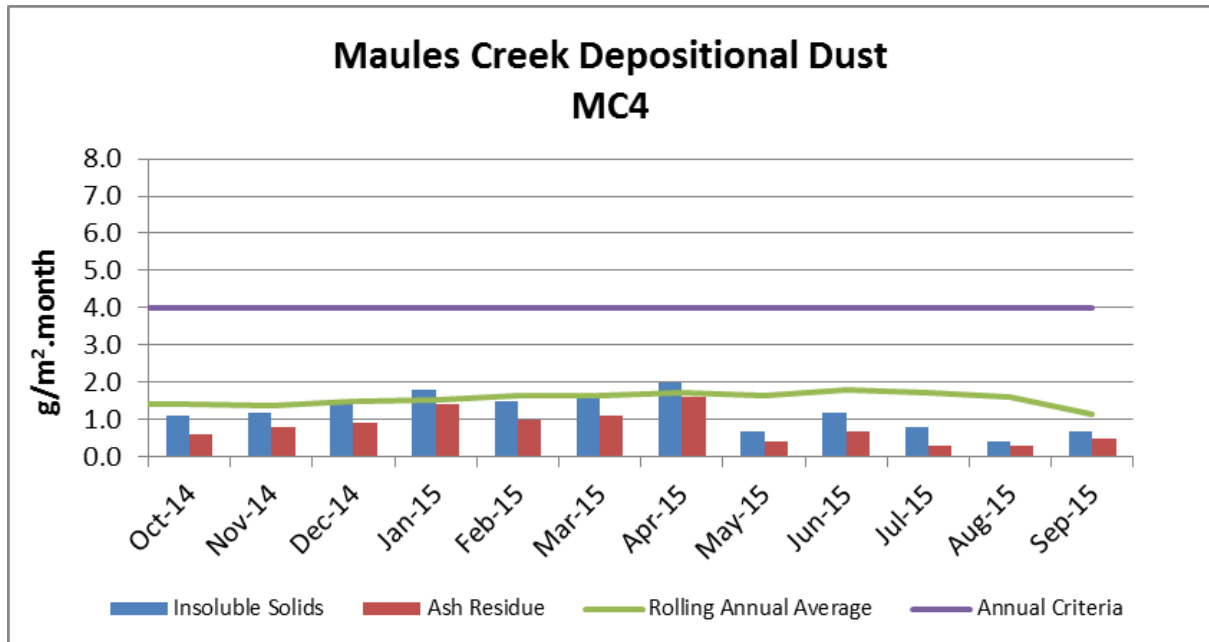
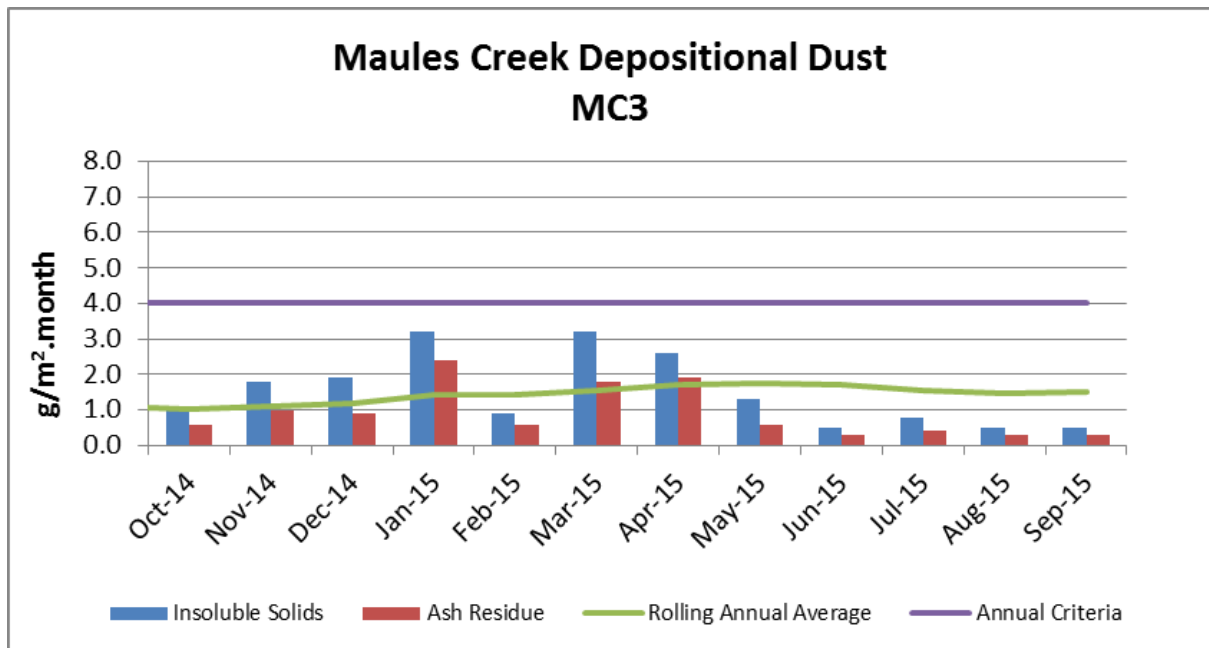
One deposited dust gauge (DDG) result at MC02 Q2 2015 shown in Table above, was above the limit of 4gm/m<sup>2</sup>/month. MC02 is located at Fairfax Public School – Maules Creek. MC02 was placed out on the 11<sup>th</sup> March and collected again on the 10<sup>th</sup> April 2015 for analysis. This sample window also captures the Maules Creek Campdraft held at the Community Hall beside the Fairfax Public School on the weekend of the 28<sup>th</sup> & 29<sup>th</sup> March 2015. The elevated dust generated by the Maules Creek Campdraft was also picked up by the Maules Creek Coal PM10 dust monitoring station TEOM1 500m east. All MC02 results since this event have returned to the normal levels below the 4gm/m<sup>2</sup>/month.

