



Mt Shamrock Environmental Management Plan 3 Monthly Progress Update

From 14th January 2009 – 14th April 2009

Prepared by [redacted] for Mt Shamrock Quarry Environment Review Committee

On 11 March 2008, the *Mt Shamrock Quarry Environmental Management Plan Version 1:18 January 2008* (EMP) was formally enacted. This document established a framework to ensure compliance with local council, AAV, DPI, EPA and DSE requirements relating to the extension of extractive limits under Work Authority 174 (WS174). An Environment Review Committee (ERC) was formed to monitor the performance of the quarry against the EMP, the permit and WA174. The ERC consists of delegates from the relevant authorities, members of the Wurundjeri Tribe, and local residents. The ERC is chaired by an independent representative from All Possibilities Pty Ltd to ensure non-partisan administration.

This report details information on both monitoring results and management actions by the quarry in the preceding three months. This report will take the form of an exception report- that is where there is a deviance from the EMP. This will be highlighted and reasons for the deviance explained. A summary of quantifiable monitoring outcomes is also included. Figure 1.12 details all monitoring locations.

Operational Update

- Capital works upgrade completed during the month of April, works completed on the Primary, Secondary, Tertiary, & Pugmill areas. The basis of the works was installation of larger screens and radial stacking conveyors to reduce materials handling on site. The outcome of this upgrade is the reduction of trucks and loaders on site. We have been able to make redundant our Terex 33-07 dump truck which was our oldest and least efficient piece of mobile equipment, 2 1986 Mercedes Benz Tippers which are inefficient and not well equipped to handle the quarrying application, 2 Front end loaders which are in excess of 35,000hrs old per unit and not equipped with new fuel saving technology. This reduces the average age of our mobile equipment to 4.5 years old.
- Completion of the joining of the two pits which has significantly improved safety and reduced materials handling.
- Sales remain high in the month of May with product being sold to subdivisional works in local areas and projects such as McGregor road and the new Bunnings project
- Final designs for the deceleration lane have been completed with information available for dissemination at the ERC meeting

2.1 Air Quality – Dust

Management Measure	Action	Procedure/ Reference	Responsibility	Timing
Monitoring	Continuous monitoring of PM10 after commencement of extension works, with results reviewed after 12 months.	(see s2.1.4 of EMP)	QM	All times
Monitoring	A weather monitoring station with display to be installed in the Pit Manager's office	-	PM	Within 1 month of EMP approval
Monitoring	Records of wind speed and direction will be stored for a period of 12 months for subsequent reference in case of complaints and to assist in interpreting dust monitoring data.	-	PM	All times
Reporting	One (1) hourly average PM10 data will be provided to the Pit Manager's office from the "reactive monitoring stations"	-	PM	All times

Figure 1.1 Selected Management Actions s2.1.3

Cemex has taken delivery of dust monitoring equipment. There are now significant delays in the installation of the hardware and support systems. This is due to CEMEX not receiving technical specifications relating to the required electrical infrastructure and IT support requirements from the supplier after repeated requests. Depositional results have indicated the dust emissions tabulated below. Where asterisks exist in the table, this indicates the unit was damaged. This damage occurs primarily due to livestock and weather conditions. Fencing around the monitoring units is planned. Measures to increase the robustness of the monitoring devices to withstand extreme weather conditions are being investigated. The result of 4.3 g/m²/month for monitoring point A6 is being investigated through the responsible consultant. The site is still awaiting dust depositional results for April.

		A1	A2	A3	A4	A5	A6	A7
Insoluble	g/m ² /month	0.2	0.2	<0.1	**	0.7	4.3	2.3

Figure 1.2 – Depositional Results for month of Feb

		A1	A2	A3	A4	A5	A6	A7
Insoluble	g/m ² /month	1.5	0.6	1.8	<0.1	0.6	2.0	<0.1

Figure 1.3 – Depositional Results for month of March

2.2 Noise

Frequency of noise monitoring at all locations is now fortnightly. Average noise levels for the preceding period are shown in Table 1.2. Significant decreases in the average values at N7 have been observed at the end of the near surface extraction phase of the extension activities. Moderate decreases have been observed in all other sensitive locations due to the cessation of near surface extraction.

