



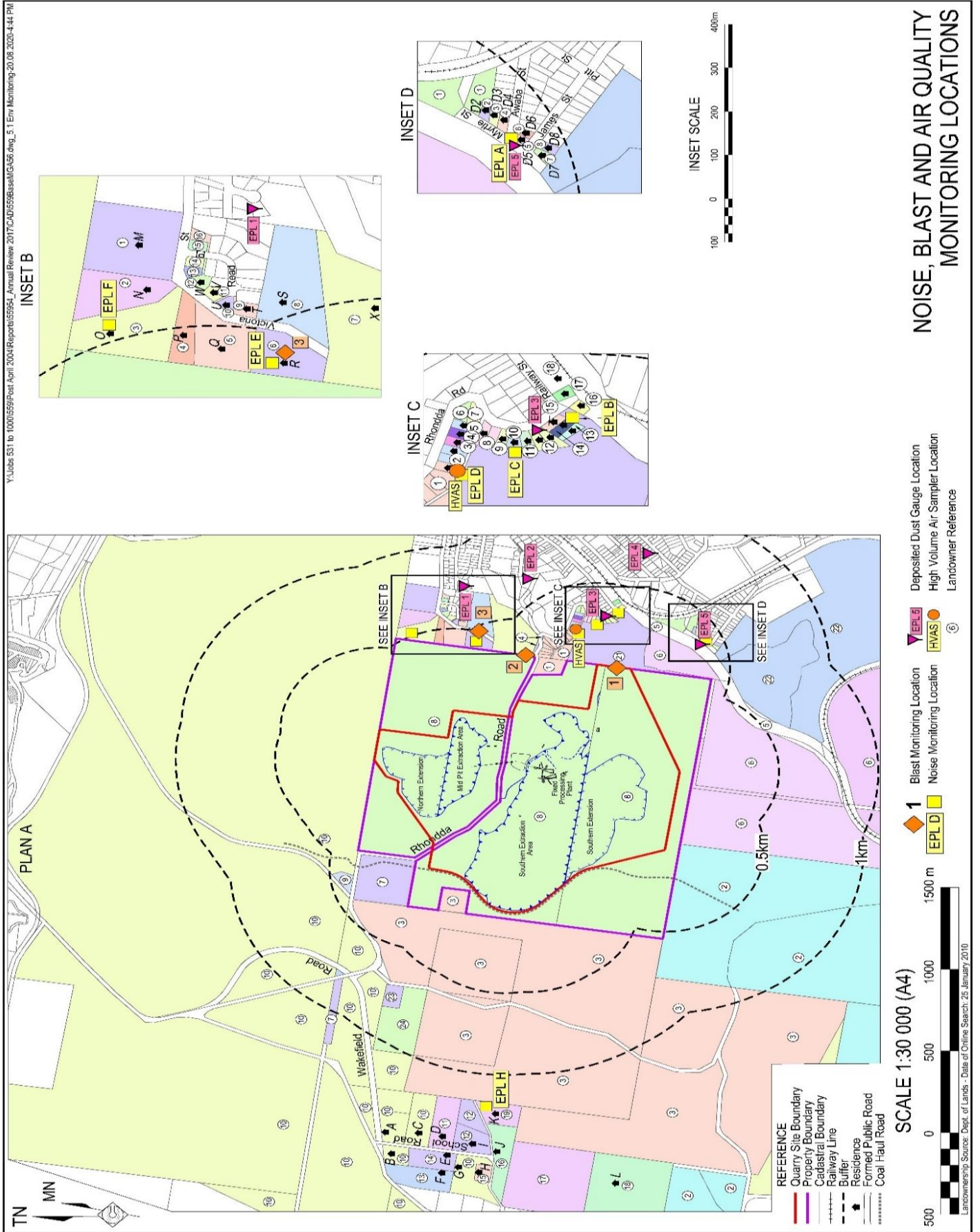
Teralba Quarry Environmental Monitoring Summary

February 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:	February 2024
Date Last Data Received	25 March 2024
Date of Report	28 March 2024

