Quarterly Report

1st January to 31st March 2017

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18th April 2017

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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 and
- ML 6233
- RL 109

PQM is located approximately 2.5 kilometres north of the township of Angaston.
DMITRE approved the Program for Environment Protection and Rehabilitation (PEPR) on the 28th October 2011 (2011/021).

This quarterly report covers the more significant environmental and operational issues undertaken at the site during the period from the 1st January 2017 – 31st March 2017 inclusive.

2. Operational Overview

Operations at the site continued as per normal. No significant changes occurred during the reporting period, with production remaining relatively constant.

Progress on redirecting the entrance road into the quarry has been slow. Design contractors have surveyed the proposed road and commenced developing detailed plans for the front entrance and the re-aligning of Penrice road. The purpose of the project is to improve safety at this intersection. Finalised plans will be developed in conjunction with Council and DSD.

Environmentally, “Farmer Johns” is continuing with the environmental tasks relating to Outcome 10 in the approved PEPR/MOP. This includes no introduction of new weed and pest, or increase in abundance or escape of existing weeds and pest species in the mine area. Specific tasks completed during the quarter included

ground maintenance and slashing at the front entrance and surrounding area. No baiting was completed during the quarter, however the situation is being monitored.

During the reporting period the company received no community complaints.

3. Environmental Management

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

3.1 Outcome 1. Dust Management

- BAM unit data showing the PM_{10} 24hr daily mean for the reporting period is attached in Appendix B.
- BAM unit availability for the period as follows, with locations shown in Appendix A:
    - BAM1 – 100%
    - BAM 2 – 82%
    - BAM3 – 47%
- Availability issue on BAM2 resulting from power drop-outs, with modem not automatically restarting as programmed. A manual restart is required in these instances. This issue is still being investigated.
- Poor availability on BAM3 related to sending the unit to Melbourne for repair in January. Unit stopped recording on the 30th December 2016. Supplier's not available until 10th January to assist with remote diagnosis. Filter tape and pump assembly changed on site without success. Unit sent to Melbourne for repairs with faulty pressure board identified and replaced. Unit back on line 17th February.
- Two PM_{10} 24hr (rolling average) exceedances (>50ug/m^3) were recorded for the period:
    - 06/01/17 – BAM1 – Increased PM_{10} from Aggregate Plant and sales area. Hot conditions with NE wind during the day. Site water truck out of service with faulty greasing unit and smaller hired water truck on site

while repairs undertaken. Upon notification of high readings, load and haul operations re-directed at and Aggregate plant stopped.

- 22/03/16 – BAM1 – Increased PM_{10} readings on BAM1 with NE winds on the 21/02 from approximately 6:30pm. Aggregate plant stopped at 8pm and remained off for the shift and following day. Strong W winds on the 22/02 increased PM_{10} readings across all 3 BAM's from offsite sources. High PM_{10} readings on BAM1 from the previous day resulting in a 24hr rolling average exceeding 50ug/m^3 on the 22/02. 24hr daily mean (midnight to midnight) did not exceed 50ug/m^3 on either day.

- A revised Dust Management Plan (DMP) was approved by the EPA on the 13th February 2017. This revised plan is now in place and being implemented. The DMP is required under the site EPA licence and details the site activities, environmental receptors, dust sources, risk assessment, hierarchy of controls site monitoring and Trigger Action Response Plan's (TARP's).
- Planned Dust Management initiatives completed during the quarter included completion of transfer point enclosures on the Aggregate Plant Impact Crusher and Primary Discharge Conveyor. These two items have made a small contribution to reducing dust generation from the Aggregate plant. The sprinkler line was also extended along the front entrance road to maintain a wet surface to mitigate wheel dust generation, which allows the water truck to be utilised in other areas.

3.2 Outcome 2. Drag Out

- The wheel wash facility has been operating during the quarter. The road sweeper continues to operate three times per week around the quarry entrance and adjacent roads; see Measurement Criteria 2.1.
- Daily checks of drag out in place as per Measurement Criteria 2.2.
- No interference with natural drainage has been observed; see Measurement criteria 2.3.