	N1	N2	N3	N4	N5	N6	N7	N8
February	41.5	37.5	35.8	36.1	36.0	41.8	43.3	40.4
March	39.3	37.1	38.3	35.2	39.5	42.6	42.1	37.7
April	34.2	36.0	33.0	32.8	33.7	41.7	40.8	42.0

Figure 1.4 Average noise values by Sensitive Location and Month

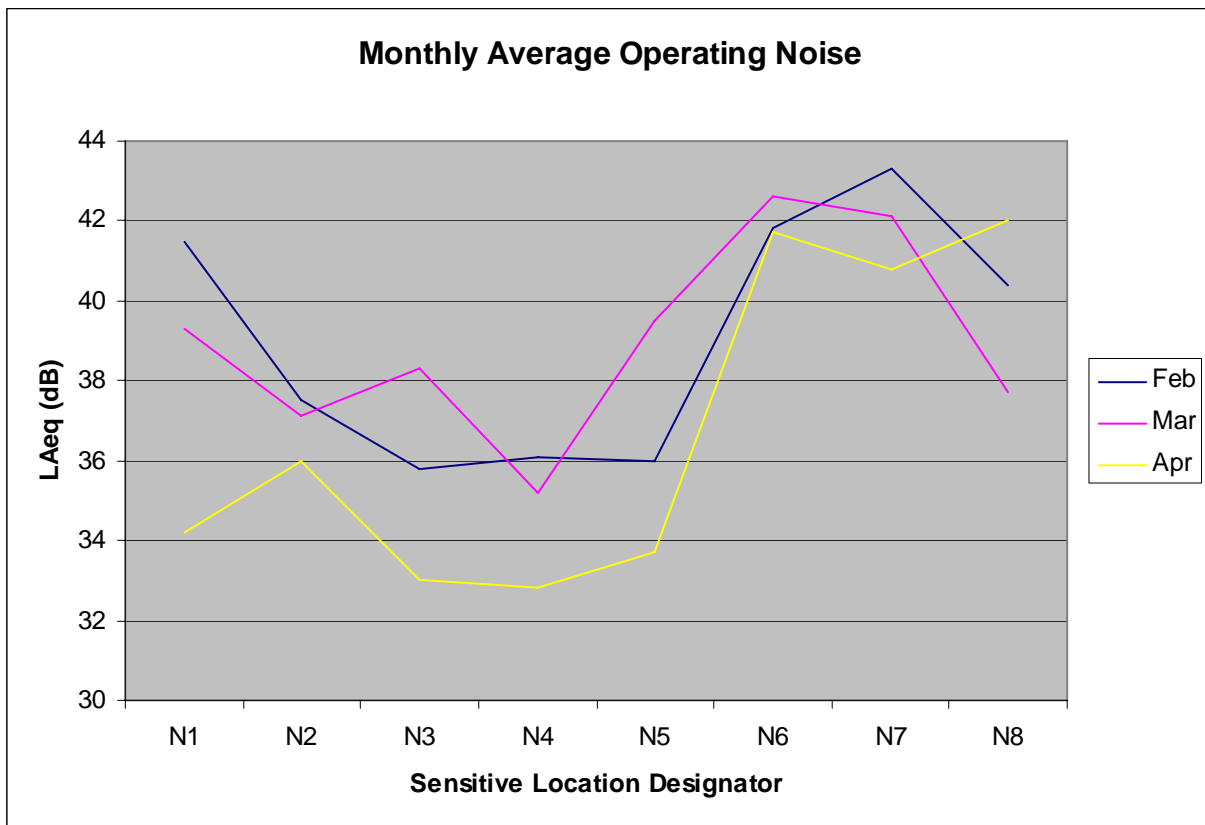


Figure 1.5 Average Monthly Noise Value by Sensitive Location

Limit is 45dB under normal operating conditions

2.3 Blasting

All blasting operations have been carried out in accordance with the standards required. Whilst some air blast measurements obtained at AB 1 may appear to fall outside the required standards, these measurements are taken from an internal monitoring point, that at times, falls within the minimum safe distance for personnel from the area being blasted. The air blast measurements that are obtained from this monitoring point during those blasts are not indicative of the actual noise translated outside of the quarry property. .

