



Mine & Rehabilitation Annual Compliance Report

2013



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3 Contents of the Compliance Report

3.1 Introduction

3.1.1 - Identification

Mine Name	Penrice Quarry & Mineral (PQM)			PEPR#	(2011/021)
Owner	Penrice Soda Products Pty Ltd			Tenements	
Operator	Penrice Quarry & Mineral (PQM)			PM 86	PM 120
Site Contact	Name	James Rowe		MPL 118	MPL 75
Email	james.rowe@penrice.com.au	Ph	08 8563 8822	ML 6233	RL109
Site Location Details: PQM is located approximately 2.5 kilometres north of the township of Angaston					
Report Details					
Reporting Period	1st January 2013 – 31st December 2013 inclusive		Date of Preparation		
Ownership Statement: This document represents a true and accurate account of the compliance status of the site at date of preparation.					
Name	James Rowe	Signature		Date	

3.1.2 – Compliance with Outcomes

With the MOP/PEPR being approved by DMITRE in November 2011, the following environmental outcomes are set out on pages 10-16 inclusive. An overview of the Environmental Outcomes, Criteria for Measurement, Status and any additional notes are provided in the table.

Environmental Outcome	Criteria for Measurement	Status	Notes
1. Air Quality			
No public health or nuisance impacts to local residents and adjacent land users from dust generated by mining operations	<p>Health Impacts:</p> <p>1.1 Site records for dust measured at the site boundary must show that: Where the average PM10 dust entering the site is less than 50 ug/m³ for any 24 hour period, the average PM 10 dust leaving the site (including both ambient and mine related dust) will not exceed an average of 50 ug/m³ for that particular 24 hour period</p> <p>1.2 Where the average PM10 dust entering the site exceeds 50 ug/m³ for any 24 hour period, the average PM10 dust leaving the site must not exceed the measured level entering the site</p> <p>1.3 Data will be acquired using a minimum of 3 fixed continuous monitors at the site boundaries linked to an onsite weather station. The monitors will be calibrated to measure onsite dust, and to determine reasonable error limits (with adjustment to the compliance limit if necessary) to DMITRE and EPA's satisfaction</p> <p>1.4 PQM will develop and implement a plan to characterise the site to determine the appropriate number and location of the monitors to EPA and DMITRE satisfaction by 31/12/2011</p> <p>1.5 PQM will provide a summary of the calendar day average data to DMITRE, PCCG and EPA every quarter</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<p>See Graph (Appendix A)</p> <p>See Graph (Appendix A)</p> <p>Three approved BAM monitors installed on site. DMITRE and the EPA have approved the BAM units and their location following a site inspection.</p> <p>Golder Associates have completed a formal Air Quality Study of the site Report No.12613029-002-r-Rev1 August 2012 PQM have consulted both DMITRE and the EPA in relation to report and the finalisation of the location of the BAM dust monitors</p> <p>See Graph (Appendix A)</p>

	<p>1.6 Any exceedance of the daily compliance limits above will be reported to EPA and DMITRE within 1 working day</p> <p>1.7 Compliance with EPA approved Dust Management Plan</p>	Compliant	See Table (Appendix D)
		Compliant	Dust Management plan has been updated and approved .This is reviewed at the morning management meetings and key points entered into the Mine Manager's diary
Environmental Outcome	Criteria for Measurement	Status	Notes
2. Drag Out			
No drag out onto Penrice Road from the mine site	<p>2.1 No exceedance of compulsory intervention level as defined by the DTEI pavement sweeping maintenance standard</p> <p>2.2 Pavement markings should be visible</p> <p>2.3 No interference with natural drainage</p> <p>2.4 Drag out not to exceed 10m² in total on road curves, or >20m length of edge line</p>	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<p>Daily check of drag out in place. Street sweeper used a minimum of twice a week</p> <p>Pavement markings and drains audited once a month</p> <p>No interference</p> <p>If the Truck wash is not working photographic evidence will be taken to monitor drag out. Regular road sweeping maintenance in place.</p>
Environmental Outcome	Criteria for Measurement	Status	Notes
3. Blasting			
No impact on public safety, nuisance or damage to third party structures as a result of blasting activities	3.1 All blasts to comply with Australian Standard AS 2187.2 (2006) limits for human comfort at any sensitive site external to the mine. The peak sound pressure limits are currently 115dB for 95% of blasts per year. 120 dell maximum for any blast	Compliant	See Table 2. blast compliance (Appendix B)

	<p>3.2 The ground vibration levels limits are 5 mm/s for 95% of blasts per year, with a maximum vibration of 10 mm/s for any blast</p> <p>3.3 No blasting outside Monday to Friday 12:00pm to 1:30pm, unless required for safety reasons</p> <p>3.4. No evidence of fly rock outside mine site due to blasting</p>	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<p>See Table 1. blast (compliance Appendix B)</p> <p>All blast times recorded</p> <p>No evidence of fly rock</p>
Environmental Outcome	Criteria for Measurement	Status	Notes
4. Noise			
No public nuisance impacts from noise emanating from the operating site	<p>4.1 The aggregate plant to operate from 6:00am to 12:00am, Monday to Friday, 6:00am to 4:00pm Saturdays, Sundays and Public Holidays</p> <p>4.2 Load and haul operations to operate from 6:00am to 6:00pm Monday to Friday, 6:00am to 4:00pm Saturdays, Sundays and Public Holidays</p> <p>4.3 Previously imposed limitations on MPL 75 and MPL 118 remain adhered to</p> <p>4.4 Rock breaking operations to operate from 7:00am to 7:00pm Monday to Friday, 7:00am to 4:00pm Saturdays, Sundays and Public Holidays</p> <p>4.5 Train loading operates between the hours of 7:30am and 6:00pm Monday to Saturday, 8:00am to 6:00pm on Sundays and Public Holidays. Future anticipated landfill projects would be supplied by rail and will likely require one additional train load per day</p> <p>4.6 Demonstrate compliance with the noise source measurements in the AECOM report (Doc No 60099270-A9K01RP-4) dated 31/5/10 by an annual independent suitably qualified expert show noise source are equal or less than Appendix B (page B-1 of the AECOM report)</p>	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<p>All production times recorded</p> <p>All production times recorded</p> <p>As above</p> <p>As above</p> <p>Reduced train movements as from July 2013 due to joint venture. Train currently running Tues & Thursday's.</p> <p>2013 AECOM Report No. A13G01RP 19/7/13 has shown PQM to be compliant</p>
Environmental Outcome	Criteria for Measurement	Status	Notes
5. Storm Water and Erosion			
No contamination of watercourses off site caused by mining related sediment	5.1 All storm water leaving silt retention dam on MPL (during rainfall events) will be tested for turbidity and comply with ANZECC standard of 50 NTU	Not Relevant	No water has left the site during this reporting period

Environmental Outcome	Criteria for Measurement	Status	Notes
6. Native Revegetation and Habitat Clearance			
Maintain existing PQM native revegetation plantings in MPL 75, MPL 118 and ML 6233. Clearance of any native vegetation complies with Native Vegetation Act 1991. Vegetation and sediment in Jaeckeli Creek maintained at 1/1/09 condition or better	<p>6.1 Annual native revegetation survey and photographic monitoring undertaken by independent expert approved by DMITRE demonstrates overall site vegetation health and surface area covered has not decreased from baseline which is to be acquired by 31/12/11 (unless removal is required for operational reasons and included in approved MOP/PEPR)</p> <p>6.2 Annual native re vegetation survey (baseline: Appendix 1 of Appendix 5) and creek profiling at specified locations (Appendix 7 of Appendix 5) undertaken by competent independent expert approved by PIRSA demonstrates vegetation health and creek profile has not deteriorated from baseline (as defined in March, 2009 Management Plan, Appendix 5)</p> <p>6.3 No clearance of native vegetation will occur</p>	<p>Compliant</p> <p>Compliant</p> <p>Compliant</p>	<p>Donovans Earthcare has conducted annual native revegetation survey and annual Jaeckeli Creek vegetation and survey Report PSP003 dated 19/12/13</p> <p>No clearance of trees throughout this reporting period</p>
Environmental Outcome	Criteria for Measurement	Status	Notes
7 .Rehabilitation and Visual Amenity Impacts			
Integrate and harmonise final landforms with the natural landform of the adjacent foothills. Visually soften contrasting and reflective landforms which are temporarily 'idle'. Integrate and harmonise revegetation with existing tree cover on adjacent hills. Screen visually prominent built structures (including active product stockpiles) with vegetation	<p>7.1 As per the 3 phases in the Strategic Visual Amenity Plan (SVAP) (Appendix 15) dated 18/10/11. Milestones for phases 1a, 1b, 1c, 2 and 3 and Mine closure</p> <p>7.2 The milestones for stages 2 and 3 are subject to timing reviews based on Mine development and include contingency rehabilitation plans if stages are delayed 6 monthly audits of SVAP progress to be undertaken by a competent independent expert approved by PIRSA</p> <p>7.3 The audits will, as a minimum, report out on progress to the milestones detailed in Section 6 of the SVAP and will provide recommendations on contingency activities to improve the visual amenity of MPL118</p>	Compliant	Donovans Earthcare has conducted an audit report No.PSP003 dated 19/12/13 to provide progress reports to milestones and provide recommendations