All other results including the Annual Average and Project Averages are below 4gm/m<sup>2</sup>/month.

Deposited Dust Figures (MC1 – MC4)



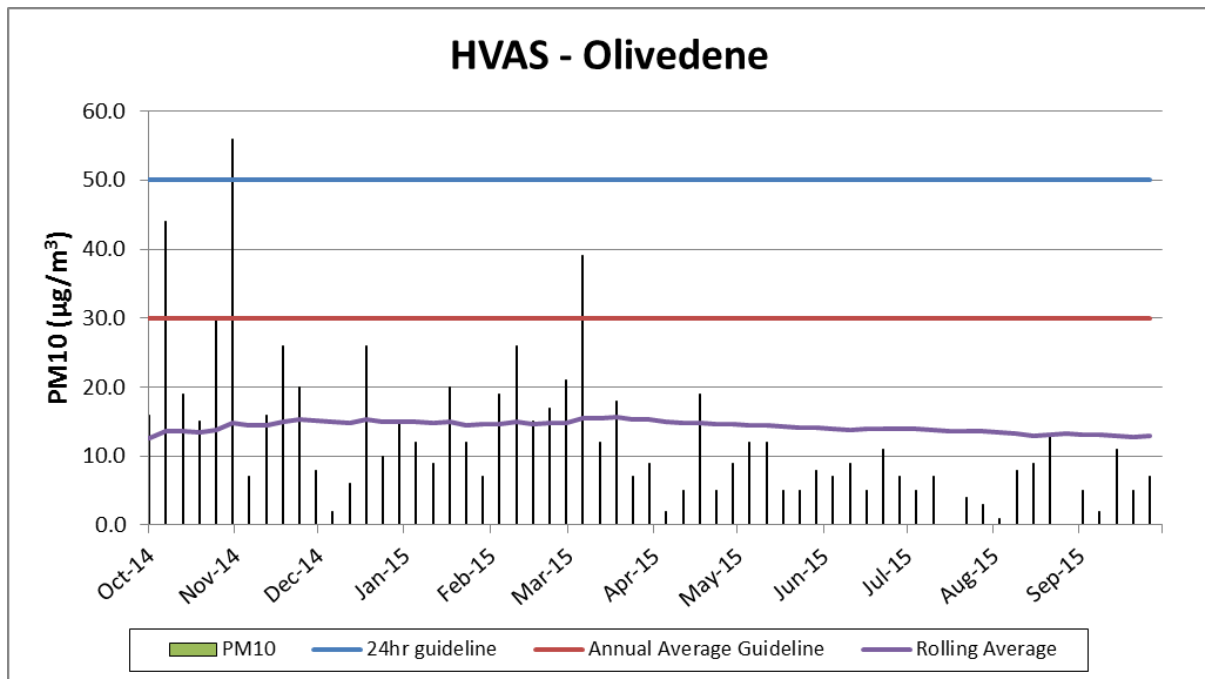




### High Volume Air Sampling (HVAS)

The HVAS is located on the 'Olivedene' property on Therribri Road since September 2014. Olivedene is a mine owned property.

HVAS PM<sub>10</sub> Rolling Annual Average results remain well below the Annual Average Guideline 30 µg/m<sup>3</sup>.

