MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: January 2017
Obtained Date: 15 February 2017
Publication Date: 1 March 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	0	Next Sample February				
	Conductivity	µs/cm		0					
	Oil & Grease	mg/L		0					
	pH	pH		0					

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Next Sample March				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	10/01/2017	20:12:00	0.2	<20		35			0	Nil
NM1	10/01/2017	20:27:00	0.2	<20		35			0	Nil
NM1	9/01/2017	22:00:00	0.4		<20	35	<20	45	0	Nil
NM1	9/01/2017	22:15:00	0.2		<20	35	<20	45	0	Nil
NM2	9/01/2017	20:55:00	0.5	<20		39			0	Nil
NM2	9/01/2017	21:10:00	0.9	IA		39			0	Nil
NM2	10/01/2017	22:00:00	0.8		<20	39	<20	45	0	Nil
NM2	10/01/2017	22:15:00	0.8		<20	39	<20	45	0	Nil
NM3	9/01/2017	19:30:00	1.9	IA		35			0	Nil
NM3	9/01/2017	19:45:00	1.5	IA		35			0	Nil
NM3	10/01/2017	23:22:00	1.2		<25	35	31	45	0	Nil
NM3	10/01/2017	23:38:00	2.5		<25	35	32	45	0	Nil
NM4	10/01/2017	20:56:00	0.4	<20		NA			0	Nil
NM4	10/01/2017	21:11:00	0.6	<20		NA			0	Nil
NM4	9/01/2017	23:30:00	0.9		<20	NA	<20	NA	0	Nil
NM4	9/01/2017	23:49:00	0.4		<20	NA	<20	NA	0	Nil
NM5	10/01/2017	19:32:00	0.2	IA		35			0	Nil
NM5	10/01/2017	19:47:00	0.1	IA		35			0	Nil
NM5	9/01/2017	22:41:00	0.2		<25	35	<25	45	0	Nil
NM5	9/01/2017	22:56:00	0.3		<25	35	25	45	0	Nil
NM6	9/01/2017	20:11:00	0.9	IA		35			0	Nil
NM6	9/01/2017	20:26:00	0.3	IA		35			0	Nil
NM6	10/01/2017	22:40:00	0.9		IA	35	IA	45	0	Nil
NM6	10/01/2017	22:55:00	0.8		IA	35	IA	45	0	Nil

IA & NM = Inaudible & Not Measurable.

MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.

ND = No data due to high prevailing winds during the attended noise monitoring event.

Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.

NA = NM4 is at mine owned land and results have been provided for informational purposes.

Noise Monitoring (Attended - Low Frequency Assessment)

None of the twenty-four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut-off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). No further assessment of low frequency noise is required.

Table 5 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	10	97.65	104	120	No
	Vibration	mm/s		10	0.14	0.32	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

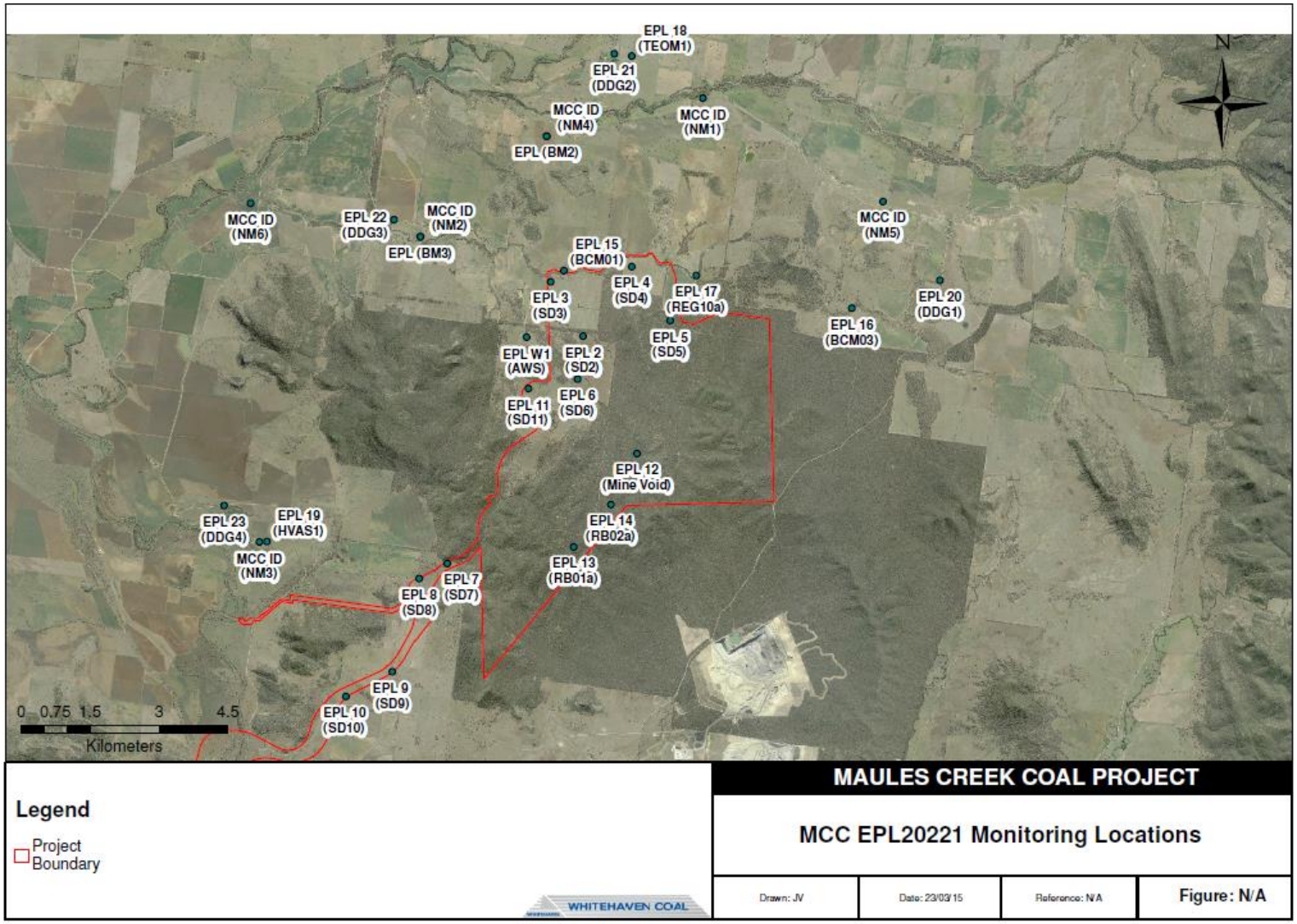
Table 6 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m^3.month	PM_{10}	8.9	30	No
19 (HVAS)	6 days	µg/m^3	PM_{10}	13.6	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m^2 month	1.9	4	No
21 (DDG2/MC2)	Monthly	g/m^2 month	2.5	4	No
22 (DDG3/MC3)	Monthly	g/m^2 month	1.1	4	No
23 (DDG4/MC4)	Monthly	g/m^2 month	1.1	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: February 2017
Obtained Date: 14 March 2017
Publication Date: 21 March 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	1	24/02/2017	Yes			<5
	Conductivity	µs/cm		1	24/02/2017	Yes			1030
	Oil & Grease	mg/L		1	24/02/2017	Yes			<5
	pH	pH		1	24/02/2017	Yes			8.55

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Next Sample March				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	16/02/2017	20:30:00	0.8		<20	35			0	Nil
NM1	16/02/2017	20:45:00	0.5		<20	35			0	Nil
NM1	15/02/2017	22:45:00	0.4	25		35	31	45	0	Nil
NM1	15/02/2017	23:01:00	0.2	24		35	32	45	0	Nil
NM2	15/02/2017	21:07:00	0.3		IA	39			0	Nil
NM2	15/02/2017	21:23:00	0.8		IA	39			0	Nil
NM2	16/02/2017	22:00:00	1.9	24		39	27	45	0	Nil
NM2	16/02/2017	22:15:00	0.4	26		39	30	45	0	Nil
NM3	15/02/2017	19:40:00	1.3		IA	35			0	Nil
NM3	15/02/2017	19:55:00	0.8		IA	35			0	Nil
NM3	16/02/2017	23:27:00	0.3	IA		35	IA	45	0	Nil
NM3	16/02/2017	23:42:00	0.1	IA		35	IA	45	0	Nil
NM4	16/02/2017	21:13:00	0.7		<20	NA			0	NA
NM4	16/02/2017	21:29:00	1		<20	NA			0	NA
NM4	15/02/2017	22:00:00	0.5	<20		NA	24	NA	0	NA
NM4	15/02/2017	22:15:00	0.5	<20		NA	<20	NA	0	NA
NM5	16/02/2017	19:45:00	0.4		IA	35			0	Nil
NM5	16/02/2017	20:00:00	0.8		IA	35			0	Nil
NM5	15/02/2017	23:26:00	0.6	<20		35	24	45	0	Nil
NM5	15/02/2017	23:42:00	0.4	21		35	26	45	0	Nil
NM6	15/02/2017	20:24:00	0.3		IA	35			0	Nil
NM6	15/02/2017	20:39:00	0.4		IA	35			0	Nil
NM6	16/02/2017	22:45:00	0.7	IA		35	IA	45	0	Nil
NM6	16/02/2017	23:00:00	0.7	IA		35	IA	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.

Noise Monitoring (Attended - Low Frequency Assessment)

None of the twenty-four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut-off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). No further assessment of low frequency noise is required.

