



Teralba Quarry Environmental Monitoring Summary

June 2024

Environmental Protection Licence (EPL):	536
Licensee:	Metromix Pty Limited
Licensee Address:	PO Box 1295 Parramatta, NSW 2124
Premises:	Metromix Pty Limited Teralba Quarry Rhondda Road Teralba, NSW 2284
Licensee Website:	https://www.metromix.com.au/
Licensee Website - Monitoring Results:	https://www.metromix.com.au/resources/#quarry
EPA Public Register:	https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers
Prepared by:	R. W. Corkery & Co.
Sample Period:	June 2024
Date Last Data Received	15 July 2024
Date of Report	15 July 2024

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Deposited Dust

Sample Period Start: 03/06/2024
 Sample Period End: 01/07/2024
 Sample Frequency: 30 ± 2 days
 Sample Collected By: Metromix - CD
 Date Received by Laboratory: 01/07/2024
 Date Results Received by Metromix: 10/07/2024

EPA Identification No.	Location	Criteria (g/m ² /month)	Insoluble Solids (g/m ² /month)	Ash Fraction (g/m ² /month)	% Ash Fraction
1	Hillside Crescent	4.0	0.4	0.3	75
8	Rodgers Street	4.0	0.4	0.1	25
9	Rhondda Road	4.0	0.3	0.2	67
11	Myrtle Street	4.0	0.3	0.3	100
23	York Street	4.0	1.2	0.5	42

Comments

No exceedances of the approved criteria were detected during the sample period.

Deposited Dust - Year to Date

	Rhondda Road			Myrtle Street			Hillside Crescent			Rodgers Street			York Street		
	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash
Units	g/m ² /month	g/m ² /month		g/m ² /month	g/m ² /month		g/m ² /month	g/m ² /month		g/m ² /month	g/m ² /month		g/m ² /month	g/m ² /month	
EPA Approved Level	4.0			4.0			4.0			4.0			4.0		
January	0.3	0.2	67	0.5	0.3	60	1.7	0.1	6	0.2	0.1	50	0.6	0.2	33
February	0.6	0.3	50	1.3	0.4	31	0.8	0.4	50	0.5	0.2	40	1.2	0.6	50
March	0.3	0.1	33	0.5	0.2	40	1.6	0.6	38	0.2	0.1	50	0.3	0.1	33
April	0.8	0.3	38	0.8	0.4	50	0.5	0.2	40	0.6	0.3	50	1.1	0.4	36
May	0.5	0.3	60	1.6	1.0	63	0.3	0.2	67	0.7	0.6	86	0.2	0.2	100
June	0.3	0.2	67	0.3	0.3	100	0.4	0.3	75	0.4	0.1	25	1.2	0.5	42
July															
August															
September															
October															
November															
December															
Annual Average	0.5	0.2	52	0.8	0.4	57	0.9	0.3	46	0.4	0.2	50	0.8	0.3	49
Annual Maximum	0.8	0.3	67	1.6	1.0	100	1.7	0.6	75	0.7	0.6	86	1.2	0.6	100
Annual Minimum	0.3	0.1	33	0.3	0.2	31	0.3	0.1	6	0.2	0.1	25	0.2	0.1	33

Particulate Matter (PM₁₀)

Sample Location: EPA 3 - Rodgers Street
Sample Frequency: 6 days

Date Sample Taken (24-hr)	Collected by	Date Results Received	PM ₁₀ µg/m ³	Monthly Average Criteria (µg/m ³)	Annual Average Criteria (µg/m ³)
04/06/2024	CBased - TD	14/06/2024	8.2	50	
10/06/2024	CBased - TD	20/06/2024	8.0	50	
16/06/2024	CBased - MB	26/06/2024	3.4	50	
22/06/2024	CBased - MB	01/07/2024	5.5	50	
28/06/2024	CBased - TD	08/07/2024	11.9	50	
Monthly Average			7.4		25/30*

*Project Approval (PA 10_0183) outlines the annual average PM₁₀ criteria to be 30µg/m³. However, EPL 536 Condition R4.5a) requires that the air quality monitoring data is assessed against the Air Impact Assessment Criteria outlined in EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*. The most up to date version of this guideline was published in 2022 and outlines the annual average PM₁₀ criteria to be 25µg/m³. Metromix has considered both criteria for its review of particulate matter monitoring.