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Deposited Dust

Sample Period Start: 01/02/2024
 Sample Period End: 01/03/2024
 Sample Frequency: 30 ± 2 days
 Sample Collected By: Metromix - AL
 Date Received by Laboratory: 01/03/2024
 Date Results Received by Metromix: 11/03/2024

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	0.8	0.4	50
8	Rodgers Street	4.0	0.5	0.2	40
9	Rhondda Road	4.0	0.6	0.3	50
11	Myrtle Street	4.0	1.3	0.4	31
23	York Street	4.0	1.2	0.6	50

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															
April															
May															
June															
July															
August															
September															
October															
November															
December															
Annual Average	0.5	0.3	58	0.9	0.4	45	1.3	0.3	28	0.4	0.2	45	0.9	0.4	42
Annual Maximum	0.6	0.3	67	1.3	0.4	60	1.7	0.4	50	0.5	0.2	50	1.2	0.6	50
Annual Minimum	0.3	0.2	50	0.5	0.3	31	0.8	0.1	6	0.2	0.1	40	0.6	0.2	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)
05/02/2024	CBased - TD	14/02/2024	46.3	50	
11/02/2024	CBased - TD	20/02/2024	26.3	50	
17/02/2024	CBased - TD	1/03/2024	20.5	50	
23/02/2024	CBased - TD	4/03/2024	22.5	50	
29/02/2024	CBased - TD	12/03/2024	21.7	50	
Monthly Average			27.5		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.