screens where practicable			
Environmental Outcome	Criteria for Measurement	Status	Notes
8. Light Spill			
Amenity of adjacent residents is not reduced by operational use of direct night time lighting	8.1 Compliance with Australian Standard 4282-1997 "Control of the obtrusive effects of outdoor lighting". Light spillage not to exceed 2 lux	Compliant	Lighting survey Report No. 127613029-001-R-Rev0 by Golder Associates dated 22/3/12 showed PQM to be compliant, lighting configuration has remained the same in 2013.
Environmental Outcome	Criteria for Measurement	Status	Notes
9. Groundwater			
No adverse impact to the quality or quantity of ground water to existing uses caused by mining operations.	9.1 Compliance with WAP license allocation 9.2 Hydrology modelling by an independent expert approved by DMITRE demonstrates no significant impact from mine operation. To be completed by end 31 st December 2012	Compliant Compliant	Aquaterra have completed the modelling and the draft report was discussed with DMITRE on the 29 th January 2013. Aquaterra presented the report at the PCCG (13 th February 2013)
Environmental Outcome	Criteria for Measurement	Status	Notes
10. Weeds and Pests			
Ensure no introduction of new weeds or pests (including feral animals) nor increase in abundance or escape of existing weeds and pest species in the mine area	10.1 Agree by 31 st December 2011 a pest control program with neighbours in the Rural and Rural Living zones within 500m of the site boundary and implement. In the event an agreement cannot be reached an independent expert will be appointed to review the suitability of the program 10.2 Annual pest and weed survey undertaken by independent expert approved by DMITRE shows no increase above previous survey levels	Compliant Compliant	Pest and weed program in place. Rabbit and fox baiting undertaken across site. Donovans Earthcare has completed survey Report no.PSP002 dated 20/12/13

<i>Environmental Outcome</i>	<i>Criteria for Measurement</i>	<i>Status</i>	<i>Notes</i>
11. Aboriginal Heritage			
No disturbance to Aboriginal artefacts unless prior approval under the relevant legislation is obtained	11.1 If any suspected artifacts are discovered as a result of mining, work will cease in the immediate vicinity of the artifact, until the find has been appropriately assessed, and if necessary, approval under the Aboriginal Heritage Act is obtained to disturb the artifact	Not Relevant	No event
<i>Environmental Outcome</i>	<i>Criteria for Measurement</i>	<i>Status</i>	<i>Notes</i>
12. Domestic and Industrial Waste (excluding overburden)			
All domestic and industrial waste disposed of offsite	12.1 Waste tracking and disposal inventory (including type, volume, storage locations and disposal method) demonstrates all domestic and industrial waste disposed of at EPA licensed site (where applicable)	Compliant	Waste tracking certificates in place
<i>Environmental Outcome</i>	<i>Criteria for Measurement</i>	<i>Status</i>	<i>Notes</i>
13. Geotechnical Stability			
No landslide events that cause any injury to the public or damage offsite assets and/or public infrastructure	<p>13.1 No impacts to public safety or offsite assets and public infrastructure caused by unplanned slope failures</p> <p>13.2 Audit by an independent geotechnical engineer confirms that the final dump design (Appendix 8 and 15) is stable and dumps are built to design specifications at the end of each stage referred to in the SVAP</p>	<p>Not Relevant</p> <p>Compliant</p>	<p>No events</p> <p>Report conducted by Delia Sedia from Mancala, report No. 2094_REO1_vol dated 1/8/2013</p>
<i>Environmental Outcome</i>	<i>Criteria for Measurement</i>	<i>Status</i>	<i>Notes</i>
14. Topsoil Management			
Ensure that existing topsoil quality and quantity is contained on site and is maintained	14.1 Topsoil inventory demonstrates all available topsoil is conserved for reuse, and is used for rehabilitation on the mine site. Representative composite sampling of topsoil at point of removal and placement for pH, conductivity and nutrients (N, K, and P) demonstrates no decrease in nutrient levels at placement	Compliant	<p>Baseline tests conducted. Audited by DMITRE</p> <p>Further tests to be conducted at final stages</p>
<i>Environmental Outcome</i>	<i>Criteria for Measurement</i>	<i>Status</i>	<i>Notes</i>
15. Public Safety			
No public injuries and/or	15.1 Independent investigation of all recorded injuries from unauthorised access to	Not	No events

deaths resulting from unauthorised entry to the site that could have been reasonably prevented	the site demonstrates that the incident could not have not been reasonably prevented through implementation of precautionary measures	Relevant	
Environmental Outcome	Criteria for Measurement	Status	Notes
16. Traffic			
No dust nuisance or safety impacts caused by heavy vehicle traffic at point of entry or exit of the mine site that could have been reasonably prevented	<p>16.1 All products trucks leaving the site will have their load covered with compliance of not less than 96% from monthly surveys</p> <p>16.2 Independent investigation of all recorded accidents resulting from mine traffic entry or exit demonstrates that the mine operator could not have reasonably prevented the accident through implementation of precautionary measures</p>	<p>Compliant</p> <p>Not Relevant</p>	<p>Monthly tarp surveys conducted results shown at PCCG</p> <p>No Event</p>
Environmental Outcome	Criteria for Measurement	Status	Notes
17. Emergency Response			
Bring the mine back to compliance as soon as practicable and modify management procedures to prevent a recurrence	17.1 An independent audit demonstrates that the breach was rectified as soon as practical and that suitable modifications have been made to the management system to prevent recurrence	Not Relevant	No event

3.1.3 - Operations Summary Table

Retention Lease 109 was granted final approval on the 10th of October 2013. The lease is situated to the north of the quarry boundary and located on Scott Tolhurst' land. A PEPR was formed and approved also. The lease extension was granted for a further 5 years and will expire in 2017.

3.1.3.1 Mining Volumes and Product

Mined (Total since lease grant)	Mined (Total this Reporting Period)	Forecast Mining (total next Reporting Period)
	1,621,866	1,700,000

Current extraction of the pit is very challenging and seems to be changing often due to uncertain markets in the concrete and civils sectors. The chemical sector market is somewhat similar to previous years with glass companies, internal sales to Penrice Osborne and ABC all remaining near current sales volumes, albeit we have heard of a possible reduction of stone needed for the Adelaide Brighton Cement Plant in Angaston in 2014 due to a reduction in the brighton lite (white) cement market. Current workings in the pit include excavation of our eastern walls from RL303 down to RL267. This is ongoing and needed to be able to enable a drop cut into the bottom level (RL267). This is needed to widen the area to enable the drop cut. Approximately 150kt of sand is currently being hauled from stockpiles in the (council pit and near the Finlay crusher to build a ramp from RL291 to RL 267 to be able to extract and mine out the current existing ramp system at the southern end of the pit. This will see a change being that the main entry haul road to the pit will be from the northern end instead of the southern area. We are sure that this will have a further positive impact on the community as it will lessen the noise impact to the Penrice neighbours adjacent to the southern boundary. I will be discussing this at the February CCG meeting. The business has moved to a 60T fleet of haul trucks as opposed to the 90T fleet in place historically. This is largely due to the fact of reduced extraction tonnages needed with the closure of the soda ash plant and a majority of the overburden campaign being completed. The 60T fleet is bought in through Komatsu on a long term hourly hire arrangement.

The MPL118 waste dump currently has a total of 1,913,486 tonnes on the area. This figure is from our June 30 I-Site scan and tonnages added to the dump from July – Dec 2013. Rehabilitation has been concentrated on finalising the MPL118 Tier 1 area. This was completed throughout this reporting period. In total 520 tube stocks were planted after final battering of the area was concluded. The area has been planted with grow guards and

irrigation in place to increase the success percentage rate of the rehabilitation. Throughout the year no additional mineral processing or kit was bought into the site.

3.1.3.2 Resource/Reserve Reporting

Ore Reserve		Mineral Resources		Est. Mine Life
Proved	34 MT	Measured	66.3 MT	23 years
Probable	33 MT	Indicated	84.5 MT	
		Inferred	88.7 MT	

Please Note: These figures were derived from the 2012 exploration Drilling campaign. The estimated Mine Life has increased to approximately 40 years with the reduced extraction of high grade limestone to the Osborne Manufacturing Plant.

Given that the reduction of high grade limestone extraction due to internal requirements have been reduced and a total extraction of 1,621,866 tonnes were mined within this period the total reserve estimate is approximately 66.37MT. The estimated mine life has risen closer to 40 years with the market decline for high grade limestone.