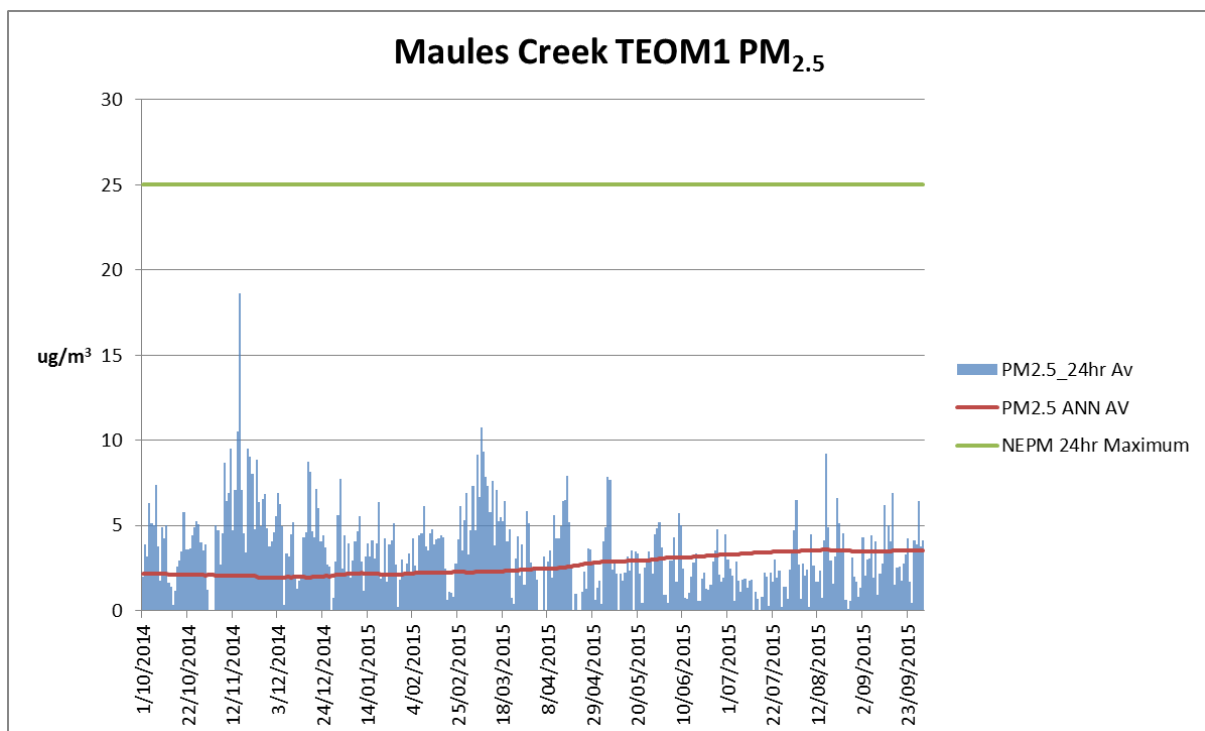
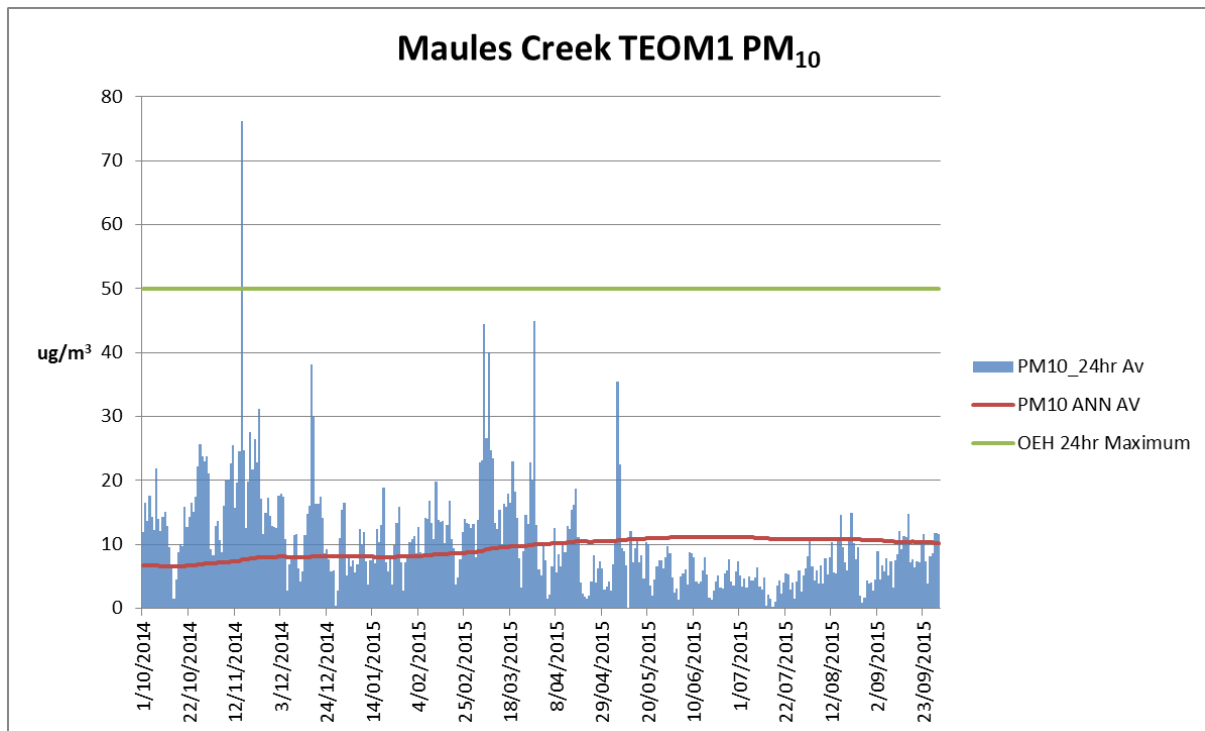


