



Quarterly Compliance Report

1st January to 31st March 2019

Prepared by:

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1. *Introduction*

Penrice Quarry & Mineral (PQM) operates a limestone quarry at Angaston under a range of different mining leases as follows:

- PM 86
- PM120
- MPL 118
- MPL 75
- ML 6233
- RL 109

PQM is located approximately 2.5 kilometres north of the township of Angaston. DMITRE, now the Department for Energy and Mines (DEM) approved the Program for Environment Protection and Rehabilitation and Mine Operations Plan (MOP/PEPR) on the 28th October 2011 (2011/021). The MOP/PEPR is currently being reviewed in accordance with sections 70C/73G of the Mining Act.

This quarterly compliance report covers the more significant environmental and operational issues undertaken at the site during the period from the 1st January 2019 – 31st March 2019 inclusive. This report aims to demonstrate that site activities are generally compliant with the approved objectives and corresponding measurement criteria contained in the MOP/PEPR.

2. *Operational Overview*

Operations at the site continued as per normal and quarry output remained relatively steady. The site continues to supply high quality products for glass manufacture and agriculture, as well as high grade limestone to the Angaston cement plant, along with lower grade material, in terms of chemical quality, as quarry products.

Early-works have begun on re-aligning the front entrance of the quarry to improve the safety of traffic entering and leaving the quarry. Delay's in relocating power-line infrastructure will see the project completion into the 3rd Quarter 2019.

Environmentally, “Farmer Johns” is continuing to undertake and assist with site works including ground maintenance, annual surveys, management plans, weed / pest control and rehabilitation works relating to Outcome 10 in the approved MOP/PEPR. This includes no introduction of new weed and pests, or increase in abundance or escape of existing weeds and pest species in the mine area. Tobacco and Olives were targeted during the quarter as per plans. No fox baiting was undertaken during the quarter; however, the situation is continuing to be monitored.

During the reporting period, the company received five community complaints all relating to dust. The complaints were received by near-by neighbours contacting the Quarry Manager direct. In each instance, discussions were had with the complainant, explaining the quarry activities at the time and any resulting actions. The complainants have been satisfied with the company’s response after each instance.

3. *Environmental Management*

Below is a summary of the significant environmental management activities that were undertaken throughout the reporting period.

3.1 Outcome 1. Air Quality

- BAM unit data showing the 24hr daily mean (mid-night to mid-night) for the reporting period is attached in Appendix B. Four daily mean exceedances were recorded during the quarter.
- BAM unit availability for the period as follows, with BAM locations shown in Appendix A, Site Locations:
 - BAM 1 – 91%
 - BAM 2 – 92%
 - BAM 3 – 83%
- BAM unit calibrations and maintenance is continuing on a quarterly basis and was last completed on the 17th January 2019. The lower availability on BAM3 was a result of a filter tape issue over the Christmas and New Year period.

Other availability issues include overheating units in extreme heat and minor data availability and transfer issues.

- Nine PM₁₀ 24hr (rolling average) exceedances were recorded during the quarter and reported to DEM and EPA. In each case, the Trigger Action Response Plan (TARP) is enacted as per the sites Dust Management Plan (DMP), which includes stopping dust generation activities including production, increasing usage of the water trucks, and redirection of haul road traffic. Brief details of each exceedance are listed below highlighting date, BAM location and wind direction:
 - 11/01/2019 – Increased readings from BAM 1 in a NE wind direction resulting from Quarry Operations.
 - 12/01/2019 – Increased readings from BAM 3 in a S-SE wind direction resulting from Quarry Operations.
 - 17/01/2019 – Increased readings from BAM 1 in a W-NW wind direction resulting from Quarry Operations.
 - 30/01/2019 – Increased readings from BAM 1 in a NE wind direction resulting from Quarry Operations.
 - 01/02/2019 – Increased readings from BAM 3 in a S-SE wind direction resulting from Quarry Operations.
 - 25/02/2019 – Increased readings from BAM 1 in a NE wind direction resulting from Quarry Operations.
 - 01/03/2019 – Increased readings from BAM 1 in a NE wind direction resulting from Quarry Operations.
 - 08/03/2019 – Increased readings from BAM 1 in a NE wind direction resulting from Quarry Operations.
 - 20/03/2019 – Increased readings from BAM 1 in a W wind direction resulting from off-site sources.
- As a result of an increased number of exceedances in 2018 and early in 2019, DEM wrote to PQM requesting that PQM provided an update on the status of the planned activities to reduce dust generation and that a suitably qualified person be engaged to undertake an independent review of dust management at the site to identify any further potential control strategies.