3.1.3.3 Native Vegetation Clearance

Maximum amount approved in PEPR to be cleared	Amount cleared this period	Total amount cleared to date	Forecast clearance for next reporting period
N/A	0		0

3.1.3.4 Disturbance and Rehabilitation

Domain	Last reporting period		Current reporting period		Proposed next 12 months	
	Disturbed	Rehabilitation	Disturbed	Rehabilitation	Disturbed	Rehabilitation
MPL 118	No new topsoil removed 125,841 tonnes of waste dumped	First tier level completed, Started second tier level	No new topsoil removed 109,530 Jan-Dec tonnes of waste dumped	First tier level Started second tier level. Weeds sprayed along Jaeckeli creek.	180 000 tonnes forecasted to be dumped in 2014, dependant on market.	Minimal, finalise Tier 2 dump and shape with battering.
MPL 75	N/A	Salem road slopes		Weeds sprayed Salem Road and Kalimna slopes		Weeds sprayed Salem Road and Kalimna slopes
ML 6233	N/A	N/A	N/A	N/A		
PM 86/PM 120	1,901,701 tonnes blasted 2,270,130 tonnes mined	Western side of the eastern mound	1,621,866 tonnes extracted in 2013, 1,536,900 blasted	Western side of the eastern mound	1,700,000 mined dependant on market activity	Weed Eradication

3.2. Compliance discussion

3.2.1 Compliance with Conditions of Approval

On the 20th and 22nd of February there was large amounts of smoke in the area coming from bushfires which effected the PM₁₀ readings at the BAM monitors. DMITRE, EPA and CCG members were notified of the exceedence and photos of the smoke were supplied. Figure 1 below shows the real time PM₁₀ readings over this period. The predominant wind direct for this period was South Easterly (figure 2). The Dust Management Plan was implemented both days.

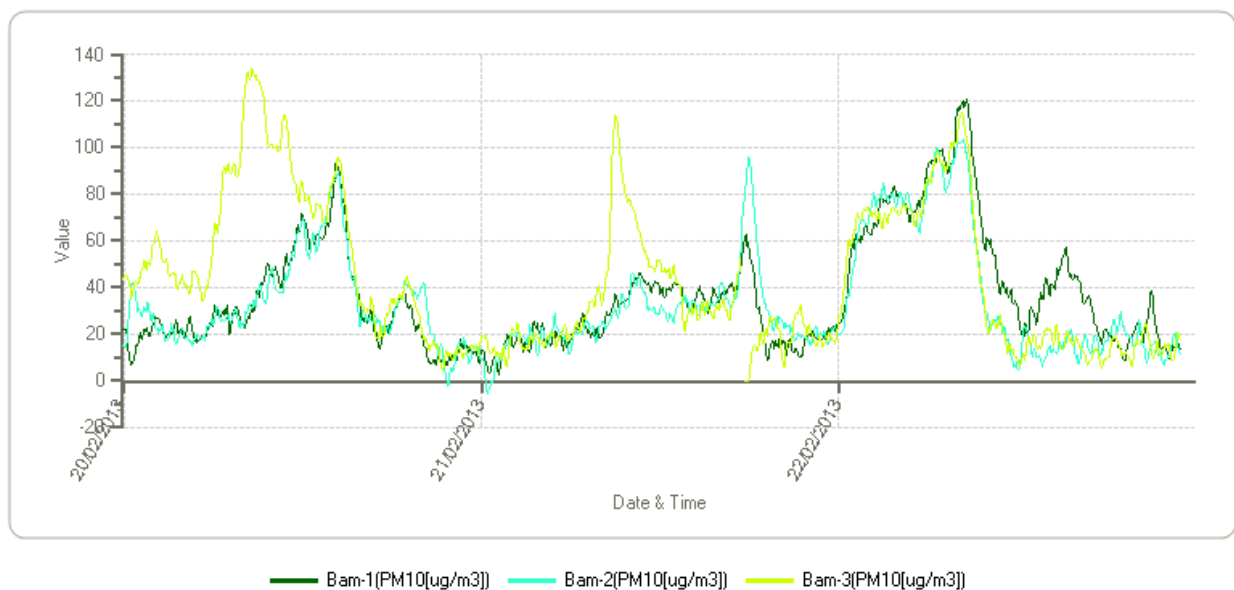


Figure 1 - PM₁₀ real time monitoring data

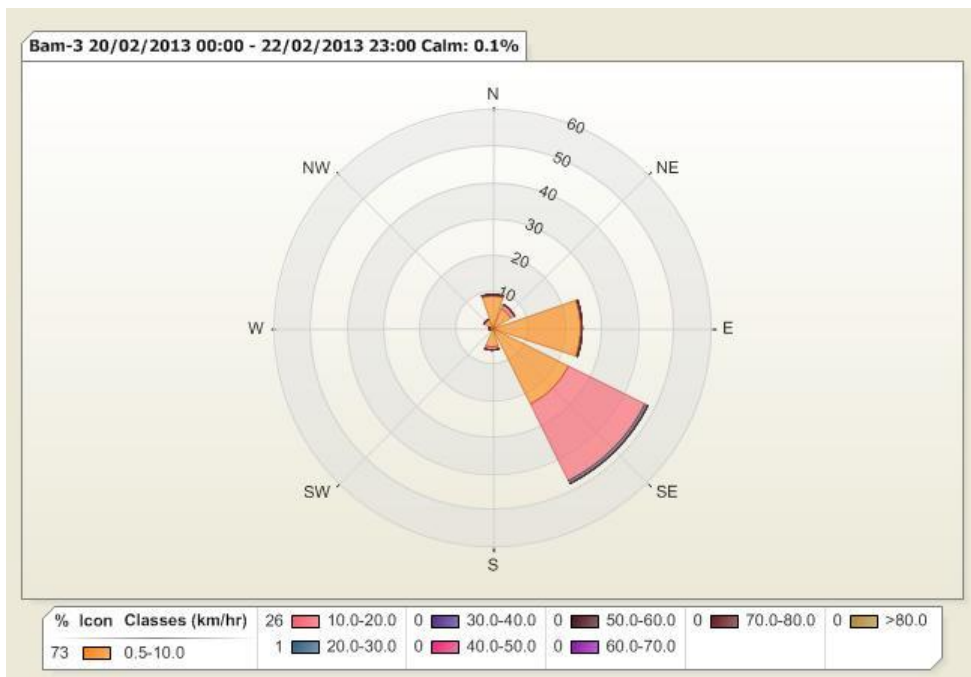


Figure 2 - Bam 3 wind direction

On the 21st of March there were dust storms in the Barossa area with speeds up to 70km/hr (Nuriootpa station 023373, BOM website) and the direction predominantly from the WSW (figure 4) all three units show consistent 24hr readings for dust coming onto and leaving site through out this period (figure 3). DMITRE, EPA and CCG members were notified of the exceedence. The Dust Management Plan was implemented.

