

Minutes of the 37th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 4th March 2015, 10am

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: Mr John Turner (JT), Independent Chairman
Mrs Julie Heiler (JH), Community Rep
Mrs Libby Guest (LG), Community Rep
Mrs Jill Johnson (JJ), Group Environment Manager
Mr David Sharpe (DS), Tarrawonga Mine Planner
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mrs Cath Collyer (CC), Narrabri Shire Council (NSC) Rep
Mr Jim Picton (JP), Community Rep (arrived 10:30am)

Apologies: Clr Hans Allgayer (HA), Gunnedah Shire Council (GSC) Rep
Mr Tim Muldoon (TM), Group Manager Community Relations and Property
Mr Anthony Margetts (AM), Operations Manager

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

JH leases "Velyama" from Aston Resources (now Whitehaven).

JT declared that he is paid a fee for his participation as Independent Chairman.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record on the motion of LG and JH.

4.0 Business Arising

- 4.1 In relation to the regional air quality monitoring network, CC said that EPA hasn't advised NSC about what the monitoring network will be. CC said NSC is passionate about the monitoring network and asked that each CCC write a letter to EPA. She said we (clarified as the community) doesn't believe the network is up to standard. LG said we don't even know what the network will be.

JT said he wrote a letter to the EPA last year inviting them to attend a Tarrawonga CCC meeting, which EPA declined. JT wrote to the EPA again advising that the CCC was not satisfied with EPA's response. The letter received from EPA said that OEH is currently focussing on the Hunter and will be able to deliver advice regarding the Gunnedah regional air quality monitoring network in late 2014/early 2015. JT noted that this timeframe has now passed without advice from EPA or OEH.

CC said the CCCs are a strong avenue to deliver the message. She said the mines are doing the job they're required to do but EPA and DP&E have not met their obligations.

JJ asked if NSC has followed up with the EPA, as they should have some influence. CC said she had sent an email to the NSC General Manager, who is no longer in the position. CC said letters should be sent to the Ministers and that royalties should cover the costs for the network.

JT said he would follow up with the Departments (EPA, DP&E, Local Members and GSC and NSC). The Committee agreed that the network should be funded by royalties.

CC moved a motion that the Chair write to the relevant authorities to request EPA to provide information relating to the status of the regional air quality monitoring network as soon as possible. The letter should also request an EPA representative attend the next CCC meeting. The Committee noted this as a priority for the community.

Regional air quality monitoring network update to be provided at next meeting.

- 4.2 JJ advised that when the next newsletter is issued information will be included about blasting. Newsletter to be prepared before next meeting.

Blasting information to be included in next newsletter.

- 4.3 JJ advised that the modification approval had been issued to all members.

No further action required.

- 4.4 LJ advised that he would follow up with JP regarding the monitoring bore on Matong.

LJ to provide monitoring results to JP for a bore on Matong.

- 4.5 Road safety video has been provided to Boggabri Coal.

No further action required.

- 4.6 In relation to HA's suggestion for a bin to be installed in the carpark, LJ advised that the carpark upgrade is almost finished and a bin will be installed.

AM/LJ to organise bin for site carpark.

- 4.7 In relation to the Trust Fund, JT advised that the sub-committee had received a workflow from NSC, which required some clarification. On clarification, the sub-committee will advise NSC to proceed with the process.

LG asked if the sub-committee knows how it will be advertised. JT said perhaps a newsletter and the paper, but this needs clarification.

JT said the NSC had advised him that there would be a fee for advertising. JT has asked for clarification but hasn't had a response from NSC.

JT to provide Trust Fund update at next meeting.

- 4.8 In TM's absence, CC provided an update on the VPA funding allocations. CC said that \$400,000 had been allocated to Blair Athol Lane.

TM to investigate status of VPA funding.

5.0 General Business

- 5.1 Mine Progress Report

DS said in the period July to December 2014 (H1), approximately 9.5 million BCM of overburden was moved for approximately 1.05 million tonnes of coal.

CC asked if production had increased. DS said it has stayed the same.

5.2 Environmental Monitoring Report

JJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

CC asked if the Matong blast monitor would be moved. JJ said Tarrawonga is currently liaising with a landholder to have it moved so it's on a privately owned property. The relocation needs to be undertaken in consultation with DP&E and EPA. JP said he would like the monitor moved to his property, as well as dust monitoring, and will liaise with LJ.

CC said Goonbri Road usage will decrease soon which will reduced dust.

JP asked what standing water level is. JJ said it's the depth of groundwater from ground level.

LG asked if monitoring is independent. JJ said ALS undertakes monitoring for Whitehaven. ALS is a NATA accredited laboratory. JJ said monitoring results are reviewed by Departments via Annual Environmental Management Reports (AEMRs) and by independent auditors via Independent Environmental Audits required by each site's Project Approval.

JH asked if the site would progress rehabilitation if the weather remained dry. LJ said he is looking at direct seeding based on advice from Boggabri Coal and rehabilitation contractors.

When asked about the complaint regarding fume from a blast, JJ advised that two blast sentries (LJ and DS) were situation between the blast and the complainant's property and did not detect any fume. The gunpowder smell (associated with all blasts) and dust was present, but no fume. JJ said the blast video also confirmed absence of blast fume. CC said she thought a follow up with the complainant would be a good idea. JP said it probably doesn't seem like much but he lives in the dust and it gets you down after a while.

6.0 New Business

- 6.1 JH commented on the condition of the haul road and expressed concern for the safety of drivers. JP said people are driving on roads too fast. The speed they drive will either kill themselves or others. CC said it's also the way they drive.

7.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

8.0 Next Meeting

The next meeting will be held at 10am on Wednesday 20th May 2015 at the Tarrawonga Training Room. Subsequent meetings for 2015 will be 10am, 12th August (Tarrawonga), 10am, 18th November (Tarrawonga) and 12:30pm 19th November (BTM).

Meeting closed at 11:00 am

John Turner - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #37

Environmental Monitoring Report December 2014 – February 2015

Noise Monitoring

Noise monitoring was undertaken at the “Tarrawonga” property from the 9th to 12th December 2014, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 - TCM Noise Monitoring Results, 9 th – 12 th December 2014					
Date	Time	dB(A), Leq (15 min)	Wind speed/direction	Temp. Inversion °C/100m	Identified Noise Sources as dB(A) Leq (15 min)
9 December 2014	2.55pm	34	7.1/SE	-	TCM (26), cattle (32), birds (26)
9 December 2014	9:10pm	35	2.3/SE	+3.0	TCM (35), insects (25)
10 December 2014	1.29am	40	3.4/NE	+0.6	TCM (40), insects (24),
10 December 2014	12.14pm	29	1.8/SW	-	TCM (27), birds (24)
10 December 2014	9.16pm	35	3.5/SE	+1.2	TCM (33) incl. (28)* insects (25)
11 December 2014	5.45am	42	6.4/N	Lapse	TCM (inaudible), Wind (42) birds & insects (32)
11 December 2014	12.27m	41	2/SW	-	TCM (30) Birds (39), wind (36)
11 December 2014	9.13pm	45	7.8/SE	Lapse	TCM (inaudible), wind (43), insects (40)
12 December 2014	1.28am	44	5.9/SSE	Lapse	TCM (inaudible), Wind (44)
12 December 2014	8:40am	51	7.8/SSE		TCM (inaudible), wind (51), cattle (34), birds (27)
12 December 2014	9.26pm	47	6/SE	0	TCM (inaudible), wind (46), insects (40)
12 December 2014	10:04pm	42	7.2/SE	Lapse	TCM (inaudible), insects (40), wind (38)

- Includes truck on TCM haul road

The results in Table 1 show that noise emissions from the mine exceeded the operational noise criterion at the “Tarrawonga” monitoring location during the monitoring event. The property is project owned and therefore the noise criterion does not apply.

The Noise Management Plan which was approved by DP&E relocates attended noise monitoring from “Tarrawonga” to “Bungalow” (south), “Barbers Lagoon” (south-west) and “Matong” (east, south-east). The new monitoring locations of, which two are private property (“Bungalow” and “Barber Lagoon”), are further from site and therefore there is less likelihood of exceedances as

identified in the EA noise modelling. The locations encompass the closest private receivers in the south and south west and form part of the proposed BTM monitoring network.

An EPL variation is required and will be submitted prior to the upcoming monitoring during late March/April 2015. Initial landholder agreement has been sought with confirmation to be undertaken prior to commencement of monitoring.

In addition to the operational noise, the noise from the mine must not exceed 45 dB(A) L1 (1 min) between the hours of 10 pm and 7 am. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine. The results of the sleep disturbance monitoring show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

TCM Sleep Disturbance Monitoring Results				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Tarrawonga (10/12/14)	1:29am	43	3.4/NE	+10.2
Tarrawonga (11/12/14)	5:45am	n/a	6.4/NNE	Lapse
Tarrawonga (12/9/14)	1:28am	n/a	5.9/SSE	Lapse
Tarrawonga (12/9/14)	10:04 pm	n/a	7.2/SE	Lapse

The real time noise monitor was relocated to the “Matong” property in November 2013 and has indicated mine noise at that location to be generally within compliance limits. With continuing warm weather, predominately minor inversion categories have been experienced and the number of alarms received from the monitor has remained low. The site OCE’s action each alarm by investigating the noise source and modifying operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels.

Blast Monitoring

Blasting Results

Since the first shot there have been 552 blasts (until the 3/2/2014).

On 16th January 2015, a result of 127.3dB was recorded at the “Tarrawonga”. This result is above the 100thile limit specified in the Project Approval and EPL (120dB); however, as the property is also project owned blast criterion does not apply. A result of 122.8dB was recorded at the “Matong” monitor. This result is above the 100thile limit specified in the Project Approval (120dB), however, as the property is also project owned blast criterion does not apply. An internal investigation was carried out and relevant agencies notified of the result. Pending the approval of the Blast Management Plan the “Tarrawonga” blast monitor will be relocated to the “Braymont” property which is a privately owned property.

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARD (EB-6)	TARRAWONGA (EB-7)	THUIN (EB-8)	PINE GROVE (EB-9)	TARRAWONGA MINE (EB-10)	TARRAWONGA MINE (EB-11)	PINE GROVE (EB-12)	BOLLOL CREEK (EB-13)	TARRAWONGA MINE (EB-14)	TARRAWONGA MINE (EB-15)	JERALONG NORTH (EB-16)
March 2014	10.7	3.0	1.2	1.1	1.4	1.1	0.1	3.2	1.7	8.7	2.7	17.1	2.7
April 2014	3.7	2.1	1.6	0.7	1.9	0.9	1.7	2.5	2.1	2.9	7.7	2.8	0.6
May 2014	1.0	1.3	0.2	0.4	4.8	1.1	0.7	2.8	2.7	2.8	5.4	8.1	1.3
June 2014	2.1	2.6	0.2	0.4	2.2	0.5	1.9	5.6	0.9	0.8	2.6	10.8	0.5
July 2014	0.8	2.8	0.3	0.3	0.7	0.3	3.4	2.7	0.5	0.2	1.4	7.6	0.5
August 2014	1.2	3.6	0.7	0.3	2.8	0.8	1.9	8.7	1.4	1.2	5.1	26	0.9
September 2014	2.2	2.4	0.6	0.5	1.1	0.6	1.9	1	0.5	0.7	3.7	6.8	0.6
October 2014	5	2.6	1.7	1	2.3	1.1	1.9	6.2	1	7.6	2.6	9.7	1.2
November 2014	2.8	1.5	7.3	0.2	1.5	0.9	1.7	1.0	0.8	2.5	1.1	1.9	0.9
December 2014	7.4	5.1	6.6	1.4	2.4	3.4	4.2	4.7	1.9	1.8	4.1	5.1	2.5
January 2015	2.2	0.9	0.3	0.8	0.8	0.7	1.6	0.7	1.1	2.3	4.8	2.5	1.9
February 2015	2.1	1.6	1.0	0.9	2.5	1.0	3.8	4.0	1.1	0.1	1.7	3.4	4.2
ANNUAL AVERAGE	3.4	2.5	1.8	0.7	2.0	1.1	2.1	3.6	1.3	2.6	3.6	8.4	1.5

All monitoring locations remain below the limit of 4g/m²/month (average) with the exception of EB-15. As this monitor is located on mine-owned land, compliance criteria do not apply.

PM₁₀ Results

The annual average for PM₁₀ readings at “Templemore” is currently at 24.23µg/m³ (until end of January 2015) and remains below the annual average limit of 30µg/m³.

Two instances of exceedance of the daily PM₁₀ limit have occurred since the last CCC meeting.