Table 5 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	14*	98.03	106.90	120	No
	Vibration	mm/s		14*	0.12	0.26	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.
**BM3 did not record results for two blasts.*

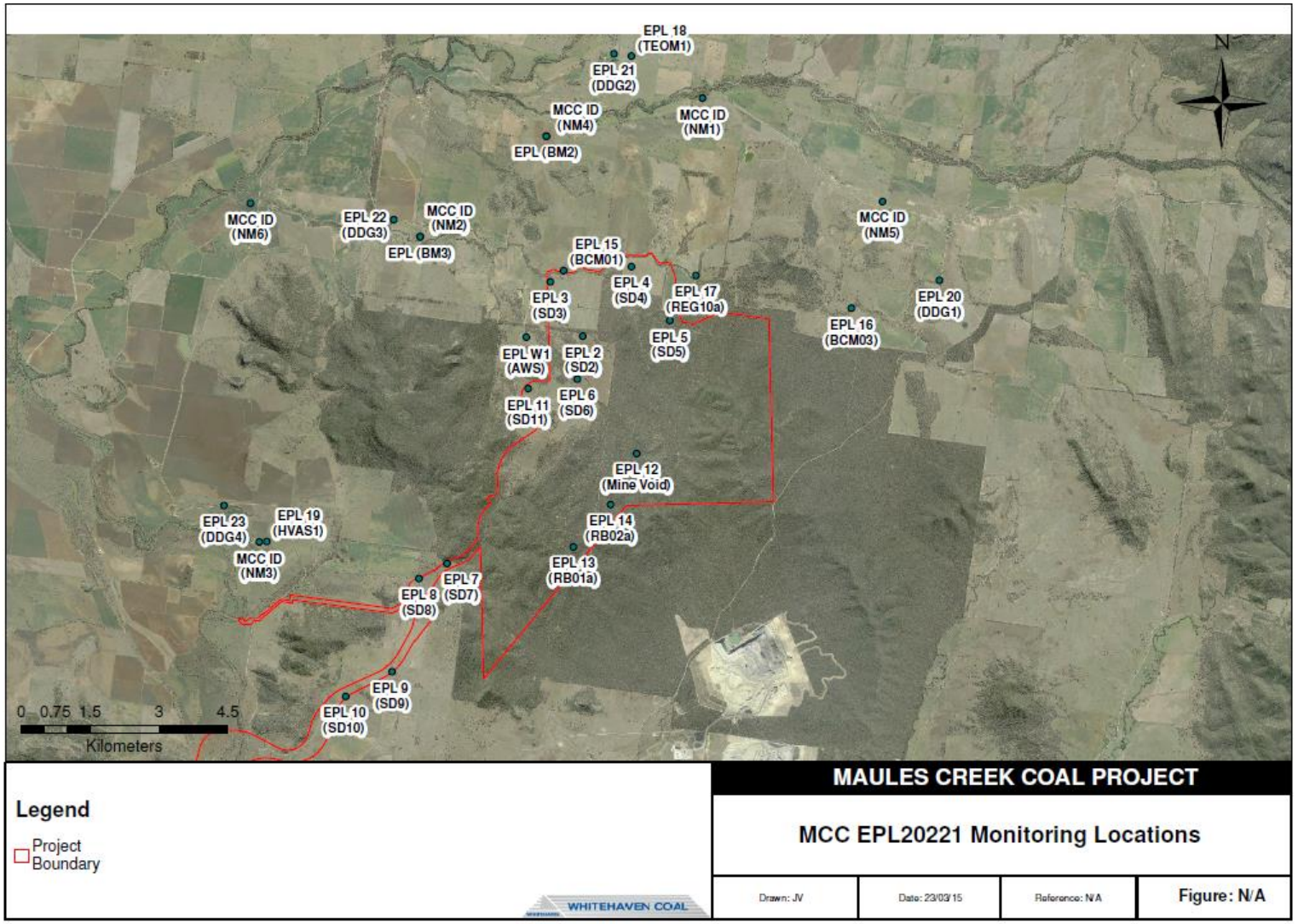
Table 6 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m^3 month	PM_{10}	9.0	30	No
19 (HVAS)	6 days	µg/m^3	PM_{10}	13.5	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m^2 month	1.9	4	No
21 (DDG2/MC2)	Monthly	g/m^2 month	2.5	4	No
22 (DDG3/MC3)	Monthly	g/m^2 month	1.2	4	No
23 (DDG4/MC4)	Monthly	g/m^2 month	1.1	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: March 2017
Obtained Date: 26 April 2017
Publication Date: 1 May 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	0	Next Sample April				
	Conductivity	µs/cm		0					
	Oil & Grease	mg/L		0					
	pH	pH		0					

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	15/03/2017	20:45:00	1.8	IA		35			0	Nil
NM1	15/03/2017	21:00:00	1.9	IA		35			0	Nil
NM1	16/03/2017	22:45:00	0.6		29	35	40	45	0	Nil
NM1	16/03/2017	23:00:00	0.3		29	35	33	45	0	Nil
NM2	16/03/2017	21:16:00	0.4	25		39			0	Nil
NM2	16/03/2017	21:30:00	0.6	29		39			0	Nil
NM2	15/03/2017	22:15:00	2.4		26	39	36	45	0	Nil
NM2	15/03/2017	22:30:00	2.2		25	39	32	45	0	Nil
NM3	16/03/2017	19:58:00	0.5	IA		35			0	Nil
NM3	16/03/2017	20:14:00	0.3	IA		35			0	Nil
NM3	15/03/2017	23:38:00	2		20	35	25	45	0	Nil
NM3	15/03/2017	23:54:00	2.4		<20	35	28	45	0	Nil
NM4	15/03/2017	21:31:00	1.7	<25		NA			0	NA
NM4	15/03/2017	21:47:00	1.7	<25		NA			0	NA
NM4	16/03/2017	22:00:00	0.7		29	NA	33	NA	0	NA
NM4	16/03/2017	22:15:00	0.8		29	NA	40	NA	0	NA
NM5	15/03/2017	20:00:00	2.9	IA		35			0	Nil
NM5	*15/03/2017*	*20:15:00*	*3.1*	*IA*		*35*			*0*	*NA*
NM5	16/03/2017	23:30:00	0.7		29	35	33	45	0	Nil
NM5	16/03/2017	23:45:00	0.9		23	35	33	45	0	Nil
NM6	16/03/2017	20:39:00	0.6	<20		35			0	Nil
NM6	16/03/2017	20:54:00	0.8	<20		35			0	Nil
NM6	15/03/2017	22:57:00	1.3		<20	35	23	45	0	Nil
NM6	15/03/2017	23:12:00	2		<20	35	24	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.

Noise Monitoring (Attended - Low Frequency Assessment)

None of the twenty-four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut-off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). No further assessment of low frequency noise is required.

Table 5 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	8	95.19	105	120	No
	Vibration	mm/s		8	0.2	0.71	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

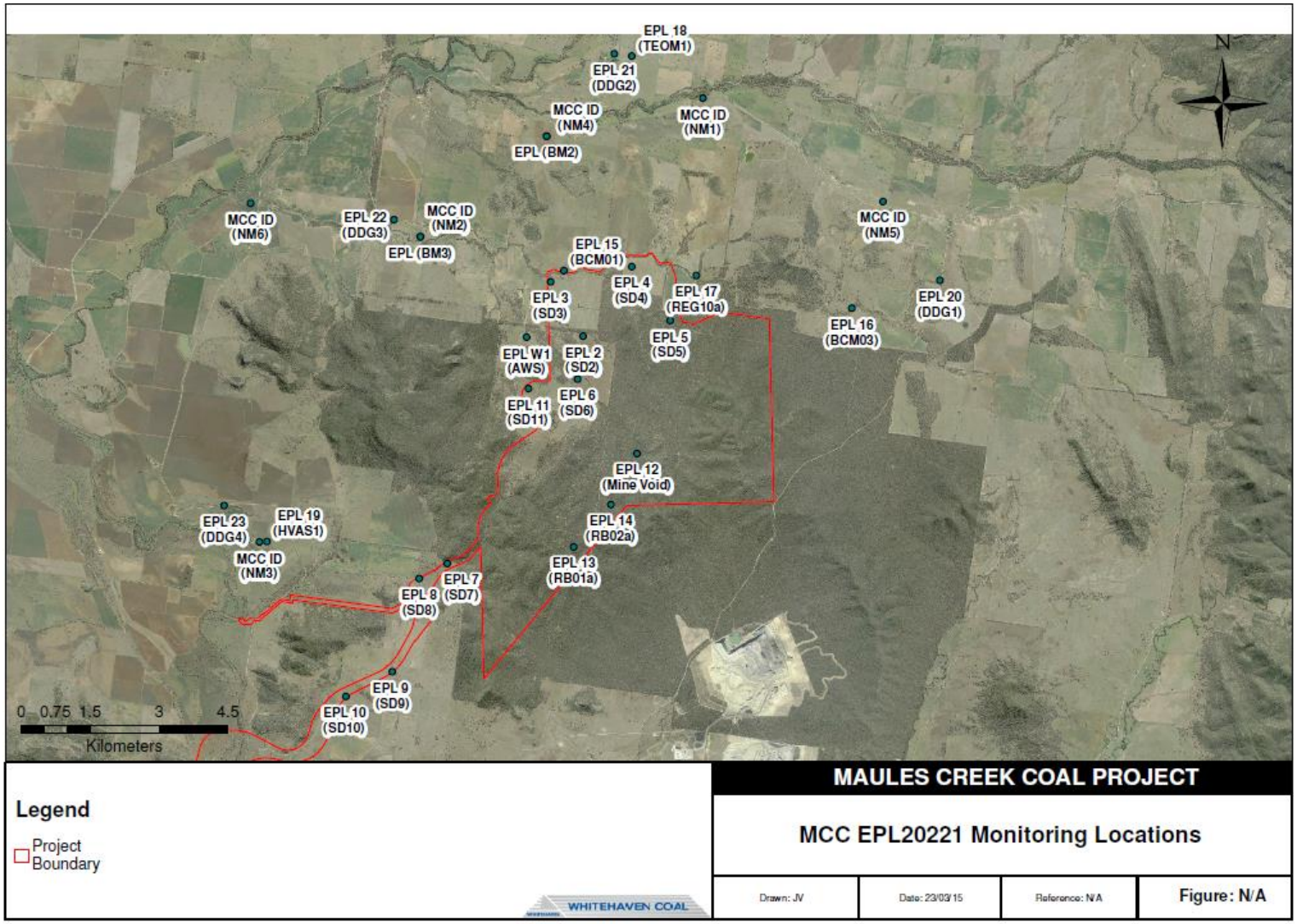
Table 6 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m³ month	PM_{10}	8.8	30	No
19 (HVAS)	6 days	µg/m³	PM_{10}	12.4	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m² month	1.9	4	No
21 (DDG2/MC2)	Monthly	g/m² month	2.5	4	No
22 (DDG3/MC3)	Monthly	g/m² month	1.3	4	No
23 (DDG4/MC4)	Monthly	g/m² month	1.3	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: April 2017
Obtained Date: 16 May 2017
Publication Date: 30 May 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	1	19/4/2017	Yes			9
	Conductivity	µs/cm		1	19/4/2017	Yes			671
	Oil & Grease	mg/L		1	19/4/2017	Yes			<5
	pH	pH		1	19/4/2017	Yes			8.32

