

AuS-10 Rhyolite - Licence number 12323

Dam 1- EPL Point 1

Licence Discharge Point 1

Guidance range		Range - 6.5 - 8.5	<1500us/cm		<30 mg/l	20	10 mg/l			
Month	Number of Samples	PH	electrical Cond	turb	total dissolved solids	total suspend Solids	oxygen dem	oil/grease	Volume Discharged - KL	Comment
Jul-2015	0								Nil Discharge	
Aug-2015	0								Nil Discharge	
Sep-2015	0								Nil Discharge	
Oct-2015	0								Nil Discharge	
Nov-2015	0								Nil Discharge	
Dec-2015	0								Nil Discharge	
Jan-2016	0								Nil Discharge	
Feb-2016	0								Nil Discharge	
Mar-2016	0								Nil Discharge	
Apr-2016	0								Nil Discharge	
May-2015	0								Nil Discharge	
Jun-2015	0								Nil Discharge	
Total		0	0	0	0	0	0	0	0	
	Mean	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
	Lowest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Highest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

EPL POINT 2

Range - 6.5 - 8.5

Month	Number of Samples	PH	electrical Cond	turb	total dissolved solids	total suspend Solids	oxygen dem	oil/grease	Volume Discharged - KL
Jul-2015	1	6.62	378	3	258	<5	<2	<5	Nil Discharge
Aug-2015	1	7.81	358	3	226	<5	<2	<5	Nil Discharge
Sep-2015	1	8.31	98	2	288	<5	<2	<5	Nil Discharge
Oct-2015	1	7.25	443	4	284	<5	<2	<5	Nil Discharge
Nov-2015	1	7.89	487	2	292	<5	<2	<5	Nil Discharge
Dec-2015	1	7.78	544	4	338	<5	<2	<5	Nil Discharge
14.01.2016	1	7.22	500	3	300	<5	<2	<5	Nil Discharge
Feb-2016	1	7.53	419	4	228	<5	<2	<5	Nil Discharge
Mar-2016	1	7.94	513	4	334	<5	<2	<5	Nil Discharge
Apr-2016	1	8.24	540	2	329	<5	<2	<5	Nil Discharge
May-2015	1	8.22	551	2	368	<5	<2	<5	Nil Discharge
Jun-2015	1	8.24	588	6	358	<5	3	<5	Nil Discharge
Total		93.05	5419	39	3603	0	3	0	
	Mean	7.75	451.58	3.25	300.25	0.00	0.25	0.00	
	Lowest	6.62	98.00	2.00	226.00	0.00	3.00	0.00	
	Highest	8.31	588.00	6.00	368.00	0.00	3.00	0.00	

EPL Point 3

COXS RIVER LOWER CROSSING 6/7/2011

Month	Number of Samples	PH	electrical Cond	turb	total dissolved solids	total suspend Solids	oxygen dem	oil/grease	Volume Discharged - KL
Jul-2015	1	6.76	379	5	258	<5	<2	<5	Nil Discharge
Aug-2015	1	8.1	366	3	226	<5	<2	<5	Nil Discharge

Sep-2015	1	8.29	98	2	288	<5	<2	<5	Nil Discharge
Oct-2015	1	7.26	439	4	278	<5	<2	<5	Nil Discharge
Nov-2015	1	8.04	486	2	290	<5	<2	<5	Nil Discharge
Dec-2015	1	7.79	554	2	336	<5	<2	<5	Nil Discharge
14.01.2016	1	7.44	502	3	306	<5	<2	<5	Nil Discharge
Feb-2016	1	7.48	438	4	236	<5	<2	<5	Nil Discharge
23.02.2016	1	7.77	490	2		<5		<5	Sampled in parallel with EPL10
Mar-2016	1	8.16	479	3	310	<5	<2	<5	Nil Discharge
Apr-2016	1	8.62	530	1	322	<5	<2	<5	Nil Discharge
May-2015	1	8.16	550	2	346	<5	<5	<5	Nil Discharge
09.06.2016	1	7.81				<5		<5	Sampled in parallel with EPL10
Jun-2016	1	8.14	598	4	348	<5	4	<5	Nil Discharge
Total		93.87	5311	33	3196	0	0	0	
Mean		7.82	442.58	2.75	266.33	0.00	0.00	0.00	
Lowest		6.76	98.00	1.00	226.00	#DIV/0!	4.00	#DIV/0!	
Highest		8.62	598.00	5.00	348.00	0.00	4.00	0.00	

