

## Narrabri Mine Community Consultative Committee Meeting Minutes (AMENDED 09<sup>th</sup> JULY)

**Meeting No:** 44  
**Date:** Wednesday 6 March 2019  
**Time:** 5:00pm  
**Location:** Narrabri Mine Office

**Present:** Russell Stewart (RS) – Independent Chair  
Peter Webb (PW)  
Mark Foster (MF)  
Geoff Hunter (GH)  
Rodney Dunlop (RD)  
Cameron Staines (CS) – Narrabri Shire Council Delegate  
Steve Bow (SB) – Narrabri Mine General Manager  
Mark Vile (MV) – Narrabri Mine Environmental Superintendent

### 1. APOLOGIES

James Stieger (JS)  
David Ellwood (DE) – Technical Services Superintendent  
Aron Cane (AC) – Surface Operations Manager

### 2. DECLARATION OF PECUNIARY OR OTHER INTERESTS

MF leases land from the Narrabri Mine.

### 3. PREVIOUS MINUTES

Moved: GH                      Seconded: RD

#### 3.1 BUSINESS ARISING FROM PREVIOUS MINUTES

##### 3.1.1 Readvertise for CCC Members

- CCC currently advertising for new members.
- Opportunity to include other members of the community. A CCC member suggested someone from a school to pass information on to students and parents.
- New guideline process needs to be followed.

##### Actions

- RS to chase up new process for CCC member, and proforma for advertisement.
- RS to request current CCC members to put forward any potential member's from section of the community that may not be covered at the moment.

##### 3.1.2 Community Meetings for Stage 3

- **Approval process update:**

- Gateway Certificate lodged and is available on Department of Planning and Environment (DPE) website and Whitehaven Coal website. Access limited for undertaking some survey works.
- Request for SEARs to be submitted in the coming weeks.
- **Community meeting** - CCC requested a community meeting. Narrabri Coal Operations has not undertaken this to date as further information from mine planning and environmental studies required so there is adequate information to present.

#### **Actions**

- NCO to bring a plan for a community meeting to the next CCC meeting.
- Dave Ellwood to attend next CCC meeting to provide update to members on Stage 3

#### **3.1.3 Use of Mayfield Road for Stage 3**

- CCC members asked if Mayfield Road would be used as an access point for Stage 3
- NCO confirmed that the access point for Stage 3 will be the current access point on Kurrajong Ck road. Any work on Mayfield road would be a negotiation with Council.

#### **3.1.4 Mine-owned Land Lease Conditions**

- Land management practices of lessees - CCC member's raised that there is concern in the community regarding the practices of some lessees, and this is reflecting poorly on Whitehaven Coal. Asked if there are any conditions in the leases regarding land management. MV tabled a standard lease agreement which had the following clause:

##### ***Clause 6 – Best Agricultural Practice***

1. *The licensee must manage the property according to the best agricultural and environmental practices*
2. *the licensee must not overstock the property having regard to seasonal conditions in accordance with the agents recommendations.*
3. *The licensee must minimise soil erosion on and from the property.*

- CCC members asked what actions can be taken if this clause is not followed. NCO said this is overseen by Tim Muldoon (Group Manager - Community Relations & Property). SB noted that TM is looking at aggregating leases to make more attractive as leases are coming up for renewal, as well as looking at some improvements in lease conditions including more rights as the owner.

### 3.1.5 White Substance Around Boreholes

- White material on drill pads raised by a neighbouring landowner.
- NCO confirmed it has inspected these areas and the material is cement.

#### Action

- CCC to write to neighbouring landholder notifying it was cement.

### 3.1.6 Exploration / Approvals Update

- EL6243 is going to be renewed in May.
- NCO gained approval for further exploration in the EL via an Activity Approval which required a Review of Environmental Factors.
- Some activities have commenced on the EL, including four coal quality sampling drill pads. Another 12 are planned for this financial year.
- Works on Scratch Road was undertaken by Forestry to align with its public road design guidelines. Recent works included widening of road, installation of mitre drains and roll overs.

## 4. Operations Progress Report and Safety Update

SB presented:

- **Operations** - fairly standard, however some issues with longwall face at the moment which is affected planned production volumes. Expecting same issues in the same area of next longwall panel (LW109) as the geology stretches across several longwalls. Also expecting slower production when mining through a fault in the coming 6 months. These issues are typical in any mining operation.
- **Employment** - steady, similar to last quarter. Currently looking to employ more local people, targeting local operators, more local trades such as fitters and electricians.
- **Safety** - a few injuries in last quarter, but in line with previous results. Still within top 10% in the state.