- 80.3 µg/m³ on 18/11/14. An investigation was undertaken subsequent to results being received, and identified:
 - Wind direction throughout the day was generally from southwest’
 - Verbal discussions with DP&E at 11am on that day, during an unannounced inspection, indicated that there was no issue with dust from the site at the time;
 - Goonbri Road was noted throughout the morning to be generating elevated dust and was very hazy; and
 - It is considered that a number of non-project related sources contributed to the elevated result.
- 53.0 µg/m³ on 17/1/15. The site was not operating on that day.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

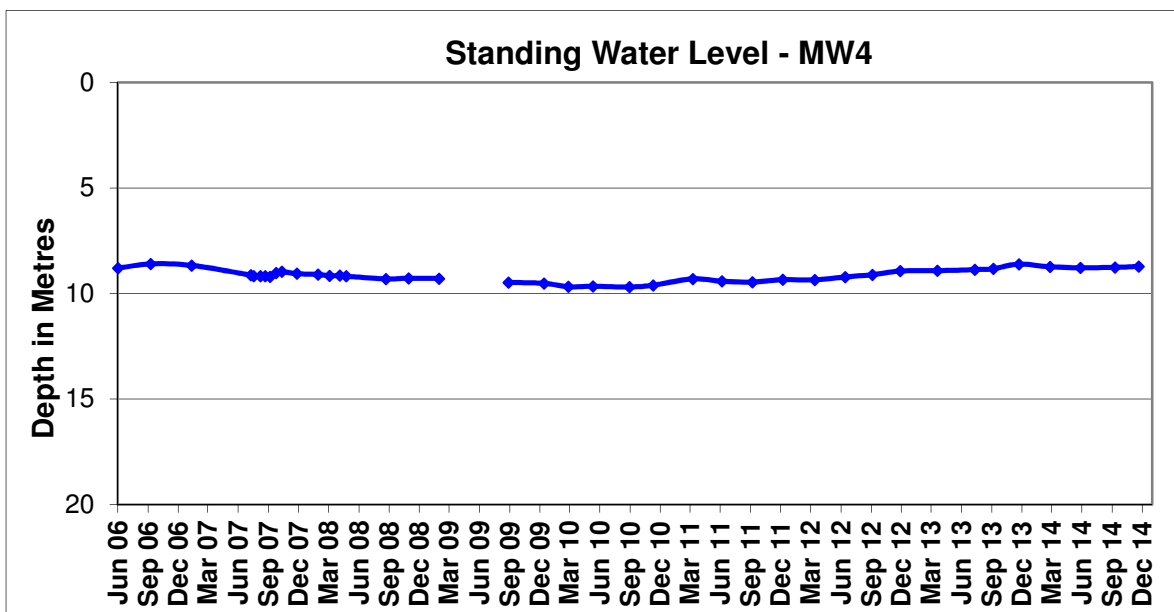
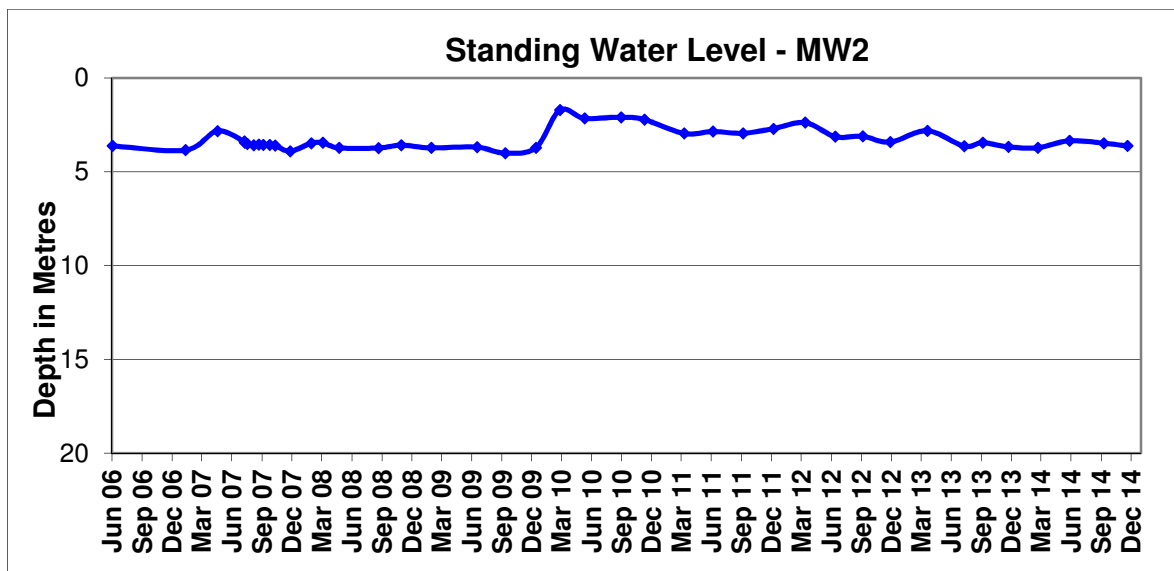
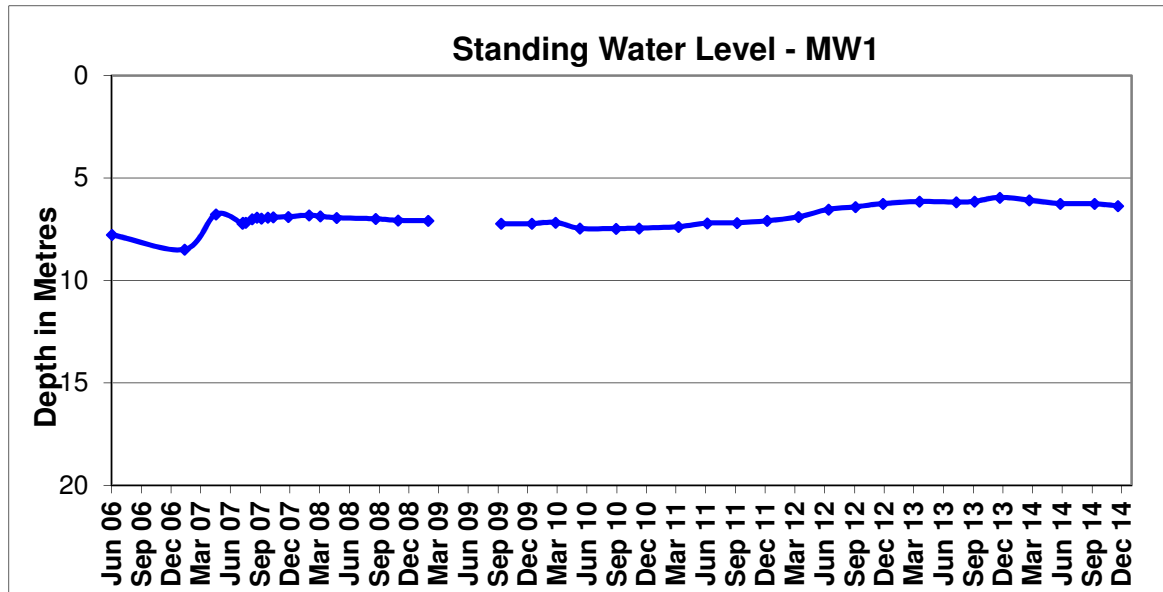
Water Monitoring

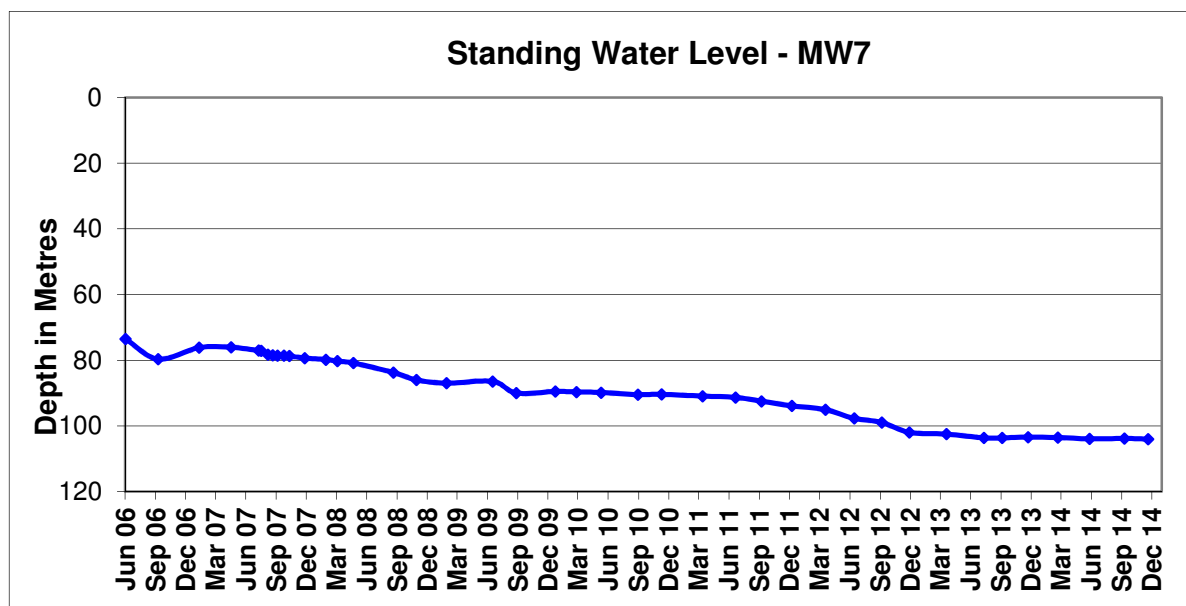
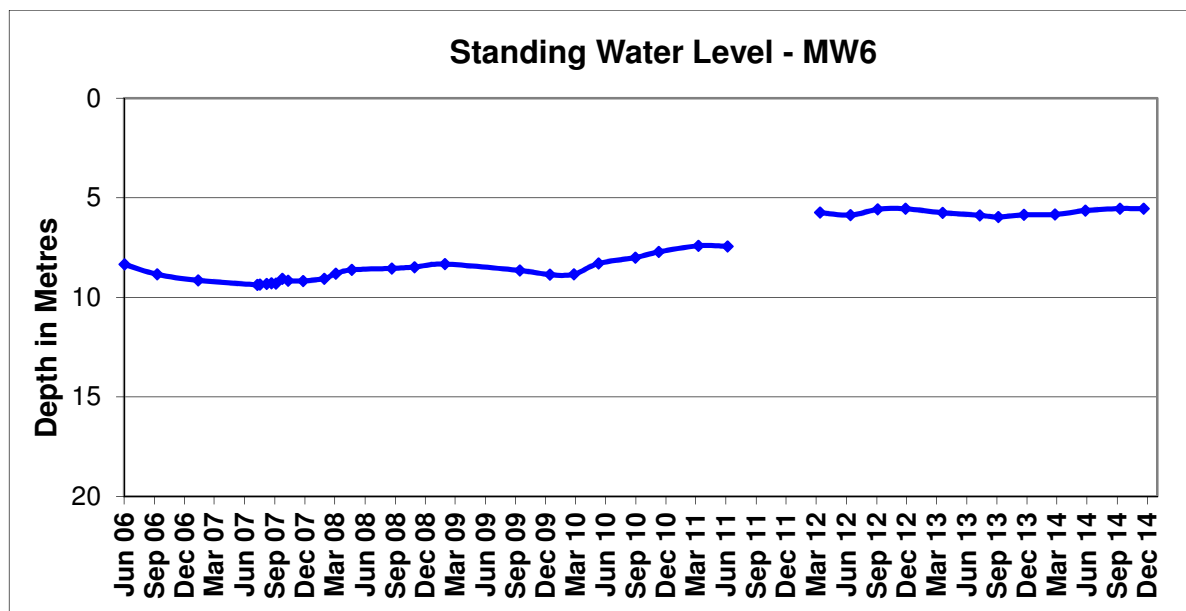
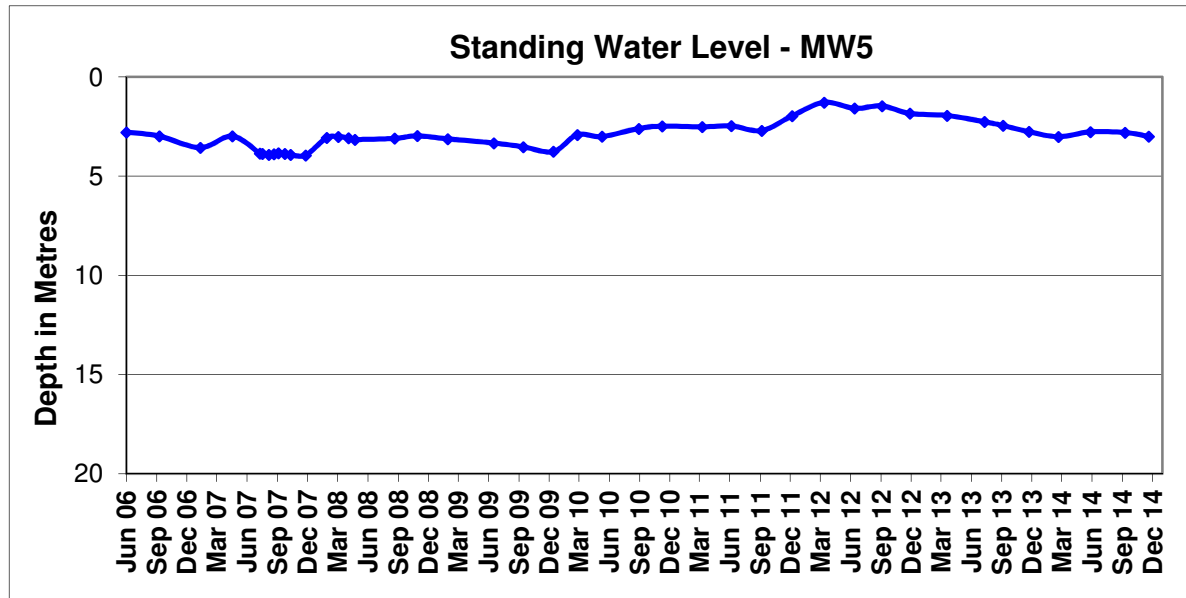
Ground Water

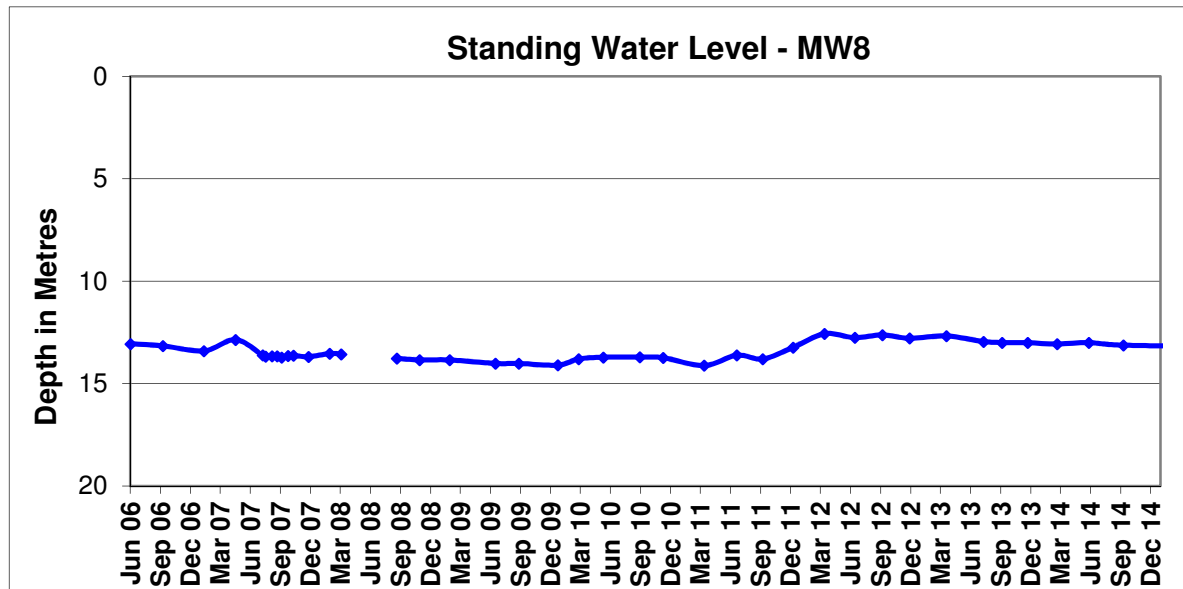
Groundwater monitoring data obtained to date, including the last round of SWL monitoring in November 2014, is provided in the table and graphs below. Results at all monitoring locations remained relatively consistent between September and November 2014.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	November 2013	5.95	7.6	3140
	February 2014	6.08	7.65	3440
	May 2014	6.25	7.6	3140
	September 2014	6.26	7.97	3320
	November 2014	6.36	7.7	3190
MW2	November 2013	3.68	6.9	694
	February 2014	3.72	7.01	694
	May 2014	3.35	7.4	618
	September 2014	3.5	7.27	615
	November 2014	3.63	7.4	615
MW4	November 2013	8.61	7.6	3720
	February 2014	8.74	7.98	3890
	May 2014	8.78	7.6	3840
	September 2014	8.76	7.83	4170
	November 2014	8.72	7.3	3970
MW5	November 2013	2.76	7.7	2430
	February 2014	3.01	7.77	1850
	May 2014	2.77	7.7	925
	September 2014	2.8	7.99	2200
	November 2014	3.0	7.8	3020
MW6	November 2013	5.85	7.2	486
	March 2014	5.84	7.51	212
	May 2014	5.64	7.5	360
	September 2014	5.54	7.61	854
	November 2014	5.55	7.5	712
MW7	November 2013	103.43	No Sample	No Sample
	February 2014	103.55	No Sample	No Sample
	May 2014	103.96	No Sample	No Sample
	September 2014	103.84	No sample	No sample
	November 2014	104.01	No sample	No sample
MW8	November 2013	13.01	Casing blocked	Casing blocked
	February 2014	13.07	Casing blocked	Casing blocked
	May 2014	13.00	Casing blocked	Casing blocked
	September 2014	13.13	Casing blocked	Casing blocked
	November 2014	13.22	Casing blocked	Casing blocked







Surface Water

Routine surface water monitoring was conducted during November 2014.