Dust Monitoring

EPL Point 4

Month	Number of Samples	Sawmill	Insoluble Solids	Combustible Matter	Ash
Jul-2015	continuous	Sawmill	<0.1	<0.1	<0.1
Aug-2015	continuous	Sawmill	0.2	0.2	<0.1
Sep-2015	continuous	Sawmill	0.5	0.3	0.2
Oct-2015	continuous	Sawmill	<0.1	<0.1	<0.1
Nov-2015	continuous	Sawmill	1.0	0.6	0.4
Nov-2015	continuous	Sawmill	0.1	0.1	<0.1
Dec-2015	continuous	Sawmill	0.5	0.3	0.2
Jan-2016	continuous	Sawmill	2	1.7	0.3
Feb-2016	continuous	Sawmill	1.5	1	0.5
Mar-2016	continuous	Sawmill	3.7	2.4	1.3
Apr-2016	continuous	Sawmill	0.5	0.4	0.1
May-2016	continuous	Sawmill	0.2	0.1	0.1
Jun-2016	continuous	Sawmill	0.5	0.3	0.2
			10.7	7.4	3.3
	Mean		0.97	0.67	0.37
	Lowest		0.1	0.1	0.1
	Highest		3.7	2.4	1.3

Additional Sample

Dust Monitoring

EPL Point 5

Month	Number of Samples	Baners Lane	Insoluble Solids	Combustible Matter	Ash
Jul-2015	continuous	Baners Lane	<0.1	<0.1	<0.1
Aug-2015	continuous	Baners Lane	<0.1	<0.1	<0.1
Sep-2015	continuous	Baners Lane	0.6	0.2	0.4
Oct-2015	continuous	Baners Lane	<0.1	<0.1	<0.1
Nov-2015	continuous	Baners Lane	0.6	0.3	0.3
Nov-2015	continuous	Baners Lane	<0.1	<0.1	<0.1
Dec-2015	continuous	Baners Lane	1.7	1.3	0.4
Jan-2016	continuous	Baners Lane	0.4	0.4	<0.1
Feb-2016	continuous	Baners Lane	1.5	1	0.5
Mar-2016	continuous	Baners Lane	0.4	0.3	0.1
Apr-2016	continuous	Baners Lane	0.4	0.3	0.1

Additional Sample

EPL POINT 9

South of O/Burden dump

Range - 6.5 - 8.5

Month	Number of Samples	PH	electrical Cond	turb	total dissolved solids	total suspend Solids	oxygen dem	oil/grease	Volume Discharged - KL	Comment
Jul-2015	0								Nil Discharge	
Aug-2015	0								Nil Discharge	
Sep-2015	0								Nil Discharge	
Oct-2015	0								Nil Discharge	
Nov-2015	0								Nil Discharge	
Dec-2015	0								Nil Discharge	
Jan-2016	0								Nil Discharge	
Feb-2016	0								Nil Discharge	
Mar-2016	0								Nil Discharge	
04.04.2016	1	8.09				12		<5	Nil Discharge	Sample only
07.04.2016	1	8.27	1120	8	768	10		<5	Discharge	.5MI
May-2016	0								Nil Discharge	
Jun-2016									Nil Discharge	
		16.36	1120	8	768	22	0	0		
Mean		8.18	1120.00	8.00	768.00	11.00	0.00	0.00		
Lowest		8.09	1120.00	8.00	768.00	10.00	0.00	0.00		
Highest		8.27	1120.00	8.00	768.00	12.00	0.00	0.00		

EPL POINT 10

Storage Dam 4

Range - 6.5 - 8.5

Month	Number of Samples	PH	electrical Cond	turb	total dissolved solids	total suspend Solids	oxygen dem	oil/grease	Volume Discharged - KL	Comment
Jul-2015	0								Nil Discharge	
Aug-2015	0								Nil Discharge	
Sep-2015	0								Nil Discharge	
Oct-2015	0								Nil Discharge	
Nov-2015	0								Nil Discharge	
Dec-2015	0								Nil Discharge	
19.01.2016	1	8.07	839	4	634	6	3	6	Nil Discharge	Sample only
28.01.2016	1	6.61	887	5		<5		6	Discharge	5MI
16.02.2016	1	6.96	895	5		<5		<5	Nil Discharge	Sample only
23.02.2016	1	7.71	913	4		<5		<5	Discharge	5MI
Mar-2016	0								Nil Discharge	
Apr-2016	0								Nil Discharge	
May-2016	0								Nil Discharge	
08.06.2016	1	8.00	908	4	607	<5		<5	Nil Discharge	
09.06.2016	1	7.97				<5		<5	Discharge	1MI
		45.32	4442	22	1241	6	3	12		
Mean		11.33	1110.50	5.50	1241.00	1.50	3.00	3.00		
Lowest		6.61	839.00	4.00	607.00	6.00	3.00	6.00		
Highest		8.07	913.00	5.00	634.00	6.00	3.00	6.00		