Detailed information below:

### Mine Progress Report (to 28 February 2019)

Coal produced (t):	February 2019	372,602
	FY-to-date	3,727,170
Coal Railed (t):	February 2019	317,574
	FY-to-date	3,926,417

Average workforce numbers (February 2019):

NCO	Waged – 124
	Salary – 125
	Total – 249
Contractors	Total – 266

Safety Update (FY to February 2019):

Lost Time Injury (LTI)	5
Days LTI Free:	8
Total Recordable Injuries:	12
Planned Task Observations:	8,269
Take 5 Assessments:	124,397
Work Hours (Feb-19):	95,097

## 5. Environmental Monitoring Report

MV presented

- **Noise** – attended noise monitoring in November 2018 – all results within compliance limits
- **Dust** – deposited dust all within compliance limits
- **HV samples** – overall aver D9 and D10 associated with regional dust storms
- **Groundwater** – fairly steady, however P13 and P9 dropped and recovered due to a production bore.
- **Surface water** – no licenced discharge, so no monitoring
- **Subsidence** – maximum subsidence within predicted modelling. Tilt values were within modelled values. Some occurrences above modelled for maximum tensile strain and maximum compressive strain, however 97-98% within predicted ranges. Key matter is subsidence which remains within modelled predictions.
- **Complaints in last quarter:**  
**Four in total**
  - Three from the same complainant related to dust from the CHPP – resolved with complainant at the time of complaint.
  - One complaint is a follow up from October 2018 related to noise, dust, odour, management of biodiversity areas and lighting. A number of actions will be committed to in a letter, and discussions and actions ongoing to resolve complaint, including additional noise and dust monitoring.
- CCC member noted that one complainant had also approached Council, and suggested further communication would help with addressing the complaints.

### Actions

- NCO to continue to communicate with complainants

## 6. New/General Business

- **Water** – CCC members asked what plans are in place if the dry period continues. SB explained currently extracting from the licenced bore and current predictions are that there will be adequate for the rest of the financial year.
- **Water licence** – CCC members asked who purchased the recent water access licence. SB explained it was purchased by Whitehaven and may be utilised at one of several sites.

- **Other water sources** - CCC members asked if WHC can purchase other water sources if extra needed rather than from alluvial system, such as the coal seam. SB noted that the most accessible water is the alluvial system and other sources do not produce the flow rates required.
- **Property purchases** – Oakleigh in process of being purchased now. A number of properties also being negotiated as part of planning for the Stage 3 expansion.
- **NCO personnel** - Dave Ellwood moving to new role in NCO and will be replaced by Aron Cane. However, DE may attend when requested.
- **CCC meeting minutes** – CCC members asked if they could be shorter and more clearly identify the actions.

#### **Actions**

- NCO to reformat meeting minutes to clearly highlight actions.

#### **7. Date and Agenda for next meeting**

Next CCC meeting proposed for Wednesday 12 June.

#### **8. Closure of meeting**

Meeting closed at 6:23pm.

## Narrabri Mine Community Consultative Committee Meeting #44

### Environmental Monitoring Report: December 2018 – February 2019

#### Noise Monitoring

Attended noise monitoring was undertaken between Monday 26<sup>th</sup> to Wednesday 28<sup>th</sup> November 2018 (Table 1) to verify if noise levels were within compliance limits. The results from this monitoring are detailed in the table below.

Table 1: Monitoring Results

EPL ID	Monitoring Date	Daytime Measured L <sub>Aeq</sub> dB	Evening Measured Levels L <sub>Aeq</sub> dB	Night Measured Levels L <sub>Aeq</sub> dB	Night Measured Level L <sub>A1,1minute</sub> dB	Noise Limit(s)	Compliance
N5 Oakleigh	26/11/2018	30	29	29	38	Day/Evening/Night L <sub>Aeq,15minute</sub> : 35 dB  Night L <sub>A1,1minute</sub> : 45 dB	Yes
	27/11/2018	IA	27	29	33		Yes
	28/11/2018	NM	27	28	38		Yes
N6 Newhaven	26/11/2018	35	NM	35	38		Yes
	27/11/2018	NM	IA	NM	NM		Yes
	28/11/2018	<25	NM	35	43		Yes
N1 Bow Hills	26/11/2018	33	35	38 <sup>1</sup>	45		Yes <sup>1</sup>
N3 Ardmona	26/11/2018	NM	35	NM	NM		Yes
N7 Merriman	26/11/2018	<25	IA	29	32		Yes
N8 Matilda	26/11/2018	25	NM	IA	IA		Yes

**Notes:**

1. A private agreement is in place so this result is compliant.
2. Noise levels provided in these columns are highest NAR only contributions, where criteria were applicable, during each period;
3. Bolded results indicate exceedance of criteria;
4. As detailed in the EPL, noise emission limits apply under all meteorological conditions except:
  - Wind speeds greater than 3 m/s at 10 metres above ground level; or
  - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
  - Stability class G temperature inversions;
5. 'NM' denotes not measureable.
6. 'IA' denotes inaudible.