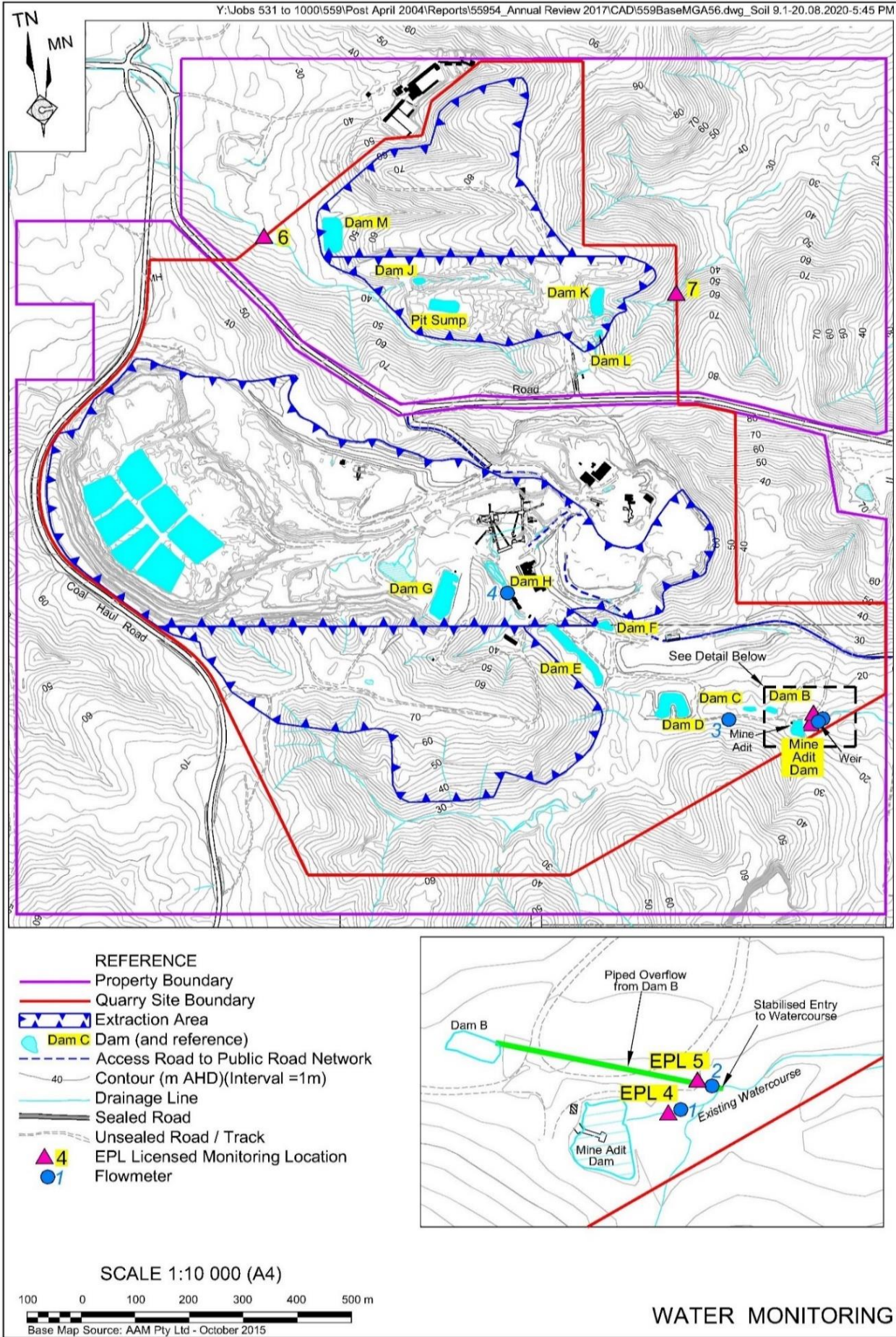
Comments

The monthly average of PM₁₀ results remained below the approved criteria for the sample period. It is noted that the unusually high PM10 result recorded on 5 February 2024 (46.3µg/m³) is consistent with the daily average of PM10 recorded for the Newcastle region (approximately 49µg/m³) for the same sample period, as indicated by data collected through the New South Wales Air Quality Monitoring Network (accessed 28 March 2024 via <https://www.airquality.nsw.gov.au/air-quality-data-services/data-download-facility>).

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 on previous page.
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	

Minimum	8.1
Maximum	46.3
Average	21.7
Standard Deviation	10.3
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	-	

No discharge occurred at this location and no monitoring was undertaken.

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	-	

No discharge occurred at this location and therefore no monitoring was required

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	February 2024	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)	01/02/2024 - 01/03/2024	0.03	0.9
5	Dam B	Discharge from Dam B (from Quarry)	01/02/2024 - 01/03/2024	0.03	0.9
4	Adit Dam	Water pumped from Adit Dam to Dam G (processing use)	01/02/2024 - 01/03/2024	2.49	72.2

Comments

No discharge occurred at EPL Point 4 during the reporting period and due to administrative oversight whereby it was assumed that monitoring was only required to be undertaken during discharge, no monitoring data was collected. This administrative non-compliance was notified to the relevant authorities on 11 March 2024 and is considered not to have resulted in any risk of environmental harm.

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 comment on previous page.
March					-
April					-
May					-
June					-
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	-	-
No discharge occurred at this location and therefore no monitoring was required.					

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

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

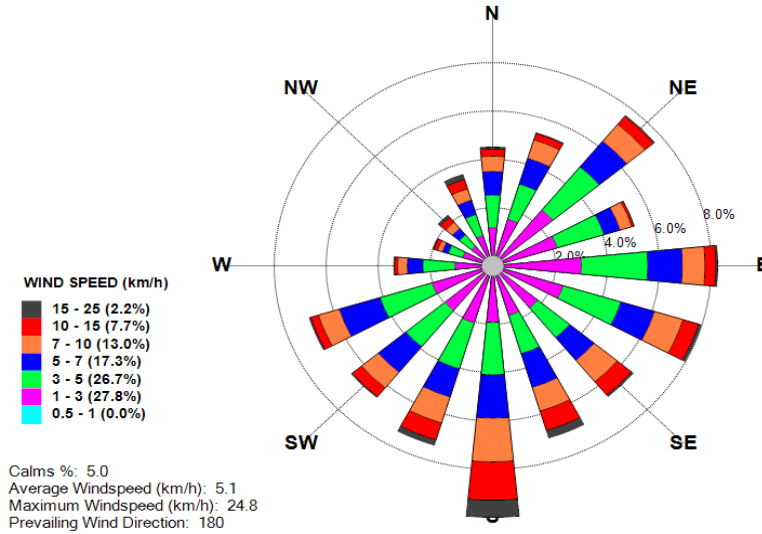
EPA Identifier	Location	Description	Date	Monthly
4	Adit Dam	Adit Dam to Creek (off site)	02/01/2024 - 01/02/2024	20.3
			01/02/2024 - 01/03/2024	0.9