3.3 Outcome 3. Blast Monitoring

- All blasts are monitored for ground vibration and air blast overpressure in accordance with Australian Standard AS 2187.2 (2006).

3.4 Outcome 4. Noise

- It has been reported previously, that noise modelling at the site was undertaken in October 2014 by AECOM and concluded that the site was compliant with the approved noise measurement criteria and with EPA Noise Policy. There have been no operational changes at the quarry since the modelling was undertaken.

3.5 Outcome 5: Storm water and Erosion

- Following the clean out of the silt traps on the western side of the quarry during the last quarter, the trap remains relatively clean.
- Despite the heavy rains in early 2017, 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

- Maintenance of the native revegetation plantings in MPL 75, MPL 118 and ML 6233 is ongoing. This included maintenance of irrigation systems and drippers. No clearance of any native vegetation occurred during the reporting period, see Criteria for Measurement 6.3.

3.7 Outcome 7. Rehabilitation and Visual Amenity

- Maintenance and irrigation of the earlier planting of native trees planted on the outer slopes of MPL 118 has continued. Additional seeding of outer slopes will be undertaken during the 2nd and 3rd Quarters on commencement of winter rains. All contrasting coloured material at the front of MPL 118 has been covered with top soil to improve the visual amenity and will be seeded.

3.8 Outcome 8. Light Spill

- Lighting survey Report No. 127613029-001-R-Rev0 undertaken by Golder Associates showed PQM to be compliant with Criteria 8.1. The lighting configuration at the site remains unchanged.
- An internal light survey will be completed on site during 2017 to ensure compliance against this outcome.

3.9 Outcome 9. Groundwater

- The groundwater bore monitoring data collected for last year was tabled at the last PCCG meeting. The company intends to report a water summary annually to determine if any meaningful trends became apparent over time.
- As usual Quarry management would like to thank the neighbours of the quarry for their cooperation with this program.

4. Quarry Planning

The consultants Groundwork Plus were engaged to produce staged Development Plans for the quarry showing the current short term extraction and rehabilitation plan for the site, along with conceptual and long term plans. The plans will be used in the MOP/PEPR review which is due in 2018 and were presented at the recent PCCG meeting held on the 17th February 2017.

Provided deliveries into the Northern Connector Project continue for the next few years, significant material can be moved off the eastern mound on MPL75. The company believes the final rehabilitated height of the eastern mound can be expected to be reduced by some 20 metres at the southern end and 30 metres at the northern end over the next 5 years. Extraction on the outer edge of the mound will naturally be limited to ensure that the planted trees are kept to aid in the progressive rehabilitation of the site. This will significantly improve the visual amenity of the site and eliminate the need to place any additional overburden on MPL 118 during the next few years.

The current approved Strategic Visual Amenity Plan (SVAP) will be updated in line with the MOP/PEPR review in 2018. Photographic evidence has also been gathered to support the integration and harmonisation of the rehabilitation, by providing a visual montage of the Penrice Quarry, to highlight the current versus predicted landform that will be left after the rehabilitation of the Eastern overburden mound. The document is to provide conceptual views highlighting predicted landform versus current topography from locations on Light Pass Road and Nuriootpa and will be presented at the next PCCG meeting.

The mine closure plan, prepared by Golders and sent to DSD is on hold until the next review of the MOP. A conceptual Post Quarry Land Use Plan was developed by Groundworks in conjunction with this mine closure plan. Hydrogeological investigation completed previously by the RPS Aquaterra study summarised, that long term groundwater inflows will stabilise in between 275mAHD and 285mAHD, within the Quarry void. For this reason, the post quarry land use has been designed to allow for groundwater inflows in the pit to reach this recommended level. Rehabilitation of the upper benches will be completed above 360mAHD, leaving approximately 6 exposed benches down to the proposed recharge level of the groundwater aquifer or final pit water level.

Appendix A – Site locations

Appendix B – BAM Monitors 24hr Average PM10 Concentration