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Next Sample June				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	19/04/2017	19:23:00	2.2	IA		35			0	Nil
NM1	19/04/2017	19:40:00	2	IA		35			0	Nil
NM1	18/04/2017	22:41:00	1.8		IA	35	IA	45	0	Nil
NM1	18/04/2017	22:57:00	1.7		IA	35	IA	45	0	Nil
NM2	18/04/2017	19:39:00	2.7	<35		39			0	Nil
NM2	18/04/2017	19:54:00	2.1	35		39			0	Nil
NM2	19/04/2017	22:24:00	3		28	39	30	45	0	Nil
NM2	19/04/2017	22:39:00	2.4		31	39	40	45	0	Nil
NM3	18/04/2017	18:03:00	1	IA		35			0	Nil
NM3	18/04/2017	18:21:00	0.4	IA		35			0	Nil
NM3	19/04/2017	23:50:00	2.4		IA	35	IA	45	0	Nil
NM3	20/04/2017	0:05:00	2.4		IA	35	IA	45	0	Nil
NM4	19/04/2017	20:10:00	0.5	22		NA			0	NA
NM4	19/04/2017	20:26:00	0.4	<20		NA			0	NA
NM4	18/04/2017	23:25:00	2.1		IA	NA	IA	NA	0	NA
NM4	18/04/2017	23:41:00	1.6		IA	NA	IA	NA	0	NA
NM5	19/04/2017	18:41:00	1.8	IA		35			0	Nil
NM5	19/04/2017	18:58:00	1.9	IA		35			0	Nil
NM5	18/04/2017	22:00:00	1.9		IA	35	IA	45	0	Nil
NM5	18/04/2017	22:17:00	2.3		IA	35	IA	45	0	Nil
NM6	18/04/2017	18:50:00	2.2	<20		35			0	Nil
NM6	18/04/2017	19:11:00	2.6	IA		35			0	Nil
NM6	19/04/2017	23:06:00	2.8		IA	35	IA	45	0	Nil
NM6	19/04/2017	23:22:00	2.9		IA	35	IA	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.

Noise Monitoring (Attended - Low Frequency Assessment)

One of the twenty-four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut-off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval).

Due to the presence of other low-frequency noise sources occurring during the measurement that were not attributable to mining, in this case breeze on the microphone, low-frequency modifying factor methods were not applicable and no further assessment is required.

Table 5 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	6	101.10	109.6	120	No
	Vibration	mm/s		6	0.17	0.39	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

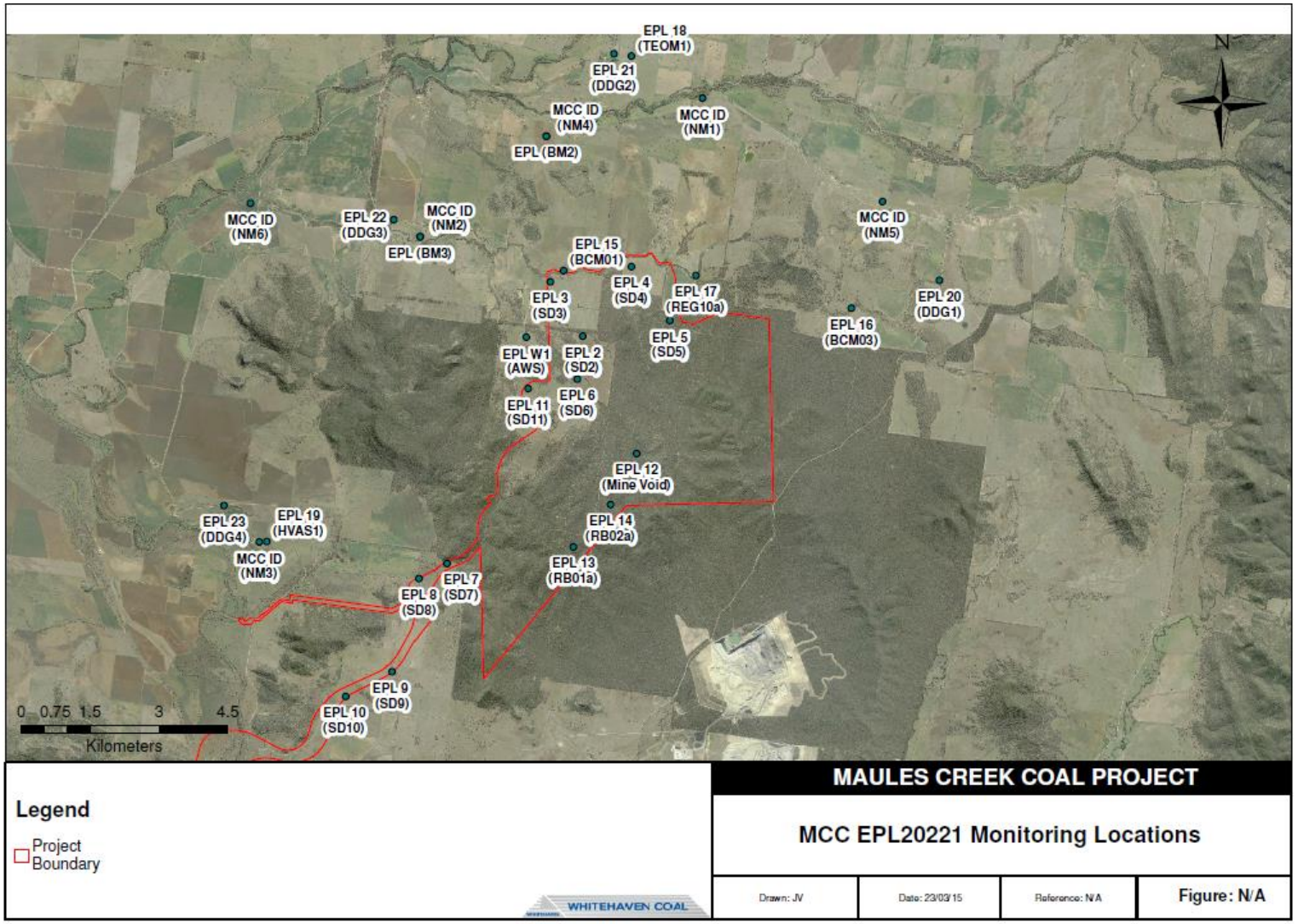
Table 6 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m³ month	PM_{10}	8.3	30	No
19 (HVAS)	6 days	µg/m³	PM_{10}	10.9	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m² month	2.0	4	No
21 (DDG2/MC2)	Monthly	g/m² month	2.3	4	No
22 (DDG3/MC3)	Monthly	g/m² month	1.4	4	No
23 (DDG4/MC4)	Monthly	g/m² month	1.3	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: May 2017
Obtained Date: 17 June 2017
Publication Date: 30 June 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	6	22/5/17 & 24/5/17	Yes	48	49	49	50
	Conductivity	µs/cm		6		Yes	527	566.5	566.5	606
	Oil & Grease	mg/L		6		Yes	<5	<5	<5	<5
	pH	pH		6		Yes	7.76	7.76	7.76	7.76
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	0	Next Sample June				
	Conductivity	µs/cm		0					
	Oil & Grease	mg/L		0					
	pH	pH		0					

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Next Sample June				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	2/05/2017	19:58:00	0.3	24		35			0	Nil
NM1	2/05/2017	20:16:00	0.3	30		35			0	Nil
NM1	1/05/2017	22:39:00	0.3		IA	35	IA	45	0	Nil
NM1	1/05/2017	22:55:00	0.8		IA	35	IA	45	0	Nil
NM2	1/05/2017	20:06:00	0.4	IA		39			0	Nil
NM2	1/05/2017	20:21:00	0.5	IA		39			0	Nil
NM2	2/05/2017	22:23:00	1.8		25	39	40	45	0	Nil
NM2	2/05/2017	22:39:00	0.8		32	39	41	45	0	Nil
NM3	1/05/2017	18:32:00	0.3	IA		35			0	Nil
NM3	1/05/2017	18:53:00	1	IA	IA	35			0	Nil
NM3	2/05/2017	23:53:00	0.9		IA	35	IA	45	0	Nil
NM3	3/05/2017	0:08:00	1		IA	35	IA	45	0	Nil
NM4	2/05/2017	20:45:00	0.4	22		NA			0	NA
NM4	2/05/2017	21:02:00	0.5	24		NA			0	NA
NM4	1/05/2017	23:50:00	0.3		IA	NA	IA	NA	0	NA
NM4	2/05/2017	0:06:00	0.4		IA	NA	IA	NA	0	NA
NM5	2/05/2017	19:10:00	1.4	25		35			0	Nil
NM5	2/05/2017	19:28:00	0.7	27		35			0	Nil
NM5	1/05/2017	22:00:00	0.4		IA	35	IA	45	0	Nil
NM5	1/05/2017	22:15:00	0.3		IA	35	IA	45	0	Nil
NM6	1/05/2017	19:22:00	1.1	IA		35			0	Nil
NM6	1/05/2017	19:38:00	0.8	IA		35			0	Nil
NM6	2/05/2017	23:09:00	1.1		24	35	32	45	0	Nil
NM6	2/05/2017	23:25:00	0.8		21	35	30	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.

Noise Monitoring (Attended - Low Frequency Assessment)

None of the twenty-four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut-off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). No further assessment of low frequency noise is required.