EPL POINT 11

Storage dam 7 (5)

Range - 6.5 - 8.5

Month	Number of Samples	PH	electrical Cond	turb	total dissolved solids	total suspend Solids	oxygen dem	oil/grease	Volume Discharged - KL	Comment
Jul-2015	0								Nil Discharge	

Aug-2015	0								Nil Discharge
Sep-2015	0								Nil Discharge
Oct-2015	0								Nil Discharge
Nov-2015	0								Nil Discharge
Dec-2015	0								Nil Discharge
Jan-2016	0								Nil Discharge
Feb-2016	0								Nil Discharge
Mar-2016	0								Nil Discharge
Apr-2016	0								Nil Discharge
May-2016	0								Nil Discharge
Jun-2016	0								Nil Discharge
	0	0	0	0	0	0	0	0	
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Lowest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Highest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

AuS-10 Rhyolite - Licence number 12323

Blasting	Frequency	Date	Blast Number	Limits	Units of measure	Results	Monitor Location - Hartley Village
Ground Vibration	Per Blast	23.07.2015	91	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	23.07.2015	91	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	27.08.2015	92	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	27.08.2015	92	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	06.08.2015	93	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	06.08.2015	93	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	08.09.2015	94	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	08.09.2015	94	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	08.09.2015	95	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	08.09.2015	95	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	25.09.2015	96	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	25.09.2015	96	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	06.11.2015	97	5 - trigger point >0.51	mm/s	1.03	√
Overpressure	Per Blast	06.11.2015	97	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	04.11.2015	98	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	04.11.2015	98	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	14.12.2015	99	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	14.12.2015	99	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	27.01.2016	100	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	27.01.2016	100	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	10.02.2016	101	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	10.02.2016	101	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	24.02.2016	102	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	24.02.2016	102	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	09.03.2016	103	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	09.03.2016	103	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	23.03.2016	104	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	23.03.2016	104	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	06.04.2016	105	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	06.04.2016	105	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	04.05.2016	106	5 - trigger point >0.51	mm/s	1.36	√
Overpressure	Per Blast	04.05.2016	106	115 - Trigger point <88	dB	95.9	√
Ground Vibration	Per Blast	18.05.2016	107	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	18.05.2016	107	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	01.06.2016	108	5 - trigger point >0.51	mm/s	0.59	√
Overpressure	Per Blast	01.06.2016	108	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	15.06.2016	109	5 - trigger point >0.51	mm/s	Nil Trigger	√

Overpressure	Per Blast	15.06.2016	109	115 - Trigger point <88	dB	Nil Trigger	√
Ground Vibration	Per Blast	05.07.2016	110	5 - trigger point >0.51	mm/s	Nil Trigger	√
Overpressure	Per Blast	05.07.2016	110	115 - Trigger point <88	dB	Nil Trigger	√

Grant's Head Quarry - Licence Number 4040

	Pollutant	Aluminium	Arsenic	Cadmium	Chromium	Conductivity µS/cm	Copper	Lead	Mercury	Nickel	Nitrate	Oil and Grease	pH (wet) Range 5.3 to 7.0
EPL Point 1 - sump	Units of Measure	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Microsiemens per centimetre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Visible	pH
Month	Number of Samples												
07.07.2015	1					387						<5	5.9
30.07.2015	1	0.51	<0.001	<0.001	0.001	418	0.332	<0.001	<0.00001	0.01	Not Required	<5	5.4
18.08.2015	1					438						<5	6.2
08.09.2015	1					444						<5	5.5
14.09.2015	1					442						<5	5.6
24.09.2015	1					421						<5	6.2
30.09.2015	1					380						<5	6.1
15.10.2015	1					418						<5	6.1
03.11.2015	1					247						<5	5.7
09.11.2015	1					396						<5	5.4
19.11.2015	1					387						<5	6.3
14.12.2015	1					481						<5	6.2
24.12.2015	1					257						<5	5.5
04.01.2016	1					568						<5	6.2
13.01.2016	1	0.68	<0.001	<0.001	<0.001	365	0.159	<0.001	0.00002	0.005		<5	6.0
20.01.2016	1					347						<5	5.7
27.01.2016	1					366						<5	5.5
08.02.2016	1					327						<5	6.2
23.02.2016	1					327						<5	5.7
29.02.2016	1					358						<5	5.3
01.03.2016	1					366						<5	5.6
05.04.2016	1					415						<5	6.3
07.04.2016	1					420						<5	5.9
20.04.2016	1					310						<5	6.1
27.04.2016	1					327						<5	5.2
03.05.2016	1	0.69	<0.001	<0.001	<0.001	288	0.245	<0.001	<0.00001	0.012		<5	5.8
16.05.2016	1					384						<5	6.0
31.05.2016	1					414						<5	5.6
09.06.2016	1					434						<5	6.2
14.06.2016	1					329						<5	7.2
15.06.2016	1					334						<5	6.6