- Recent actions planned and completed to further reduce dust generation in 2019 include:
 - Relocation of finer material away from BAM1 zone including two ABC Angaston product pads, two 7mm aggregate, two 5mm Aggregate and two 3mm Aggregate stockpiles.
 - Aggregate radial stacker / screen transfer point enclosure completed.
 - Installation of two 3-sided bunkers to contain the fine material stockpiles (minus 3mm) produced at the aggregate plant. Completion date end of May 2019.
 - AECOM engaged as a suitably qualified consultant to undertake an independent review of dust management at the site. The site visit and review was conducted on 4 March 2019 and report submitted to DEM. Recommendations contained in the report will assist in revising the sites DMP.
 - Ongoing hire of a second water truck throughout the duration of Spring-Summer-Autumn. Capital budgeted in 2019 to purchase a second water truck.
 - Ongoing application of stockpile dust suppressant spray to form a crust on exposed stockpiles and reduce dust generation in windy conditions.
 - Ongoing application of haul road dust suppressant types to assist in haul road dust suppression and conservation of water.
- DEM acknowledged the extremely low rainfall in 2018 and early 2019 has increased the difficulty in managing dust emissions from the site. 291mm of rain was recorded in 2018 at Nuriootpa, which is the lowest on record. For January to April 2019 a total of 9.2mm has been recorded, with January (0.2mm), March (2.8mm) and April (0.2mm) the lowest on record for the respective months (Bureau of Metrology Website).

3.2 Outcome 2. Drag Out

- The wheel wash facility has been operating during the quarter. The road sweeper frequency was increased around the quarry entrance and adjacent roads; see Measurement Criteria 2.1.

- Daily checks of drag out are in place as per Measurement Criteria 2.2 and no interference with natural drainage observed; see Measurement criteria 2.3.
- No complaints relating to drag out were received by the company during the quarter, although the EPA received to complaints resulting from drag out on Saturday 9th February. Overnight rains were the cause of the increased drag out in the morning. The street sweeper operates 5 days per week, but not on the weekends.

3.3 Outcome 3. Blasting

- All blasts are monitored for ground vibration and air blast overpressure in accordance with Australian Standard AS 2187.2 (2006).
- All blast complied with the Australian standards, with the maximum recorded reading during the quarter for one blast being 118.4dB for Air Blast Over Pressure (limit 120db) and 3.0mm/sec for Ground Vibration (limit 10mm/sec).

3.4 Outcome 4. Noise

- A noise assessment for the Penrice Quarry was undertaken by AECOM in 2017. The results demonstrated that the Quarry remains compliant with the Noise measurement criteria 4.6 as set out in the approved MOP/PEPR.

3.5 Outcome 5: Storm water and Erosion

- Silt trap locations are shown in Appendix A.
- No storm water left the site during the reporting period; all runoff was contained in the silt retention dams.

3.6 Outcome 6. Native Revegetation and Habitat Clearance

- Maintenance of the native revegetation plantings in MPL 75, MPL 118 and ML 6233 is ongoing. This included ongoing maintenance of irrigation systems and drippers.
- No clearance of any native vegetation occurred during the reporting period.

3.7 Outcome 7. Rehabilitation and Visual Amenity Impacts

- The company has purchased 5000 trees and shrubs for planting in 2019 as part of the progressive rehabilitation on the site. The majority of trees will be planted on the on eastern slopes of MPL 75, with the remaining planted on the western slope of MPL118 as replacement. The company is working with local schools to coordinate a community tree planting day in June 2019.
- Additional areas, after the successful trial of a hydro-mulching spray in 2018, will be treated on some of the visible outer slopes in 2019.

3.8 Outcome 8. Light Spill

- AECOM were engaged to undertake an assessment of light spill from the Penrice Quarry in 2017. The results indicated compliance with the most stringent recommended maximum illuminance criterion from AS 4282-1997.

3.9 Outcome 9. Groundwater

- The company continues to monitor additional ground water bores around the quarry, to establish whether the future operations will affect the groundwater aquifers in the Barossa Basin.
- The groundwater bore monitoring data collected, will be reported annually to determine if any meaningful trends became apparent over time.

3.10 Outcome 10. Weeds and Pests

- The company has updated its management plan to control weeds on the site for 2019. The January to March quarter focused on the following Olive and Tobacco trees.

3.11 Outcome 16. Traffic

- Monthly TARP surveys continued throughout the quarter. Installed security cameras from the weighbridge to the wheel wash are able to monitor trucks for tarp loads as they exit the quarry as an additional compliance measure. Tarping compliance remained at 96% for the quarter.

- Early works has been completed on re-aligning the quarry entrance to help improve public safety at this intersection. The project has been delayed in waiting for SA Power Network to relocate power lines in this area.

4. Quarry Planning

The company is progressing with the MOP/PEPR review, with the assistance of Groundwork Plus consultants. The review includes a complete revision of the current MOP/PEPR document to align with the recently released updated Extractive Mineral Lease Ministerial Determinations. The review will incorporate a detailed impact assessment and changes to existing objectives and criteria. The proposed changes were presented at the PCCG meeting held in February 2019, with the community feedback to be incorporated into the draft submissions.

Staged Development Plans for the quarry showing the current short-term extraction and rehabilitation plans for the site are being updated. Supply of material offsite into major projects was not realised, meaning the previously predicted reductions in the height of the landform will not be reached. The final height of the landform is a significant part of the final rehabilitation for the site and will form part of the current MOP/PEPR review. This is to ensure that the final land forms conform with the wider landscape to improve visual amenity.

Appendix A – Site Locations



Appendix B – BAM Monitors 24hr Average PM₁₀ Concentration