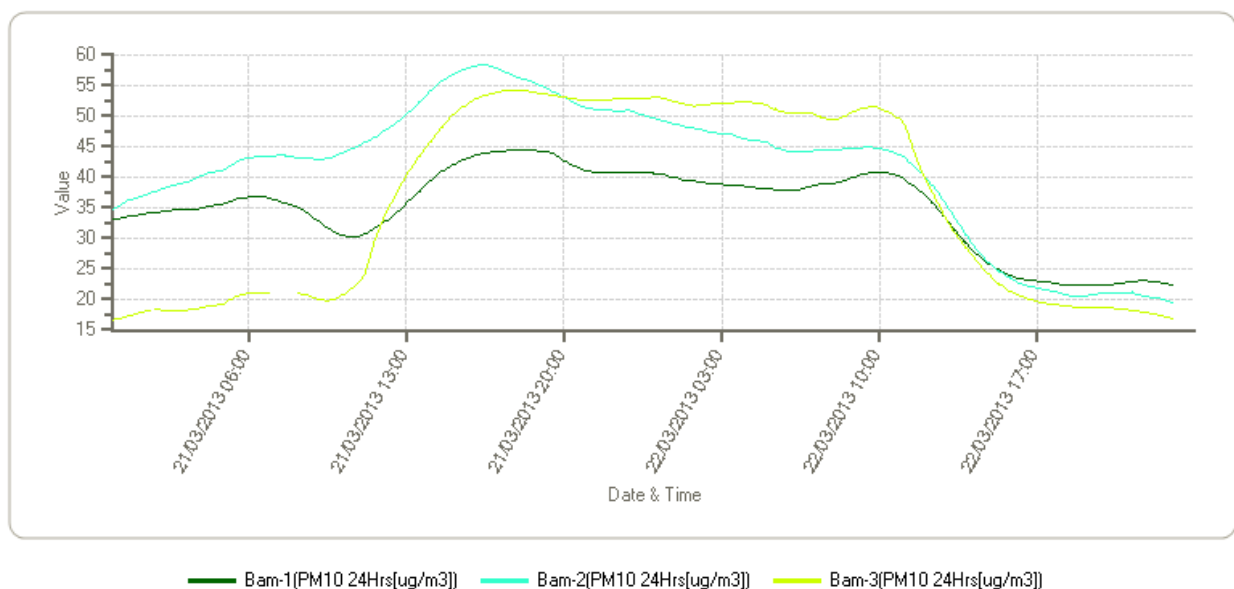


Figure 3 - PM₁₀ 24 hour average

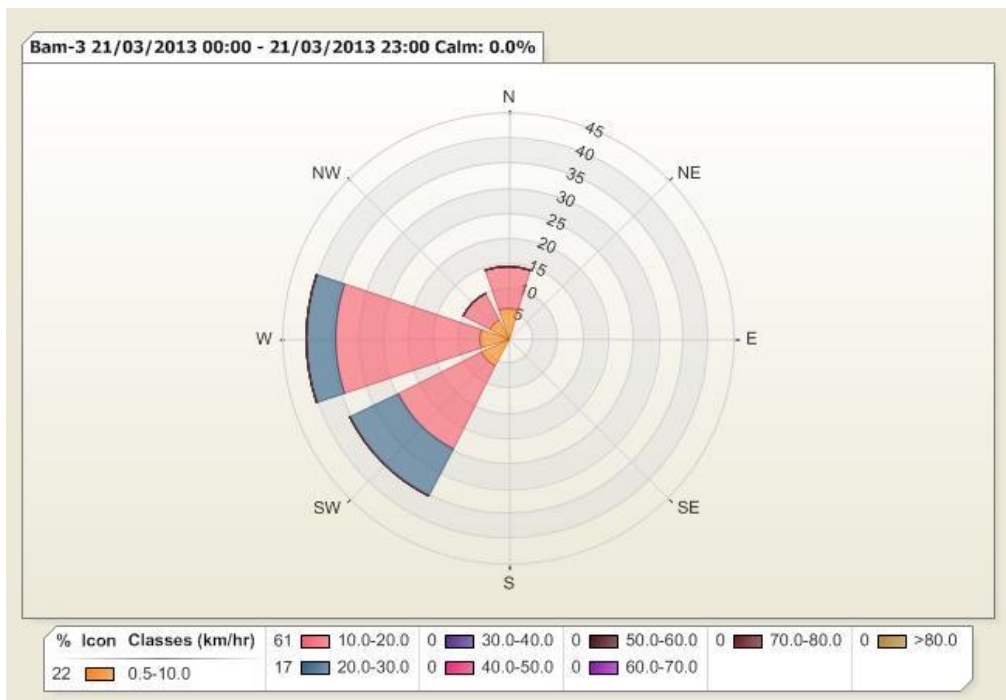


Figure 4 – Bam 3 wind direction

On the 27th of March there were WNW winds of up to 65km/hr (Nuriootpa station 023373, BOM website) apart from one spike at Bam 3 of 280 $\mu\text{g}/\text{m}^3$ all three units had consistent readings through out this period (figure 5). On the day there were public road works being undertaken on Penrice Road (south of the quarry boundary) which is believed to have affected the readings as the predominant wind direction at Bam 2 for the day was SW (Figure 6). DMITRE, EPA and CCG members were notified of the exceedence. The Dust Management Plan was implemented.

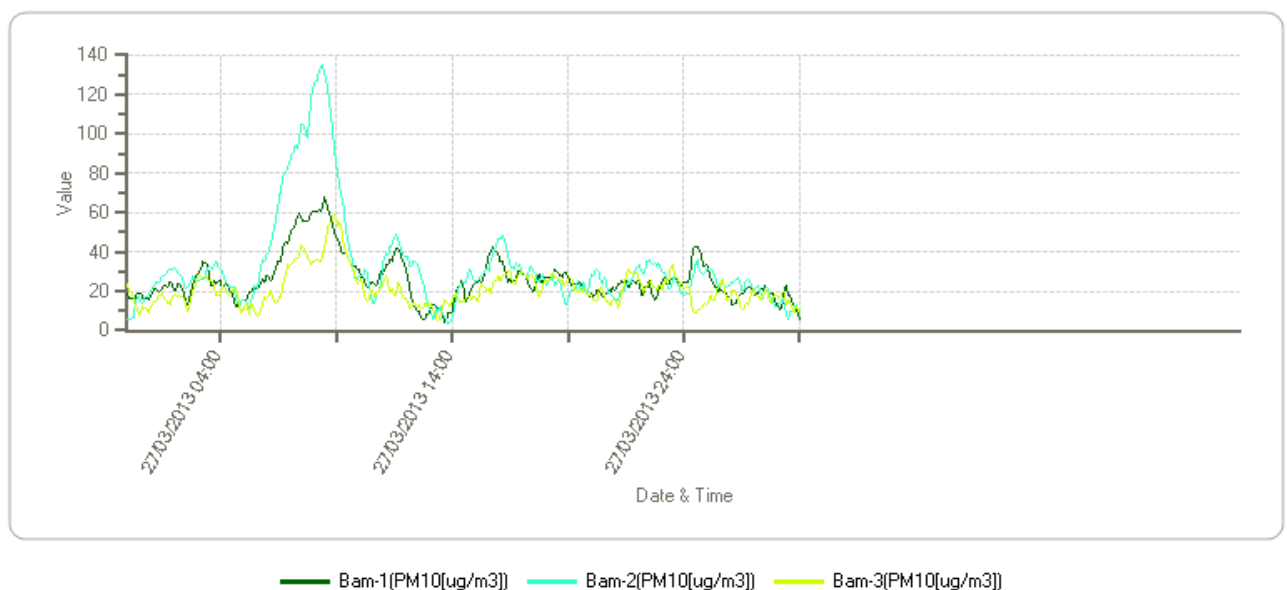


Figure 5 - PM₁₀ real time monitoring data

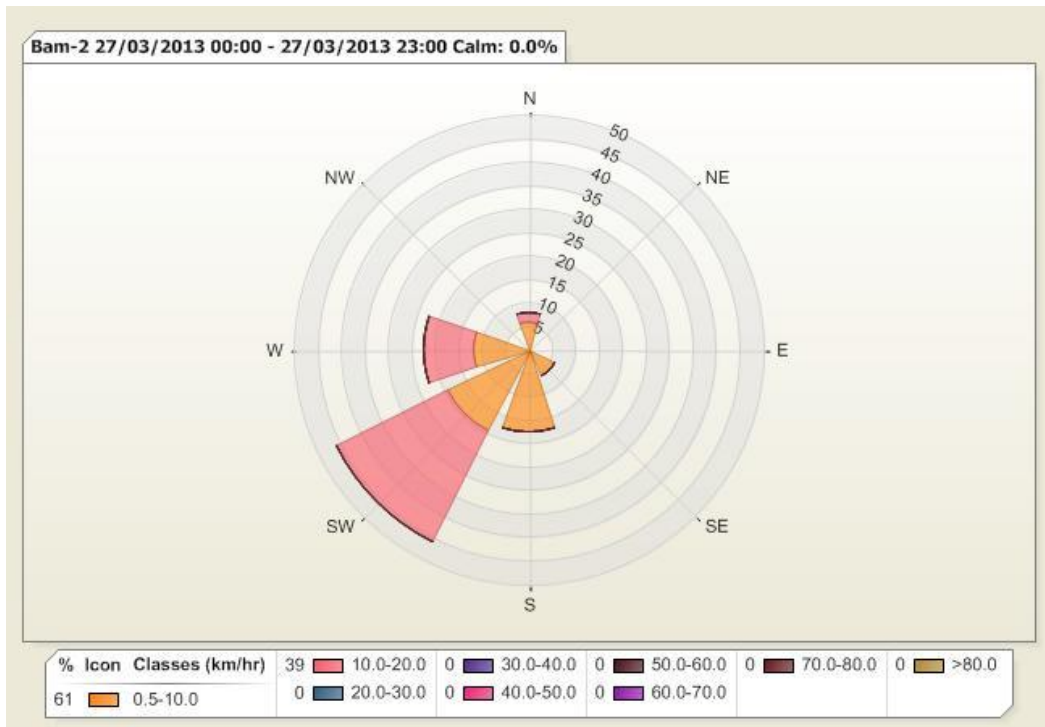


Figure 6 – Bam 2 wind direction

There was an exceedence at BAM 2 on the 10th May, burn off in the area is thought to have increased the PM₁₀ (figure 7). The predominant wind direction was easterly (figure 8) with a top wind speed of 41km/hr (Nuriootpa station 023373, BOM website). The Dust Management Plan was implemented and DMITR, EPA and CCG members were notified.