Table 5 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	9	96.54	103.40	120	No
	Vibration	mm/s		9	0.15	0.28	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

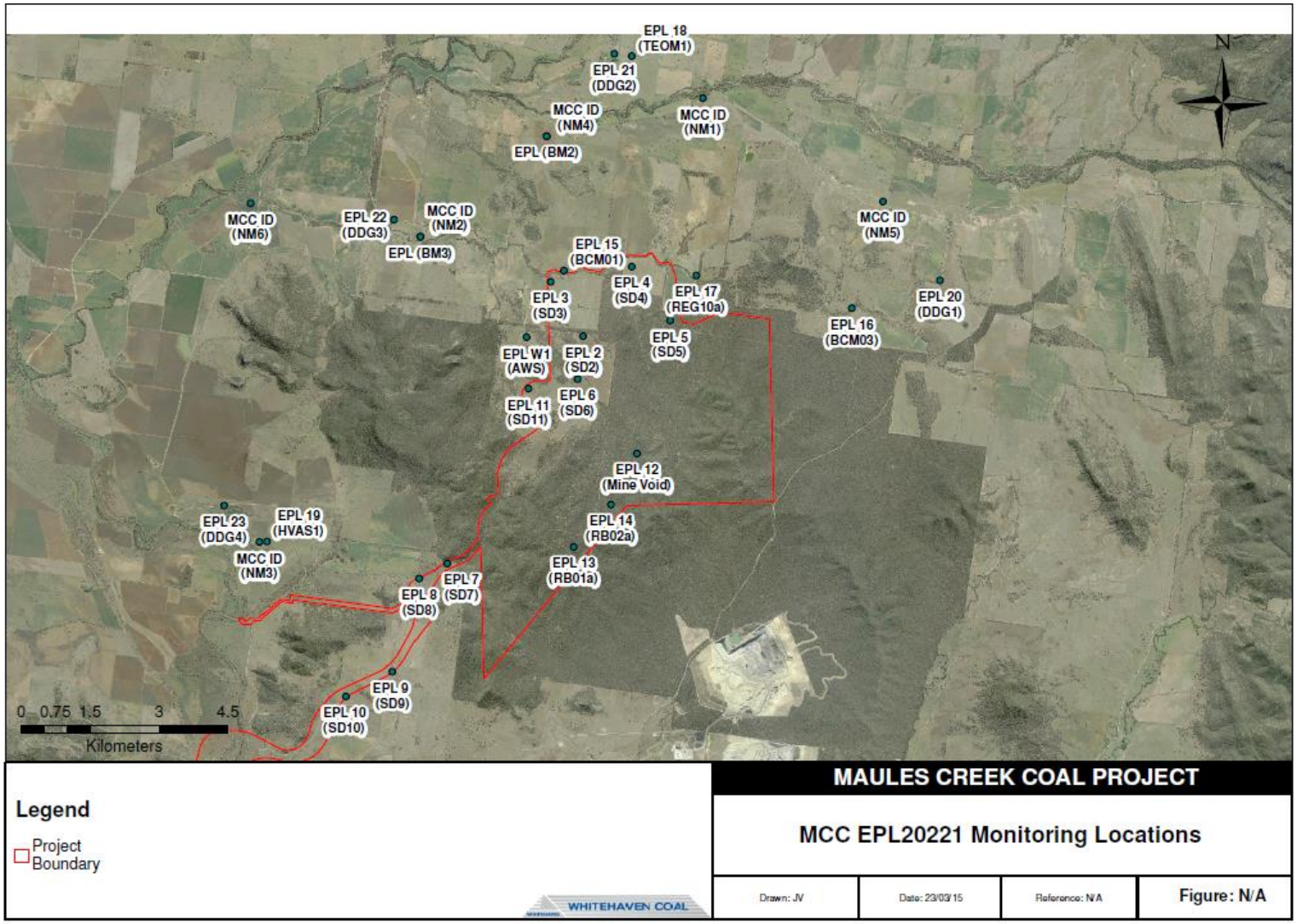
Table 6 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m^3 month	PM_{10}	7.9	30	No
19 (HVAS)	6 days	µg/m^3	PM_{10}	10.3	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m^2 month	2.0	4	No
21 (DDG2/MC2)	Monthly	g/m^2 month	2.3	4	No
22 (DDG3/MC3)	Monthly	g/m^2 month	1.4	4	No
23 (DDG4/MC4)	Monthly	g/m^2 month	1.2	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: June 2017
Obtained Date: 17 July 2017
Publication Date: 31 July 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	1	29/6/2017	Yes				128
	Conductivity	µs/cm		1		Yes				688
	Oil & Grease	mg/L		1		Yes				<5
	pH	pH		1		Yes				8.18
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	1	22/6/2017	Yes			<5
	Conductivity	µs/cm		1	22/6/2017	Yes			2220
	Oil & Grease	mg/L		1	22/6/2017	Yes			<5
	pH	pH		1	22/6/2017	Yes			7.69

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	27/06/2017	20:14:00	0.7	27		35			0	Nil
NM1	27/06/2017	20:30:00	0.4	26		35			0	Nil
NM1	26/06/2017	22:45:00	0.4		30	35	38	45	0	Nil
NM1	26/06/2017	23:12:00	0.4		30	35	40	45	0	Nil
NM2	26/06/2017	21:15:00	0.9	28		39			0	Nil
NM2	26/06/2017	21:30:00	1.5	30		39			0	Nil
NM2	27/06/2017	22:00:00	0.2		29	39	36	45	0	Nil
NM2	27/06/2017	22:15:00	0.4		29	39	39	45	0	Nil
NM3	26/06/2017	19:45:00	0.1	<20		35			0	Nil
NM3	26/06/2017	20:00:00	0.2	<20		35			0	Nil
NM3	28/06/2017	0:03:00	0.9		<25	35	<25	45	0	Nil
NM3	28/06/2017	0:28:00	0.8		<20	35	<25	45	0	Nil
NM4	27/06/2017	21:00:00	0.4	30		NA			0	NA
NM4	27/06/2017	21:16:00	0.2	31		NA			0	NA
NM4	26/06/2017	22:00:00	0.3		30	NA	38	NA	0	NA
NM4	26/06/2017	22:16:00	0.3		35	NA	35	NA	0	NA
NM5	27/06/2017	19:30:00	1	24		35			0	Nil
NM5	27/06/2017	19:45:00	0.6	<25		35			0	Nil
NM5	26/06/2017	23:45:00	0.4		<20	35	<25	45	0	Nil
NM5	27/06/2017	0:01:00	0.5		<20	35	35	45	0	Nil
NM6	26/06/2017	20:25:00	0.3	<25		35			0	Nil
NM6	26/06/2017	20:41:00	0.7	25		35			0	Nil
NM6	27/06/2017	22:44:00	0.5		<25	35	31	45	0	Nil
NM6	27/06/2017	23:00:00	0.4		<25	35	<25	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.

Noise Monitoring (Attended - Low Frequency Assessment)

None of the twenty-four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut-off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). No further assessment of low frequency noise is required.

Table 5 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	9	100.04	114.10	120	No
	Vibration	mm/s		9	0.18	0.43	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

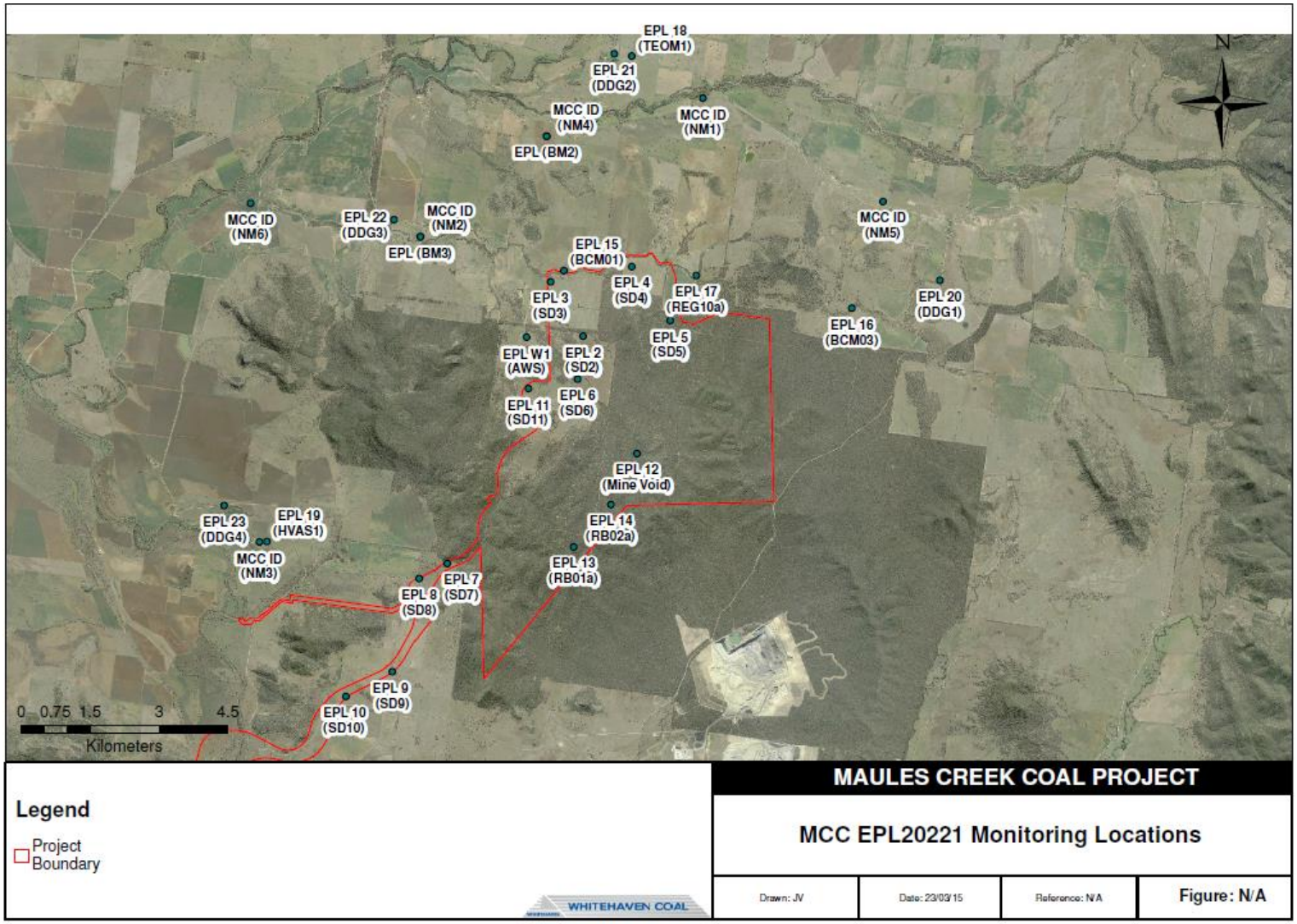
Table 6 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m^3 month	PM_{10}	8.3	30	No
19 (HVAS)	6 days	µg/m^3	PM_{10}	10.3	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m^2 month	1.9	4	No
21 (DDG2/MC2)	Monthly	g/m^2 month	2.2	4	No
22 (DDG3/MC3)	Monthly	g/m^2 month	1.4	4	No
23 (DDG4/MC4)	Monthly	g/m^2 month	1.2	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: June 2017
Obtained Date: 15 August 2017
Publication Date: 29 August 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	0	Next Sample August				
	Conductivity	µs/cm		0					
	Oil & Grease	mg/L		0					
	pH	pH		0					