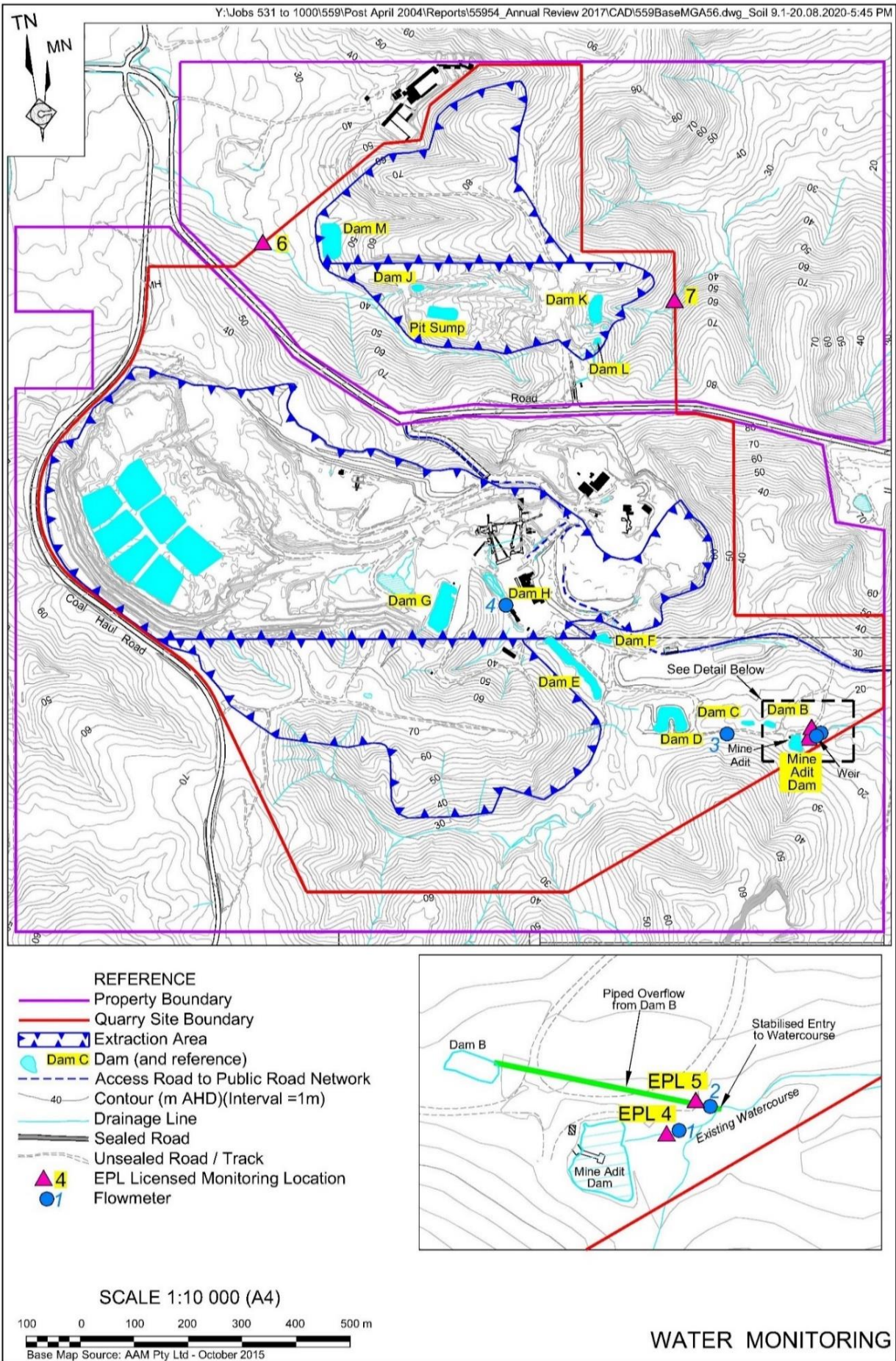
Comments

All PM₁₀ results remained below the approved criteria for the sample period.