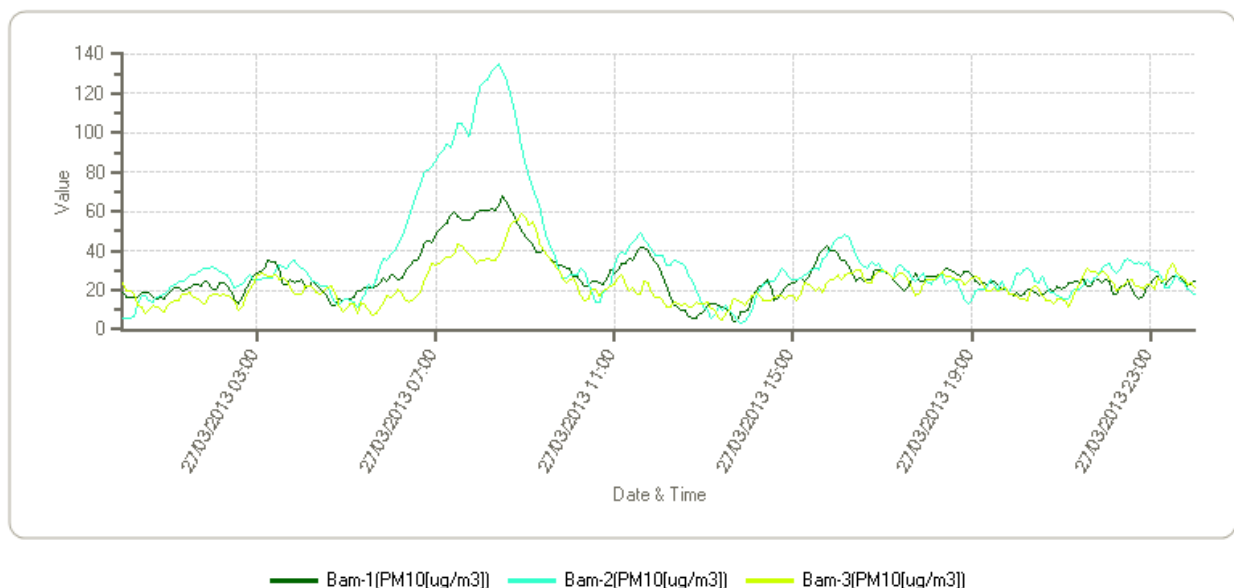


Figure 7 - PM₁₀ real time monitoring data

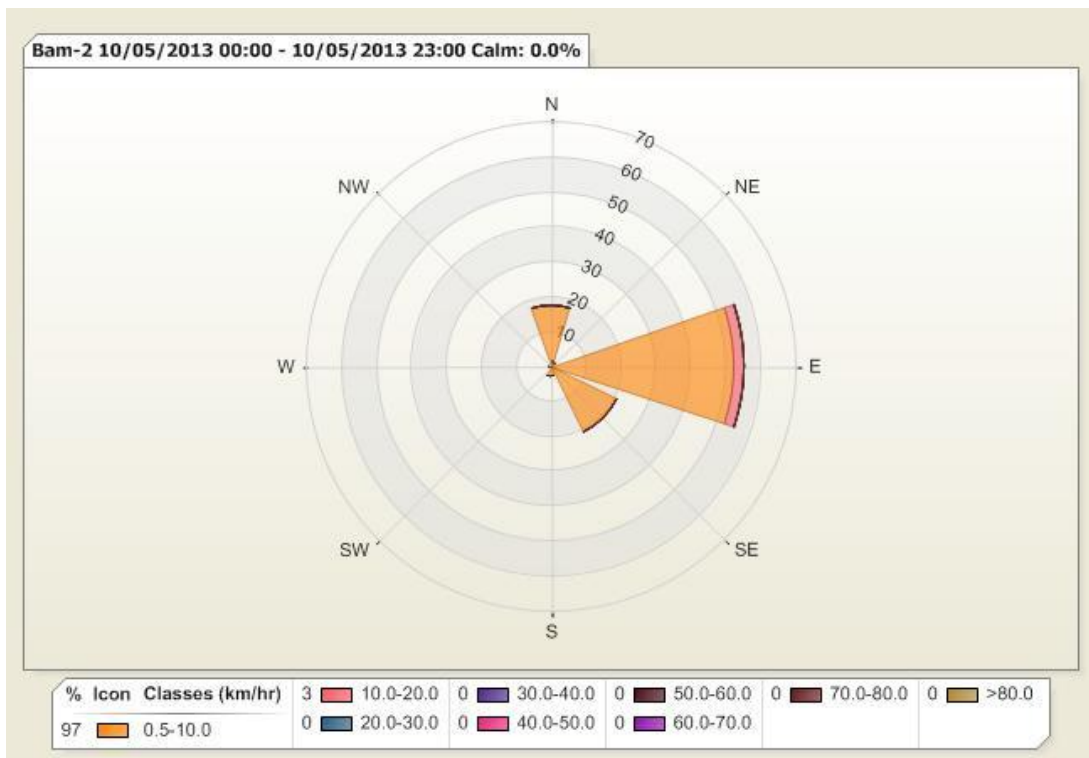


Figure 8 – Bam 2 wind direction

On Friday the 31st May there was an exceedence at BAM 3 with the real time reading up to 800 $\mu\text{g}/\text{m}^3$ (Figure 9). This is thought to be an incorrect reading as there was rainfall all day with a total of 4.8 mm for the 24 hour period. Lear Siegler were contacted and the root cause was found to be water egress into the air conditioner, the extra drainage plug was removed which fixed the problem.

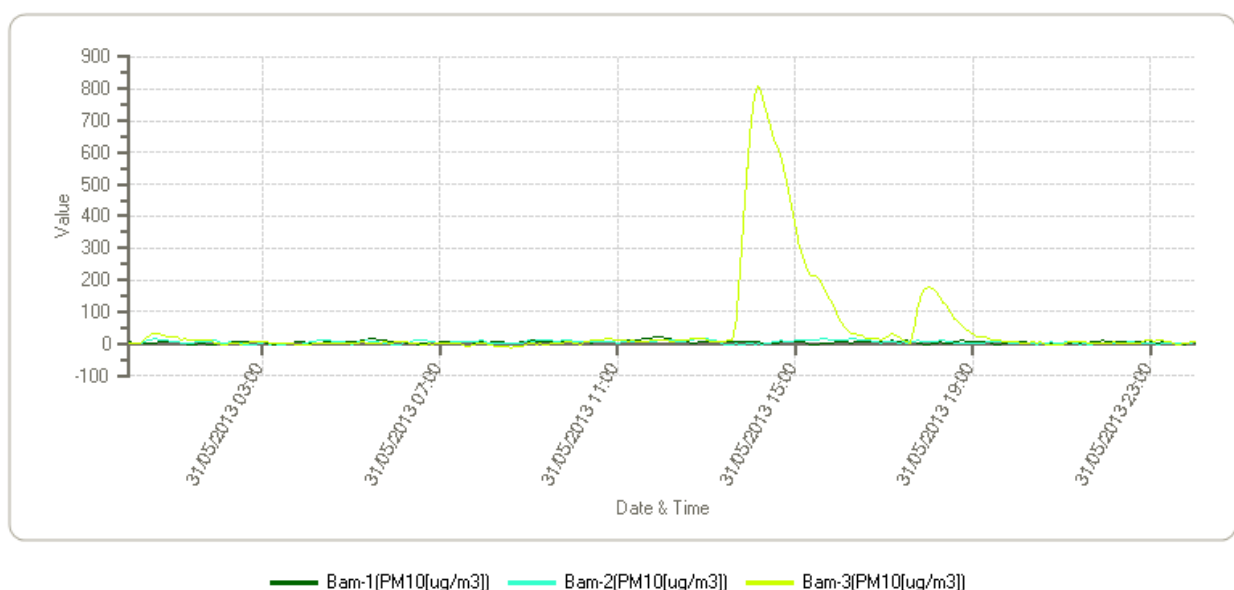


Figure 9 - PM₁₀ real time monitoring data

On the 16th August there was a PM₁₀ exceedance at BAM 1 with real time reading reaching 270 µg/m³ (figure 10). The maximum wind speed was 67km/hr and the dominant wind directions are shown in figure 11 below. The SMS alarm system was not working and therefore no alert was given for the exceedance, as soon as this was realised Lear Siegler were contacted and the system corrected.