During the November 2018 monitoring, under the operating and meteorological conditions at the time, for the worst-case 15-minute compliance measurement periods, the mine noise was compliant at all locations.

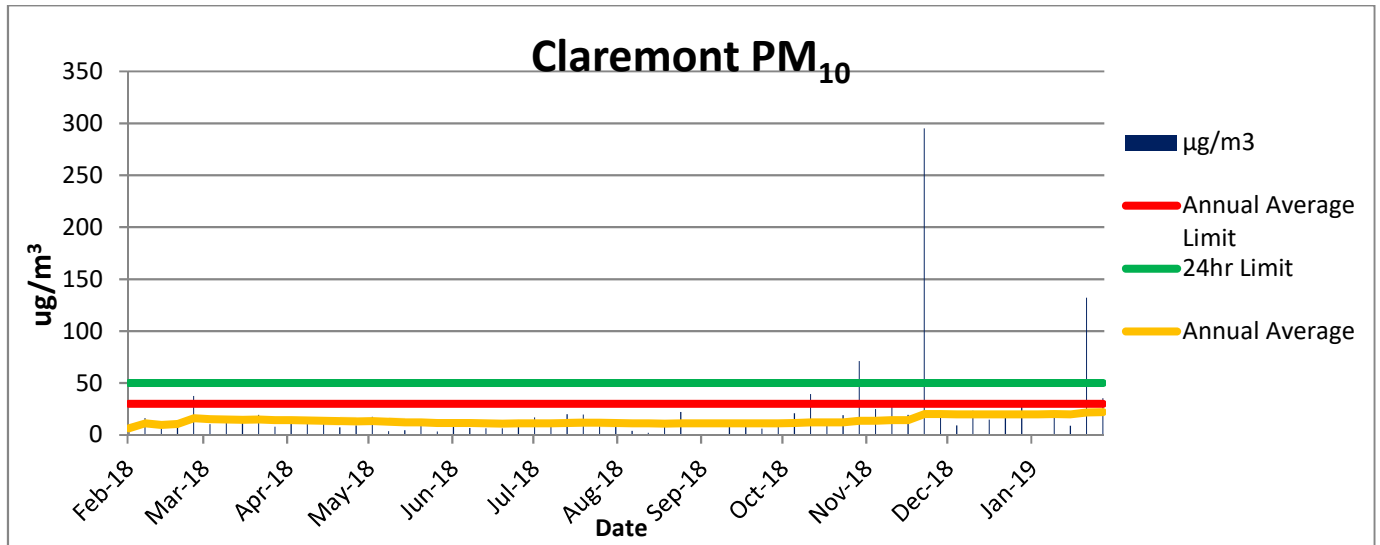
#### Deposited Dust Monitoring

Month	ND1 Turrabaa	ND2 Claremont	ND3 Bow Hills	ND4a New Matoppo	ND5 Claremont	ND6 Willarah	ND7 Claremont	ND8 Claremont	ND11 Oakleigh	ND12 Merriman	ND13 Darjeeling
Jan-19	2.9	2.2	2.9	3.6	2.7	3.6	1.2	3.4	-	5.3	3.9
Mar-19	2.4	2.5	1.9	1.7	2.8	2.6	1.6	1.6	1.7	1.8	2.0
<b>Quarterly Average</b>	<b>2.7</b>	<b>2.4</b>	<b>2.4</b>	<b>2.7</b>	<b>2.8</b>	<b>3.1</b>	<b>1.4</b>	<b>2.5</b>	<b>1.7</b>	<b>3.6</b>	<b>3.0</b>