Particulate Matter (PM₁₀) - Year to Date

Date	PM ₁₀ (µg/m ³)	Monthly Average (µg/m ³)	Year to Date Average (µg/m ³)	24-Hr Criteria (µg/m ³)	Comments
06/01/2024	12.7	15.9	12.7	50	
12/01/2024	14.5		13.6	50	
18/01/2024	8.1		11.8	50	
24/01/2024	20.0		13.8	50	
30/01/2024	24.4		15.9	50	
05/02/2024	46.3	27.5	12.7	50	See comment in February 2024 Monitoring Summary.
11/02/2024	26.3		21.8	50	
17/02/2024	20.5		21.6	50	
23/02/2024	22.5		21.7	50	
29/02/2024	21.7		21.7	50	
06/03/2024	18.9	14.3	21.4	50	
12/03/2024	22.0		21.5	50	
18/03/2024	8.5		20.5	50	
24/03/2024	9.4		19.7	50	
30/03/2024	12.7		19.2	50	
05/04/2024	9.1	11.1	18.6	50	
11/04/2024	12.0		18.2	50	
17/04/2024	14.9		18.0	50	
23/04/2024	9.6		17.6	50	
29/04/2024	10.0		17.2	50	
05/05/2024	3.7	10.0	16.6	50	
11/05/2024	5.1		16.0	50	
17/05/2024	15.8		16.0	50	
23/05/2024	8.5		15.7	50	
29/05/2024	17.1		15.8	50	
04/06/2024	8.2	7.4	15.5	50	
10/06/2024	8.0		15.2	50	
16/06/2024	3.4		14.8	50	
22/06/2024	5.5		14.5	50	
28/06/2024	11.9		14.4	50	

Minimum	3.4
Maximum	46.3
Average	14.4
Standard Deviation	8.8
24-hr Criteria	50
Number of Exceedences	0
Annual Average Criteria	25/30*
Annual Average Criteria Exceeded	No
*See explanation on previous page.	



Water**Water Monitoring****EPL Point 4 - Monthly Monitoring**

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
03/06/2024	7:15am	Metromix - AL	11/06/2024		7.2	1650	12	<5	

EPL Point 5 - Monitoring Daily During Discharge

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
03/06/2024	7:05am	Metromix - AL	11/06/2024		6.9	859	<5	<5	

EPL Point 6 - Monthly Monitoring

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
No discharge occurred at this location and therefore no monitoring was required.									

EPL Point 7 - Monthly Monitoring

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
No discharge occurred at this location and therefore no monitoring was required.									

Flow Meter Records

EPA Identified Point	Location	Description	Sample Period	Daily Average Flow ML	Monthly Total Flow ML
4	Adit Dam	Adit Dam to Creek (off site)	01/06/2024 - 01/07/2024	7.23	216.9
5	Dam B	Discharge from Dam B (from Quarry)	03/06/2024 - 01/07/2024	0.35	9.7
4	Adit Dam	Water pumped from Adit Dam to Dam G (processing use)	03/06/2024 - 01/07/2024	3.05	85.3

Comments

All water monitoring results remained within the approved criteria levels during the monitoring period.

Water - Year to Date**EPL Point 4 : Monthly Monitoring**

	pH	EC	TSS	Oil & Grease	Comments
Units	pH Units	µS/cm	mg/L	mg/L	-
EPL Criterion*	6.5-8.5	NA	<50	10	-
ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	-
January	7.3	2090	<5	6	-
February	-	-	-	-	No discharge occurred at this location and no monitoring was undertaken (see February 2024 monitoring summary).
March	8.3	2100	<5	<5	-
April	7.4	2100	<5	<5	-
May	7.2	1670	5	<5	-
June	7.2	1650	12	<5	-
July					
August					
September					
October					
November					
December					

EPL Point 5 : Monitoring During Discharge

	pH	EC	TSS	Oil & Grease	Comments
Units	pH Units	µS/cm	mg/L	mg/L	
EPL Criterion*	6.5-8.5	NA	<50	10	
ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
8 April	6.9	798	5	<5	-
1 May	6.9	758	<5	<5	-
3 June	6.9	859	<5	<5	-

Flow Meter Records

EPA Identifier	Location	Description	Date	Monthly
4	Adit Dam	Water pumped from Adit Dam to Dam G (processing use)	02/01/2024 - 01/02/2024	0.2
			01/02/2024 - 01/03/2024	72.2
			01/03/2024 - 02/04/2024	76.0
			02/04/2024 - 01/05/2024	86.2
			01/05/2024 - 03/06/2024	118.4
			03/06/2024 - 01/07/2024	85.3

EPA Identifier	Location	Description	Date	Monthly
5	Dam B	Discharge from Dam B (from Quarry)	02/01/2024 - 01/02/2024	0.0
			01/02/2024 - 01/03/2024	0.9
			01/03/2024 - 02/04/2024	0.0
			02/04/2024 - 01/05/2024	11.4
			01/05/2024 - 01/06/2024	27.5
			03/06/2024 - 01/07/2024	9.7