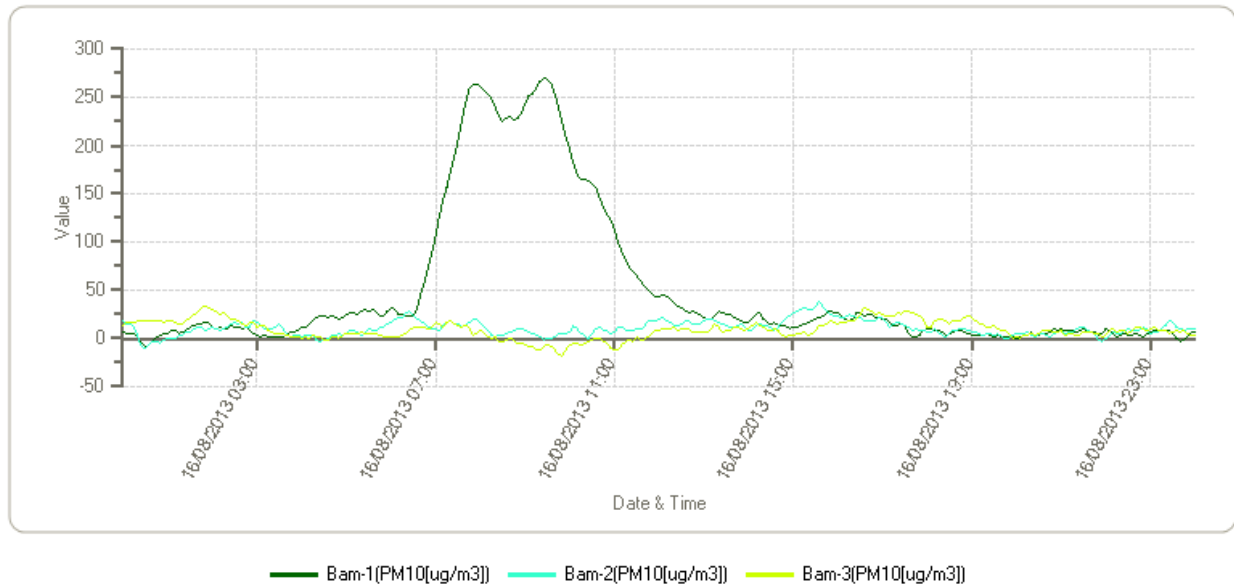


Figure 10 - PM₁₀ real time monitoring data

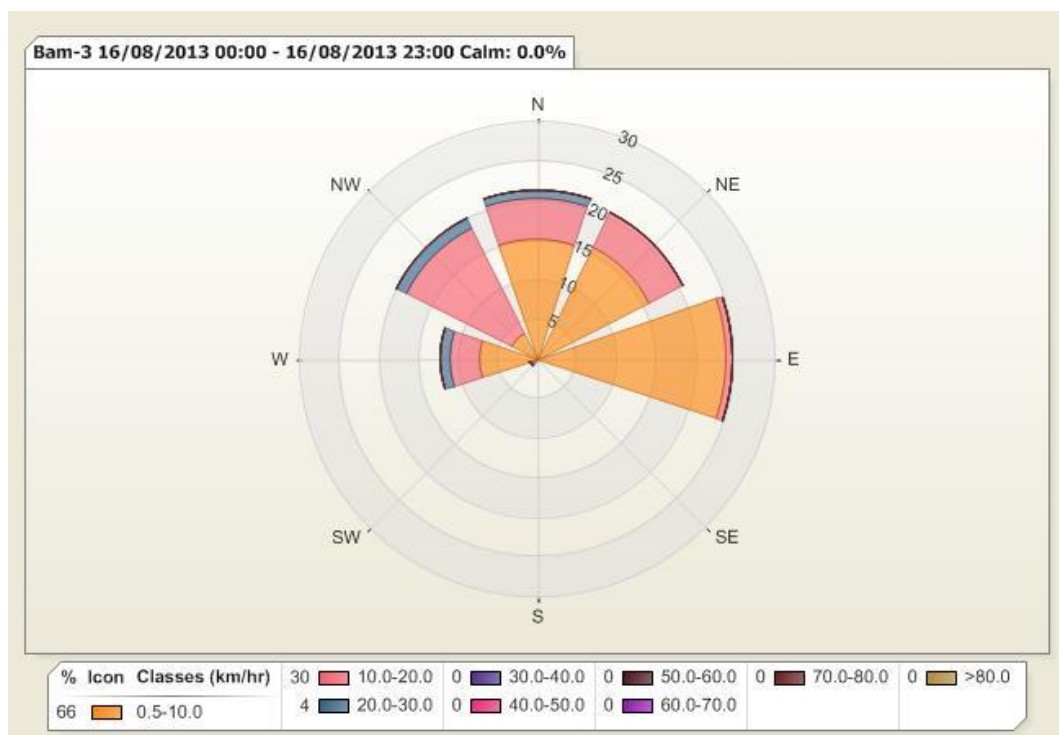


Figure 11 Bam 3 wind direction

On Monday the 30th September there were extreme weather warnings and conditions for the Barossa area with NW wind speeds up to 91 km/hr (Nuriootpa station 023373, BOM website). At 5am all three units had readings around 200 $\mu\text{g}/\text{m}^3$ see figure 12. The Dust Management Plan was implemented with all water trucks running and the Aggregate Plant remained off for the whole day. Wind direction during this period was predominantly NNW as shown in figure 13. With plant shut down and water trucks working continuously Penrice still contributed to the amount of dust going off site see figure 14. DMITRE and EPA were notified of the exceedence. A meeting was held between Penrice and DMITRE to discuss whether the PEPR conditions in criteria 1.2 can realistically be met when there are extreme weather events.