Meteorological Conditions

Monitoring Location: Mid-Pit Entrance
Monitoring Frequency: Continuous

Windrose

Metromix Teralba - Windrose
FEBRUARY 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
01/02/24	160	4.7	2.6	33.1	30.0	20.6
02/02/24	167	5.9	0.0	32.3	32.4	20.7
03/02/24	98	4.5	0.0	30.1	29.0	19.0
04/02/24	140	4.2	0.0	30.1	38.4	19.0
05/02/24	138	5.4	0.0	34.1	37.4	24.6
06/02/24	185	7.1	12.6	36.7	27.6	18.2
07/02/24	190	7.3	5.6	35.8	20.8	16.4
08/02/24	161	6.4	0.0	42.1	24.4	17.8
09/02/24	213	6.4	0.0	34.8	26.0	17.2
10/02/24	158	9.1	24.4	40.2	26.4	18.4
11/02/24	116	4.5	0.0	36.0	23.6	20.8
12/02/24	102	4.3	0.0	29.0	30.6	19.0
13/02/24	93	6.0	0.0	25.5	34.4	20.2
14/02/24	164	7.3	34.4	36.4	33.6	18.4
15/02/24	205	4.9	9.4	38.9	22.6	18.8
16/02/24	139	3.8	2.6	36.8	29.4	19.8
17/02/24	165	3.3	0.0	31.0	32.6	21.2
18/02/24	170	3.1	0.0	33.4	30.4	20.4
19/02/24	187	3.6	6.6	30.0	23.2	17.8
20/02/24	182	4.6	20.6	39.3	24.4	18.6
21/02/24	179	3.9	0.4	36.1	27.6	18.6
22/02/24	168	3.4	0.0	35.5	31.8	20.8
23/02/24	202	7.2	5.0	38.8	39.0	22.1
24/02/24	190	6.5	10.2	38.3	23.2	18.6
25/02/24	151	4.2	0.2	33.9	28.4	17.8
26/02/24	185	5.4	0.0	34.8	33.8	17.3
27/02/24	137	3.7	22.4	35.8	23.1	19.9
28/02/24	92	4.1	0.0	32.1	30.8	20.8
29/02/24	165	6.2	8.8	32.3	41.2	21.4

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											198.8
Average Minimum Temperature (°C) at 2m	17.0	16.4											16.7
Average Maximum Temperature (°C) at 2m	42.2	41.2											41.7
Average Minimum Temperature (°C) at 10m	17.4	16.2											16.8
Average Maximum Temperature (°C) at 10m	41.0	40.3											40.7
Average Sigma Theta	33.3	34.6											34.0
Average Solar Radiation (W/m ²)	192.0	160.7											176.4
Average Relative Humidity (%)	70.0	75.0											72.5

Blasting

Monitoring Frequency Each Blast

Blast Monitoring Completed By MAXAM

Shot #	Day	Month	Time	Location	Location 1		Location 2		Location 3		Comments
					Overpressure	Vibration	Overpressure	Vibration	Overpressure	Vibration	
					dB(L)	mm/s	dB(L)	mm/s	dB(L)	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	1:49:00	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	

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

Three 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
Items	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	-										
Paper & Cardboard Bin (3m ³)	2	1										
Shredded Paper Bin (240L)	-	-										
Co Mingled Recycling (2 x 240 L)	2	2										
Tonner Cartridges	-	-										
Waste Oil (L)	-	-										
Scrap Steel (t)	-	-										
Timber (m ³)	-	-										
Engine Coolant (L)	-	-										
Oil Filters (240L bin)	-	2										
Batteries	-	-										
Oily Rags (240L bin)	-	-										
Aerosols (120L bin)	-	-										
Tyres	-	-										
Other	-	-										
Oily Water (L)	-	-										
Grease Waste (L)	-	-										