EPA Identifier	Location	Description	Date	Monthly
4	Adit Dam	Adit Dam to Creek (off site)	02/01/2024 - 01/02/2024	20.3
			01/02/2024 - 01/03/2024	0.9
			01/03/2024 - 02/04/2024	2.8
			02/04/2024 - 01/05/2024	45.1
			01/05/2024 - 01/06/2024	31.6
			01/06/2024 - 01/07/2024	216.9

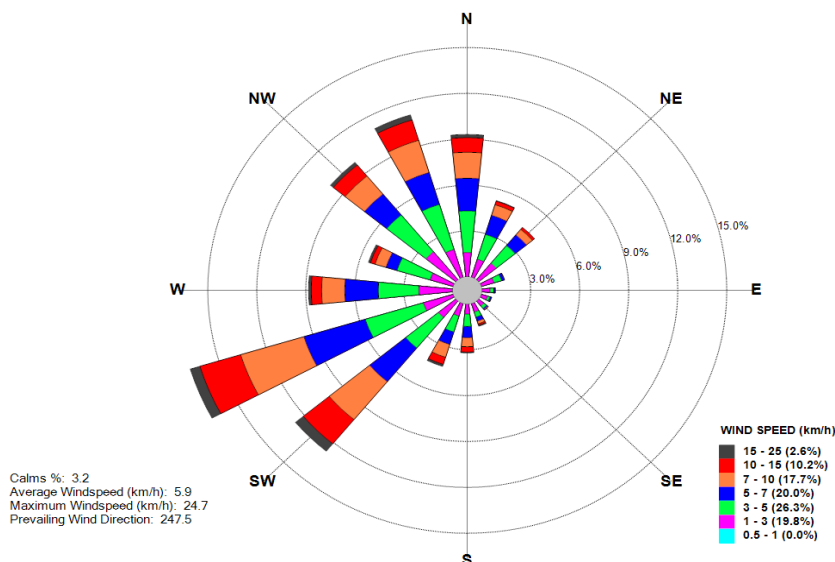
Meteorological Conditions

Monitoring Location: Mid-Pit Entrance
 Monitoring Frequency: Continuous

Windrose

Metromix Teralba - Windrose

JUNE 2024



Monthly Summary

Date	Mean Wind Direction (°)	Mean Wind Speed (km/h)	Daily Rainfall (mm)	Mean Sigma Theta	Max Temperature (°C) at 2m	Min Temperature (°C) at 2m
01/06/24	189	6.9	54.2	26.9	15.8	11.6
02/06/24	250	8.8	6.2	27.3	14.8	10.6
03/06/24	262	7.0	0.0	40.3	16.2	9.6
04/06/24	260	5.8	0.0	36.9	15.0	8.6
05/06/24	224	2.8	5.8	30.0	17.2	8.4
06/06/24	221	4.0	14.4	31.7	18.4	9.6
07/06/24	258	6.6	2.4	40.0	13.2	10.8
08/06/24	257	6.7	0.0	44.3	18.8	11.4
09/06/24	239	6.4	0.0	36.6	19.2	10.4
10/06/24	245	5.5	0.0	27.8	17.5	8.4
11/06/24	252	7.3	0.0	36.2	16.4	9.2
12/06/24	235	8.8	0.0	32.8	19.2	10.2
13/06/24	237	8.8	0.2	20.6	16.2	9.2
14/06/24	232	6.0	0.2	29.7	15.4	10.8
15/06/24	229	6.1	8.2	28.8	14.4	10.2
16/06/24	236	7.5	0.2	23.4	16.2	8.2
17/06/24	238	7.4	0.0	25.8	17.2	6.6
18/06/24	245	6.2	0.0	22.0	17.4	8.8
19/06/24	255	3.9	0.0	33.1	16.4	5.2
20/06/24	247	4.7	0.0	30.0	18.0	7.4
21/06/24	228	4.2	0.0	29.1	17.8	8.8
22/06/24	234	7.7	16.0	26.6	15.4	9.4
23/06/24	236	6.1	1.6	23.9	16.3	9.2
24/06/24	216	4.3	0.0	22.6	18.4	7.4
25/06/24	150	3.4	0.0	23.2	19.6	6.8
26/06/24	176	5.1	0.0	21.2	21.2	8.8
27/06/24	271	3.5	0.0	33.3	19.2	9.4
28/06/24	180	3.6	0.0	25.6	18.4	7.2
29/06/24	139	6.9	0.0	21.5	20.0	7.2
30/06/24	175	6.7	12.2	29.6	16.0	8.8