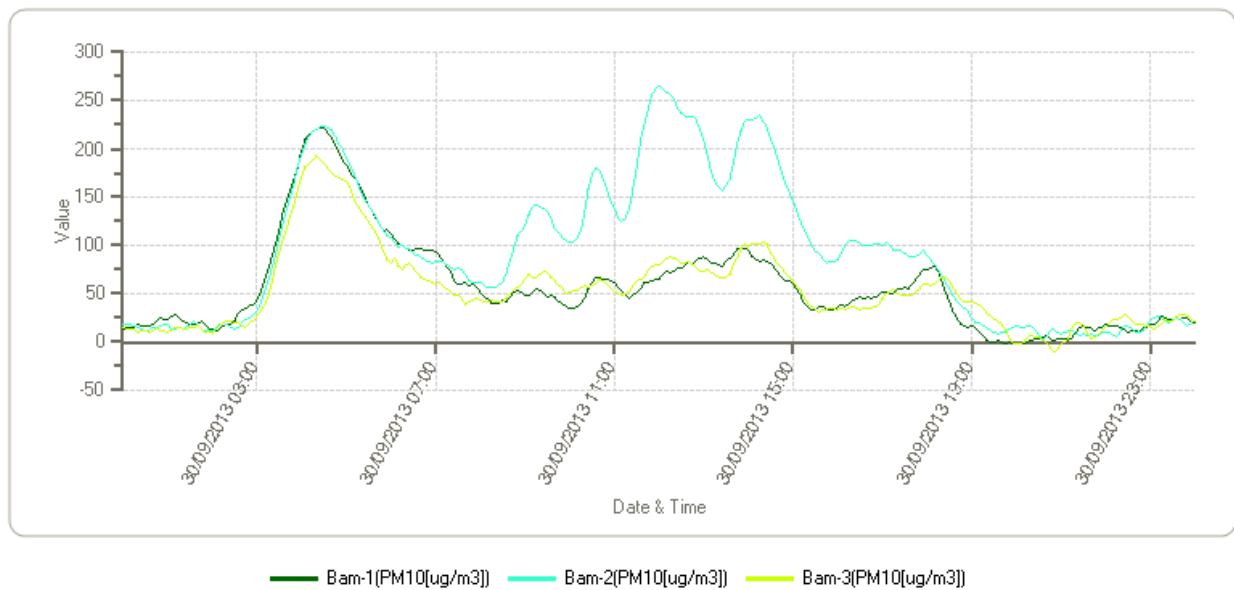


Figure12 - PM₁₀ real time monitoring data

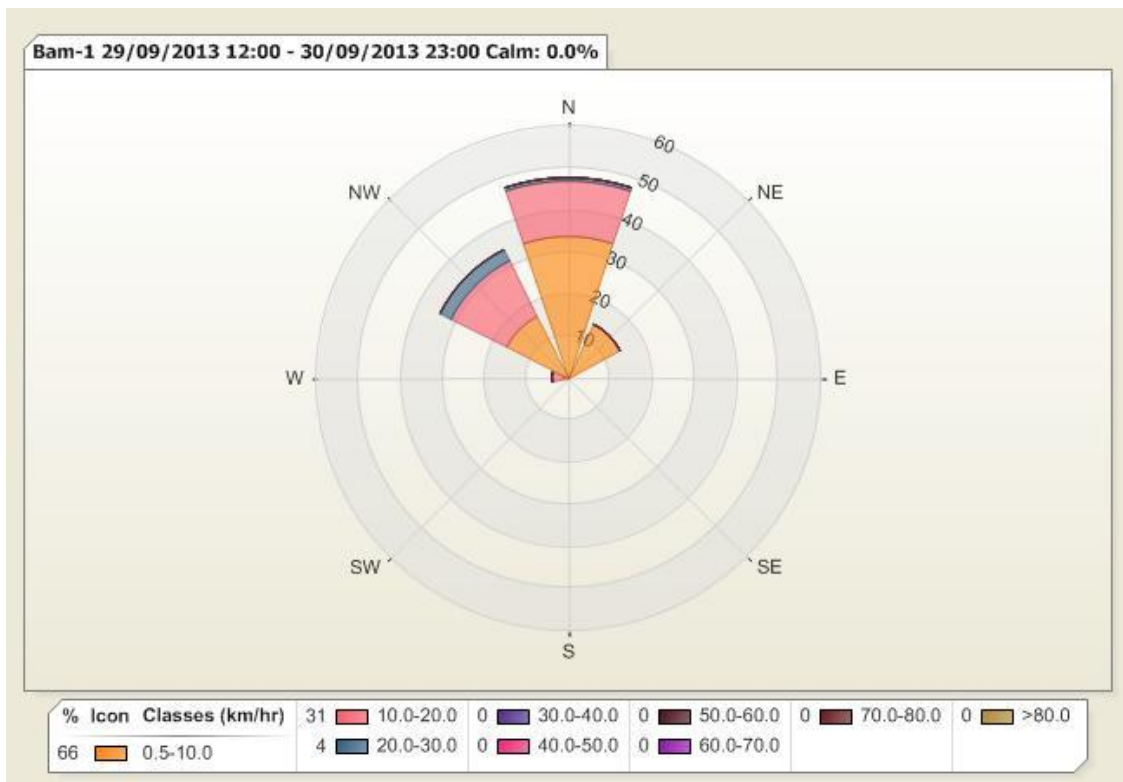


Figure 13 – Bam 1 Wind direction

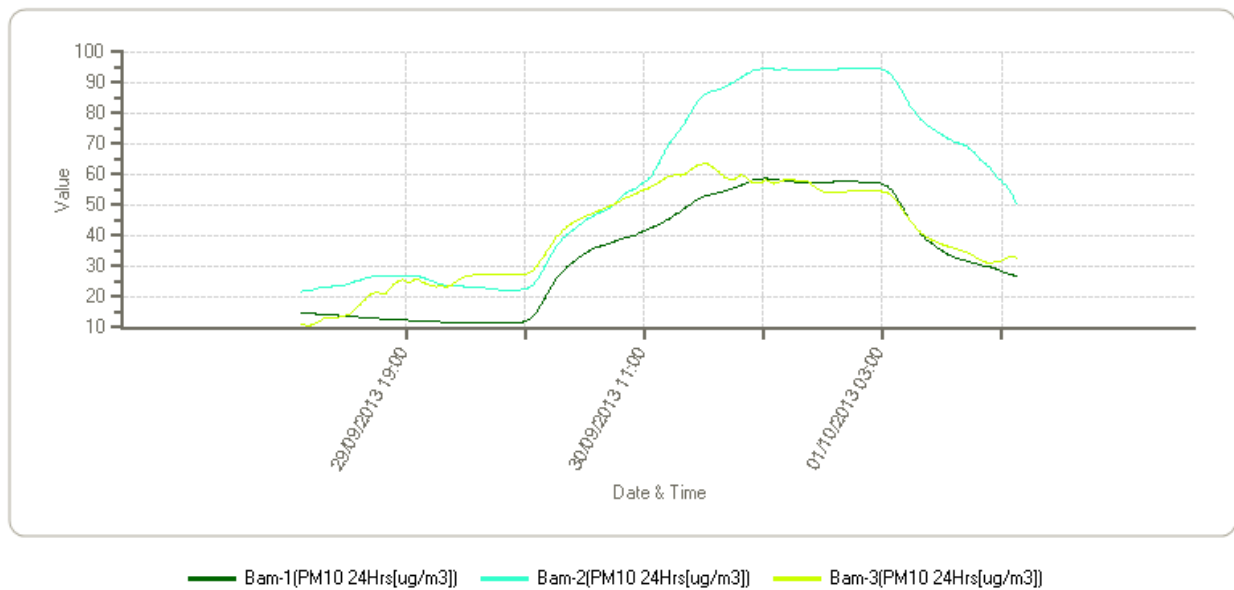


Figure 14 - PM₁₀ 24 hour average

There were irregular readings at BAM 2 (Figure 15) from the 14th October, Lear Siegler were contacted to advise on why this might be happening. 17th October a Lear Siegler technician came to site to try and repair BAM 2. The technician returned to site to calibrate all three units on the 23rd October. BAM 2 gave consistent reading with the other two units after it was calibrated until the 5th of November when the irregular readings started again. The unit was removed from site and sent to Lear Siegler for repair. The

unit was returned and reinstated on the 12th of December and appears to be working correctly again. DIMITRE were notified and updated throughout this period.

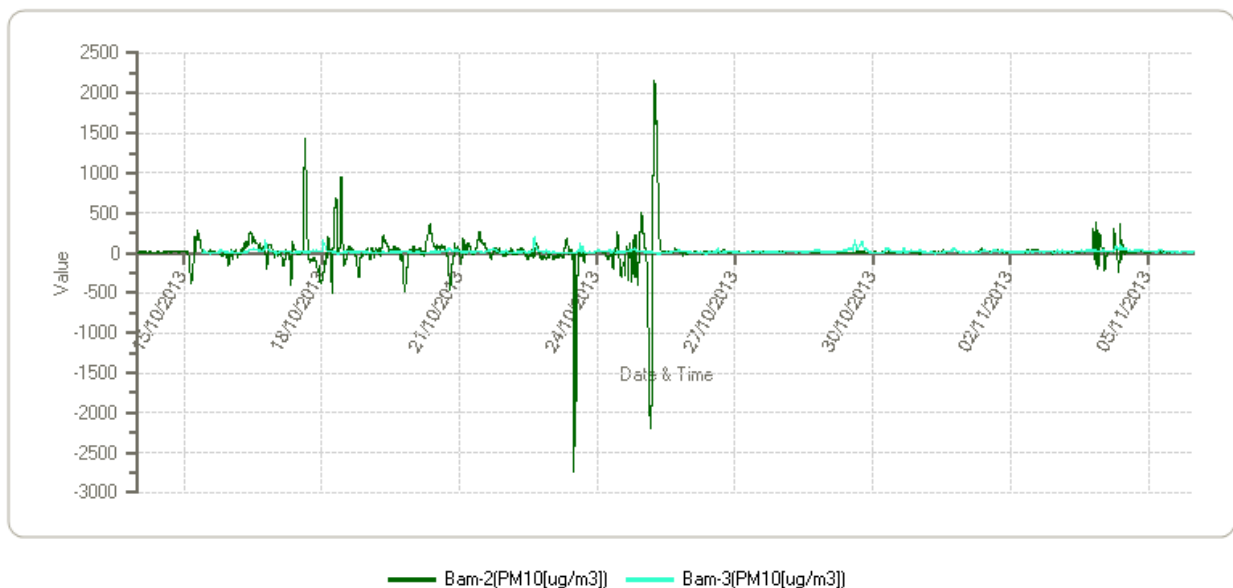


Figure 15 - Bam 2 irregular readings

3.2.2 Rectification of Non - Compliances

Appendix D states all of the non-compliances experienced throughout the year in relation to high dust readings. The BAM units have proved to be of assistance to quarry management in highlighting and putting a proactive approach toward dust management. As part of the updated dust management plan.

3.2.3 Performance Against Leading Indicator Criteria

N/A

3.2.4 Rehabilitation

Below is a summary of the rehabilitation and environmental management activities that were undertaken throughout the reporting period:

Flora & Fauna MPL 75

- General tree/shrub maintenance was completed in this period
- Brush cutting and spot weed spraying on Salem and Kalimna slopes
- Additional watering has been implemented due to a dry summer

- Assessed struggling trees and there was no impact to the rehabilitation if they are removed
- Removal of tree guards.

MPL 118

- General tree/shrub maintenance was completed
- Brush cutting and spot weed spraying
- Weed spraying on MPL Slopes and proximity area
- Additional watering has been implemented due to a dry summer
- Replanted failed trees
- Reseeded with native grasses and saltbush
- 170 tube stock planted on tier 1 and 2 of the northern face
- 520 tube stock planted on the MPL118 newly battered western and southern faces
- Removal of tree guards.
- Operation and inspection of active irrigation.

Jaeckeli Creek

- General tree/shrub maintenance was completed in this period
- Spot weed spraying
- Saturation watering of this area was also completed
- Additional watering has been implemented due to a dry summer
- Upgrade of water course area to silt trap

PM 86 and PM 120

- General site maintenance activities
- Grass slashing around the boundary perimeter
- Weed spraying around explosives magazine was conducted
- Weed spraying and removal of tree guards on the western side and the ridgeline of the east mound.
- Weeds eradicated around the winch house and wheel wash areas
- Additional watering has been implemented due to a dry summer

3.3 Changes to mining operations and emerging environmental hazards

PQM are still feeling the effects of a decrease in the civils, aggregate and chemical markets at the moment with no major projects prominent in the short term. With this in mind the workforce has been decreased to reduce operational costs onsite and become more viable to operate under these difficult economic times that we are currently facing.

The reduction in extraction will assist in managing the site from an environmental view point especially with the dry conditions that we are experiencing currently.

Nick Van Der Hout will still be employed through Mancala to overlook all of the Penrice Quarry planning.

3.4 Additional Required Information

3.4.1 Technical Reports

Technical reports can be sourced from the DMITRE website.

See link below:

http://www.minerals.dmitre.sa.gov.au/mines_and_developing_projects/approved_mines/penrice_mine

3.4.2 Adjacent Land Use

No changes to any land use adjacent to the mine have been reported in this current reporting period.