### TEOM - PM<sub>10</sub> Results

The annual average for PM<sub>10</sub> results at the Maules Creek Coal TEOM, is significantly below the applicable NEPM / OEH maximum annual average criteria of 30.0µg/m<sup>3</sup> (at 30<sup>th</sup> September 2015). The PM<sub>10</sub> results have remained below the criteria since the TEOM was commissioned in November 2011 with exception for the regional dust event of November 15<sup>th</sup> 2014. The TEOM also captures continuous measurements of PM<sub>coarse</sub>, PM<sub>2.5</sub>, and Meteorology which are all available to the mine in real time. The only periods when the TEOM is offline is during scheduled system maintenance and regional power failures.

The following figures show the TEOM particulate matter results (PM<sub>10</sub>, PM<sub>2.5</sub>) for the previous 12 months. The two images illustrate that particulate matter 'Annual Averages'

TEOM Figures – Particulate Matter  $PM_{10\mu g/m^3}$  and  $PM_{2.5\mu g/m^3}$



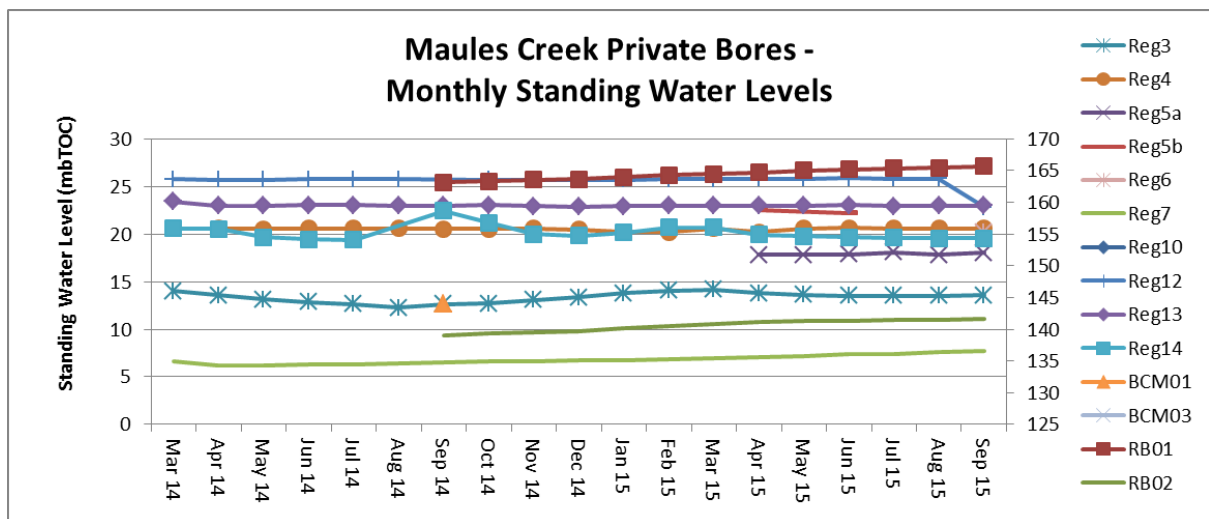
## Water Monitoring

### Ground Water

Groundwater monitoring results in open / standpipe piezometers show levels to be currently stable. 'RB' and 'Reg' series bores were installed between Q4 2013 and Q1 2014. BCM01, BCM03, Reg10 are shallow bores which have been dry since construction in 2013.