No wet weather discharges have occurred since the last CCC meeting. Sampling was undertaken 28th January 2015 at Nagero downstream monitoring location following 46.6mm rain over a two day period.

Rehabilitation

Shaping has commenced as part of the rehabilitation of 5.5ha of the northern extension emplacement. The completion of shaping, top soiling and planting with tubestock is scheduled for the end of FY14/15.

A further 2ha of rehabilitation is to be completed by 30th April 2015 on the northern emplacement.

Rehabilitation maintenance activities across an area of 10ha on the northern and southern emplacements are scheduled for completion by 30th April 2015. These works include erosion control, weed control, direct seeding and tubestock planting.

Clearing

An area of 6ha was cleared as part of the central pit progression during December 2014.

Clearing operations have not yet commenced in the northern extension.

Tarrawonga is now required to limit clearing operations to 15th February to 30th April annually to minimise impacts to fauna. Clearing for the continuation of mine progression is expected to commence during March and be completed prior to the closure of the clearing window.

Complaints

Since the last meeting, there have been 2 complaints, as outlined on the following table.

Complaints Register

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
1	Phone call to the Environmental Officer, Environmental Superintendent and EPA	16/1/2015 12.01pm & 12.10pm	Complaint made regarding dust associated with blast no. 540. Complainant advised that the plume resembled a bushfire and inundated the property impacting workers who stated that there was a strong sulphur smell which caused throat and eye irritation.	A preliminary investigation was carried out of the meteorological conditions, blast video and eye witnesses. No evidence of blast fume was identified. Further investigation of the blast identified that the increased dust level could be attributed to ' <i>face burst</i> ' caused by broken ground with the blast pattern. The investigation confirmed that no evidence of fume.	Tarrawonga Site Environmental Officer provided details of the blast which caused increased dust to the complainant on 16/2/2015. A subsequent meeting with the complainant is to be arranged by the Environmental Officer.
2	Email to the Group Environment Manager	18/2/2015 12.21pm	Complaint received regarding dust associated with blast no. 547. Complainant advised it is the second blast related dust issue in recent weeks and does not believe that it is acceptable to live with this ongoing issue.	A preliminary investigation was carried by the Environmental Officer. Photos were taken onsite of the blast which showed the dust generated from the blast mostly dissipated onsite with evidence of some dust travelling eastward prior to dispersal in the atmosphere. A review of meteorological data indicated that conditions were satisfactory for blasting.	The Environmental Officer responded to the complainant providing details of the blast.. A subsequent meeting with the complainant is to be arranged by the Environmental Officer.

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Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: Mr John Turner (JT), Independent Chairman
Mrs Julie Heiler (JH), Community Rep
Mrs Jill Johnson (JJ), Group Environment Manager
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mrs Cath Collyer (CC), Narrabri Shire Council (NSC) Rep
Mr Tony Dwyer (TD), Environmental Superintendent
Mr Tim Muldoon (TM), Group Manager Community Relations and Property
Mr Anthony Margetts (AM), Operations Manager
Mr Steve O'Donoghue (SO), EPA
Mr Simon Smith (SS), EPA

Apologies: Cllr Hans Allgayer (HA), Gunnedah Shire Council (GSC) Rep
Mrs Libby Guest (LG), Community Rep
Mr Jim Picton (JP), Community Rep

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

JH leases "Velyama" from Aston Resources (now Whitehaven).

JT declared that he is paid a fee for his participation as Independent Chairman.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record on the motion of JH and CC.

4.0 Business Arising

4.1 To be discussed in general business.

4.2 JJ advised that the newsletter is currently being printed and will be issued in the next week or so. It will be distributed to the Boggabri mail run, both Councils, both Chambers of Commerce and the CCC members

Blasting information to be included in next newsletter.

4.3 LJ said that he had advised JP that the bore he was enquiring about was monitored by Boggabri Coal. LJ has asked Boggabri Coal to liaise with JP on the matter.

No further action required.

4.4 LJ advised that bins had been installed in the carpark.

No further action required.

- 4.5 JT provided an update on the Environmental Trust Fund. He said a worksheet flow plan had been received from NSC prior to the last meeting and queries were issued back to NSC. JT has issued 7 calls and 6 letters to NSC following up on the matter and has received only 1 call back which was in relation to them not being able to find the paperwork. JT said CC and Lloyd Finlay had tried to assist to hurry things along.

JT received a reply about 10 days ago advising that the Officer had been busy but will look into the Trust matters as soon as possible. JT followed up 4 days ago with no response.

JT said until the pro-forma is finalised, the Trust Sub-Committee is unable to proceed.

CC said she had made further contact with the relevant people at NSC and that something should be issued by the end of next week.

JT to provide Trust Fund update at next meeting.

- 4.6 TM advised that the VPA had been finalised and executed by NSC and will shortly be executed by WHC.

No further action required.

5.0 General Business

5.1 Mine Progress Report

AM said there has been no major changes since the last meeting. The water status is excellent following rain in March and April. The Box Cut Dam (mine water) will be decommissioned in the next 6 months and reconstructed in the northern extension area. AM said the mine is ahead of budget for coal and costs are going ok despite operating in a very tough market. All staff have been retained but there has been a change to the rosters where rosters are generally only weekdays.

CC said this allows the workers to be social.

JH asked how far ahead coal is pre sold. AM said it varies (eg. 5 year supply contracts without fixed prices through to spot marked)

CC asked about the relocation of the Box Cut Dam and whether there had been any discharge from it. JJ advised that mine water is never discharged from site and the site has not had any wet weather discharges recently. CC said she'd received a query from someone about discharges from the mines but she didn't think it would be Tarrawonga. She said the person had suggested that the river water was oily. JH said since the change to management of water at the site a couple of years ago, she hasn't had any issues with water from the site.

5.2 Environmental Monitoring Report

LJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

In relation to the March PM₁₀ exceedance, CC said she received a phone call from a distressed person from the other side of the Maules Creek mine the day after the exceedance complaining that the dust from the mine was causing nose bleeds. JH said there was also people farming at the time. CC agreed there was smoke and dust around. JJ asked CC if she'd advised the mine so they were able to act on the complaint. CC said no she hadn't and that she thought it was up to him to notify the mine.

SO suggested that LJ look at the PM_{2.5} because if there's smoke in the air the PM_{2.5} will be higher.

In relation to the blast complaint, JH said it also shook her house.

JH asked how mines can be responsible for a dust storm. CC this area isn't the only one and that she'd been advised that people in the Hunter were blaming the mines. JJ said the EPA follows up on complaints received and the mines are required to justify the situation at the time of the complaint. In this instance the response to the EPA will include reference to the dust storm. LJ said the Tamworth PM₁₀ level was reading higher than the mine monitor and a media release was issued regarding the dust storm.

SO said when there are elevated regional dust levels, the mines are still contributing and it's up to the mines to minimise that contribution.

TM questioned the delay in EPA reporting the complaints to the mines. LJ it's not normally that delayed. JJ said it does make it more difficult to investigate the complaints when a delay in provision of information from the EPA occurs.

6.0 New Business

- 6.1 JT introduced the Simon Smith (SS) and Steve O'Donoghue (SO) of the EPA. The Tarrawonga CCC had asked JT to contact the EPA some time ago regarding the proposed regional air quality monitoring network (RAQMN). JT had received a response but the nominated timeframes in the response had expired so JT was again asked by the Tarrawonga CCC to contact the EPA. JT noted the prompt response from the EPA and thanked SS and SO for their attendance.

SO distributed plans identifying the mine sites in the region and the existing air quality monitoring network.

SS provided a background to the RAQMN. He said there was a commitment made in the 2012 Strategic Regional Land Use Policy (SRLUP) to progressively develop a RAQMN for the New England North West (NENW). The intention in the document is for the network to be based on the Upper Hunter network.

In NSW there is a publically funded network and the Upper and Lower Hunter networks are funded by revenue raised by the EPA through licencing fees. In this area it would require the EPA to raise the funds as the EPA and OEH haven't been provided with a bucket of money even though the commitment for a network exists in the SRLUP.

OEH has advised that there is no priority for a publically funded network in this area (focus on the Hunter) so the responsibility for funding lies with the EPA. The only mechanism for the EPA to develop a regulation under the POEO Act. This requires evidence of need and cost effectiveness.

In 2013 and 2014 the EPA had hoped that industry would volunteer to contribute. Understandably industry isn't willing to cough up money without the need, purpose etc. Given existing monitoring, costs and results, the data isn't showing exceedances so there may not be a need.

The only way to proceed is to gather information to provide evidence to support regulations. The steps for this are:

- A meteorological study has been undertaken which provided recommendation for 14 monitoring stations across the valley. The priority is to protect the

majority of the population (Narrabri and Gunnedah) with a third monitor proposed outside the mine impact area (ie Mullaley).

- An air shed model has just been commissioned with completion expected end August. The model will look at different sources of dust, comparative volumes of dust and where it comes from. This allows the EPA to identify who is contributing to dust generation.
- The information will then be provided to an expert health panel who will determine the basis to, or not to, generate funds for the network and whether it may be required now or in the future. At the moment, the information doesn't indicate impact is occurring but it may do when new mines come on line.

EPA has met with the mines, councils and others regarding the proposed network. To give an indication of costs, each station costs approximately \$200,000 - \$250,000 to establish and \$60,000 - \$70,000 to maintain.

CC asked how the unit costs compare to the Upper Hunter network. SS said the costs are based on the Upper Hunter network costs but a big part of the operating costs is employing people and the costs are shared across 14 units in the Hunter which is more cost effective than the proposed 3 units in the NENW.

SS said he also takes the point that there is lots of monitoring already happening. He is conscious of getting good value out of the existing network but thinks there is currently a missed opportunity as the data isn't easily accessible to the mines or the community.

SS said there are three models of how the network could be operated:

- Funded by industry, operated by OEH
- Funded by industry, operated by industry
- Funded by industry, operated by a third party

But before this occurs, the EPA needs to gather more information to justify regulation.

The EPA is looking at adding a fee to all licenced premises, not just mines.

SS said it strikes him about how much information is available but is not communicated effectively. There is a possibility of a co-operative website that provides data in real time, and the EPA will talk to the mines about this. There will be technical difficulties and the EPA is looking at how they can help the process.

SS said SO is also looking at other opportunities for funding, including Royalties for Regions, however under the current terms this wouldn't be possible. The scope of Royalties for Regions is being reviewed.

CC said as the EPA is aware, the EPA met with GSC on Monday and NSC on Tuesday on other matters. In discussions, the Chair of EPA (Barry Buffier) have an assurance to Councils that he would come back in 3 weeks with a view to look at the monitors that are already in operations. CC is disappointed that it has taken this long to be told we won't get a network. She said funding is an issue that needs to be directed to the Minister, whether it be straight royalties or Royalties for Regions.

JT said as he said yesterday, capital funding is easier to get than recurrent funding and he suspects this may be an issue for the EPA.

CC said it is a matter of the will of the Minister to have that put in place and perhaps we should be lobbying Minister Stokes. SS said Rob Stokes is the Minister for Planning, not the Minister for the Environment. CC asked which of the two is the top Minister. SS said they are both on the same level.

SS said the commitment for a network wasn't considered or justified in the SRLUP and funding is beyond the control of the agencies.

SS said his personal opinion is that a RAQMP will be difficult to justify.

JH said this is ridiculous. EPA had a meeting 18 months ago with Council and the community that the mines weren't invited to. It's not the mines' responsibility to put the money in, they already do this through royalties.

JH said when the network is installed it will be too late. She lives 10km away and hasn't been impacted by Tarrawonga or Boggabri Coal. She said it is also going to be difficult to tell the source of the dust because all the unsealed public roads are sheeted with crushed gravel from the mines. She said the surrounding landholders are paying the price.

SS said a monitoring program can only do so much. Irrespective of what the monitoring data shows, the EPA's role is to require best practice to minimise dust. There are some tense discussions currently occurring between the executives of the EPA and Whitehaven. The RAQMP won't solve the issue of localised dust because the monitors will be so far from the mines.

SO referred to all the monitoring currently occurring around the mine precinct and said there could be more work on that. He said there's more responsibility on the mines regarding their Environment Protection Licence and Project Approval. The RAQMP is for population areas, not for compliance at the mines.

SS said the two monitoring networks serve different purposes.

SS said the EPA are investing in dust track technology which is low cost (\$20,000) but less accurate. The EPA has purchased a hand held unit. But it doesn't deal with the long term regional issue.

SS wants as much information provided so people can look at it and understand it.

CC asked if the dust inspections were unannounced or announced. SS said both plus there is also a camera which is useful. He thinks the cameras should be rolled out across a number of industries.

CC said half the problem is having the systems in place being more available. She doesn't have an issue with the mines providing the information and this is better than a double up. Half the stress for people is getting the information.

SS referred to the dust storm and said the whole NSW dust monitoring network "lit up" and it was worse in the south of the state than in this region.