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	1	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	1	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Next Sample September				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	25/07/2017	20:00:00	1.3	24		35			0	Nil
NM1	25/07/2017	20:17:00	1.3	26		35			0	Nil
NM1	24/07/2017	23:15:00	1.5		34	35	40	45	0	Nil
NM1	24/07/2017	23:40:00	1.4		30	35	33	45	0	Nil
NM1	25/07/2017	0:00:00	1.1		28	35	32	45	0	Nil
NM2	24/07/2017	21:16:00	2.1	30		39			0	Nil
NM2	24/07/2017	21:31:00	1	29		39			0	Nil
NM2	25/07/2017	22:00:00	1.2		<20	39	<20	45	0	Nil
NM2	25/07/2017	22:16:00	1.4		<20	39	<20	45	0	Nil
NM3	*24/07/2017*	*19:30:00*	*3.3*	*IA*		*35*			*0*	*NA*
NM3	*24/07/2017*	*19:45:00*	*6.9*	*IA*		*35*			*0*	*NA*
NM3	25/07/2017	23:30:00	1.6		IA	35	IA	45	0	Nil
NM3	25/07/2017	23:46:00	1.6		IA	35	IA	45	0	Nil
NM4	25/07/2017	20:45:00	1.2	NM		NA			0	NA
NM4	25/07/2017	21:01:00	2.2	IA		NA			0	NA
NM4	24/07/2017	22:30:00	1.1		33	NA	38	NA	0	NA
NM4	24/07/2017	22:45:00	1.9		33	NA	39	NA	0	NA
NM5	25/07/2017	19:15:00	0.8	<20		35			0	Nil
NM5	25/07/2017	19:31:00	1.2	27		35			0	Nil
NM5	25/07/2017	0:44:00	1.6		25	35	31	45	0	Nil
NM5	25/07/2017	0:59:00	1.4		29	35	35	45	0	Nil
NM6	24/07/2017	20:20:00	2.8	IA		35			0	Nil
NM6	*24/07/2017*	*20:36:00*	*3.1*	*IA*		*35*			*0*	*NA*
NM6	25/07/2017	22:43:00	1.2		IA	35	IA	45	0	Nil
NM6	25/07/2017	22:58:00	1.6		IA	35	IA	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.
NM = Not Measurable. If site noise is noted as NM, <20 dB or <30 dB, this means some noise was audible but could not be quantified.

Table 5 - Noise Monitoring (Attended - Low Frequency Assessment)

One of the twenty four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). This measurement was further analysed for low frequency noise against relevant triggers. Where results in the following table are greater than the applicable ‘Industrial Noise Policy’ (INP), or ‘Broner’ low frequency modifying factor triggers due to activities at MCC, a 5 dB modifying factor correction is applied to the measured noise level. During the measurement at NM1, starting at 23:15 on 24 July, MCCP recorded 34dB. There were no sustained exceedances of the applicable criteria measured during subsequent monitoring at this location.

MCC ID	Date	Criterion dB	MCCP only LAeq dB	INP		Broner		dING	
				Result[1] LCeq – LAeq dB	With penalty LAeq dB1 (+5dB)	Result[2] LCeq dB	With penalty LAeq dB1 (+2dB)	Result[3] Max exceedance of ref spectrum dB	With dING penalty LAeq dB1 (+2dB)
NM1	24/07/2017	35	34	**23**	39	57	NA	**5**	36

(1) Low frequency modifying factor trigger is $L_{Ceq} – L_{Aeq}$ >= 15 dB as per the INP;
(2) Night L_{Ceq} modifying factor trigger is L_{Ceq} 60 dB as per Broner (2010);
(3) Low frequency modifying factor trigger is comparison of measured spectrum against a reference spectrum as per the dING;
(4) NA – penalty did not apply as trigger was not satisfied
(5) Bold results are greater than the relevant low frequency modifying factor trigger

Table 6 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations	Noise	Db (Lin Peak)	All	8	92.39	107.1	120	No
Blasts	Vibration	mm/s		8	0.14	0.31	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

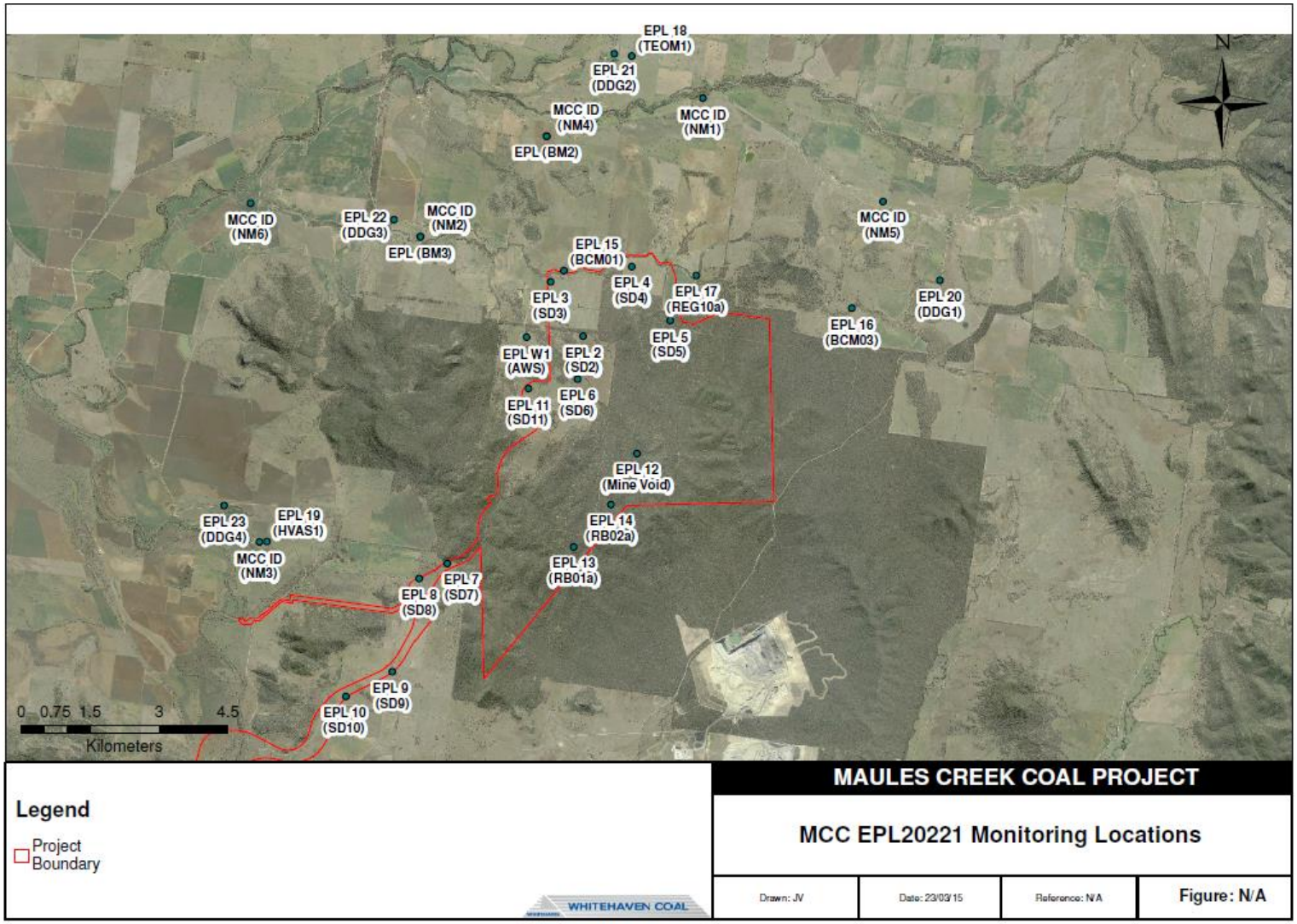
Table 7 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m³ month	PM_{10}	8.4	30	No
19 (HVAS)	6 days	µg/m³	PM_{10}	10.3	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m² month	1.9	4	No
21 (DDG2/MC2)	Monthly	g/m² month	2.2	4	No
22 (DDG3/MC3)	Monthly	g/m² month	3.2	4	No
23 (DDG4/MC4)	Monthly	g/m² month	1.2	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: August 2017
Obtained Date: 14 September 2017
Publication Date: 25 September 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	1	29/8/2017	Yes			168
	Conductivity	µs/cm		1	29/8/2017	Yes			1360
	Oil & Grease	mg/L		1	29/8/2017	Yes			<5
	pH	pH		1	29/8/2017	Yes			7.91

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Next Sample September				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	23/08/2017	21:15:00	0.3	27		35			0	Nil
NM1	23/08/2017	21:31:00	0.6	26		35			0	Nil
NM1	22/08/2017	23:00:00	0.7		27	35	33	45	0	Nil
NM1	22/08/2017	23:15:00	0.6		<25	35	25	45	0	Nil
NM2	22/08/2017	21:15:00	0.3	33		39			0	Nil
NM2	22/08/2017	21:30:00	0.2	25		39			0	Nil
NM2	23/08/2017	22:00:00	0.3		<20	39	29	45	0	Nil
NM2	23/08/2017	22:15:00	0.5		<20	39	20	45	0	Nil
NM3	22/08/2017	19:46:00	0.4	IA		35			0	Nil
NM3	22/08/2017	20:01:00	0.4	IA		35			0	Nil
NM3	23/08/2017	23:28:00	0.4		IA	35	IA	45	0	Nil
NM3	23/08/2017	23:43:00	0.4		IA	35	IA	45	0	Nil
NM4	23/08/2017	20:30:00	0.6	21		NA			0	NA
NM4	23/08/2017	20:45:00	0.3	<20		NA			0	NA
NM4	22/08/2017	22:00:00	0.2		30	NA	39	NA	0	NA
NM4	22/08/2017	22:15:00	0.4		29	NA	35	NA	0	NA
NM5	23/08/2017	21:15:00	0.3	33		35			0	Nil
NM5	23/08/2017	21:45:00	0.3	30		35			0	Nil
NM5	22/08/2017	23:45:00	0.5		<20	35	29	45	0	Nil
NM5	23/08/2017	0:00:00	0.4		<25	35	32	45	0	Nil
NM6	22/08/2017	20:26:00	0.4	<20		35			0	Nil
NM6	22/08/2017	20:42:00	0.3	<20		35			0	Nil
NM6	23/08/2017	22:47:00	0.4		IA	35	IA	45	0	Nil
NM6	23/08/2017	23:03:00	0.5		IA	35	IA	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.
NM = Not Measurable. If site noise is noted as NM, <20 dB or <30 dB, this means some noise was audible but could not be quantified.

Table 5 - Noise Monitoring (Attended - Low Frequency Assessment)

Two of the twenty four measurements occurred during which operational activities from MCCP were directly measurable (not "inaudible", "not measurable" or less than a maximum cut off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the Project Approval). These measurements were further analysed for low frequency noise against the relevant triggers. Where results in the following table are greater than the applicable 'Industrial Noise Policy' (INP), or 'Broner' low frequency modifying factor triggers due to activities at MCC, a 5 dB modifying factor correction is applied to the measured noise level.