Meteorological Conditions - Year to Date

Monitored Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Total Rainfall (mm)	33.0	165.8	27.6	335.8	189.0	121.6							872.8
Average Minimum Temperature (°C) at 2m	17.0	16.4	15.0	12.0	7.6	5.2							12.2
Average Maximum Temperature (°C) at 2m	42.2	41.2	36.8	30.0	23.8	21.2							32.5
Average Minimum Temperature (°C) at 10m	17.4	16.2	15.4	12.2	8.9	6.5							12.8
Average Maximum Temperature (°C) at 10m	41.0	40.3	35.5	28.6	23.2	20.5							31.5
Average Sigma Theta	33.3	34.6	32.5	30.3	28.3	29.4							31.4
Average Solar Radiation (W/m ²)	192.0	160.7	159.0	127.4	88.3	82.0							134.9
Average Relative Humidity (%)	70.0	75.0	74.0	73.0	77.0	69.0							73.0

Blasting

Monitoring Frequency Each Blast

Blast Monitoring Completed By MAXAM

Shot #	Day	Month	Time	Location	Location 1		Location 2		Location 3		Comments
					Overpressure dB(L)	Vibration mm/s	Overpressure dB(L)	Vibration mm/s	Overpressure dB(L)	Vibration mm/s	
1	10	January	13:14:00	Stage 2B-1	103.3	0.17	102.7	0.08	NM	NM	
2	19	January	11:52:39	Stage 2B-2	96.3	0.33	99.9	0.06	NM	NM	
3	29	January	11:51:27	Stage 2B	90.9	0.32	96.7	0.09	NM	NM	
4	7	February	11:38:31	Stage 2B-3	106.7	0.26	97.6	0.07	NM	NM	
5	26	February	13:49:00	Stage 2B-3	100.1	0.34	105.2	0.08	NM	NM	
6	29	February	10:47:00	Stage 2B	112.1	0.38	108.2	0.06	NM	NM	
7	14	March	12:59:31	Stage 1C	102.3	0.18	NT	NT	NM	NM	
8	2	April	12:43:14	Stage 2B-3	109.5	0.30	101.7	0.08	NM	NM	
9	12	April	12:09:28	Stage 1C	NT	NT	NT	NT	NM	NM	
10	29	April	13:15:28	Stage 2B-3	105.2	0.30	NT	NT	NM	NM	
11	13	May	13:28:00	Stage 2B-3	NT	NT	NT	NT	NM	NM	
12	22	May	14:17:00	Stage 1C	101.6	0.36	NT	NT	NM	NM	
13	7	June	13:34:00	Stage 2B-3	105.2	0.33	NT	NT	NM	NM	
14	26	June	13:40:00	Stage 1C	103.6	0.25	NT	NT	NM	NM	

NT Not Triggered
NM Not Monitored

Blasting Criteria

Parameter	Units of Measure	Limit	
		95% of blasts per year	100% of blasts
Airblast Overpressure (Linear Peak)	decibels (dB(L))	115	120
Ground Vibration (Peak Particle Velocity)	millimeters per second	5	10

Comments

Two blasting events occurred during the monitoring period. All blast monitoring results were within the approved criteria.

Waste Management**Waste Removal Summary**

Month	January	February	March	April	May	June	July	August	September	October	November	December
Item	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
General Waste Bin (10m ³)	-	-	-	-	-	-						
General Waste Bin (4.5m ³)	-	-	-	-	-	-						
General Waste Bin (6m ³)	-	-	-	-	-	-						
General Waste Bin (20m ³)	1	-	1	1	1	-						
Paper & Cardboard Bin (3m ³)	2	1	2	1	1	2						
Shredded Paper Bin (240L)	-	-	-	-	-	-						
Co Mingled Recycling (2 x 240 L)	2	4	4	4	4	4						
Tonner Cartridges	49	-	-	-	-	-						
Waste Oil (L)	-	-	-	-	-	-						
Scrap Steel (t)	2.86	-	3.28	2.66	-	-						
Timber (m ³)	-	-	-	-	-	-						
Engine Coolant (L)	-	-	-	-	-	-						
Oil Filters (240L bin)	-	3	-	-	4	-						
Batteries	-	-	-	-	-	-						
Oily Rags (240L bin)	-	-	-	-	-	-						
Aerosols (120L bin)	-	-	-	-	-	-						
Tyres	-	-	-	-	-	-						
Other	-	-	-	-	-	-						
Oily Water (L)	-	-	-	-	-	-						
Grease Waste (L)	-	-	-	-	-	-						