SS said people don't trust the information from the mines and can't find it so they get frustrated.

SS said the RAQMP is different to site specific compliance issues. He said people in the Upper Hunter complained when the network went in that it didn't tell them what they wanted to know (compliance) as it referred to regional conditions.

CC said she disagrees with the need for funding to be evidence based.

TM asked what the site specific requirements for monitoring were in the Hunter at the time their network was installed (ie. were the requirements less stringent then so the network was better justified). TM said more mines in the Hunter makes

their network more affordable. TM asked what the timeframes were for investigating the need for a network here and then, if justified, time to install.

SS said one justification for the Upper Hunter network was a reduction in existing monitoring. Deposited dust gauges don't tell you anything other than what's happening immediately adjacent to them. The Environmental Assessments here are more stringent than the ones in the Hunter and the number of dust gauges is greater here. Technology has advanced in the last 3-4 years to assist us to look at an integrated picture.

SS said the Upper Hunter network is confusing people because it doesn't show what's happening at a site and people don't understand the numbers.

SS said the met study has been completed, the air shed model will be completed by the end of August and will be issued to the technical panel for expert advice as to the necessity and cost effectiveness of a network. If proven it will take 6-12 months to draft the regulation so if it is to commence it will likely be 2017. The EPA had a false expectation that the industry would voluntarily fund the network.

TM said Whitehaven paid either \$63 million or \$83 million (can't recall exact figure) last year in royalties, which will now increase with Maules Creek. Industry is providing a lot of money and Councils support this.

JH said the community believes the mines have paid their way.

JT said the criteria for Royalties for Regions would need to be changed by the Minister. CC said it could be just from straight royalties. JT said he doesn't think it would come from straight royalties.

CC said she had a call from the local newspaper asking about the monitoring network. She said the Government needs their credibility back.

JH said people interpret information how they want in order to support their case.

JJ said real time monitoring data needs to be validated. SO said the OEH run network publishes validated data with QA/QC within 1 hour. TM said there is a resourcing issue in that. SS said there is a risk that the information will be misinterpreted.

In relation to the dust complaints received recently, SS said they could see two sources of dust, the regional dust and the site specific dust, including the Wave Hill quarry.

TM said the media will report worst case straight up. SS said you do get hysteria and misinterpretation but on the other side people do get information.

SS said EPA is trying to get in contact with the community members installing dust gauges. The output of these monitors is questionable and doesn't mean much unless zeroed and validated.

JH said there is also an assumption that everyone is on the internet.

JH asked the EPA how many cameras. She said EPA installed one at Tarrawonga but after three months asked Tarrawonga to pay for it. SS said there is also an EPA camera at a Maules Creek private property which has funding until the end of the financial year. EPA doesn't have access to the Tarrawonga camera.

SS said at the time of the complaints there was a particular issue with a set of quarries.

SS said it was evident by listening to the Tarrawonga UHF channel that there was a cultural change when the camera was installed and that he'd heard people talking

about it on the UHF. JJ questioned how the EPA accesses Tarrawonga's UHF channel as it is a private channel. SS said we hear it but you don't need to know how we get it. AM asked for clarification that EPA had access to the Tarrawonga UHF channel and SS said that they had listened to it.

JT thanked SS and SO for attending the meeting.

SS said they will provide a response within 3 weeks in accordance with Barry Buffier's commitment.

7.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

8.0 Next Meeting

The next meeting will be held at 10am on Wednesday 12th August 2015 at the Tarrawonga Training Room. Subsequent meetings for 2015 will be 10am, 18th November (Tarrawonga) and 12:30pm, 19th November (BTM).

Meeting closed at 11:40 am

John Turner - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #38

Environmental Monitoring Report March 2015 – May 2015

Noise Monitoring

Following the approval of the Noise Management Plan by DP&E in January 2015, attended noise monitoring was undertaken at the 'Bungalow', 'Barbers Lagoon' and 'Matong' properties from 23rd to 26th March 2015, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Matong

TCM Operational Noise Monitoring Results – 23 rd – 26 th March 2015					
Date	Time	dB(A),Leq (15 min)	Wind speed/direction	Temperature Inversion °C/100m	Identified Noise Sources as dB(A) Leq (15 min)
23/3/15	9:46 am	32	1.3/213		Birds (30), wind (26), mine noise (22) TCM est. inaudible
23/3/15	7:48 pm	32	0.9/1	+7.8	Insects(30), mine noise (28) TCM est. inaudible
23/3/15	10:02 pm	34	1.7/1	+4.0	Mine noise (33) TCM est. faintly audible, insects (26)
24/3/15	7:28 am	44	0.8/343		Birds (41), wind (41), mine noise (27) TCM est. (24)
24/3/15	7:45 pm	38	2.1/55	+0.6	Mine noise (36) TCM est. (28), insects (33)
24/3/15	10:01 pm	35	0.8/191		Mine noise (34) TCM est. (25), frogs & insects (29)
25/3/15	7:50 am	41	1.0/174		Birds (38), mine noise (38) TCM est. (30)
25/3/15	9:08 pm	32	1.1/350	+9.2	Mine noise (30) TCM est. (27), insects (28)
26/3/15	12:29 am	26	0.8/347	+9.6	Mine noise (25) TCM est. (22), insects (22)
26/3/15	8:17 am	50	1.0/187		Birds (50), mine noise (26), TCM est. (23)
26/3/15	7:41 pm	34	2.4/226	+1.0	Insects (33), mine noise (27) TCM est. (24)
26/3/15	10:15 pm	32	0.6/251	+7.0	Mine noise (30) TCM est. (27), insects (27)

Barbers Lagoon

TCM Operational Noise Monitoring Results – 23 rd – 26 th March 2015					
Date	Time	dB(A),Leq (15 min)	Wind speed/direction	Temperature Inversion °C/100m	Identified Noise Sources as dB(A) Leq (15 min)
23/3/15	11:26 am	44	1.3/219		Birds (44), traffic (26), TCM inaudible
23/3/15	8:32 pm	30	1.0/24	+8.6	Insects (30), TCM inaudible
23/3/15	11:12 pm	31	1.6/351	+5.2	Frogs & insects (31), TCM faintly audible
24/3/15	9:19 am	42	2.1/276		Birds (41), traffic (34), mine noise (24) TCM est. (21)
24/3/15	8:28 pm	36	0.8/113	+1.0	Frogs & insects (35), domestic (29), TCM inaudible
24/3/15	11:16 pm	32	1.1/231		Frogs & insects (32), mine noise (22) TCM est. (19)
25/3/15	9:31 am	43	1.2/173		Birds (40), sheep (37), traffic (36), TCM faintly audible
25/3/15	8:22 pm	32	0.8/4	+8.4	Insects (32), TCM inaudible
25/3/15	11:14 pm	25	1.0/346	+9.2	Insects (25), TCM inaudible
26/3/15	10:00 am	43	0.8/190		Birds (43), traffic (31), TCM inaudible
26/3/15	8:23 pm	35	1.7/226	+2.2	Insects (34), wind (27), TCM inaudible
26/3/15	11:28 pm	26	0.8/217	+5.4	Insects (26), TCM inaudible

Bungalow

TCM Operational Noise Monitoring Results – 23 rd – 27 th March 2015					
Date	Time	dB(A),Leq (15 min)	Wind speed/direction	Temperature Inversion °C/100m	Identified Noise Sources as dB(A) Leq (15 min)
23/3/15	1:36 pm	35	2.3/272		Birds & insects (34), wind (28), TCM inaudible
23/3/15	9:16 pm	33	1.2/29	+6.8	Frogs & insects (33), TCM inaudible
24/3/15	12:33 am	30	2.9/11	+4.4	Frogs & insects (30), TCM faintly audible
24/3/15	11:06 am	42	6.1/327		Wind (41), birds (35), TCM inaudible
24/3/15	9:15 pm	33	1.3/215		Frogs & insects (31), wind (25), mine noise (25) TCM est. (22)
25/3/15	12:34 am	36	1.4/209	+2.4	Wind (33), frogs & insects (30), mine noise (30) TCM est. (27)
25/3/15	11:16 am	38	1.6/207		Birds & insects (38), TCM inaudible
25/3/15	7:38 pm	31	1.0/308	+6.2	Birds & insects (31), TCM inaudible
25/3/15	10:00 pm	32	0.6/341	+8.4	Insects (32), TCM faintly audible
26/3/15	11:44 am	30	2.8/286		Birds (30), TCM inaudible
26/3/15	9:09 pm	27	0.5/128	+4.4	Insects (27), TCM inaudible
27/3/15	12:43 am	24	0.7/199	+5.6	Insects (24), TCM inaudible

The results show that noise emissions from the mine did not exceed the operational noise criterion at the three monitoring locations during the monitoring event.

In addition to the operational noise, the noise from the mine must not exceed 45 dB(A) L1 (1 min) between the hours of 10 pm and 7 am. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine. The results of the sleep disturbance monitoring provided below show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

Table 13 TCM Sleep Disturbance Monitoring Results – 23 rd – 27 th March 2015					
Date	Location	Time	dB(A),L1 (1 min)	Wind speed/direction	Temperature Inversion °C/100m
23/3/15	Matong	10:02 pm	20	1.7/1	+4.0
24/3/15	Matong	10:01 pm	29	0.8/191	
26/3/15	Matong	12:29 am	25	0.8/347	+9.6
26/3/15	Matong	10:15 pm	31	0.6/251	+7.0
23/3/15	Barbers Lagoon	11:12 pm	19	1.6/351	+5.2
24/3/15	Barbers Lagoon	11:16 pm	22	1.1/231	
25/3/15	Barbers Lagoon	11:14 pm	n/a	1.0/346	+9.2
26/3/15	Barbers Lagoon	11:28 pm	n/a	0.8/217	+5.4
24/3/15	Bungalow	12:33 am	19	2.9/11	+4.4
25/3/15	Bungalow	12:34 am	30	1.4/209	+2.4
25/3/15	Bungalow	10:00 pm	n/a	0.6/341	+8.4
27/3/15	Bungalow	12:43 am	n/a	0.7/199	+5.6

The real time noise monitor was relocated to the “Matong” property in November 2013 and has indicated mine noise at that location to be generally within compliance limits. OCE’s action alarms

by investigating the noise source and modifying operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels.

The real time noise monitor is to be relocated to a private receiver; the unit will still remain a management tool used to facilitate operations maintaining compliance. This relocation is expected prior to the next CCC meeting in August.

Blast Monitoring

Blasting Results

Since the first shot there have been 570 blasts (until the 15/5/2015).

All blasts have been within 100 percentile limit for ground vibration and air blast overpressure since the last meeting.

Agreement has been reached with two private landholders for the relocation of the blast monitors from “Tarrawonga” and “Matong”. The relocation is pending the approval of the Blast Management Plan currently with DP&E.

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARD (EB-6)	TARRAWONGA (EB-7)	THUJIN (EB-8)	PINE GROVE (EB-9)	TARRAWONGA MINE (EB-10)	TARRAWONGA MINE (EB-11)	PINE GROVE (EB-12)	BOLLOL CREEK (EB-13)	TARRAWONGA MINE (EB-14)	TARRAWONGA MINE (EB-15)	JERALONG NORTH (EB-16)
May 2014	1.0	1.3	0.2	0.4	4.8	1.1	0.7	2.8	2.7	2.8	5.4	8.1	1.3
June 2014	2.1	2.6	0.2	0.4	2.2	0.5	1.9	5.6	0.9	0.8	2.6	10.8	0.5
July 2014	0.8	2.8	0.3	0.3	0.7	0.3	3.4	2.7	0.5	0.2	1.4	7.6	0.5
August 2014	1.2	3.6	0.7	0.3	2.8	0.8	1.9	8.7	1.4	1.2	5.1	26	0.9
September 2014	2.2	2.4	0.6	0.5	1.1	0.6	1.9	1	0.5	0.7	3.7	6.8	0.6
October 2014	5	2.6	1.7	1	2.3	1.1	1.9	6.2	1	7.6	2.6	9.7	1.2
November 2014	2.8	1.5	7.3	0.2	1.5	0.9	1.7	1.0	0.8	2.5	1.1	1.9	0.9
December 2014	7.4	5.1	6.6	1.4	2.4	3.4	4.2	4.7	1.9	1.8	4.1	5.1	2.5
January 2015	2.2	0.9	0.3	0.8	0.8	0.7	1.6	0.7	1.1	2.3	4.8	2.5	1.9
February 2015	2.1	1.6	1.0	0.9	2.5	1.0	3.8	4.0	1.1	0.1	1.7	3.4	4.2
March 2015	2.9	2.7	2.7	1.1	1.0	0.9	6.2	2.1	2.5	2.0	5.5	4.9	0.3
April 2015	0.4	2.3	1.7	1.4	3.1	-	6.5	3.6	6.0	1.5	2.5	7.7	14.6
ANNUAL AVERAGE	2.5	2.5	2.1	0.7	2.1	1.0	3.0	3.6	1.7	2.0	3.4	7.8	2.5

All monitoring locations remain below the limit of 4g/m²/month (average) with the exception of EB-15. As this monitor is located on mine-owned land, compliance criteria do not apply.

PM₁₀ Results

The annual average for PM₁₀ readings at “Templemore” is currently at 27.03µg/m³ (until end of April 2015) and remains below the annual average limit of 30µg/m³.

One instance of exceedance of the daily PM₁₀ limit has occurred since the last CCC meeting. A result of 214µg/m³ was recorded on the 6th March 2015. The initial investigation has identified that the wind direction throughout the day was generally from the south east and that smoke haze was separately identified by the ALS technician and Tarrawonga Environmental Officer on the day of the exceedance. The sample paper is currently at a laboratory undergoing a microscopic analysis to determine the contaminant source, having already had the result retested to ensure that the result was accurate.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

Water Monitoring

Ground Water

Groundwater monitoring data obtained to date, including the last round of SWL monitoring in February 2015, is provided in the table and graphs below. Results at all monitoring locations remained relatively consistent between November 2014 and February 2015.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	February 2014	6.08	7.65	3440
	May 2014	6.25	7.6	3140
	September 2014	6.26	7.97	3320
	November 2014	6.36	7.7	3190
	February 2015	6.39	8.0	3420
MW2	February 2014	3.72	7.01	694
	May 2014	3.35	7.4	618
	September 2014	3.5	7.27	615
	November 2014	3.63	7.4	615
	February 2015	3.32	7.59	567
MW4	February 2014	8.74	7.98	3890
	May 2014	8.78	7.6	3840
	September 2014	8.76	7.83	4170
	November 2014	8.72	7.3	3970
	February 2015	8.71	7.7	4430
MW5	February 2014	3.01	7.77	1850
	May 2014	2.77	7.7	925
	September 2014	2.8	7.99	2200
	November 2014	3.0	7.8	3020
	February 2015	3.17	8.15	2060
MW6	March 2014	5.84	7.51	212
	May 2014	5.64	7.5	360
	September 2014	5.54	7.61	854
	November 2014	5.55	7.5	712
	February 2015	5.65	7.67	617
MW7	February 2014	103.55	No Sample	No Sample
	May 2014	103.96	No Sample	No Sample
	September 2014	103.84	No sample	No sample
	November 2014	104.01	No sample	No sample
	February 2015	104.09	No sample	No sample

MW8	February 2014	13.07	Casing blocked	Casing blocked
	May 2014	13.00	Casing blocked	Casing blocked
	September 2014	13.13	Casing blocked	Casing blocked
	November 2014	13.22	Casing blocked	Casing blocked
	February 2015	13.27	Casing blocked	Casing blocked

Surface Water

Routine surface water monitoring was conducted during May 2015.