MCC ID	Date	Criterion dB	MCCP only LAeq dB	INP		Broner		dING	
				Result[1] LCeq – LAeq dB	With penalty LAeq dB1 (+5dB)	Result[2] LCeq dB	With penalty LAeq dB1 (+2dB)	Result[3] Max exceedance of ref spectrum dB	With dING penalty LAeq dB1 (+2dB)
NM5	23/08/17	35	33	**23**	38	57	NA	**1**	35
NM5	23/08/17	35	30	**21**	35	51	NA	**0**	NA

(1) Low frequency modifying factor trigger is $L_{Ceq} - L_{Aeq}$ >= 15 dB as per the INP;
(2) Night L_{Ceq} modifying factor trigger is L_{Ceq} 60 dB as per Broner (2010);
(3) Low frequency modifying factor trigger is comparison of measured spectrum against a reference spectrum as per the dING;
(4) NA – penalty did not apply as trigger was not satisfied
(5) Bold results are greater than the relevant low frequency modifying factor trigger

During a measurement at NM5, starting at 21:15 on 23 August, the modifying factor was triggered for the INP and dING methods of assessing low frequency noise, but not for the Broner method. During the second measurement at NM5 starting at 21:45 on 23 August, the modifying factor was triggered for the INP method of assessing low frequency noise, but not for the Broner and dING methods. No sustained exceedances of the applicable criteria were measured at this monitoring location.

Table 6 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations	Noise	Db (Lin Peak)	All	8	96.22	105.6	120	No
Blasts	Vibration	mm/s		8	0.13	0.26	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

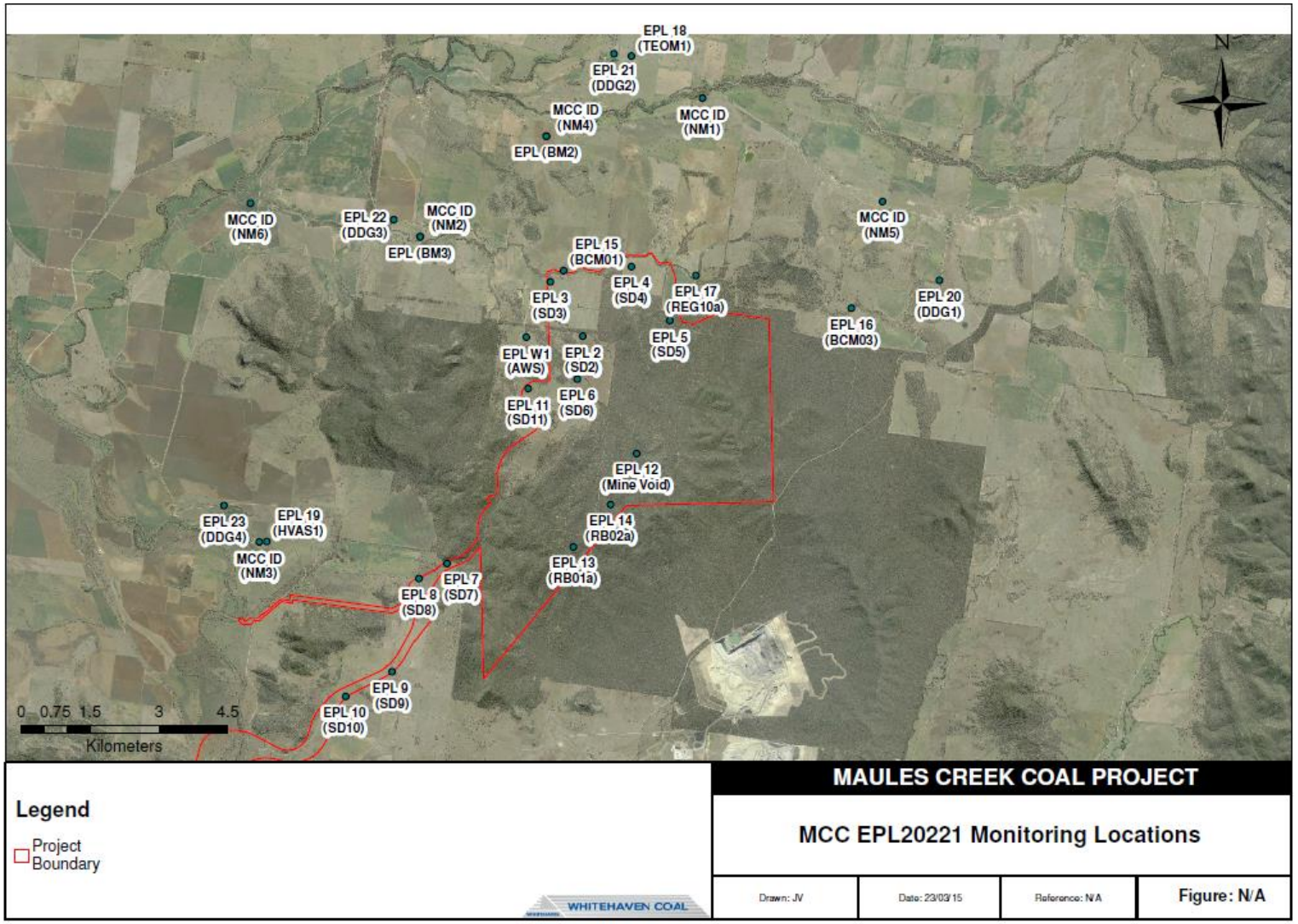
Table 7 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m³ month	PM_{10}	8.8	30	No
19 (HVAS)	6 days	µg/m³	PM_{10}	11.1	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m² month	1.8	4	No
21 (DDG2/MC2)	Monthly	g/m² month	2.1	4	No
22 (DDG3/MC3)	Monthly	g/m² month	3.4	4	No
23 (DDG4/MC4)	Monthly	g/m² month	1.2	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: September 2017
Obtained Date: 17 October 2017
Publication Date: 1 November 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	0	Next Sample October				
	Conductivity	µs/cm		0					
	Oil & Grease	mg/L		0					
	pH	pH		0					

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	26/09/2017	19:05:00	0.7	23		35			0	Nil
NM1	26/09/2017	19:20:00	0.8	29		35			0	Nil
NM1	25/09/2017	22:58:00	1.8		<25	35	<25	45	0	Nil
NM1	25/09/2017	23:13:00	1.6		NM	35	NM	45	0	Nil
NM2	25/09/2017	19:35:00	0.5	IA		39			0	Nil
NM2	25/09/2017	19:50:00	0.4	IA		39			0	Nil
NM2	26/09/2017	22:00:00	0.6		30	39	33	45	0	Nil
NM2	26/09/2017	22:15:00	0.4		31	39	33	45	0	Nil
NM3	25/09/2017	18:14:00	0.1	IA		35			0	Nil
NM3	25/09/2017	18:29:00	0.3	IA		35			0	Nil
NM3	26/09/2017	23:25:00	1.3		IA	35	IA	45	0	Nil
NM3	26/09/2017	23:40:00	0.8		IA	35	IA	45	0	Nil
NM4	26/09/2017	20:13:00	0.4	33		NA			0	NA
NM4	26/09/2017	20:28:00	0.5	31		NA			0	NA
NM4	26/09/2017	0:00:00	0.8		25	NA	30	NA	0	NA
NM4	26/09/2017	0:15:00	0.3		<25	NA	30	NA	0	NA
NM5	26/09/2017	18:27:00	1	IA		35			0	Nil
NM5	26/09/2017	18:42:00	1.5	IA		35			0	Nil
NM5	25/09/2017	22:00:00	0.3		32	35	35	45	0	Nil
NM5	25/09/2017	22:27:00	0.2		30	35	33	45	0	Nil
NM6	25/09/2017	18:54:00	0.3	IA		35			0	Nil
NM6	25/09/2017	19:09:00	0.6	IA		35			0	Nil
NM6	26/09/2017	22:41:00	1.6		<20	35	<20	45	0	Nil
NM6	26/09/2017	22:56:00	2		<20	35	<20	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.
NM = Not Measurable. If site noise is noted as NM, <20 dB or <30 dB, this means some noise was audible but could not be quantified.

Table 5 - Noise Monitoring (Attended - Low Frequency Assessment)

Two of the twenty four measurements occurred during which operational activities from MCCP were directly measurable (not "inaudible", "not measurable" or less than a maximum cut off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). These measurements were further analysed for low frequency noise against relevant triggers. It was not possible to calculate the MCCP only contribution due to the presence of low frequency noise from another mine for one measurement. The second measurement, was compliant with criteria.

Table 6 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	9*	94.47	99.50	120	No
	Vibration	mm/s		9*	0.17	0.30	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