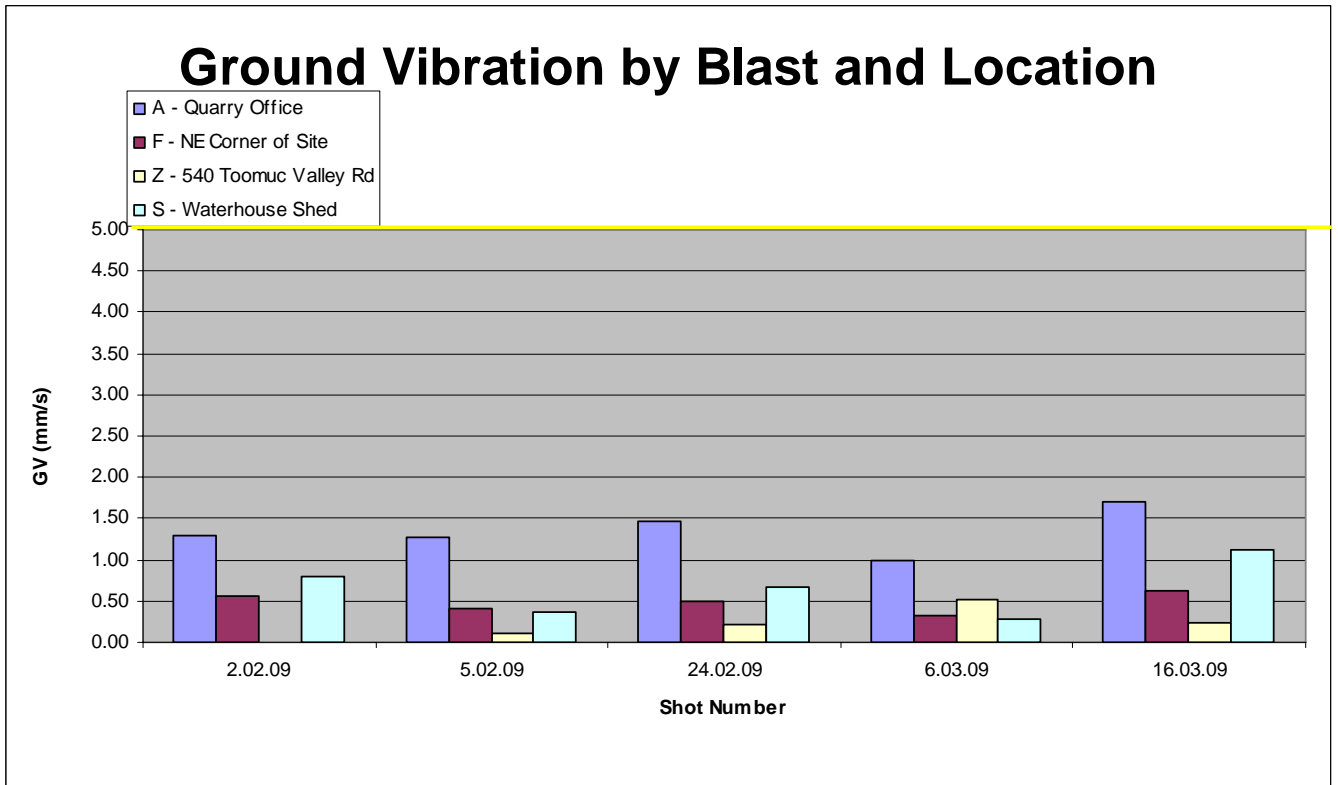


Figure 1.6 Ground Vibration by monitoring point and blast for reporting period

Limit is 5mm/s for 95% of blasts in a 12 month period.