No wet weather discharges have occurred since the last CCC meeting. Sampling was undertaken 4th April 2015 at Nagero downstream monitoring location following 49.8mm rain over a two day period.

Rehabilitation

Shaping of 5.5ha on the northern extension emplacement continues with topsoil being relocated to the top of the rehabilitation slope for spreading once the final slope is achieved. The completion of shaping, topsoiling and planting with tubestock is scheduled for the end of FY14/15.

A further 2ha of rehabilitation has commenced on the northern emplacement.

Rehabilitation maintenance activities across an area of 10ha on the northern and southern emplacements are ongoing. These works include erosion control, weed control, direct seeding and tubestock planting.

Clearing

Clearing activities were undertaken in the central pit and northern extension during March and April 2015 in accordance with the recently approved Biodiversity Management Plan. Pre clearance survey was undertaken by an ecologist to identify habitat trees and trees suitable for salvage for later use on rehabilitation areas. Clearing was undertaken in two stages; stage one involved the clearing of understorey and non-habitat trees. This work was completed in March.

Stage two clearing was undertaken in April with the clearing of identified habitat under the supervision of the qualified ecologist.

Cleared vegetation has been windrowed and is being processed by the tree mulching contractor. Mulched timber will be incorporated into the top soil during the soil stripping process.

Complaints

Since the last meeting, there have been three complaints, as outlined on the following table.

Complaints Register

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
3	Phone call to the EPA Environment Line	15/5/2015 12.39pm	Complaint received by the EPA regarding blasting activities at Tarrawonga which resulted the rattling of windows and tin roof.	The Environmental Officer upon receipt of the complaint reviewed blast monitor results and weather conditions at the time of the blast; the blast monitor results were compliant and weather conditions suitable for blasting activities	The blast monitor results and weather conditions were provided to the EPA 15/5/15. No further action required.
4	Phone call the EPA Environment Line	6/5/15 (received 18/5/15 – 12.44pm)	Complaint received by the EPA regarding dust generation from coal mines in the Gunnedah basin. Complainant stated that mines contributing to elevated dust levels across the state which was the result of a dust storm which developed in the states south west.	The Tarrawonga Environmental Officer undertook a preliminary investigation upon receipt of the complaint.	Further investigation is to be undertaken and a response will be provided to the EPA in relation to this matter.
5	Phone call the EPA Environment Line	6/5/15 (received 18/5/15 – 12.44pm)	Complaint regarding dust generated on 6/5/15 stating that the dust was awful and was not associated with any elevated dust levels from the dust storm moving across NSW from the states south west.	The Tarrawonga Environmental Officer undertook a preliminary investigation upon receipt of the complaint.	Further investigation is to be undertaken and a response will be provided to the EPA in relation to this matter.

Minutes of the 39th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 12th August 2015

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: Mr John Turner (JT), Independent Chairman
Mrs Jill Johnson (JJ), Group Manager - Environment
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mrs Cath Collyer (CC), Narrabri Shire Council (NSC) delegate
Mr Tim Muldoon (TM), Group Manager Community Relations and Property
Mr Anthony Margetts (AM), Operations Manager
Mr Jim Picton (JP), Community Rep
Mrs Libby Guest (LG), Community Rep (in attendance via telephone)
Mrs Rebecca Ryan (RR), Gunnedah Shire Council (GSC) delegate

Apologies: Mrs Julie Heiler (JH), Community Rep

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

JT declared that he is paid a fee for his participation as Independent Chairman.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record on the motion of CC and LJ.

4.0 Business Arising

- 4.1 JJ advised that a newsletter, which included blasting information, had been issued.

No further action required.

- 4.2 JT provided a summary of the requirement for the mine to contribute to an environmental trust fund. The sub-committee had a meeting with NSC on the day prior to this CCC meeting and agreed on the form for application and process for NSC to advertise. The process will be finalised for presentation and approval at the joint CCC meeting in November. It's expected that call for applications will occur in early 2016.

JT to provide Trust Fund update at next meeting.

5.0 General Business

- 5.1 Mine Progress Report

AM provided an update on the 2014-2015 financial year results.

- Slightly exceeded targets, whilst remaining within compliance limits.

- The site's safety performance improved again, which is now three years with continuous improvement. The site is up to 750 days LTI (lost time injury) free.
- Costs have decreased. Dozer push has been maximised which reduces costs and also reduces dust due to different handling techniques (compared to excavator and trucks).

CC asked if the change was a result of where the coal is in the pit. AM said the design of the pit has been modified (ie. moving ramps to allow better utilisation).

AM said the site had trialled wetting the dig face but found it to have limited benefit due to the water penetrating less than the depth of the bucket swipe. The site is still looking at additional ways to minimise dust. LJ said the site is running water on exposed areas. CC asked if dust suppressants are used. AM said they're not because they're only cost effective when the site has a water deficit. The site has enough water so will use water. LJ said dust suppressants and generally used in high traffic areas.

JP asked about the site's water supply. AM said it's good with the winter rains received.

AM said the challenges for the mine are:

- Visual impact as the mine has extended beyond the south dump, meaning the site has to be very conscious of positioning of lighting plants. CC said it is quite visible.
- Dump integration with Boggabri Coal. The integration plan has been finalised but the date that integration occurs is dependent on Boggabri Coal ceasing use of the haul road in between the two dumps.

5.2 Environmental Monitoring Report

LJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

JP said the dust has been pretty bad, in particular the previous Friday, Saturday and Monday. He said it was an accumulation of the mines. CC said the dust is clearly visible. JP asked when the mine can monitor. LJ said the High Volume Air Sample (HVAS PM₁₀) runs every 6 days and the TEOM every 5 minutes in real time and every 15 minutes recorded. JP asked if he could ring up on a dusty day and find out what the dust level is. CC asked how the information is published. JJ said Jim is looking for a more instantaneous result which LJ could provide from the real time TEOM unit.

JP asked about the bore on Matong and whether it is Tarrawonga's or Boggabri Coal's. LJ said its Boggabri Coal's. JP said they didn't know about it. LJ said its there's but he thinks it's no longer part of their monitoring network.

CC asked if the recent 5.5ha of rehabilitation was grazing. LJ said it's in the area that needs to blend with Boggabri Coal's rehabilitation. The grazing areas will be reinstated in other areas further on in the mine's life.

6.0 New Business

- 6.1 JP referred to Boggabri Coal undertaking a baiting program for feral animals. LJ said he has spoken with them and is going to meet with Local Land Services (LLS) on Monday and will target onsite and offsite areas. Boggabri Coal will focus more on pigs while Tarrawonga will focus more on foxes (the predominant pests on the respective sites). LJ said he would be in contact with JP regarding the program. There was general discussion about the number of foxes in the region. JP said he baited and culled 150 foxes in one week in 2014 on his properties.
- 6.2 CC thanked JJ for providing information for the potential new member. JJ explained to the Committee that CC had approached her at the recent Vickery CCC about a member of the community who was interested in becoming a CCC member. The Department advised that the person could send an expression of interest to Whitehaven for the Department to consider.
- 6.3 CC suggested that the CCCs invite Department representatives to the annual joint CCC meeting for information sessions.
- 6.4 TM advised that licence holders on Whitehaven land have been issued notices regarding controlling any pig dogs they may own. Notices have also been issued for control of weeds and feral animals. Whitehaven is working with Councils, in particular NSC, and will participate in the upcoming field day at Maules Creek for Green Cestrum. TM noted the importance of all landholders, not just mining companies, participating in weed and feral animal control.
- 6.5 LJ provided a copy of the 2014-2015 Annual Environmental Management Report (AEMR)/Annual Review for the Committee and advised he could post electronic copies to any interested members. JJ advised that the report will also be available on the Whitehaven website.

7.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

8.0 Next Meeting

The next meeting will be held at 10am on Wednesday 18th November 2015 at the Tarrawonga Training Room. The BTM CCC meeting will be held at 12:30pm on Thursday 19th November 2015 (venue to be advised).

Meeting closed at 10:50am

John Turner - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #39

Environmental Monitoring Report May 2015 – August 2015

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow”, “Barbers Lagoon” and “Matong” properties from 9th to 12th June 2015, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 TCM Operational Noise Monitoring Results – 9 June 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:24am	46	3.7/306	Birds (43), mine noise (43), TCM est. (35)
Barbers Lagoon	7:00 am	42	0.3/10	Birds (41), traffic (33), mine noise (31), TCM est. (29)
Bungalow	8:41 am	39	0.7/169	Birds (36), mine noise (34), TCM est. (33), TCM (26) ¹ traffic (25)

1. TCM haul trucks on haul road

Table 2 TCM Operational Noise Monitoring Results – 9 June 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	8:42 pm	31	1.0/334	+10.2	Tractor (28), mine noise (28), TCM est. (<20)
Barbers Lagoon	9:27 pm	25	0.7/316	+9.8	Traffic (25), TCM (<20)
Bungalow	7:31 pm	22	0.9/349	+8.4	TCM (22) ¹

1. TCM haul trucks on haul road

Table 3 TCM Operational Noise Monitoring Results – 9/10 June 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	12:35 am	29	0.6/40	+7.2	Mine noise (29), TCM est. (<20)
Barbers Lagoon	1:49 am	32	0.7/343	+7.4	Mine noise (32), TCM est. (31)
Bungalow	12:38 am	23	0.6/40	+7.2	Traffic (23), TCM (<20)

Table 4 TCM Operational Noise Monitoring Results – 10 June 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	8:54 am	40	1.6/187	Birds (38), mine noise (35), TCM est. (27)
Barbers Lagoon	2:11 pm	35	3.2/163	Wind (34), traffic (28), TCM (<20)
Bungalow	11:00am	52	2.8/173	Birds (52), mine noise (35), TCM est. (34)

Table 5 TCM Operational Noise Monitoring Results – 10 June 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Tarrawonga	7:25 pm	35	1.3/171	+4.2	Tractor (35), mine noise (23), TCM est. (<20)
Barbers Lagoon	9:30 pm	35	0.7/285	+10.2	Mine noise (35), TCM est. (34)
Bungalow	7:43 pm	37	0.9/185	+5.0	Mine noise (32), TCM est. (31), TCM (27) ¹

1. TCM haul trucks on haul road

Table 6 TCM Operational Noise Monitoring Results – 10/11 June 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:14 pm	32	1.7/174	+6.6	Tractor (32), TCM (<20)
Barbers Lagoon	2:03 am	34	0.5/188	+7.6	Mine noise (34), TCM est. (33)
Bungalow	12:36 am	31	2.6/131	+4.6	Mine noise (31), TCM est. (30)

Table 7 TCM Operational Noise Monitoring Results – 11 June 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:30 am	46	4.6/123	Birds (44), tractor (40), wind (35), TCM (<20)
Barbers Lagoon	12:16 pm	38	4.4/135	Wind (36), birds (32), traffic (28), TCM (<20)
Bungalow	2:01 pm	46	4.1/141	Wind (46), domestic (27), TCM (<20)

Table 8 TCM Operational Noise Monitoring Results – 11 June 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	7:50 pm	27	0.6/74	+5.4	Mine noise (27), TCM est. (<20)
Barbers Lagoon	8:36 pm	33	0.9/149	+4.8	Mine noise (32), TCM est. (31), traffic (25)
Bungalow	9:18 pm	33	0.7/152	+4.0	Mine noise (32), TCM est. (31), traffic (26)

Table 9 TCM Operational Noise Monitoring Results – 11/12 June 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:04 pm	25	1.4/145	+4.8	Mine noise (25), TCM est. (<20)
Barbers Lagoon	11:22 pm	33	0.9/172	+4.4	Mine noise (33), TCM est. (32), traffic (21)
Bungalow	12:36 am	28	0.7/204	+11.2	Mine noise (28), TCM est. (27)

Table 10 TCM Operational Noise Monitoring Results – 12 June 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:46 am	42	4.9/128	Wind (40), birds (37), mine noise (31), TCM est. (<20)
Barbers Lagoon	9:01 am	39	4.2/126	Traffic (36), mine noise (34), TCM est. (27), birds (31)
Bungalow	12:34 pm	37	3.8/141	Wind (36), birds (30), mine noise (27), TCM est. (24)

Table 11 TCM Operational Noise Monitoring Results – 12 June 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	8:31 pm	29	0.5/359	+4.4	Mine noise (29), TCM est. (<20)
Barbers Lagoon	9:25 pm	36	0.3/330	+6.6	Mine noise (36), TCM est. (28), traffic (25)
Bungalow	9:20 pm	33	0.3/330	+6.6	Mine noise (33), TCM est. (26)

Table 12 TCM Operational Noise Monitoring Results – 12/13 June 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:10 pm	27	0.2/348	+8.0	Mine noise (27), TCM est. (<20)
Barbers Lagoon	11:26 pm	32	0.3/331	+8.2	Mine noise (32), TCM est. (29), traffic (21)
Bungalow	10:00 pm	34	0.3/341	+7.4	Mine noise (34), TCM est. (27)

The results in Table 1- Table 12 show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event.