	Pollutant	Total Suspended Solids Max 30 Milligrams per litre	Zinc	Turbidity	Hours of pump operation	Requirement to Monitor Volume or Mass - KL
EPL Point 1 - sump	Units of Measure					
Month	Number of Samples					
07.07.2015	1	6		4.3	24	6,825.6

30.07.2015	1	11	0.094	10	24	6,825.6
18.08.2015	1	3		2.8	24	6,825.6
08.09.2015	1	<3		4.7		NO Discharge
14.09.2015	1	<3		2.5	24	6,825.6
24.09.2015	1	5		6.1	24	6,825.6
30.09.2015	1	10		8.8	24	6,825.6
15.10.2015	1	19		21	24	6,825.6
03.11.2015	1	33		39		NO Discharge
09.11.2015	1	16		16	24	6,825.6
19.11.2015	1	19		12	24	6,825.6
14.12.2015	1	6		5.8	24	6,825.6
24.12.2015	1	57		86	10	2,844.0
04.01.2016	1	41		23	24	6,825.6
13.01.2016	1	4	0.05	2.5	24	6,825.6
20.01.2016	1	<3		1.8	24	6,825.6
27.01.2016	1	7		4.5	24	6,825.6
08.02.2016	1	13			24	6,825.6
23.02.2016	1	12		9.9	24	6,825.6
29.02.2016	1	8		6.0	24	6,825.6
01.03.2016	1	10		6.6	18	5,119.2
05.04.2016	1	14		12	24	6,825.6
07.04.2016	1	9		8.3	24	6,825.6
20.04.2016	1	10		11	24	6,825.6
27.04.2016	1	9		14	0	NO Discharge
03.05.2016	1	6	0.044	4.2	24	6,825.6
16.05.2016	1	6		4.3	24	6,825.6
31.05.2016	1	3		2.8	24	6,825.6
09.06.2016	1	13		21	24	6,825.6
14.06.2016	1	8		6.4	0	NO Discharge
15.06.2016	1	7		4.8	24	6,825.6

Grant's Head Point 2 & 3

Standing Water Level

Metres (mAHD)

Quarterly

Standing Water Level

Metres (mAHD)

Quarterly

Month	Position	Quarterly	Quarterly
26.02.2014	MW05	4.304	MW06 4.374
22.05.2014	MW05	4.584	MW06 4.729
02.10.2014	MW05	4.634	MW06 4.764
07.01.2015	MW05	4.504	MW06 4.629
01.04.2015	MW05	4.764	MW06 4.729
12.06.2015	MW05	4.735	MW06 4.874
25.09.2015	MW05	4.704	MW06 4.777
14.12.2015	MW05	4.487	MW06 4.67
30.03.2016	MW05	4.609	MW06 4.759
26.05.2016	MW05	4.644	MW06 4.794

Grant's Head Point 4	Aluminium	Arsenic	Cadmium	Chromium	Conductivity	Copper	Lead	Mercury	Nickel	Nitrate	pH	Standing Water Level
12.06.2015	NW01S				633						5.08	1.159
12.06.2015	NW01D				603						4.67	0.602
02.10.2015	NW01S				458.7						8.62	-0.7
02.10.2015	NW01D				449						13.75	-0.51

14.12.2015	NW01S	0.04	<0.001	<0.0001	<0.001	573	<0.001	<0.001	<0.0001	0.003		5.03	-1.18
14.12.2015	NW01D	0.02	<0.001	<0.0001	<0.001	564	<0.001	<0.001	<0.0001	0.001		5.22	0.105
30.03.2016	NW01S					537						5.95	1.105
30.03.2016	NW01D					325						5.53	0.01
25.05.2016	NW01S					523						5.64	0.635
25.05.2017	NW01D					524						4.85	0.132