**Table 5 – Groundwater Level**

SWL	RB01	RB02	RB05	Reg3	Reg4	Reg5a	Reg5b	Reg6	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			55.26	14	20.61				6.61		25.74	23.4	20.58		
Apr-14				13.54	20.56				6.19		25.7	22.97	20.54		
May-14				13.15	20.54				6.23		25.7	22.96	19.67		
Jun-14			55.54	12.86	20.6				6.28		25.74	23.04	19.45		
Jul-14			56	12.63	20.59				6.32		25.75	23.03	19.4		
Aug-14			55.99	12.26	20.56				6.37		25.76	22.97			
Sep-14	163.17	138.98	56.07	12.62	20.54				6.57			22.97	22.41	12.69	
Oct-14	163.34	139.37	56.34	12.67	20.54				6.58		25.68	23.01	21.2		
Nov-14	163.55	139.5	56.28	13.1	20.56				6.67		25.72	22.95	19.97		
Dec-14	163.67	139.75	56.3	13.36	20.48				6.69		25.64	22.87	19.85		
Jan-15	163.95	140.1	55.83	13.81	20.19				6.76		25.72	22.94	20.14		
Feb-15	164.27	140.47	55.98	14.05	20.23				6.85		25.78	23	20.67		
Mar-15	164.42	140.77	56.5	14.18	20.57				6.93		25.77	22.97	20.67		
Apr-15	164.69	141.19	55.6	13.8	20.23	17.79	22.52		7.04		25.79	22.97	19.95		
May-15	164.99	141.24	56.78	13.6	20.6	17.82			7.19		25.81	22.99	19.77		
Jun-15	165.22	141.35	56.94	13.53	20.64	17.84	22.22		7.35		25.85	23.01	19.65		
Jul-15	165.36	141.44	56.97	13.49	20.58	18.07			7.41		25.8	22.94	19.59		
Aug-15	165.42	141.43	57.08	13.52	20.61	17.83			7.58		25.83	22.99	19.57		
Sep-15	165.68	141.69	57.2	13.54	20.58	18.04		20.13	7.71		22.84	22.96	19.54		



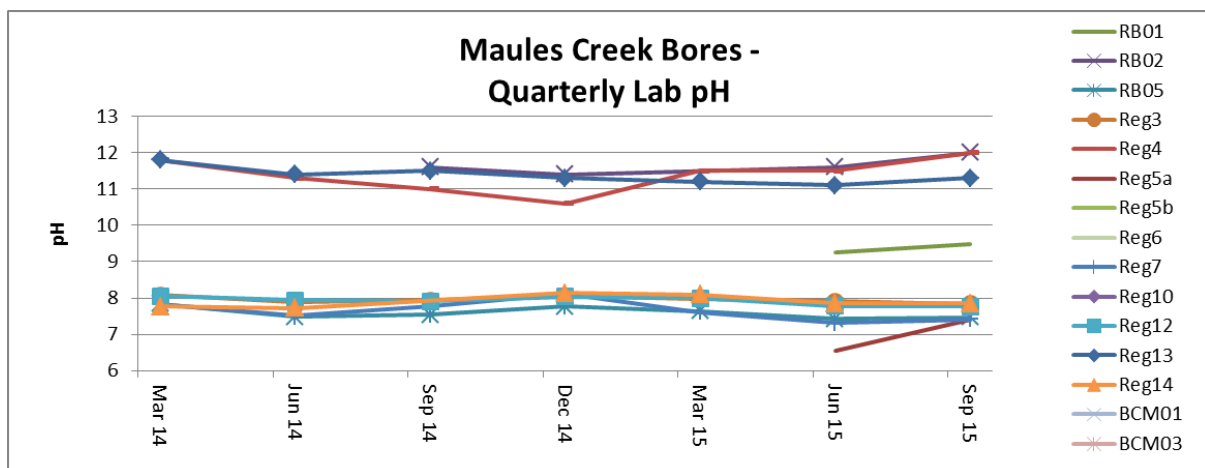
\* RB01 & RB02 bore depths are listed on the secondary axis.

### Acidity / Alkalinity (pH)

Baseline groundwater conditions are still being established, however, 3 bores RB02a, Reg4 and Reg13 show elevated pH levels (above pH 8.5) this has been determined to be a result of low recharge volumes within these bores since the drilling and installation. The two deep bores RB01a and RB02a were successfully sampled during the September monitoring event.