** BM2 unit had a mechanical issue resulting in two results unable to be downloaded. The unit was promptly repaired.*

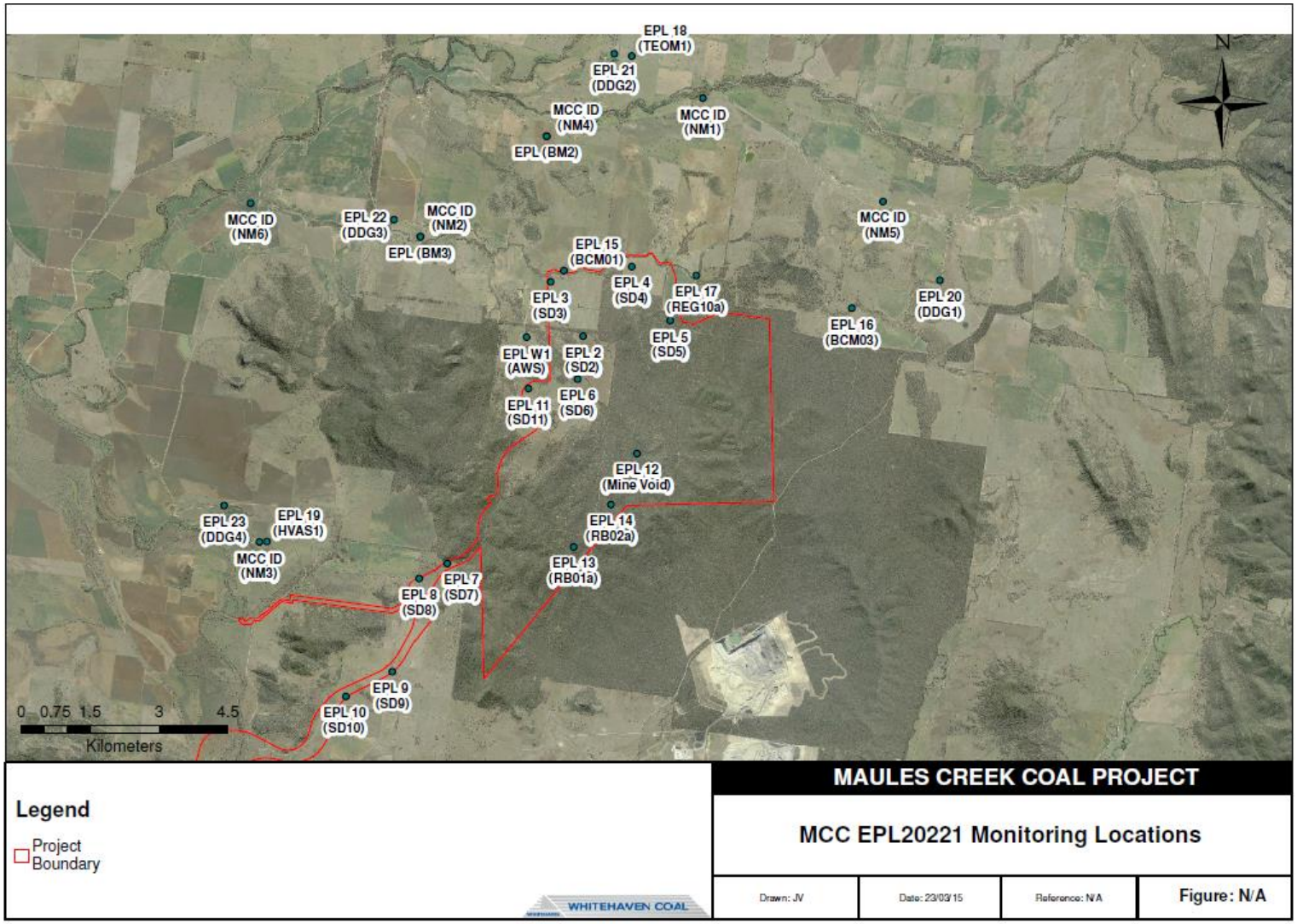
Table 7 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m^3 month	PM_{10}	9.5	30	No
19 (HVAS)	6 days	µg/m^3	PM_{10}	12.4	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m^2 month	1.7	4	No
21 (DDG2/MC2)	Monthly	g/m^2 month	1.8	4	No
22 (DDG3/MC3)	Monthly	g/m^2 month	3.5	4	No
23 (DDG4/MC4)	Monthly	g/m^2 month	1.3	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: October 2017
Obtained Date: 15 November 2017
Publication Date: 28 November 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	1	31/10/17	Yes			14
	Conductivity	µs/cm		1	31/10/17	Yes			2190
	Oil & Grease	mg/L		1	31/10/17	Yes			<5
	pH	pH		1	31/10/17	Yes			7.53

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Next Sample December				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	10/10/2017	20:30:00	1.9	28		35			0	Nil
NM1	10/10/2017	20:45:00	0.4	28		35			0	Nil
NM1	9/10/2017	23:00:00	0.7		28	35	35	45	0	Nil
NM1	9/10/2017	23:30:00	0.5		29	35	34	45	0	Nil
NM2	9/10/2017	21:00:00	0.4	<20		39			0	Nil
NM2	9/10/2017	21:15:00	0.3	<20		39			0	Nil
NM2	10/10/2017	22:30:00	1.2		33	39	40	45	0	Nil
NM2	10/10/2017	22:45:00	1.4		33	39	38	45	0	Nil
NM3	9/10/2017	19:30:00	0.3	IA		35			0	Nil
NM3	9/10/2017	19:45:00	0.3	IA		35			0	Nil
NM3	11/10/2017	0:00:00	1		IA	35	IA	45	0	Nil
NM3	11/10/2017	0:15:00	0.7		IA	35	IA	45	0	Nil
NM4	10/10/2017	21:15:00	0.7	29		NA			0	Nil
NM4	10/10/2017	21:30:00	0.7	28		NA			0	Nil
NM4	9/10/2017	22:15:00	0.4		<25	NA	<25	NA	0	Nil
NM4	9/10/2017	22:30:00	0.6		<25	NA	<25	NA	0	Nil
NM5	10/10/2017	19:45:00	1.5	<20		35			0	Nil
NM5	10/10/2017	20:00:00	2.1	<25		35			0	Nil
NM5	10/10/2017	0:00:00	0.9		29	35	34	45	0	Nil
NM5	10/10/2017	0:15:00	0.8		30	35	36	45	0	Nil
NM6	9/10/2017	20:12:00	0.5	IA		35			0	Nil
NM6	9/10/2017	20:27:00	0.5	IA		35			0	Nil
NM6	10/10/2017	23:15:00	0.5		25	35	28	45	0	Nil
NM6	10/10/2017	23:30:00	0.5		<25	35	29	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.
NM = Not Measurable. If site noise is noted as NM, <20 dB or <30 dB, this means some noise was audible but could not be quantified.

Table 5 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations	Noise	Db (Lin Peak)	All	10	96.11	108.8	120	No
Blasts	Vibration	mm/s		10	0.19	0.34	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

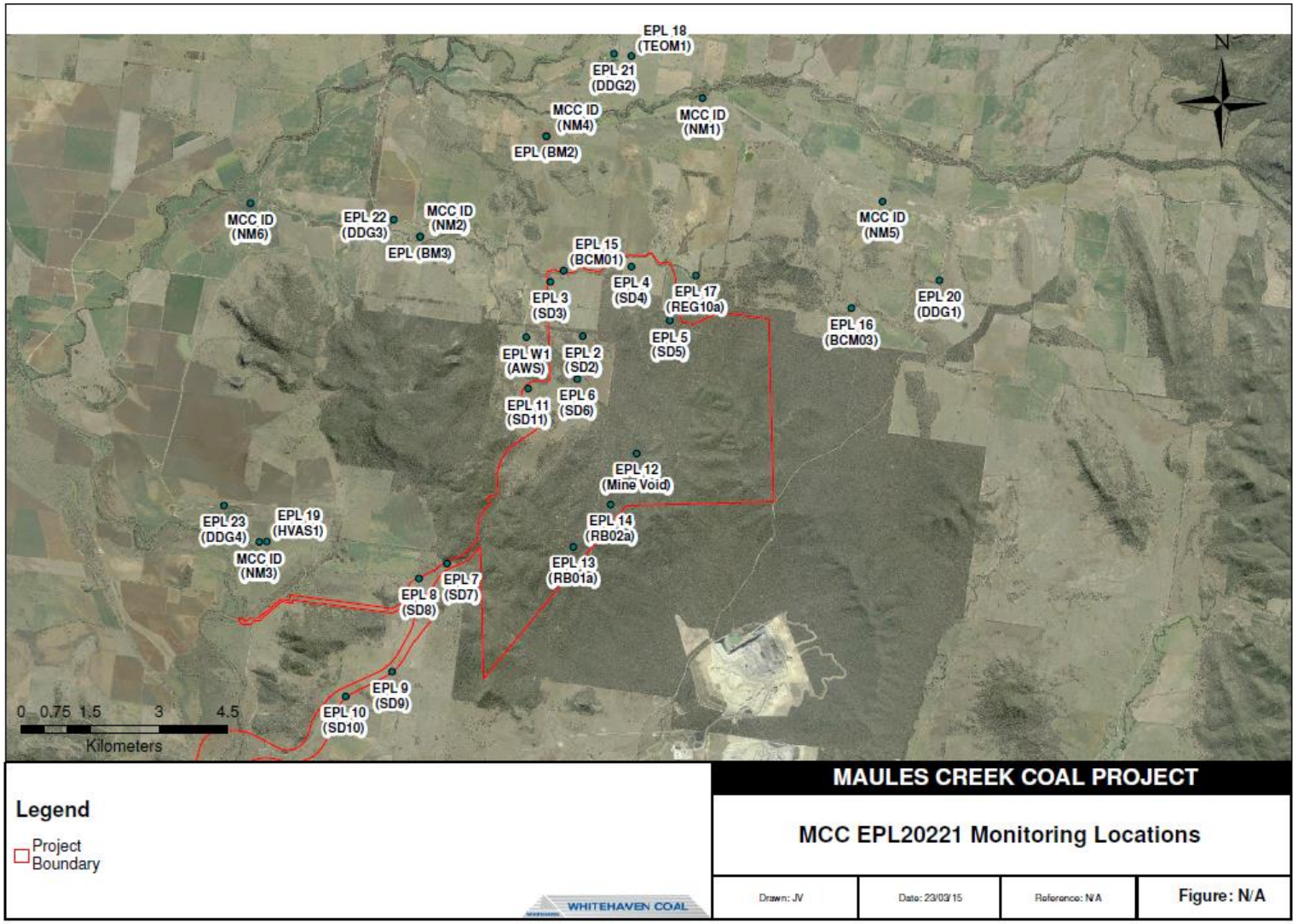
Table 6 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m³ month	PM_{10}	9.6	30	No
19 (HVAS)	6 days	µg/m³	PM_{10}	12.1	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m² month	1.5	4	No
21 (DDG2/MC2)	Monthly	g/m² month	1.9	4	No
22 (DDG3/MC3)	Monthly	g/m² month	3.6	4	No
23 (DDG4/MC4)	Monthly	g/m² month	1.4	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: November 2017
Obtained Date: 15 December 2017
Publication Date: 22 December 2017

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	0	Next Sample December				
	Conductivity	µs/cm		0					
	Oil & Grease	mg/L		0					
	pH	pH		0					

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Next Sample December				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0					
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	28/11/2017	20:10:00	0.3	IA		35			0	Nil
NM1	28/11/2017	20:28:00	0.3	IA		35			0	Nil
NM1	27/11/2017	22:49:00	3.1		IA	35	IA	45	0	NA
NM1	27/11/2017	23:05:00	2.8		IA	35	IA	45	0	Nil
NM2	27/11/2017	21:00:00	2.1	23		39			0	Nil
NM2	27/11/2017	21:15:00	2.5	23		39			0	Nil
NM2	28/11/2017	22:03:00	1.3		28	39	32	45	0	Nil
NM2	28/11/2017	22:20:00	1.8		<25	39	28	45	0	Nil
NM3	27/11/2017	19:30:00	2.7	28		35			0	Nil
NM3	27/11/2017	19:45:00	2.6	23		35			0	Nil
NM3	28/11/2017	23:36:00	2.8		<25	35	<25	45	0	Nil
NM3	28/11/2017	23:51:00	2.7		<20	35	<25	45	0	Nil
NM4	28/11/2017	20:56:00	0.8	22		NA			0	NA
NM4	28/11/2017	21:14:00	1.6	27		NA			0	NA
NM4	27/11/2017	22:03:00	2.7		<20	NA	<20	NA	0	NA
NM4	27/11/2017	22:19:00	3.5		<20	NA	<20	NA	0	NA
NM5	28/11/2017	19:28:00	1.4	IA		35			0	Nil
NM5	28/11/2017	19:44:00	1.3	IA		35			0	Nil
NM5	27/11/2017	23:31:00	1.9		<20	35	<20	45	0	Nil
NM5	27/11/2017	23:47:00	1.6		<20	35	<20	45	0	Nil
NM6	27/11/2017	20:15:00	2.4	<20		35			0	Nil
NM6	27/11/2017	20:31:00	2.2	<20		35			0	Nil
NM6	28/11/2017	22:51:00	3		<20	35	<20	45	0	Nil
NM6	28/11/2017	23:07:00	2.7		<20	35	<25	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NA = NM4 is at mine owned land and results have been provided for informational purposes.
NM = Not Measurable. If site noise is noted as NM, <20 dB or <30 dB, this means some noise was audible but could not be quantified.