Grant's Head EPL Point

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Month		Zinc
		Milligrams per Litre
12.06.2015	NW01S	
12.06.2015	NW01D	
02.10.2015	NW01S	
02.10.2015	NW01D	
14.12.2015	NW01S	0.98
14.12.2015	NW01D	0.006
30.03.2016	NW01S	
30.03.2016	NW01D	
25.05.2016	NW01S	
25.05.2017	NW01D	

Grant's Head EPL Point

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Tested For	Aluminium	Arsenic	Cadmium	Chromium	Conductivity	Copper	Lead	Mercury	Nickel	Nitrate	pH
Units of Measure	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Microsiemens per centimetre μ S/cm	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	pH
12.06.2015	NW02S				410						4.32
12.06.2015	NW02D				913						6.09
25.09.2015	NW02S				305.5						4.02
25.09.2015	NW02D				687						5.86
14.12.2015	NW02S	0.45	<0.001	<0.0001	<0.001	384	0.003	<0.001	<0.0001	<0.001	3.85
14.12.2015	NW02D	<0.01	0.005	<0.0001	<0.001	881	<0.001	<0.001	<0.0001	0.015	5.95
30.03.2016	NW02S				387						3.62
30.03.2016	NW02D				915						6.28
25.05.2016	NW02S				366						4.8
25.05.2017	NW02D				860						6.41

Grant's Head EPL Point

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Month		Standing Water Level	Zinc
		Metres (mAHD)	Milligrams per Litre
12.06.2015	NW02S	-6.06	
12.06.2015	NW02D	1.857	

25.09.2015	NW02S	-5.863	
25.09.2015	NW02D	0.745	
14.12.2015	NW02S	-6.87	<0.005
14.12.2015	NW02D	-0.692	0.007

30.03.2016	NW02S	-6.892	
30.03.2016	NW02D	-0.455	

25.05.2016	NW02S	-7.095	
25.05.2017	NW02D	-0.635	

**Grant's Head EPL Point
6**

Tested For	Aluminium	Arsenic	Cadmium	Chromium	Conductivity	Copper	Lead	Mercury	Nickel	Nitrate	pH
Units of Measure	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Microsiemens per centimetre μ S/cm	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	Milligrams per Litre	pH

Month											
12.06.2015	NW03S					510					4.34
12.06.2016	NW03D					1393					6.49
25.09.2015	NW03S					358.7					4.17
25.09.2015	NW03D					772					6.91
14.12.2015	NW03S	0.33	<0.001	<0.0001	<0.001	456	0.002	<0.001	<0.0001	0.001	3.93
14.12.2015	NW03D	<0.01	<0.001	<0.0001	<0.001	995	<0.001	<0.001	<0.0001	0.01	6.29
30.03.2016	NW03S					450					3.66
30.03.2016	NW03D					1091					6.1
25.05.2016	NW03S					412					5.5
25.05.2017	NW03D					1305					6.14

**Grant's Head EPL Point
6**

Standing Water Level	Zinc
Metres	Milligrams per Litre

Month			
12.06.2015	NW03S	-10.425	
12.06.2016	NW03D	-4.115	
25.09.2015	NW03S	-10.71	
25.09.2015	NW03D	-4.565	
14.12.2015	NW03S	-10.86	0.015
14.12.2015	NW03D	-14.965	0.018
30.03.2016	NW03S	-10.935	
30.03.2016	NW03D	-20.931	
25.05.2016	NW03S	-10.814	
25.05.2017	NW03D	-29.132	