In addition to the operational noise, the noise from the mine must not exceed 45 dB(A) L1 (1 min) between the hours of 10 pm and 7 am. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine. The results of the sleep disturbance monitoring (table 13-16) show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

Table 13 TCM Sleep Disturbance Monitoring Results – 9/10 June 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	12:35 am	22	0.6/40	+7.2
Barbers Lagoon	1:49 am	34	0.7/343	+7.4
Bungalow	12:38 am	<20	0.6/40	+7.2

Table 14 TCM Sleep Disturbance Monitoring Results – 10/11 June 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	10:14 pm	<20	1.7/174	+6.6
Barbers Lagoon	2:03 am	37	0.5/188	+7.6
Bungalow	12:36 am	35	2.6/131	+4.6

Table 15 TCM Sleep Disturbance Monitoring Results – 11/12 March 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	10:04 pm	<20	1.4/145	+4.8
Barbers Lagoon	11:22 pm	37	0.9/172	+4.4
Bungalow	12:36 am	32	0.7/204	+11.2

Table 16 TCM Sleep Disturbance Monitoring Results – 12/13 June 2015 (night)				
Location	Time	dB(A), L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	10:10 pm	20	0.2/348	+8.0
Barbers Lagoon	11:26 pm	34	0.3/331	+8.2
Bungalow	10:00 pm	32	0.3/341	+7.4

The real time noise monitor was relocated to the “Coomalgah” property on the 9th June 2015 from the “Matong” property. OCE’s action alarms by investigating the noise source and modifying operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels.

The unit will remain a management tool used to facilitate operations maintaining compliance.

Blast Monitoring

Blasting Results

Since the first shot there have been 588 blasts (until the 6/8/2015).

All blasts have been within 100 percentile limit for ground vibration and air blast overpressure since the last meeting.

Blast 576 on 11/6/2015 registered 117.5dB. Both the EPL and Project Approval permit 5% of blasts to exceed 115dB, but not exceed 120dB. This occurrence remains within the 5% for each of the EPL’s and Project Approvals reporting period. An internal investigation was undertaken to determine the cause of the elevated result and the outcomes of that investigation will now be incorporated into future blast designs.

Agreement has been reached with two private landholders for the relocation of the blast monitors from “Tarrawonga” and “Matong”. The relocation is pending the approval of the Blast Management Plan currently with DP&E.

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARD (EB-6)	TARRAWONGA (EB-7)	THUIN (EB-8)	PINE GROVE (EB-9)	TARRAWONGA MINE (EB-10)	TARRAWONGA MINE (EB-11)	PINE GROVE (EB-12)	BOLLOL CREEK (EB-13)	TARRAWONGA MINE (EB-14)	TARRAWONGA MINE (EB-15)	JERALONG NORTH (EB-16)
August 2014	1.2	3.6	0.7	0.3	2.8	0.8	1.9	8.7	1.4	1.2	5.1	26	0.9
September 2014	2.2	2.4	0.6	0.5	1.1	0.6	1.9	1	0.5	0.7	3.7	6.8	0.6
October 2014	5	2.6	1.7	1	2.3	1.1	1.9	6.2	1	7.6	2.6	9.7	1.2
November 2014	2.8	1.5	7.3	0.2	1.5	0.9	1.7	1.0	0.8	2.5	1.1	1.9	0.9
December 2014	7.4	5.1	6.6	1.4	2.4	3.4	4.2	4.7	1.9	1.8	4.1	5.1	2.5
January 2015	2.2	0.9	0.3	0.8	0.8	0.7	1.6	0.7	1.1	2.3	4.8	2.5	1.9
February 2015	2.1	1.6	1.0	0.9	2.5	1.0	3.8	4.0	1.1	0.1	1.7	3.4	4.2
March 2015	2.9	2.7	2.7	1.1	1.0	0.9	6.2	2.1	2.5	2.0	5.5	4.9	0.3
April 2015	0.4	2.3	1.7	1.4	3.1	-	6.5	3.6	6.0	1.5	2.5	7.7	14.6
May 2015	1.4	2.7	1.9	23.7	1.5	0.4	8.6	2.7	0.7	2.5	3.5	9.2	<0.1
June 2015	21.4	1.8	0.7	1.1	2.9	0.8	-	9.5	0.7	1.1	1.7	5.0	0.4
July 2015	144.0	2.2	0.6	4.3	4.2	0.4	21.1	6.8	<0.1	1.0	1.2	4.5	0.5
ANNUAL AVERAGE	16.1	2.5	2.2	3.1	2.2	0.9	5.4	4.3	1.5	2.0	3.1	7.1	2.3

Four monitoring locations exceeded the limit of 4g/m²/month (average); Templemore EB-4, Tarrawonga Mine EB-10, Tarrawonga Mine EB-11 and Tarrawonga Mine EB-15. As these monitors are located on mine-owned land, compliance criteria do not apply.

An abnormally high result at Templemore EB-4 was recorded in July 2015. This result will undergo further analysis. Field note records indicate that the funnel was blocked by bird droppings.

PM₁₀ Results

The annual average for PM₁₀ readings at “Templemore” is currently at 25.2µg/m³ (until end of July 2015) and remains below the annual average limit of 30µg/m³.

There has been no exceedance of the daily PM₁₀ limit since the last CCC meeting.

The investigation undertaken as a result of the exceedance which occurred 6/3/2015 determined the following:

- Wind direction throughout the day was generally from southeast indicating that mine generated dust was not likely an influencing factor;
- Bushfire haze was noted on the field sheet completed by the ALS technician;
- The Environmental Officer noted the smoke haze around site as part of daily inspections around the time of the exceedance date;
- Sample paper was sent to the ALS laboratory for microscopic analysis and the results confirmed that the result was accurate.

- It has been concluded that the bushfire haze surrounding the region had an impact on the result. The result has been accepted and will not be excluded from the monitoring records.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

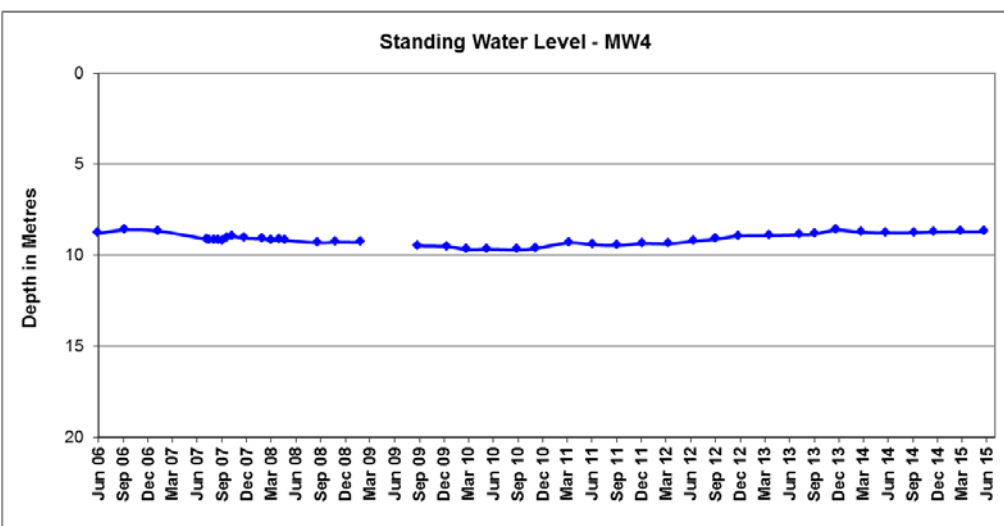
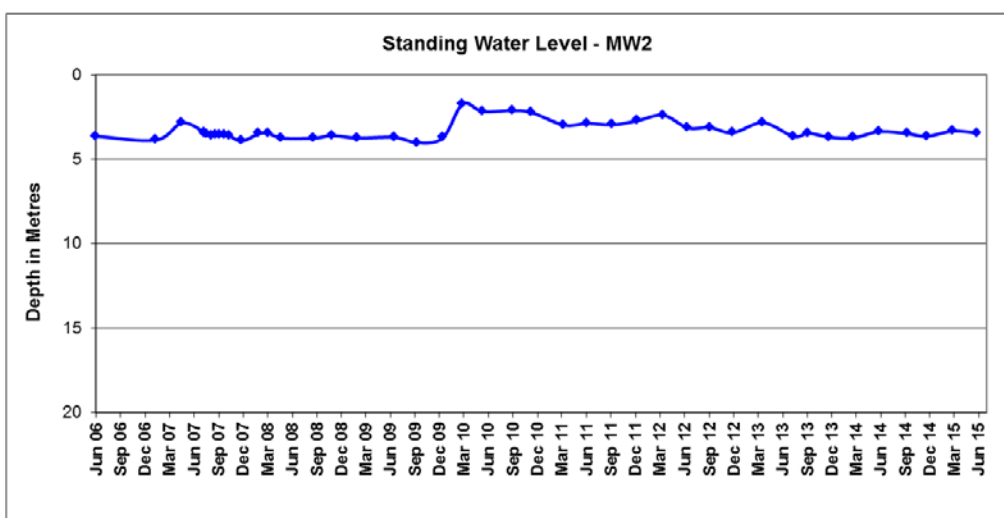
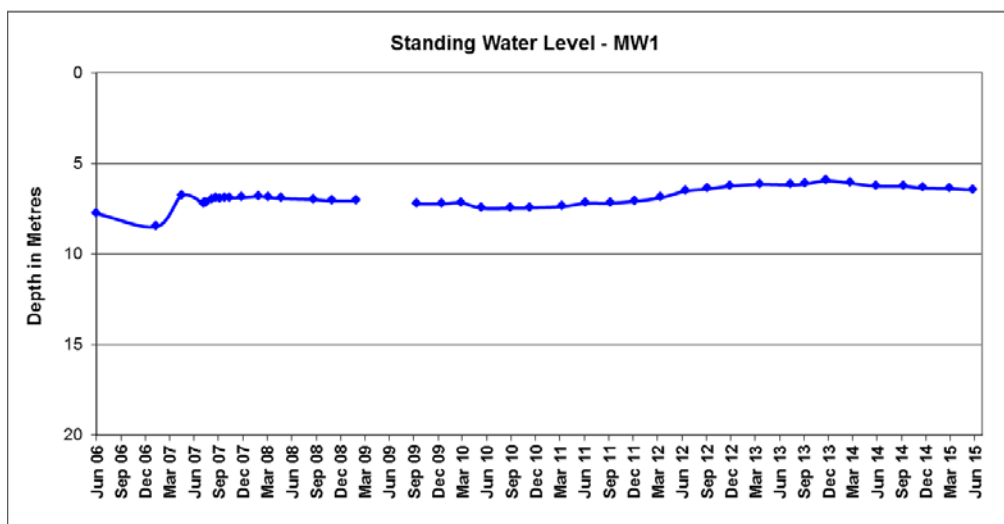
Water Monitoring

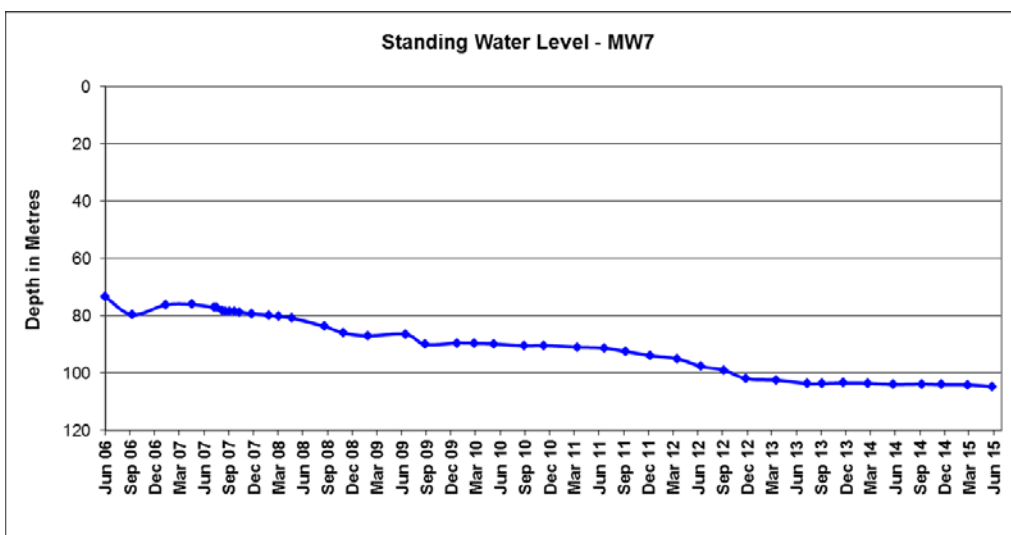
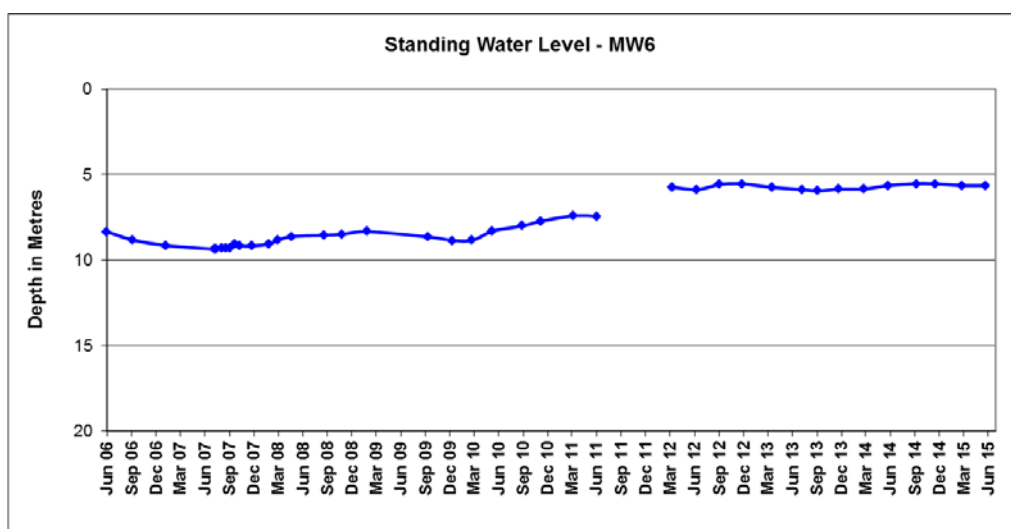
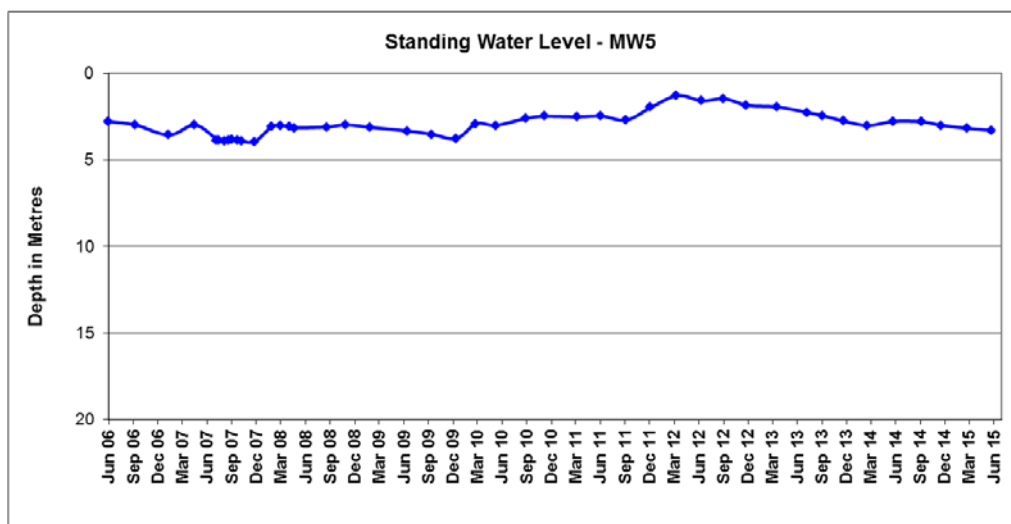
Ground Water