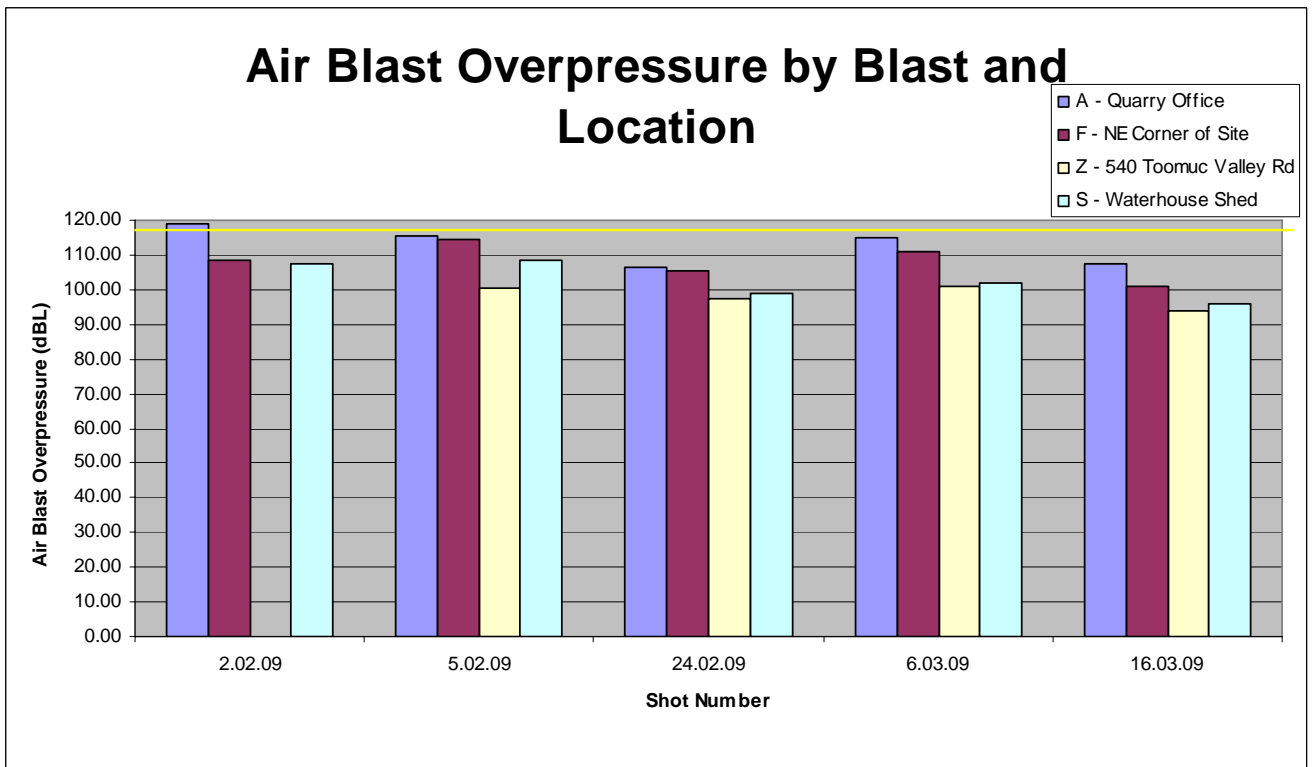


Figure 1.7 Air Blast Overpressure by monitoring location and blast for reporting period.

Monitoring point; 540 Toomuc Valley Rd did not trigger on the 2.02.09.

Limit is 115 dBL for 95% of blasts in a 12 month period.

2.4 Surface Water, Drainage and Ground Water

The annual groundwater report is expected next month and will be included in the following quarterly review.

A surface water testing regime has been implemented with the frequency of monitoring weekly. No water discharges occurred during this period. All steps are taken to avoid water discharge.

The following limits apply to water discharged from site.

TDS (mg/L)	pH	Turbidity (NTU)
650	6.5 – 9.0	30

Figure 1.8 – Discharge Limits