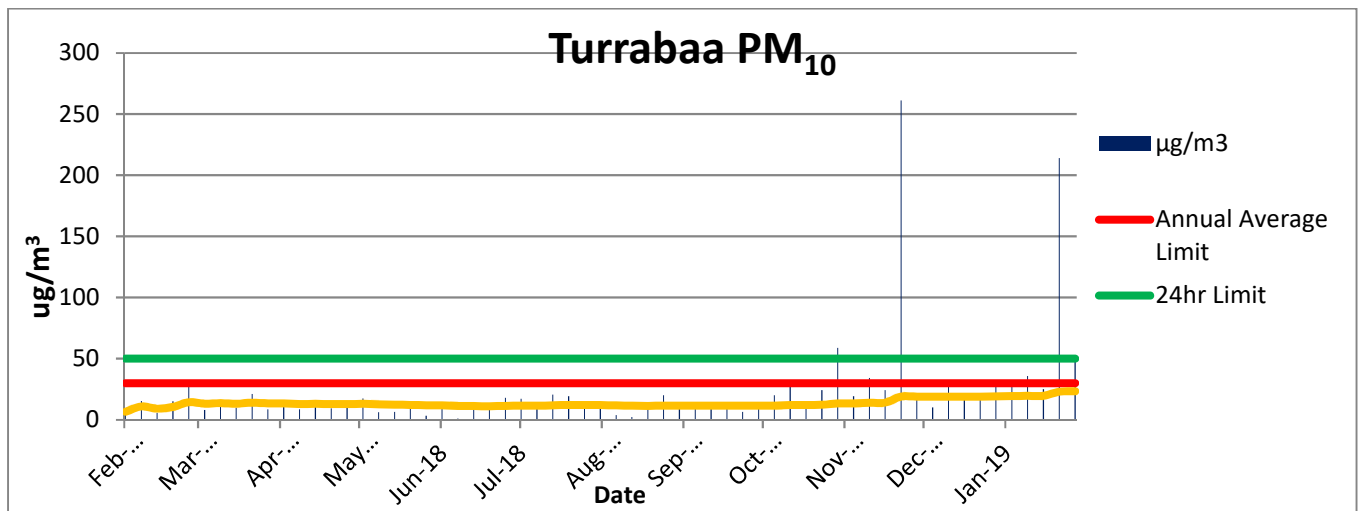
All deposited dust levels are within the compliance limit of 4 g/m<sup>2</sup>/mth with the exception of ND1 and ND8. Both of these gauges annual ash limit, i.e. the component of the deposited dust attributable to mining, are below the annual limit being 3.4 and 2.9 g/m<sup>2</sup>/mth, respectively.

### High Volume Air Sampling (PM10)

PM10 measurements taken to 19 February 2019 for the “Claremont” High Volume Air Sampler (HVAS) are returning a running annual average of 22.09  $\mu\text{g}/\text{m}^3$ , which is well below the annual average limit of 30  $\mu\text{g}/\text{m}^3$ .