Grant's Head Quarry - Licence Number 4040

Blasting	Frequency	Date	Limits	Units of measure	Results Bonny Hills 1st House	Results - Sherwood House	Blast No #
Ground Vibration	Per Blast	04.02.2014	5 - trigger point <0.27	mm/s	2.35	0.35	# 102
Overpressure	Per Blast	04.02.2014	115 - Trigger point 100	dB	105.3	90.2	# 102
Ground Vibration	Per Blast	20.05.2014	5 - trigger point <0.27	mm/s	3.22	0.5	# 103
Overpressure	Per Blast	20.05.2014	115 - Trigger point 100	dB	112.5	84.2	# 103
Ground Vibration	Per Blast	01.08.2014	5 - trigger point <0.27	mm/s	1.71	0.57	# 104
Overpressure	Per Blast	01.08.2014	115 - Trigger point 100	dB	99.3	103	# 104
Ground Vibration	Per Blast	03.12.2014	5 - trigger point >0.27	mm/s	3.98	0.3	# 105
Overpressure	Per Blast	03.12.2014	115 - Trigger point >100	dB	102	112.2	# 105
Ground Vibration	Per Blast	26.05.2015	5 - trigger point >0.27	mm/s	4.03	0.46	# 106
Overpressure	Per Blast	26.05.2015	115 - Trigger point >100	dB	106.7	96	# 106
Ground Vibration	Per Blast	10.08.2015	5 - trigger point >0.27	mm/s	2.59	0.87	# 107
Overpressure	Per Blast	10.08.2015	115 - Trigger point >100	dB	101.6	102.4	# 107
Ground Vibration	Per Blast	19.11.2015	5 - trigger point >1.00	mm/s	1.27	Nil Trigger	# 108
Overpressure	Per Blast	19.11.2015	115 - Trigger point >105	dB	100.9	Nil Trigger	# 108
Ground Vibration	Per Blast	19.01.2016	5 - trigger point >0.27	mm/s	4.42	Nil Trigger	# 109
Overpressure	Per Blast	19.01.2016	115 - Trigger point >100	dB	101.5	Nil Trigger	# 109
Ground Vibration	Per Blast	29.03.2016	5 - trigger point >0.27	mm/s	1.53	0.57	# 110
Overpressure	Per Blast	29.03.2016	115 - Trigger point >100	dB	106.5	113.1	# 110
Ground Vibration	Per Blast	13.07.2016	5 - trigger point >0.27	mm/s	1.5	0.76	# 111
Overpressure	Per Blast	13.07.2016	115 - Trigger point >100	dB	102.4	94.1	# 111

Tumbulgum EPL 3430

Tumbulgum Point 1	WM 1	Pollutant	OIL and Grease -10 Milligrams per lt.	Total Suspended Solids Max 50 Milligrams per litre	pH (wet) Range 6.5 to 8.5	Requirement to Monitor Volume or Mass	
Month	Number of Samples	Frequency	Less than 24 hours before Discharge	Less than 24 hours before Discharge	Less than 24 hours before Discharge	Daily when wastes (water) discharged Klitres per day	Why Sampled - Discharge or Random?
Jul-2015	Nil			Nil	Nil	NIL	No Discharge
Aug-2015	Nil			Nil	Nil	Nil	No Discharge
Sep-2015	Nil			Nil	Nil	Nil	No Discharge
Oct-2015	Nil			Nil	Nil	NIL	No Discharge
Nov-2015	Nil			Nil	Nil	NIL	No Discharge
Dec-2015	Nil			Nil	Nil	NIL	No Discharge
Jan-2016	Nil			Nil	Nil	NIL	No Discharge
Feb-2016	Nil			Nil	Nil	NIL	No Discharge
Mar-2016	Nil			Nil	Nil	NIL	No Discharge
Apr-2016	Nil			Nil	Nil	NIL	No Discharge
May-2016	Nil			Nil	Nil	NIL	No Discharge
Jun-2016	Nil						Discharge - rainfall 350MI

Tumbulgum Point 2		Pollutant	OIL and Grease -10 Milligrams per Lt.	Total Suspended Solids Max 50 Milligrams per litre	pH (wet) Range 6.5 to 8.5	Requirement to Monitor Volume or Mass	
Month	Number of Samples	Frequency		Monthly during discharge	<24hrs prior to discharge	Daily when wastes (water) discharged Klitres per day	Why Sampled - Discharge or Random?
Jul-2015	Nil			Nil	Nil	Nil	No Discharge
Aug-2015	Nil			Nil	Nil	Nil	No Discharge
Sep-2015	Nil			Nil	Nil	Nil	No Discharge
Oct-2015	Nil			Nil	Nil	Nil	No Discharge
Nov-2015	Nil			Nil	Nil	Nil	No Discharge
Dec-2015	Nil			Nil	Nil	Nil	No Discharge
Jan-2016	Nil			Nil	Nil	Nil	No Discharge
Feb-2016	Nil			Nil	Nil	Nil	No Discharge
Mar-2016	Nil			Nil	Nil	Nil	No Discharge
Apr-2016	Nil			Nil	Nil	Nil	No Discharge
May-2016	Nil			Nil	Nil	Nil	No Discharge
Jun-2016							Discharge - rainfall 350MI