**Table – Groundwater Lab pH**

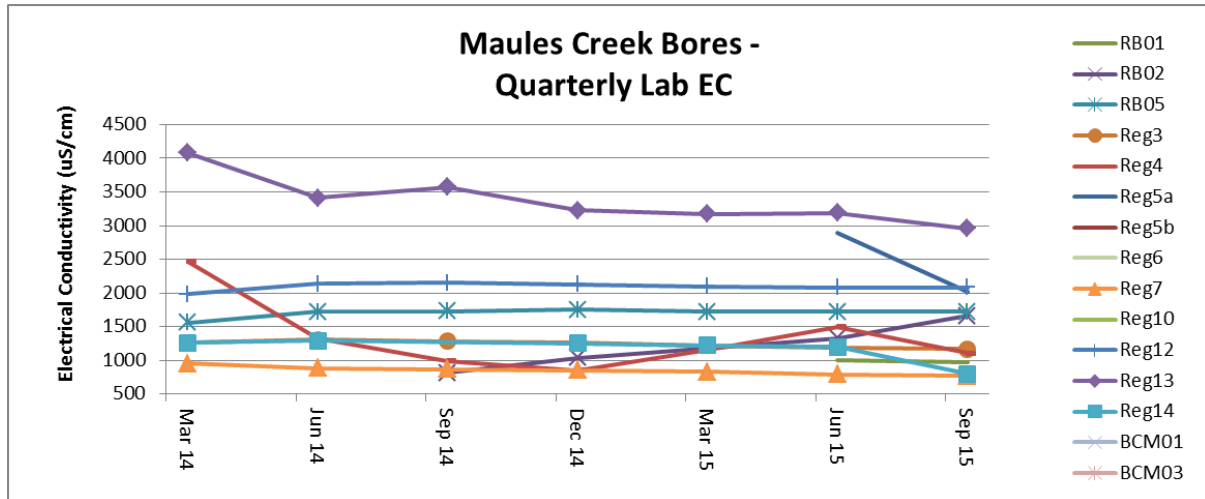
Lab pH	RB01	RB02	RB05	Reg3	Reg4	Reg5a	Reg5b	Reg6	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			7.84	8.08	11.8				7.83		8.05	11.8	7.76		
Jun-14			7.48	7.9	11.3				7.52		7.93	11.4	7.72		
Sep-14		11.6	7.54	7.93	11				7.77		7.91	11.5			
Dec-14		11.4	7.77	8.05	10.6				8.11		8.04	11.3	8.14		
Mar-15			7.63	7.98	11.5				7.61		7.99	11.2	8.09		
Jun-15	9.26	11.6	7.42	7.91	11.5	6.54			7.31		7.78	11.1	7.85		
Sep-15	9.49	12	7.47	7.84	12	7.4		11.6	7.41		7.76	11.3	7.85		



### Electrical Conductivity

Laboratory conductivity (EC) levels are all within historic groundwater EC range of 500 $\mu$ S/cm to 2500 $\mu$ S/cm with exception for Reg13.

Lab EC	RB01	RB02	RB05	Reg3	Reg4	Reg5a	Reg5b	Reg6	Reg7	Reg10	Reg12	Reg13	Reg14	BCM01	BCM03
Mar-14			1560	1260	2470				950		1980	4080	1260		
Jun-14			1720	1310	1330				884		2140	3410	1290		
Sep-14		814	1730	1280	988				871		2150	3570			
Dec-14		1040	1750	1260	854				853		2130	3230	1250		
Mar-15			1720	1220	1160				834		2100	3170	1220		
Jun-15	999	1330	1720	1190	1500	2890			793		2080	3190	1200		
Sep-15	979	1660	1720	1170	1110	2010		2270	772		2080	2960	797		



### Wet Weather Discharge Sampling

There were no wet weather discharge events during Q3 2015 (July to September).