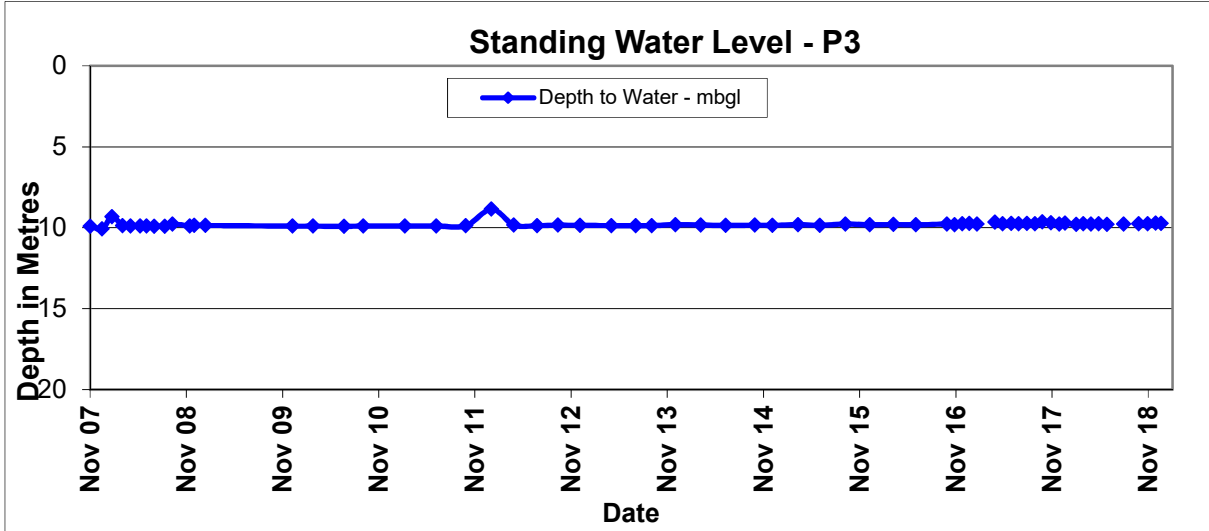
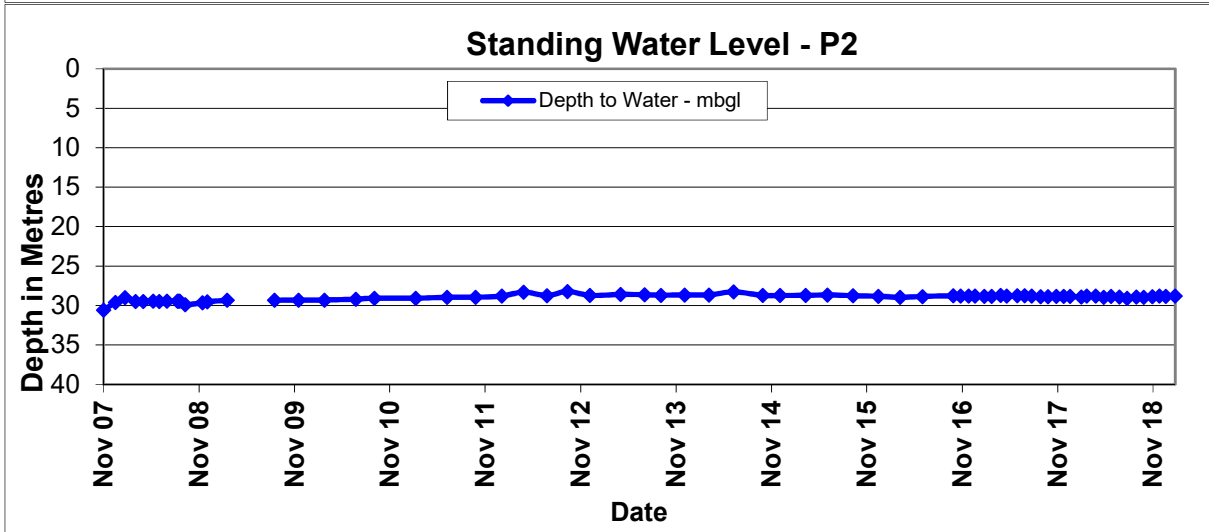
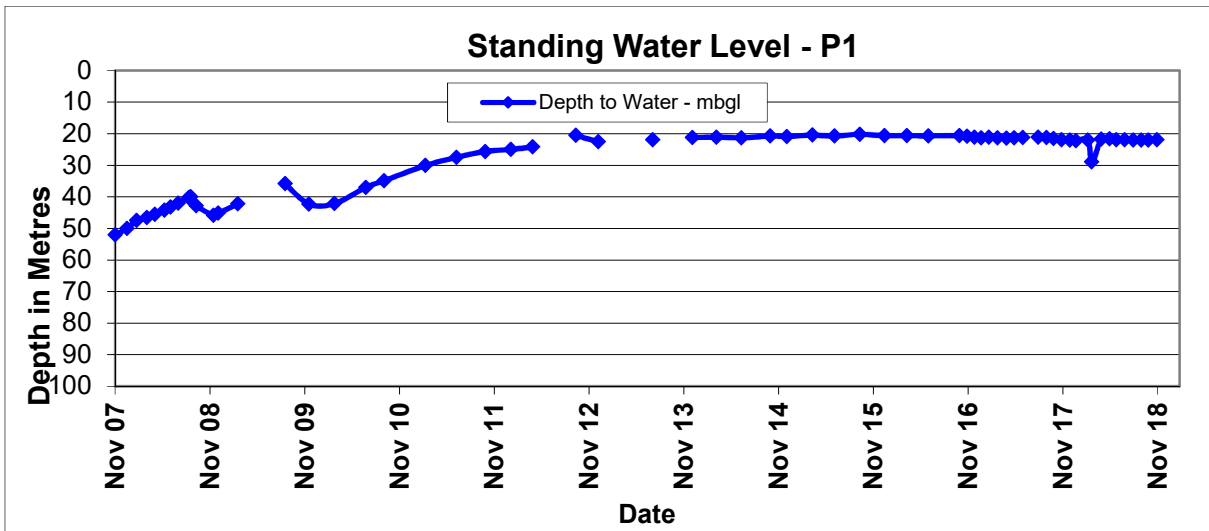
PM10 measurements taken to 19 February 2019 for the “Turrabaa” High Volume Air Sampler are returning a running annual average of 23.36  $\mu\text{g}/\text{m}^3$ , which is also well below the annual average limit of 30  $\mu\text{g}/\text{m}^3$ .