Table 5 - Noise Monitoring (Attended - Low Frequency Assessment)

None of the twenty-four measurements occurred during which operational activities from MCCP were directly measurable (not “inaudible”, “not measurable” or less than a maximum cut-off value of 30 dB), were within 5 dB of the relevant criterion and where meteorological conditions resulted in criteria applying (in accordance with the project approval). No further assessment has been undertaken.

Table 6 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	11	91.92	101.9	120	No
	Vibration	mm/s		11	0.24	0.58	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

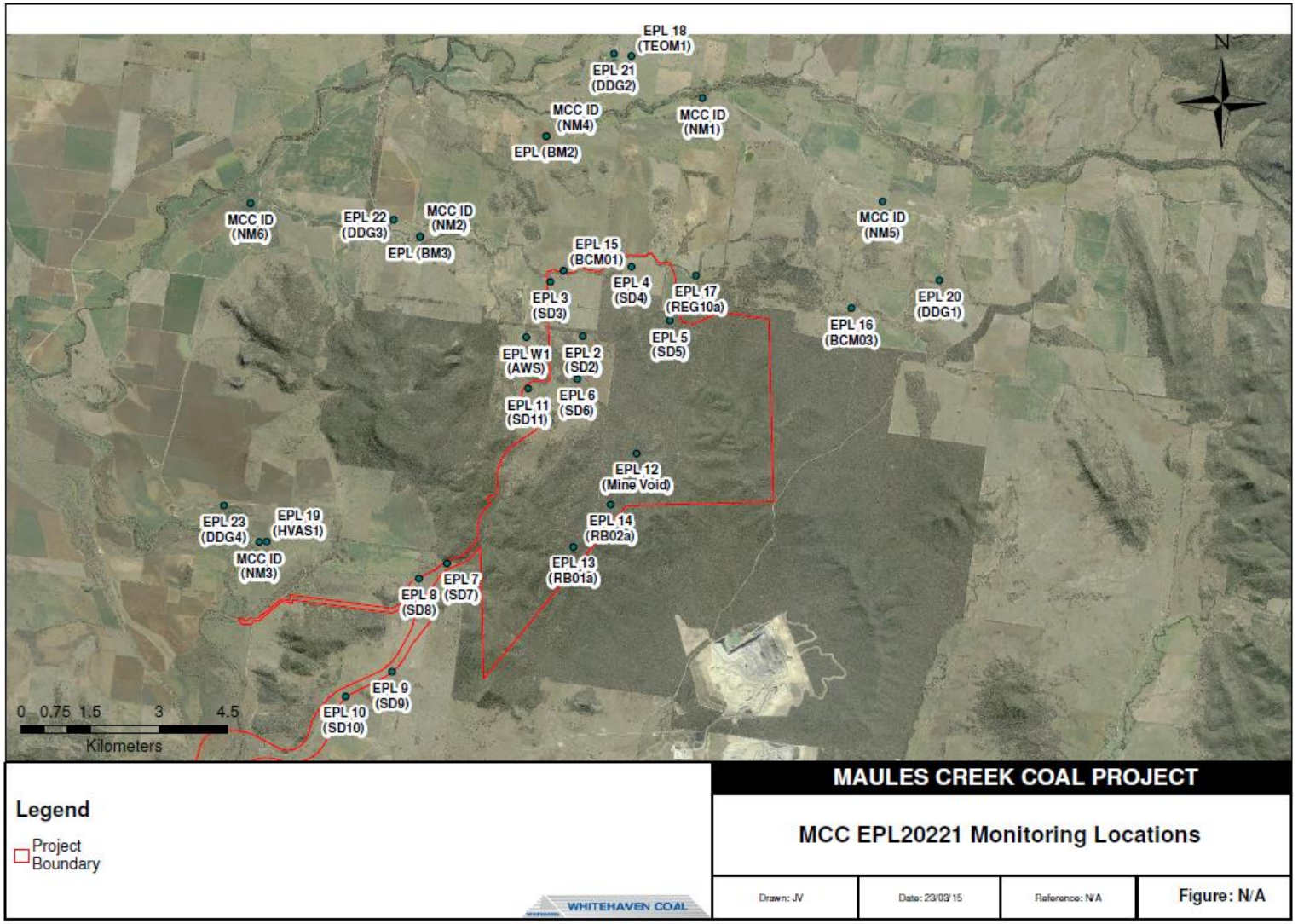
Table 7 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m^3 month	PM_{10}	9.2	30	No
19 (HVAS)	6 days	µg/m^3	PM_{10}	12.5	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m^2 month	1.3	4	No
21 (DDG2/MC2)	Monthly	g/m^2 month	2.0	4	No
22 (DDG3/MC3)	Monthly	g/m^2 month	3.4	4	No
23 (DDG4/MC4)	Monthly	g/m^2 month	1.5	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations



MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: Hyperlink to Maules Creek Coal, Environment Protection Licence
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: December 2017
Obtained Date: 15 January 2018
Publication Date: 29 January 2018

Context: This Monthly Monitoring Summary aligns with the applicable Environment Protection Licence (EPL) – Maules Creek Coal Mine issued 21st September 2015 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Table 1 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
2 (SD2)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
3 (SD3)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
4 (SD4)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
5 (SD5)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
6 (SD6)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
7 (SD7)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
8 (SD8)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

EPL ID	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
9 (SD9)	TSS	mg/L	Special Frequency Discharge only	0	No discharge at this location this month.					
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
10 (SD10)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						
11 (SD11)	TSS	mg/L	Special Frequency Discharge only	0						
	Conductivity	µs/cm		0						
	Oil & Grease	mg/L		0						
	pH	pH		0						

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	1	18/12/2017	Yes			6
	Conductivity	µs/cm		1	18/12/2017	Yes			2110
	Oil & Grease	mg/L		1	18/12/2017	Yes			<5
	pH	pH		1	18/12/2017	Yes			7.56

Table 3 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
13 (RB01a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
14 (RB02a)	pH	pH	Quarterly	0	Removed*				
	Conductivity	µs/cm							
	TDS	mg/L							
15 (BCM01)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10a)	pH	pH	Quarterly	0	Bore dry since installation				
	Conductivity	µs/cm							
	TDS	mg/L							

* Removed by progress of mining.

Table 4 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Evening	Measured Levels – dB(A) $L_{Aeq\ 15min}$ Night	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	Measured Levels – dB(A) $L_{A1\ (1\ min)}$ Night	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	19/12/2017	19:20:00	2.9	IA		35			0	Nil
NM1	19/12/2017	19:36:00	2.5	IA		35			0	Nil
NM1	18/12/2017	22:40:00	1.5		IA	35	IA	45	0	Nil
NM1	18/12/2017	22:55:00	2.7		IA	35	IA	45	0	Nil
NM2	18/12/2017	20:25:00	0.5	IA		39			0	Nil
NM2	18/12/2017	20:41:00	0.2	IA		39			0	Nil
NM2	19/12/2017	22:00:00	0.4		IA	39	IA	45	0	Nil
NM2	19/12/2017	22:15:00	0.6		IA	39	IA	45	0	Nil
NM3	18/12/2017	18:59:00	3	IA		35			0	Nil
NM3	18/12/2017	19:15:00	2.9	IA		35			0	Nil
NM3	19/12/2017	23:22:00	0.5		IA	35	IA	45	0	Nil
NM3	19/12/2017	23:37:00	0.3		IA	35	IA	45	0	Nil
NM4	19/12/2017	20:03:00	1.1	IA		NA			0	NA
NM4	19/12/2017	20:20:00	0.8	IA		NA			0	NA
NM4	18/12/2017	23:23:00	3		IA	NA	IA	NA	0	NA
NM4	18/12/2017	23:39:00	3.2		IA	NA	IA	NA	0	NA
NM5	19/12/2017	18:42:00	3.4	IA		35			0	NA
NM5	19/12/2017	18:57:00	2.7	IA		35			0	Nil
NM5	18/12/2017	22:00:00	0.6		IA	35	IA	45	0	Nil
NM5	18/12/2017	22:16:00	0.5		IA	35	IA	45	0	Nil
NM6	18/12/2017	19:41:00	2.5	IA		35			0	Nil
NM6	18/12/2017	19:56:00	1.5	IA		35			0	Nil
NM6	19/12/2017	22:42:00	0.5		IA	35	IA	45	0	Nil
NM6	19/12/2017	22:57:00	0.5		IA	35	IA	45	0	Nil

IA & NM = Inaudible & Not Measurable.
MCC ID = Locations as per the approved Noise Management Plan & EPL 20221.
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Table 6 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Noise	Db (Lin Peak)	All	8	90.05	99.60	120	No
	Vibration	mm/s		8	0.22	0.34	10	No

Note: In accordance with the requirements of EPL 20221 M7.4 blast monitoring results are for monitoring points BM2 and BM3.

Table 7 – Dust Monitoring (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m^3 month	PM_{10}	8.8	30	No
19 (HVAS)	6 days	µg/m^3	PM_{10}	13.1	30	No

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m^2 month	1.4	4	No
21 (DDG2/MC2)	Monthly	g/m^2 month	2.0	4	No
22 (DDG3/MC3)	Monthly	g/m^2 month	3.2	4	No
23 (DDG4/MC4)	Monthly	g/m^2 month	1.5	4	No

Figure

Figure 1 – EPL 20221 Monitoring Locations