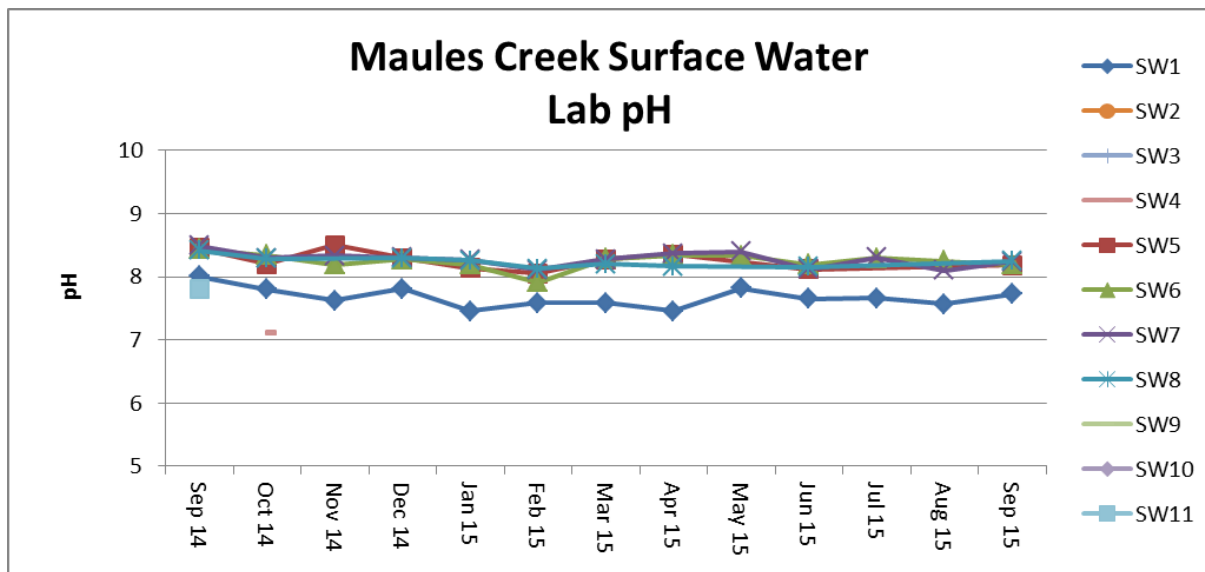
### Surface Water – Creeks and Rivers

Routine surface water monitoring is conducted in surrounding Creeks and Rivers on a monthly basis and pH, EC and TSS are shown in the tables and figures below.

### Acidity / Alkalinity (pH)

Laboratory pH in creeks and rivers surrounding the project are all trending within the ANZECC acceptable range for Irrigation, Ecosystem Health and Recreation. Back Creek and upper Maules Creek are ephemeral and rarely contain flowing water.

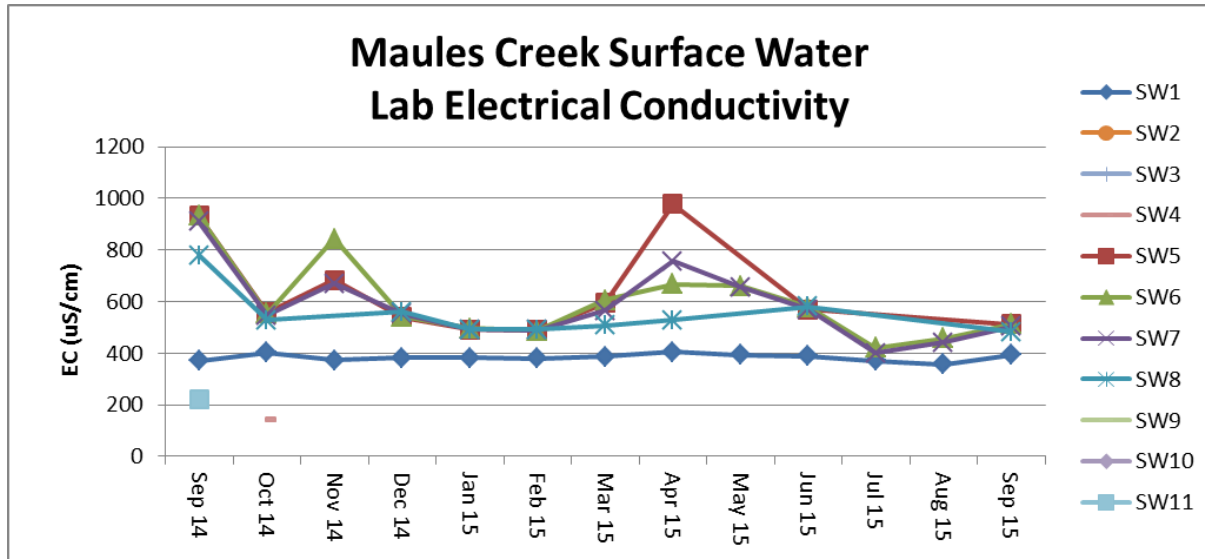
Lab pH	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
16/09/2014	8.01				8.45	8.44	8.49	8.42			7.8
14/10/2014	7.8			7.11	8.2	8.34	8.3	8.29			
20/11/2014	7.62				8.5	8.19	8.33				
16/12/2014	7.81				8.3	8.28	8.31	8.3			
14/01/2015	7.46				8.14	8.19	8.27	8.26			
11/02/2015	7.59				8.05	7.91	8.11	8.13			
11/03/2015	7.59				8.28	8.29	8.28	8.2			
14/04/2015	7.46				8.35	8.34	8.37	8.17			
19/05/2015	7.82					8.33	8.4				
11/06/2015	7.65				8.12	8.19	8.12	8.16			
13/07/2015	7.66					8.3	8.31				
25/08/2015	7.57					8.25	8.1				
16/09/2015	7.73				8.18	8.19	8.24	8.25			



#### Electrical Conductivity

Surface water EC trends have remained consistent with SW5, SW6, SW7 and SW8 all historically variable. SW5 to SW8 are stations along the Namoi River which is subject to regulated / variable flow regimes.