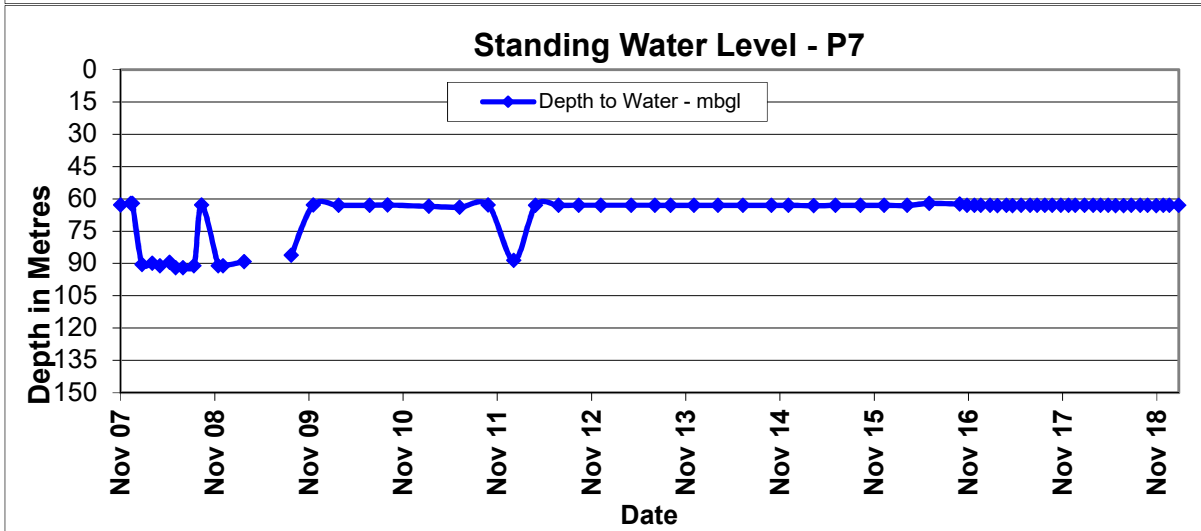
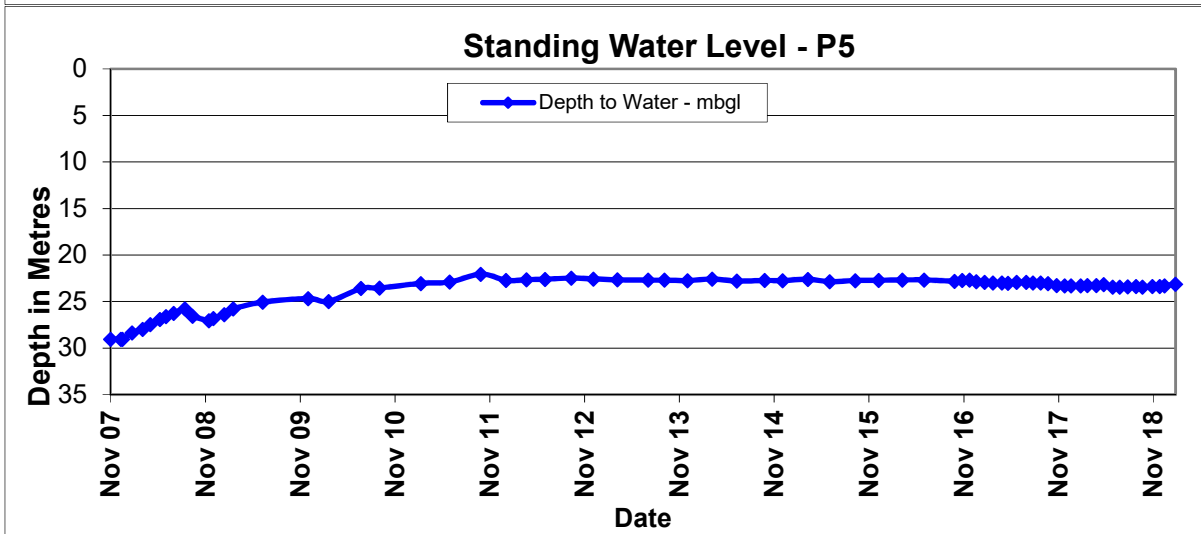
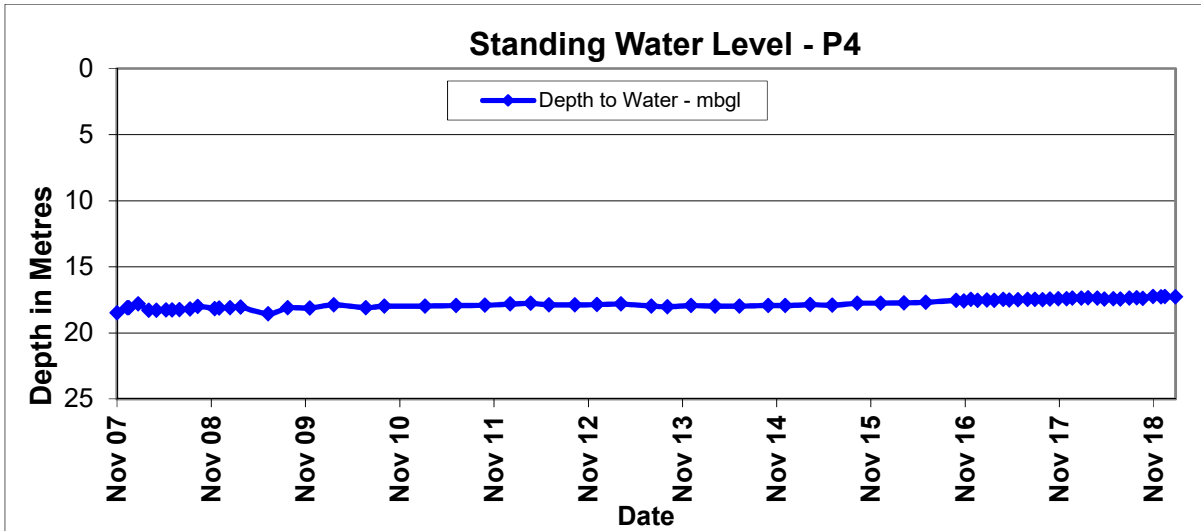
PM10 annual average levels have remained compliant since the last meeting. ND9 and ND10 both recorded exceedances on the 21<sup>st</sup> of November, 15<sup>th</sup> of December and 13<sup>th</sup> February 2019 as result of regional dust storms that affected much of NSW. The mine notified the DP&E as required by the sites’ Air Quality Management Plan.