Tumbulgum EPL 3430

Tumbulgum Blast Monitoring results

Blasting	Frequency	Date	Limits	Units of measure	Loc # 1 - 43 Pollard Rd	Loc # 2 - 2 Pollard Rd	Loc # 3 - 729 - 731 Dulguigan Rd	Blast #
Ground Vibration	Per Blast	28.05.2015	5 - trigger point >0.26	mm/s	0.5	Nil Monitor	0.57	# 5, 6 & 7
Overpressure	Per Blast	28.05.2015	Max 115 - Trigger point >100	dB	114.1	Nil Monitor	103.5	# 5, 6 & 7
Ground Vibration	Per Blast	21.07.2015	5 - trigger point >0.26	mm/s	0.74	Nil Monitor	1.21	#8
Overpressure	Per Blast	21.07.2015	Max 115 - Trigger point >100	dB	110.5	Nil Monitor	103	#8
Ground Vibration	Per Blast	12.08.2015	5 - trigger point >0.26	mm/s	0.42 / Nil Trigger	Nil Monitor	0.47 / .49	# 9
Overpressure	Per Blast	12.08.2015	115 - Trigger point >101.6	dB	106.8 / Nil Trigger	Nil Monitor	101.8 /102.4	# 9
Ground Vibration	Per Blast	14.09.2015	5 - trigger point >0.26	mm/s	0.51	1.29	0.53	# 11
Overpressure	Per Blast	14.09.2015	Max 115 - Trigger point >100	dB	115.5	115.5	95.2	# 11
Ground Vibration	Per Blast	25.11.2015	Max 5 - trigger point >0.51	mm/s	0.684	0.925	Nil Trigger	# 12
Overpressure	Per Blast	25.11.2015	Max 115 - Trigger point >110	dB	104.9	101.9	Nil Trigger	# 12
Ground Vibration	Per Blast	25.11.2015	Max 5 - trigger point >0.51	mm/s	0.582	0.751	1.04	# 13
Overpressure	Per Blast	25.11.2015	Max 115 - Trigger point >100	dB	111.5	105.5	98.84	# 13
Ground Vibration	Per Blast	18.02.2016	5 - trigger point >0.26	mm/s	No Trigger	0.96	Nil Trigger	#15
Overpressure	Per Blast	18.02.2016	Max 115 - Trigger point >100	dB	No Trigger	102.8	Nil Trigger	#15
Ground Vibration	Per Blast	18.02.2016	5 - trigger point >0.26	mm/s	No Trigger	0.9	Nil Trigger	# 16
Overpressure	Per Blast	18.02.2016	Max 115 - Trigger point >100	dB	No Trigger	104.2	Nil Trigger	# 16
Ground Vibration	Per Blast	14.04.2016	5 - trigger point >0.26	mm/s	1.448	1.329	Not required by location	#17 & 18
Overpressure	Per Blast	14.04.2016	Max 115 - Trigger point >100	dB	111.2	112.0	Not required by location	#17 & 18
Ground Vibration	Per Blast	27.05.2016	5 - trigger point >0.26	mm/s	0.254	0.492	Not required by location	#19
Overpressure	Per Blast	27.05.2016	Max 115 - Trigger point >100	dB	103.5	101	Not required by location	#19

Ground Vibration	Per Blast	27.05.2016	5 - trigger point >0.51	mm/s	0.302		Not required by location	#20
Overpressure	Per Blast	27.05.2016	Max 115 - Trigger point >90	dB	98.84		Not required by location	#20
Ground Vibration	Per Blast	07.07.2016	5 - trigger point >0.51	mm/s	No Trigger	1.048	Not required by location	#21
Overpressure	Per Blast	07.07.2016	Max 115 - Trigger point >110	dB	No Trigger	113.5	Not required by location	#21
Ground Vibration	Per Blast	07.07.2016	5 - trigger point >0.26	mm/s	0.302	0.571	Not required by location	#22
Overpressure	Per Blast	07.07.2016	Max 115 - Trigger point >100	dB	104.2	105.5	Not required by location	#22

Yarrabee Rd Quarry - Licence Number 11462

Yarrabee Rd Point 3		Pollutant	Total Suspended Solids	pH (wet) Range 6.5 to	Requirement to
Month	Number of	Frequency	<24hrs prior to discharge	<24hrs prior to	Daily when
14.08.2015	1		11	6.2	Nil Discharge
Sep-2015	Nil		No Record	No Record	Nil Discharge
11.11.2015	1		6	7.9	Nil Discharge
19.01.2016	1		4	8.3	2,400,000
29.03.2016	1		9	8	1,230,000
29.06.2016	1		6	8.1	
Number of samples	5				