Lab EC	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
16/09/2014	371				932	932	910	778			223
14/10/2014	403			142	557	553	547	529			
20/11/2014	372				684	842	670				
16/12/2014	381				540	541	554	561			
14/01/2015	382				491	495	492	491			
11/02/2015	379				490	487	489	492			
11/03/2015	386				595	605	564	508			
14/04/2015	404				978	668	756	528			
19/05/2015	394					661	655				
11/06/2015	389				570	577	568	580			
13/07/2015	371					420	401				
25/08/2015	357					458	441				
16/09/2015	393				511	512	502	482			

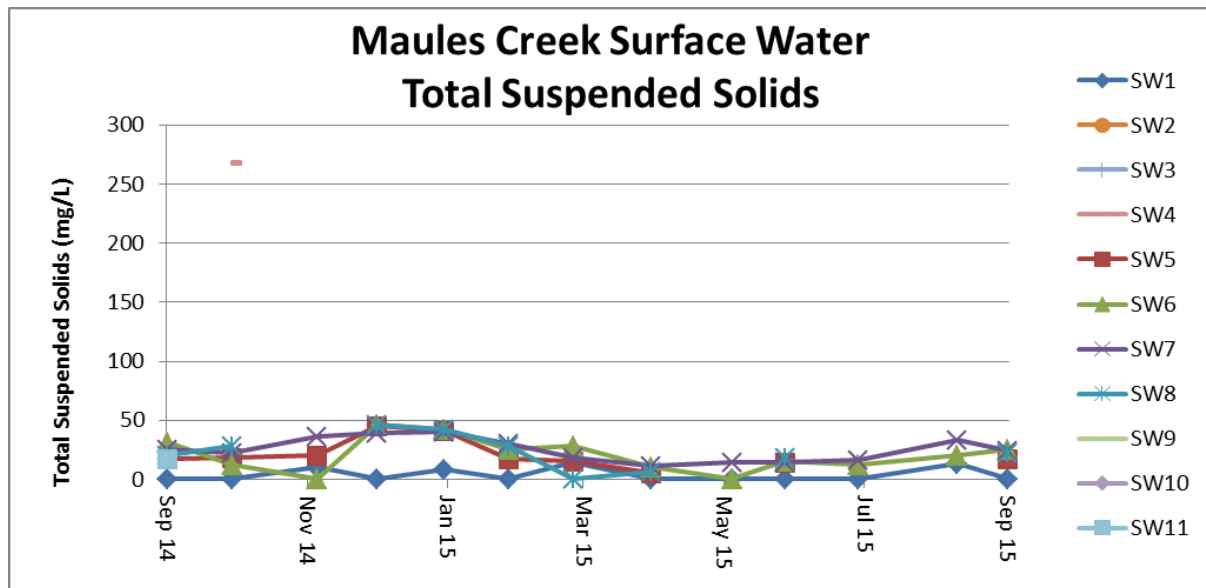


#### Total Suspended Solids (TSS)

Surface TSS trends have remained consistent with SW5, SW6, SW7 and SW8 are also historically variable. SW5 to SW8 are stations along the Namoi River which is subject to regulated / variable flow regimes.

TSS	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11
16/09/2014	<5				17	31	25	20			17
14/10/2014	<5			268	18	12	22	28			
20/11/2014	10				20	<5	36				
16/12/2014	<5				45	46	39	46			
14/01/2015	8				41	42	40	42			
11/02/2015	<5				17	25	30	28			
11/03/2015	14				15	28	18	<5			
14/04/2015	<5				5	10	11	6			
19/05/2015	<5					<5	14				
11/06/2015	<5				14	15	14	18			
13/07/2015	<5					12	16				
25/08/2015	13					20	33				
16/09/2015	<5				17	25	24	22			





### **Rehabilitation**

Construction at Maules Creek Coal commenced in December 2013 with majority of works completed by June 2015.

Mining commenced in August 2014, as such rehabilitation has been restricted to areas associated with rail and infrastructure areas during this period. Mine rehabilitation trials and research have not yet commenced, but will do so when suitable trial areas are available within the mining areas.

### **Complaints**

For full detail of each Complaint please refer to the Community Complaints Register published on the Whitehaven Coal – Maules Creek website.

[https://www.whitehavencoal.com.au/environment/maules\\_creek\\_environmental\\_management.cfm](https://www.whitehavencoal.com.au/environment/maules_creek_environmental_management.cfm)