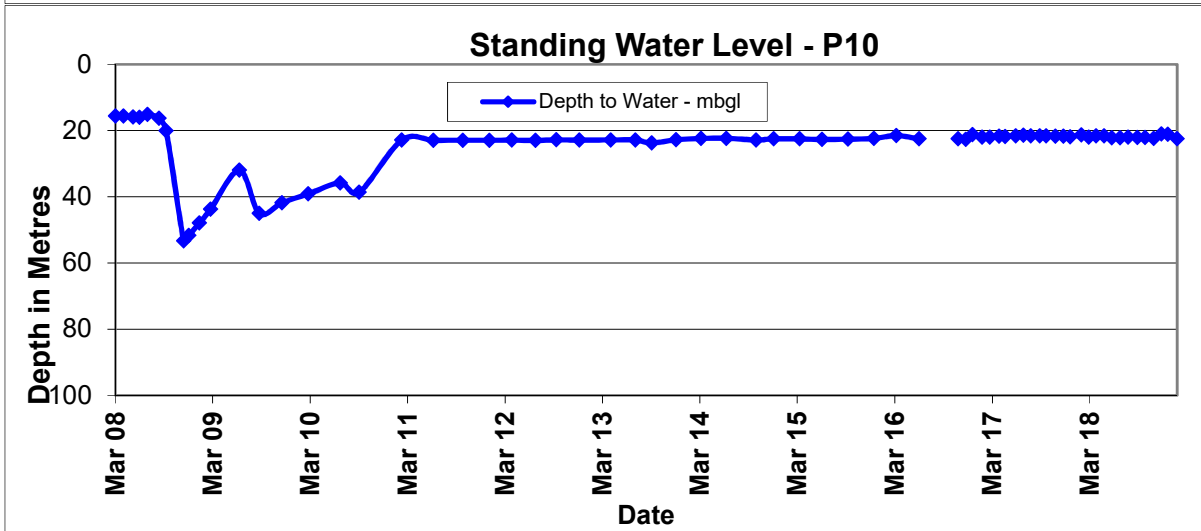
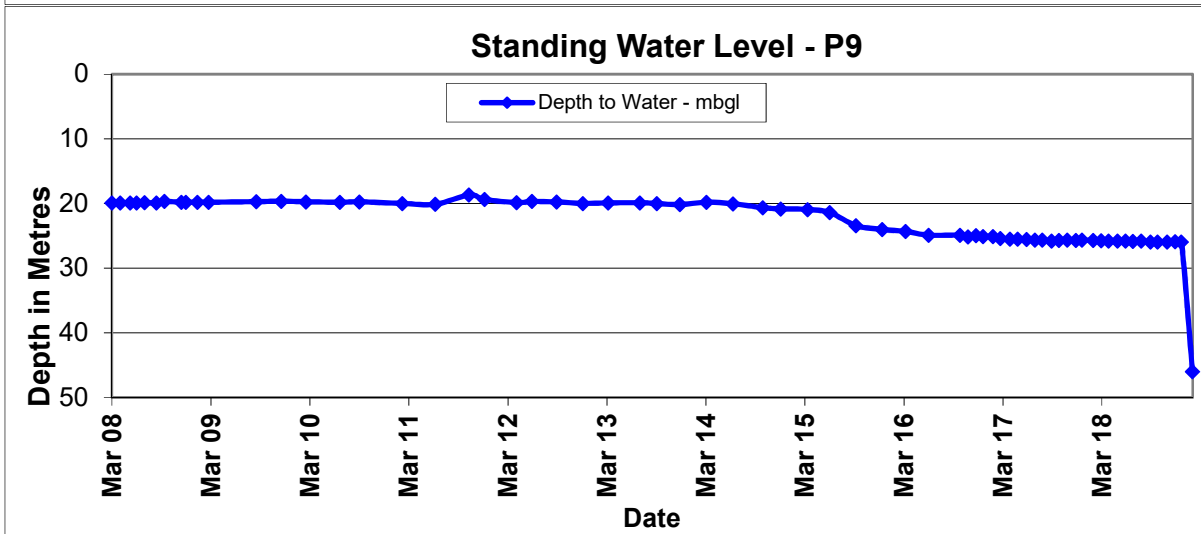
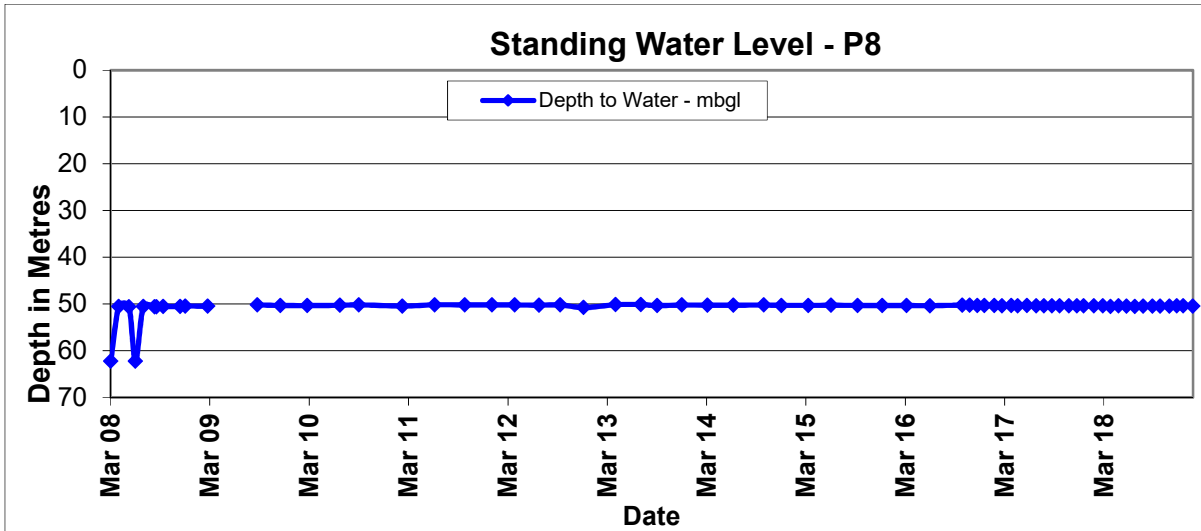
### Groundwater Monitoring