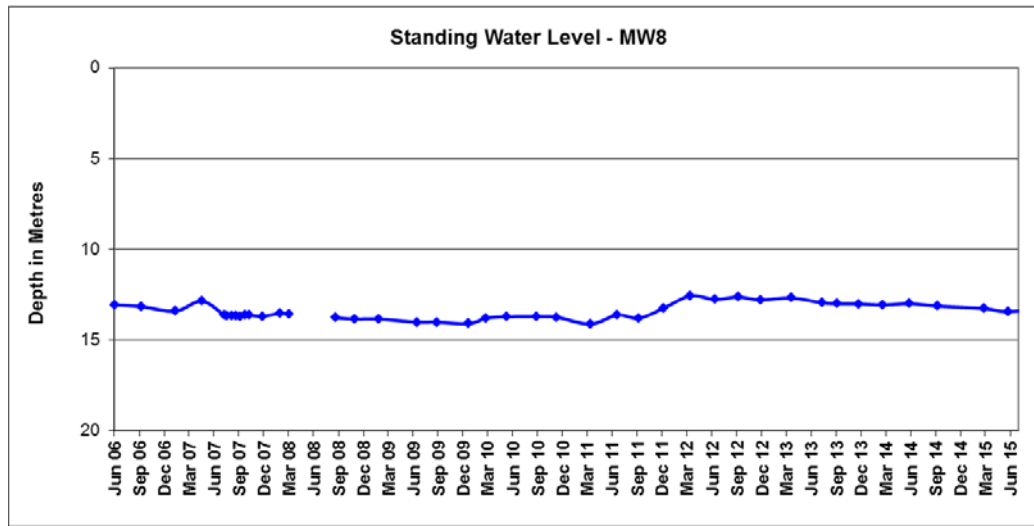
Groundwater monitoring data obtained to date, including the last round of SWL monitoring in May 2015, is provided in the table and graphs below. Results at all monitoring locations remained relatively consistent between February 2015 and May 2015.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	May 2014	6.25	7.6	3140
	September 2014	6.26	7.97	3320
	November 2014	6.36	7.7	3190
	February 2015	6.39	8.0	3420
	May 2015	6.47	7.5	3210
MW2	May 2014	3.35	7.4	618
	September 2014	3.5	7.27	615
	November 2014	3.63	7.4	615
	February 2015	3.32	7.59	567
	May 2015	3.44	7.2	522
MW4	May 2014	8.78	7.6	3840
	September 2014	8.76	7.83	4170
	November 2014	8.72	7.3	3970
	February 2015	8.71	7.7	4430
	May 2015	8.71	7.3	4120
MW5	May 2014	2.77	7.7	925
	September 2014	2.8	7.99	2200
	November 2014	3.0	7.8	3020
	February 2015	3.17	8.15	2060
	May 2015	3.29	7.8	2120
MW6	May 2014	5.64	7.5	360
	September 2014	5.54	7.61	854
	November 2014	5.55	7.5	712
	February 2015	5.64	7.67	617
	May 2015	5.65	7.5	692
MW7	May 2014	103.96	No Sample	No Sample
	September 2014	103.84	No sample	No sample
	November 2014	104.01	No sample	No sample
	February 2015	104.09	No sample	No sample
	May 2015	104.67	No sample	No sample
MW8	May 2014	13.00	Casing blocked	Casing blocked
	September 2014	13.13	Casing blocked	Casing blocked
	November 2014	13.22	Casing blocked	Casing blocked
	February 2015	13.27	Casing blocked	Casing blocked
	May 2015	13.43	Casing blocked	Casing blocked







Surface Water

Routine surface water monitoring was conducted during May 2015.

No wet weather discharges have occurred since the last CCC meeting. Sampling was undertaken 17th June 2015 at Nagero downstream monitoring location following 41.2mm rain over a two day period.

Rehabilitation

Rehabilitation on the northern extension emplacement continues with topsoil being spread across an area of approximately 3.7ha. The remaining 1.8ha is being reshaped progressively.

A further 2ha of rehabilitation on the northern emplacement is to be completed in the upcoming month.

Rehabilitation maintenance activities across an area of 10ha on the northern and southern emplacements is nearing completion with erosion control and weed control completed and direct seeding scheduled to be completed in the upcoming month.

In July a stabilisation trial of the southern emplacement was undertaken. This involved the aerial application of a pasture mix onto the eastern and southern faces of the emplacement. The slope is being monitored to determine the success of the trial.

Topsoil Stripping

Topsoil, incorporating mulch from the clearing process, has been windrowed and is being progressively taken to designated topsoil stockpiles on the northern and southern emplacements. The incorporation of the mulch material into the topsoil will improve the seed back and organic matter of the soil.

Complaints

Since the last meeting, there have been three complaints, as outlined on the following table.

Complaints Register

Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
Phone call to the EPA Environment Line	30/7/2015 11.53am	Complainant advised the EPA that a dust plume was surrounding the mountain and area; it was noted that dust had been seen coming from Tarrawonga.	An investigation was undertaken by the Tarrawonga Environmental Officer into the operations during the night of 29th July and morning of 30th July to ascertain what contributing factors led to the complaint. This information was provided to the EPA.	Tarrawonga Environmental Officer provided a response to the EPA on 6/8/2015 outlining the meteorological conditions, mining operations, dust suppression utilisation, and review of mining activities.
Voice message left on the Tarrawonga Environmental Officer's phone	2/8/2015 9.54am	Complainant advised that there was significant dust coming from the Tarrawonga Mine both at the time of the complaint and the previous day. The complainant wished to know who was in charge of operations to discuss the matter further.	An investigation was undertaken on Monday 3/8/2015 as to possible source/s of elevated dust. As there were no mining operations undertaken on the Sunday it was concluded that elevated dust was the result of dust lift off occurring during adverse weather conditions which occurred throughout the day.	The Tarrawonga Environmental Officer attempted to contact the complainant on the day of the complaint and left a voice message. A follow up attempt to contact the complainant was undertaken on Monday 3/8/2015 with a second voice message left. On 4/8/15 the Tarrawonga Environmental Officer spoke with the complainant about the issue providing a summary of mining operations on the Saturday and advised that no mining operations were undertaken on the Sunday. Information was provided to the complainant regarding the dust source being a result of lift off from exposed areas under adverse weather conditions.
Phone call to the Tarrawonga Environmental Officer	7/8/2015 8.20am	Complainant advised that there was dust issue from Tarrawonga and Boggabri Coal Mines noting that it was a 'dust bowl'.	Tarrawonga Environmental Officer inspected the operation immediately following the complaint. Upon investigation it was noted that there was elevated atmospheric dust over the Tarrawonga and Boggabri Coal operations. A drill operating in the pit was not drilling with water. Two waste carts were in operations from the commencement of shift.	The drill which was not drilling with water was stood down until water was made available. The Environmental Officer called the complainant acknowledging the elevated dust conditions and advised that a drill was stood down and that conditions would be continued to be monitored.

Minutes of the 40th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 18th November 2015

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: Mr John Turner (JT), Independent Chairman
Miss Lexie Frankham (LF), Group Superintendent - Environment (Operations)
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mrs Cath Collyer (CC), Narrabri Shire Council (NSC) delegate
Mr Anthony Margetts (AM), Operations Manager
Mrs Rebecca Ryan (RR), Gunnedah Shire Council (GSC) delegate
Mrs Julie Heiler (JH), Community Rep

Apologies: Mrs Jill Johnson (JJ), Group Manager – Environment
Mr Tim Muldoon (TM), Group Manager Community Relations and Property
Mrs Libby Guest (LG), Community Rep

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

JT declared that he is paid a fee for his participation as Independent Chairman.

JH declared non-pecuniary interest – leases “Velyama” from Whitehaven.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record on the motion of CC and JH.

4.0 Business Arising

- 4.1 In relation to the Environment Trust, JT advised that Narrabri Shire Council have put together an application for community environmental projects funding. Sub-committee meeting 19th November 2015 to determine process and funding amount. ‘Smarty Grants’ on-line grants system was circulated to the committee and comments received. To be further discussed at meeting on the 19th November.

Environment Trust fund update to be provided at BTM CCC meeting and next Tarrawonga CCC meeting.

- 4.2 CC advised that there will be no guest speaker at the BTM CCC joint meeting as no reply to request was received.

JT has been notified that DP&E's Steven O'Donoghue and a colleague, will be attending the BTM CCC joint meeting on 19th November 2015 as observers. JT advised the committee that this was not in accordance with the guidelines. However, they would be accepted and would be attending as observers, only to participate where approved by the Chairman.

5.0 General Business

5.1 Mine Progress Report

AM provided an update:

- Market in depressed state – working on reducing costs.
- Ahead of budget on coal production.
- Below budget on costs – minimised on-site haul lengths and maximised dozer push.
- Continue to run Monday to Friday with some Saturdays optional.
- In the last couple of months, a watercart has run for 1hr before starting day shift for dust management – working well – roads and benches then in good state when start operating.

CC asked how on-site haulage has been minimised. AM said through mine planning – have set up shorter dumps and created dumps much closer to working areas then progressing outward.

CC asked how is water going with the rain received. AM said there is plenty of water.

JH asked if the Mine would be working over Christmas. AM said yes, only standard days, not public holidays.

5.2 Environmental Monitoring Report

LJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

CC asked where blast monitors will be moved to. LJ said the Matong/Coomalgah monitor will be moved to Coomalgah (Picton's property) and the other will go to "Braymont" with further discussion to be had with the property owner and Whitehaven.

CC queried whether the Orica facility had anything to do with Tarrawonga. LJ said no, it is likely to be associated with Boggabri Coal who had been undertaking a trial of blasting contractors. AM advised that they still have some equipment at the Remote Mixing Station, but effectively it is in care and maintenance.

LJ explained that the July 2015 deposited dust result for EB-4Templemore was contaminated but could not be reviewed as the tests destroy the sample.

LJ said unless there is more wet weather – tree planting will probably be delayed. Will be timed to get best results targeting late summer/early autumn. Aerial seeding trial on southern emplacement initially showed signs of success but burnt off with dry weather during September/October. Will probably try direct seeding again, weather dependent. JH asked if Tarrawonga thinks the Hunter valley has better success with direct seeding because they have more consistent rainfall. LJ said yes. JH asked whether the area was mulched. LJ said no.

CC said the mine did have a very dusty period – with times of heavy dust. It was hard to tell which mine – Boggabri or Tarrawonga. Complaints should go to both mines. LJ said they generally do go to both sites. JT asked if complaints come from multiple people or the same. LJ said generally from one direction but there is a new source of complaints. CC said there was a correction to operations for the complaint on 12 October. It was a really dusty period. AM said that operators had brought up dust issues and had taken action before the complaint was received. There was also an inversion present with dust coming over from Boggabri Coal too. JH asked about hot seating in relation to the excavator. AM explained that when the operators came in for their break, they did not put other operators on the machine and used this time to apply water. JH said when people complain, they need to do it as it happens and suggested that it be included in the next newsletter so people will know the mine is actively doing something about it. People will see the mine are acting. The public perception is that the mine is making dust and not doing anything about it. CC said they need to contact the mine directly so they can do something about it straight away. If go through the EPA, there will be delay.

JH said Tarrawonga is managing community expectations well and there are few issues to discuss. Since Bis have taken over coal haulage there have been no complaints on the road. CC said when you come in to town, at turn off, when it's dark and rainy it is hard to see the lines because of the coal dust. When there are long periods of dry, would like to have something done about it. AM agreed. It was agreed that it was a Gunnedah Shire Council responsibility.

6.0 New Business

- 6.1 JH asked whether the gauges are in place for mine discharges – were going to do it years ago and Boggabri was meant to do it too. Before LJ time, before Danny Young left. LJ said it's not in the Management Plan, all sampling is manual sampling. Goonbri Creek is to have flow gauges installed; however at this time the gauges have not yet been installed.

LJ to investigate and report on requirements at the next meeting.

- 6.2 JH asked whether anything can be done about woody weeds yet, in particular pine trees. LJ said, that for WHC owned properties there have been discussions with regard to available options. This does not include pine trees on the mine site which is covered by the Biodiversity Management Plan. LJ advised that NSC have undertaken weeds inspections for the area with a number of properties being identified as having box thorn issues, generally speaking the mine site has the box thorn under control. JH said you inherited these. LJ said that WHC properties are outside his scope and is managed by Tim Muldoon in the Properties Group. This issue has been raised by NSC and actions to control are being taken where required.