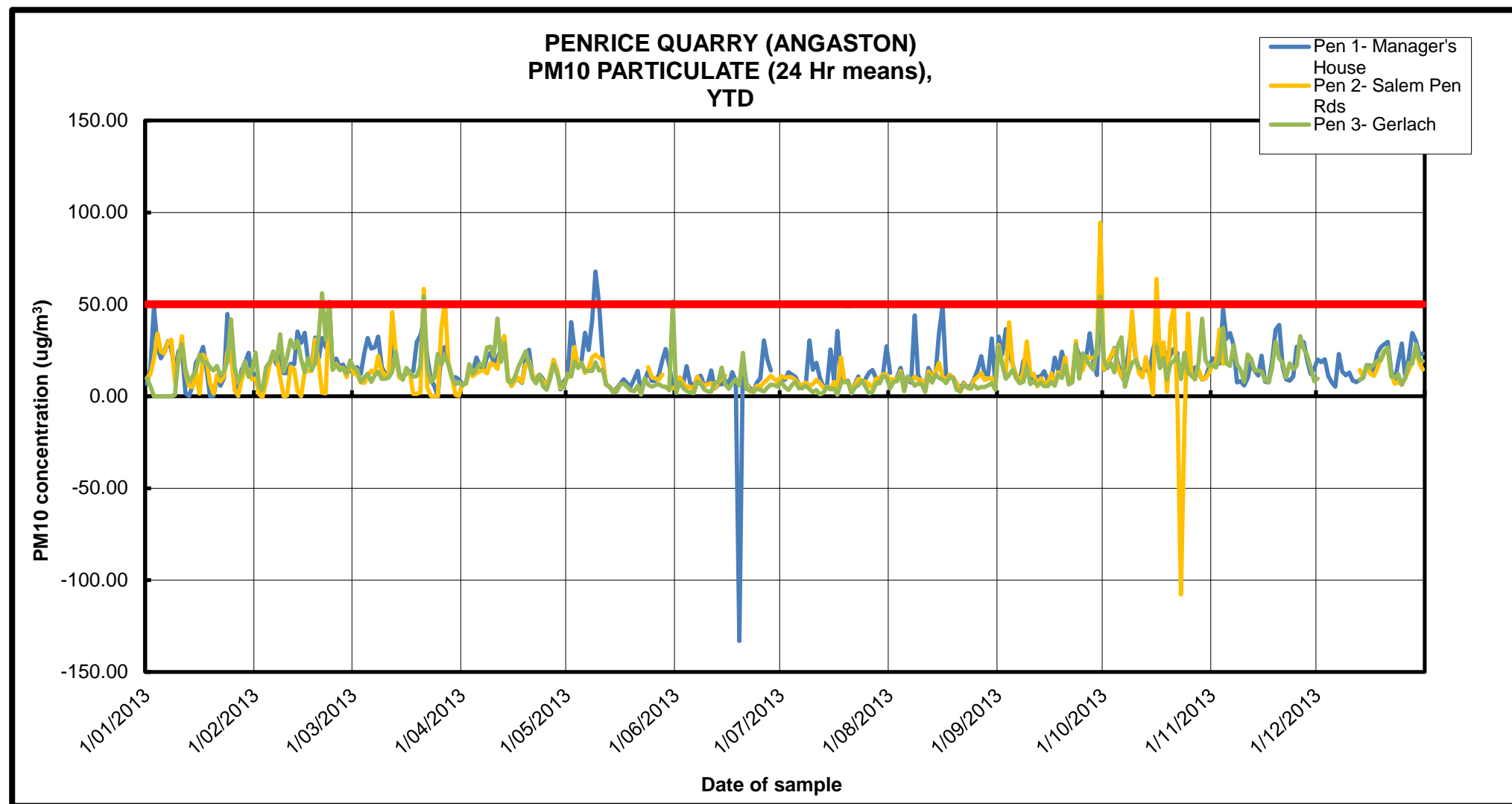
3.4.3 Complaints

One complaint was received during this reporting period, see Appendix C.

3.4.4 Management System Reviews

3.5 Voluntary Information

Appendix A - TEOM & BAM Data for the Reporting Period



BAM 1 DATA OUTAGES

26th April –

4th May –

24th July –

2nd August –

23rd October – Unit calibrated

BAM 2 DATA OUTAGES

17th – 23rd May -

29th – 30th May

16th – 21st June -

5th November - 13th December – Sent to Lear Siegler for repair

BAM 3 OUTAGES

12th – 15th October – Power out new safety switch installed

2nd – 12th December – Power surge causing outage which was not detected

Appendix B - Air Blast History and Vibration History Table

Table 1 % Shots >5mm/sec @ 31st December 2013

	365 days	180 days	90 days	30 days	7 days
Total Number of Shots	90	40	18	7	0
% Shots >5mm/sec	1.1	0	0	0	0

Table 2 % Shots >115 (dB) & Number of Shots >120 (dB)

	365 days	180 days	90 days	30 days	7 days
Total Number of Shots	90	40	18	7	0
% Shots >115 (dB)	2.2	2.5	0	0	0
Shots >120 (dB)	0.0	0.0	0.0	0.0	0.0

Appendix C - CCG Environmental Reports External Complaints

CCG - Environmental Reports – External Complaints - <u>Report Period: 1st Jan 2013 to 31st Dec 2013</u>										
Date	Type	Incident Description	Investigation/ Cause/ Possible cause	Corrective Actions	Responsible	Due by	Completed	Addressed & Signed Off	Notification given to:	
20/6/13	Neighbour complaint	Received a Penrice neighbour complaint Regarding Sweeper on Penrice road leaving a wet film and not drying out well	⇒ Explained we conduct extra sweeping this time of year late in the day due to winter weather	Contacted the sweeper company to conduct any road sweeping earlier in the day to facilitate the drying process. We contacted the neighbor again to notify them of the street sweeper time changes and thanked them for their feedback	1.MS	20/6/13	0/6/13	Y	DMITRE EPA CCG	

Appendix D - High Dust Readings

High Dust Readings— <u>Report Period: 1st Jan 2013 to 31st Dec 2013</u>										
Date	Type	Incident Description	Investigation/ Cause/ Possible cause	Dust Management/Corrective Actions	Responsible	Due by	Completed	Addressed & Signed Off	Notification given to:	
20/02/13	High Pm 10 reading	High reading PQM 3 monitor	⇒ High reading 57.6 Pm 10 24r. Wind . S Large amount of smoke in the area this was reported from Victorian fires EPA air quality reported smoke from fires. Smoke pictures supplied	Report to DMITRE & EPA: Main Agg plant and Finlay plant shut down Water trucks in use	1. BP	Complete	Complete	Y	DMITRE EPA CCG	
22/02/13	High Pm 10 reading	High reading PQM 1 2 and 3 monitors	⇒ High reading No 1 51.44 /No2 49.82/No3 51.35Pm 10 24r. Wind E Large amount of smoke in the area this was reported from Victorian fires J Rowe reported smoke problem during the day	Report to DMITRE & EPA: Main Agg plant and Finlay plant shut down Water trucks in use	1. BP	Complete	Complete	Y	DMITRE EPA CCG	
21/03/13	High Pm 10 reading	High reading PQM 2 and 3 monitors	⇒ High reading No 2 58.45 /No 3 54.35. Pm 10 24r. High winds and large dust storm in the valley Photos of dust storm supplied	Report to DMITRE & EPA: Main Agg senator plant and Finlay plant shut down Brighton lite material loading relocated to a more protected area. Water trucks in use	1. BP	Complete	Complete	Y	DMITRE EPA CCG	
27/03/13	High Pm 10 reading	High reading PQM 2 monitor	⇒ High reading 51.22 Pm 10 24r. High wind Non PSP public works on Penrice road effecting monitor No. 2 Photos of public work dust supplied	Report to DMITRE & EPA: 1.Main Agg senator plant and Finlay plant shut down 2. Discuss public works with council	1. BP 2. JW	Complete TBA	Complete TBA	Y N	DMITRE EPA CCG	
10/5/13	High Pm 10 reading	High reading PQM 2 monitor	⇒ High reading 51..22 Pm 10 24r. High northerly wind Numerous burn offs in the district effecting monitor No. 1	Report to DMITRE & EPA: 1.Main Agg material spray with water and extra foam and Fine mill plant shut down 2. Trucks stopped working in several areas	1. BP 2. JR	Complete Complete	Complete Complete	Y Y	DMITRE EPA CCG	
31/5/13	High Pm 10 reading	High reading PQM 3 monitor	⇒ High reading of 600 plus resulting high Pm 10 24r. ⇒ This is not possible due to very high rain fall all day (4.8 mm)	Report to DMITRE & EPA: 1.Faulty BAM unit seek technical support from Lear-Siegler 2. Root cause water egress into air conditioner Removed extra drainage plugs to fix problem	1. MS 2. JR	Complete Complete	Complete Complete	Y Y	CCG	
13/6/13	Telstra data issue	Notified DMITRE EPA	Telstra data issues	Report to DMITRE & EPA: 1.Favourable damp conditions had to turn off Telstra sim 2. Working with PSP IT Dept. and Lear-Siegler To resolve issue	1. MS 2. JR	Complete Complete	Complete Complete	Y Y	CCG	
16/8/13	High Pm 10 reading	High reading PQM 2 monitor	⇒ High reading 61 PM 10 24r. High northerly wind Issue with SMS activation system, management did not receive alarms	Report to DMITRE & EPA: 1.Main Agg material spray with water and extra foam and Fine mill plant shut down 2. Trucks stopped working in several areas	1. BP 2. JR	Complete Complete	Complete Complete	Y Y	DMITRE	
30/9/13	High Pm 10 reading	High reading PQM BAM 2 & 3 monitors	⇒ High reading of 200 plus resulting high Pm 10 24r. ⇒ PM10 data of over 100ug/m3 recorded at 6pm Sunday the 29 th whilst nobody was onsite	Report to DMITRE & EPA: 1.Root cause, extreme weather alerts for the state, 94km/hr gusts at the quarry. High PM10 levels when nobody was onsite.	1. BP 2. JR	Complete Complete	Complete Complete	Y Y	CCG DMITRE	

High Dust Readings— Report Period: 1st Jan 2013 to 31st Dec 2013

Date	Type	Incident Description	Investigation/ Cause/ Possible cause	Dust Management/Corrective Actions	Responsible	Due by	Completed	Addressed & Signed Off	Notification given to:
				2. DMP put in place, Aggregate Plant shutdown for the day					
16/9/13	High Pm 10 reading	High reading PQM BAM 2	Bam 2 appears to be giving incorrect readings, Lear Siegler technician to come to site and check the unit 17/10/13	,Lear Siegler technician to come to site and check the unit 17/10/13	1.GT	Completed	Unit returned 13/12/2013	Y	DMITRE
20/11/13	High Pm 10 reading	High reading PQM BAM 1 monitor	⇒ High reading 50.16 PM 10 24r. SSE wind Dust coming onto site from earth works being conducted across the road south of the quarry by contractors working for the council	1.Contacted the council to inform them of the high dust readings 2. Spoke to the operator about the dust; they organized for a water truck to wet the area.	1. BP 2. GT	Complete Complete	Complete Complete	Y Y	DMITRE EPA