Mean	7.20	7.70	1,815,000.00
Lowest	4.00	6.20	1,230,000.00
Highest	11.00	8.30	2,400,000.00

Yarrabee Rd Quarry - Licence Number 11462

Blasting	Frequency	Date	Limits	Units of measure	Results	Blast #
Ground Vibration	Per Blast	23.06.2015	5 - trigger point >0.27	mm/s	0.06	#43
Overpressure	Per Blast	23.06.2015	Max 115 - Trigger point >100	dB	106.7	#43
Ground Vibration	Per Blast	06.07.2015	5 - trigger point >0.27	mm/s	0.64	#44
Overpressure	Per Blast	06.07.2015	Max 115 - Trigger point >100	dB	106.1	#44
Ground Vibration	Per Blast	21.07.2015	5 - trigger point >0.27	mm/s	1.0	#45 SEQ2015-01
Overpressure	Per Blast	21.07.2015	Max 115 - Trigger point >100	dB	114	#45 SEQ2015-01
Ground Vibration	Per Blast	27.07.2015	5 - trigger point >0.27	mm/s	1.0	#46 SEQ2015-02
Overpressure	Per Blast	27.07.2015	Max 115 - Trigger point >100	dB	107.8	#46 SEQ2015-02
Ground Vibration	Per Blast	25.08.2015	5 - trigger point >0.27	mm/s	0.68	#47 SEQ2015-03
Overpressure	Per Blast	25.08.2015	Max 115 - Trigger point >100	dB	105.7	#47 SEQ2015-03
Ground Vibration	Per Blast	15.09.2015	5 - trigger point >0.27	mm/s	2.15	#48 SEQ2015-04
Overpressure	Per Blast	15.09.2015	Max 115 - Trigger point >100	dB	114.7	#48 SEQ2015-04
Ground Vibration	Per Blast	20.10.2015	5 - trigger point >0.27	mm/s	3.42	#49 SEQ2015-05
Overpressure	Per Blast	20.10.2015	Max 115 - Trigger point >100	dB	109.6	#49 SEQ2015-05
Ground Vibration	Per Blast	18.11.2015	5 - trigger point >0.27	mm/s	0.91	#50 SEQ2015-06

Overpressure	Per Blast	18.11.2015	Max 115 - Trigger point >100	dB	105.2	#50 SEQ2015-06
Ground Vibration	Per Blast	16.12.2015	5 - trigger point >0.27	mm/s	0.87	#51 SEQ2015-07
Overpressure	Per Blast	16.12.2015	Max 115 - Trigger point >100	dB	104.1	#51 SEQ2015-07
Ground Vibration	Per Blast	18.01.2016	5 - trigger point >0.27	mm/s	0.13	#52 SEQ2016-01
Overpressure	Per Blast	18.01.2016	Max 115 - Trigger point >100	dB	111.6	#52 SEQ2016-01
Ground Vibration	Per Blast	08.02.2016	5 - trigger point >0.27	mm/s	3.21	#53 SEQ2016-02
Overpressure	Per Blast	08.02.2016	Max 115 - Trigger point >100	dB	114.6	#53 SEQ2016-02
Ground Vibration	Per Blast	30.03.2016	5 - trigger point >1.00	mm/s	2.23	#55 YRQ-16-02
Overpressure	Per Blast	30.03.2016	Max 115 - Trigger point >105	dB	118.1	#55 YRQ-16-02
Ground Vibration	Per Blast	28.04.2016	5 - trigger point >1.00	mm/s	No Trigger	#56 YRQ-16-03
Overpressure	Per Blast	28.04.2016	Max 115 - Trigger point >105	dB	No Trigger	#56 YRQ-16-03
Ground Vibration	Per Blast	30.06.2016	5 - trigger point >1.00	mm/s	1.98	#57 YRQ-16-04
Overpressure	Per Blast	30.06.2016	Max 115 - Trigger point >105	dB	114.9	#57 YRQ-16-04
Ground Vibration	Per Blast		5 - trigger point >1.00	mm/s		#58 YRQ-16-05
Overpressure	Per Blast		Max 115 - Trigger point >105	dB		#58 YRQ-16-05