7.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

8.0 Next Meeting

Meeting dates for 2016:

- 2 March
- 18 May
- 10 August
- 16 November
- BTM CCC meeting – 17 November

Meeting closed at 10:50am

John Turner - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #40

Environmental Monitoring Report September 2015 – November 2015

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow”, “Barbers Lagoon” and “Matong” properties from 7th to 11th September 2015, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 TCM Operational Noise Monitoring Results – 7 September 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	7:49 pm	31	1.0/1	+7.0	Mine noise (25) TCM est. (<20) , frogs (25)
Barbers Lagoon	8:32 pm	36	2.5/220	+2.0	Frogs (36), traffic (22), TCM (<20)
Bungalow	9:12 pm	23	0.8/1	+4.8	Frogs (23), TCM (<20)

Table 2 TCM Operational Noise Monitoring Results – 7/8 September 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	11:13 pm	25	1.6/220	+2.4	Frogs (21), mine noise (<20) TCM est. (<20)
Barbers Lagoon	2:44 am	24	0.6/118	+6.6	Frogs (24), TCM (<20)
Bungalow	1:35 am	26	Calm	+5.0	Sheep (23), mine noise (23) TCM est. (23)

Table 3 TCM Operational Noise Monitoring Results – 8 September 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	11:10 am	32	2.0/242	Birds (29), mine noise (23) TCM est. (<20)
Barbers Lagoon	2:36 pm	35	2.9/208	Tractor (33), birds (29), traffic (26), TCM (<20)
Bungalow	4:21 pm	39	2.3/189	Birds (39), TCM (<20)

Table 4 TCM Operational Noise Monitoring Results – 8 September 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	7:42 pm	34	0.8/287	+2.8	Mine noise (29) TCM est. (28)
Barbers Lagoon	8:36 pm	25	0.7/284	+1.8	Frogs (22), traffic (22), TCM (<20)
Bungalow	6:13 pm	38	2.0/217	+2.4	Sheep (37), dog (30), TCM (<20)

Table 5 TCM Operational Noise Monitoring Results – 8/9 September 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	12:30 am	34	0.8/299	+5.6	Mine noise (29) TCM est. (24)
Barbers Lagoon	12:21 am	22	0.9/294	+4.8	Frogs (22), TCM (<20)
Bungalow	10:00 pm	30	0.6/351	+4.6	Sheep (30), TCM (<20)

Table 6 TCM Operational Noise Monitoring Results – 9 September 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	12:05 pm	33	2.8/232	Mine noise (26) TCM est. (21) , birds (28)
Barbers Lagoon	8:33 am	36	2.3/215	Birds (36), tractor (23), TCM (<20)
Bungalow	1:54 pm	44	1.3/276	Birds (44), TCM (22) ¹

1. TCM haul trucks on haul road (22)

Table 7 TCM Operational Noise Monitoring Results – 9 September 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	8:18 pm	35	0.7/278	+2.6	Mine noise (30) TCM est. (29)
Barbers Lagoon	8:34 pm	25	1.0/251	+3.0	Traffic (22), frogs (22), TCM (<20)
Bungalow	9:02 pm	23	0.7/16	+5.0	Traffic (23), TCM (<20)

Table 8 TCM Operational Noise Monitoring Results – 9/10 September 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	12:21 am	28	0.8/352	+6.8	Mine noise (23) TCM est. (<20)
Barbers Lagoon	12:22 am	24	0.8/352	+6.8	Mine noise (21) TCM est. (21) , frogs (21)
Bungalow	1:35 am	23	0.6/11	+8.0	Sheep (23), TCM (<20)

Table 9 TCM Operational Noise Monitoring Results – 10 September 2015 (day)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources	
Matong	11:27 am	29	1.7/192	Birds (28), mine noise (<20), TCM est. (<20)	
Barbers Lagoon	10:23 am	36	1.8/184	Birds (34), traffic (30), mine noise (29) TCM est. (29)	
Bungalow	3:04 pm	40	2.5/182	Birds (40), TCM (<20)	

Table 10 TCM Operational Noise Monitoring Results – 10 September 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	7:40 pm	23	1.3/148	+3.2	Cattle (23), TCM (<20)
Barbers Lagoon	8:21 pm	25	1.9/163	+2.2	Mine noise (23), TCM est. (23) , frogs (20)
Bungalow	9:12 pm	26	1.4/157	+2.0	Traffic (26), TCM (<20)

Table 11 TCM Operational Noise Monitoring Results – 10/11 September 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:00 pm	29	0.7/353	+6.8	Mine noise (24) TCM est. (<20)
Barbers Lagoon	11:12 pm	29	3.4/128	+2.4	Mine noise (28), TCM est. (25) , frogs (22)
Bungalow	12:21 pm	33	2.9/140	+1.6	Mine noise (32) TCM est. (29) , sheep (26)

Table 12 TCM Operational Noise Monitoring Results – 11 September 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:22 am	29	1.9/138	Birds (27), mine noise (20) TCM est. (<20)
Barbers Lagoon	8:40 pm	43	1.9/166	Birds (43), mine noise (33) TCM est. (32)
Bungalow	7:01 am	40	0.6/351	Birds (39), mine noise (33) TCM est. (33) ¹

1. TCM haul trucks on haul road (32)

The results in Table 1- Table 12 show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event.

In addition to the operational noise, the noise from the mine must not exceed 45 dB(A) L1 (1 min) between the hours of 10 pm and 7 am. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine. The results of the sleep disturbance monitoring (table 13-16) show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

Table 14 TCM Sleep Disturbance Monitoring Results – 8/9 September 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	12:30 am	36	0.8/299	+5.6
Barbers Lagoon	12:21 am	<20	0.9/294	+4.8
Bungalow	10:00 pm	<20	0.6/351	+4.6

Table 15 TCM Sleep Disturbance Monitoring Results – 9/10 September 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/direction	Temperature Inversion °C/100m
Matong	12:21 am	30	0.8/352	+6.8
Barbers Lagoon	12:22 am	25	0.8/352	+6.8
Bungalow	1:35 am	<20	0.6/11	+8.0

Table 16 TCM Sleep Disturbance Monitoring Results – 10/11 September 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/direction	Temperature Inversion °C/100m
Matong	10:00 pm	31	0.7/353	+6.8
Barbers Lagoon	11:12 pm	30	3.4/128	+2.4
Bungalow	12:21 pm	37	2.9/140	+1.6

The real time noise monitor is located on the “Coomalgah” property. OCE’s action alarms by investigating the noise source and modifying operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels.

The unit will remain a management tool used to facilitate operations maintaining compliance.

Blast Monitoring

Blasting Results

Since the first shot there have been 607 blasts (until the 17/11/2015).

All blasts have been within 100 percentile limit for ground vibration and air blast overpressure since the last meeting.

Blast 599 on 25/9/2015 registered 118.3dB. Both the EPL and Project Approval permit 5% of blasts to exceed 115dB, but not exceed 120dB. This occurrence remains within the 5% for each of the EPL’s and Project Approvals reporting period. An internal investigation was undertaken to determine the cause of the elevated result and the outcomes of that investigation will now be incorporated into future blast designs.

The Blast Management Plan has been approved by DP&E; with this approval the monitors located on the Tarrawonga and Matong properties will be relocated to private properties in agreement with the landholder.

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARD (EB-6)	TARRAWONGA (EB-7)	THUIN (EB-8)	PINE GROVE (EB-9)	TARRAWONGA MINE (EB-10)	TARRAWONGA MINE (EB-11)	PINE GROVE (EB-12)	BOLLOL CREEK (EB-13)	TARRAWONGA MINE (EB-14)	TARRAWONGA MINE (EB-15)	JERALONG NORTH (EB-16)
November 2014	2.8	1.5	7.3	0.2	1.5	0.9	1.7	1.0	0.8	2.5	1.1	1.9	0.9
December 2014	7.4	5.1	6.6	1.4	2.4	3.4	4.2	4.7	1.9	1.8	4.1	5.1	2.5
January 2015	2.2	0.9	0.3	0.8	0.8	0.7	1.6	0.7	1.1	2.3	4.8	2.5	1.9
February 2015	2.1	1.6	1.0	0.9	2.5	1.0	3.8	4.0	1.1	0.1	1.7	3.4	4.2
March 2015	2.9	2.7	2.7	1.1	1.0	0.9	6.2	2.1	2.5	2.0	5.5	4.9	0.3
April 2015	0.4	2.3	1.7	1.4	3.1	-	6.5	3.6	6.0	1.5	2.5	7.7	14.6
May 2015	1.4	2.7	1.9	23.7	1.5	0.4	8.6	2.7	0.7	2.5	3.5	9.2	<0.1
June 2015	21.4	1.8	0.7	1.1	2.9	0.8	-	9.5	0.7	1.1	1.7	5.0	0.4
July 2015	144.0	2.2	0.6	4.3	4.2	0.4	21.1	6.8	<0.1	1.0	1.2	4.5	0.5
August 2015	49.4	12.1	1.7	1.3	10.7	0.6	7.3	2.4	0.4	0.9	1.2	3.6	0.5
September 2015	10.2	5.3	1.6	1.0	6.9	2.1	1.6	5.1	1.7	2.4	3.9	15.4	1.2
October 2015	2.6	4.2	0.7	0.6	0.7	6.0	3.9	2.4	1.2	0.2	4.5	3.7	0.9
ANNUAL AVERAGE	9.3	3.5	2.2	3.2	3.2	1.6	6.0	3.8	1.6	1.5	3.0	5.6	2.5

Three monitoring locations exceeded the limit of 4g/m²/month (average); Templemore EB-4, Tarrawonga Mine EB-10 and Tarrawonga Mine EB-15. As these monitors are located on mine-owned land, compliance criteria do not apply.

PM₁₀ Results

The annual average for PM₁₀ readings at “Templemore” is currently at 25.04µg/m³ (until end of October 2015) and remains below the annual average limit of 30µg/m³.

There has been no exceedance of the daily PM₁₀ limit since the last CCC meeting.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

Water Monitoring

Ground Water

Groundwater monitoring data obtained to date, including the last round of SWL monitoring in May 2015, is provided in the table and graphs below. Results at all monitoring locations remained relatively consistent between May 2015 and August 2015.

MW6 was not able to be monitored due to access during wet weather.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	September 2014	6.26	7.97	3320
	November 2014	6.36	7.7	3190
	February 2015	6.39	8.0	3420
	May 2015	6.47	7.5	3210
	August 2015	6.51	8.03	3440
MW2	September 2014	3.5	7.27	615
	November 2014	3.63	7.4	615
	February 2015	3.32	7.59	567
	May 2015	3.44	7.2	522
	August 2015	3.46	7.32	538
MW4	September 2014	8.76	7.83	4170
	November 2014	8.72	7.3	3970
	February 2015	8.71	7.7	4430
	May 2015	8.71	7.3	4120
	August 2015	8.85	7.72	4680
MW5	September 2014	2.8	7.99	2200
	November 2014	3.0	7.8	3020
	February 2015	3.17	8.15	2060
	May 2015	3.29	7.8	2120
	August 2015	3.18	8.08	2210
MW6	September 2014	5.54	7.61	854
	November 2014	5.55	7.5	712
	February 2015	5.64	7.67	617
	May 2015	5.65	7.5	692
	August 2015	No sample	No sample	No sample
MW7	September 2014	103.84	No sample	No sample
	November 2014	104.01	No sample	No sample
	February 2015	104.09	No sample	No sample
	May 2015	104.67	No sample	No sample
	August 2015	104.0	No sample	No sample
MW8	September 2014	13.13	Casing blocked	Casing blocked
	November 2014	13.22	Casing blocked	Casing blocked
	February 2015	13.27	Casing blocked	Casing blocked
	May 2015	13.43	Casing blocked	Casing blocked
	August 2015	13.47	Casing blocked	Casing blocked

Surface Water

Routine surface water monitoring was conducted during August 2015.

No wet weather discharges have occurred since the last CCC meeting. Sampling was undertaken 24th August 2015 at Nagero downstream monitoring location following 50.4mm rain over a two day period.

Rehabilitation

Rehabilitation on the northern extension emplacement continues with topsoil being spread across an area of approximately 4.5ha with contouring and cover crop seeding nearing completion. The remaining 1ha is being reshaped progressively.

A further 2ha of rehabilitation on the northern emplacement was completed.

Rehabilitation maintenance activities across an area of 10ha on the northern and southern emplacements was completed with erosion control and weed control works and direct seeding completed.

In July a stabilisation trial of the southern emplacement was undertaken. This involved the aerial application of a pasture mix onto the eastern and southern faces of the emplacement. The slope is being monitored to determine the success of the trial. After initially showing signs of success the dry hot weather experienced during spring impacted on the overall success of the trial. A follow up aerial application is being considered subject to suitable conditions.

Complaints

Since the last meeting, there have been six complaints, as outlined on the following table.

Complaints Register

Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken/Follow-up
Phone call to the Tarrawonga Complaint Hotline	12/8/2015 10.57am	Complainant advised that they could smell coal dust at their property. Dust was not visible at their property but when taking their children to school could see the dust haze in the area. It was also noted that the hot water system at the complainant's property was covered in coal dust. The complainant advised that they were going to keep a calendar to monitor blasting impacts.	The Environmental Officer undertook an investigation of mining operations and meteorological conditions at the time of the complaint.	The Tarrawonga Environmental Officer contacted the complainant on 13/8/2015 via phone and discussed the matter pertaining to the complaint and provided a summary of mining operations, meteorological conditions and information on inversions.
Phone call to the EPA Complaints Hotline	17/8/2015 7.00am (Received 19/8/2015 3.05pm)	Complainant reported a large amount of dust coming from the mining operation.	An investigation into the meteorological conditions and operations was undertaken upon receipt of the complaint.	The Tarrawonga Environmental Officer provided a response to the EPA 21/8/2015 at 4.52pm which included a summary of mining operations, dust suppression and weather data for the 24hr period relating to the complaint.
Phone call to the Tarrawonga Environmental Officer's Phone	8/9/2015 8.16am	Complaint regarding the dust over and around the hill onto premises; stated it was the worst it has been observed.	Tarrawonga Environmental Officer undertook an investigation of mining operations. Meteorological conditions were reviewed and real time dust levels were complaint.	Tarrawonga Environmental Officer provided an overview of operations and dust suppression at the time of the complaint.
Phone call to the Tarrawonga Office	14/9/2015 9.05am	Complainant advised the Tarrawonga Site Clerk that there were air quality issues surrounding site and requested that the Environmental Officer inspect the area.	Tarrawonga Environmental Officer inspected operations immediately following the complaint, including a review of meteorological conditions and PM10 particulate levels.	The Environmental Officer met with the complainant 15/9/2015 to further discuss matter. Reviewing location of the High Volume Air Sampler (PM10).

Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken/Follow-up
Phone call to the EPA Complaints Hotline	12/10/2015 7.00am (Received 13/10/2015 10am)	Complainant reported that dust pollution was coming from the Tarrawonga coal mine	On the day of the complaint, a field assessment was undertaken by the Operations Manager.	Watercart applied dust suppression to windrows, benches and highwalls where fine material had accumulated (bull-dust). Maintained dust suppression to these areas until the wind settled down at the end of dayshift. An excavator located near the surface of the mine was slowed and operator instructed to ensure the bucket was lowered as far as possible when dumping into the rear dumps to minimize any dust generated. The same excavator was not hot-seated during crib and during this time additional dust suppressant was applied to the working area.
E-mail to EPA complaints hotline	21/10/2015 (Received 3/11/2015)	Complainant reported a large amount of dust coming from the mining operation.	Reviewed equipment operated at the time and meteorological conditions	Reviewed records of conditions and activities for the day of the complaint however, no particular action was taken at the time of complaint, as complaint was not received until the 3/11/2015.