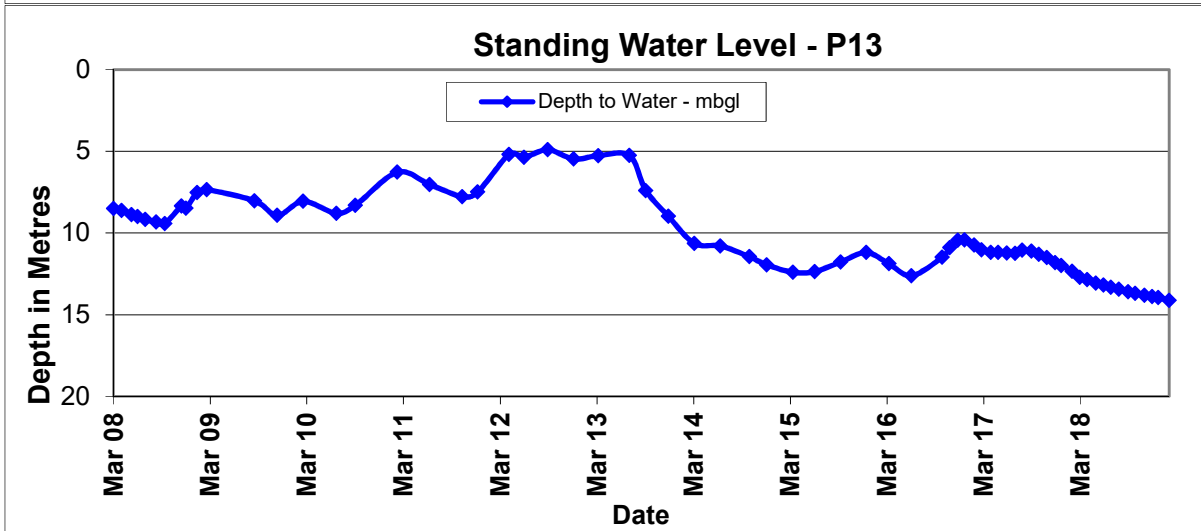
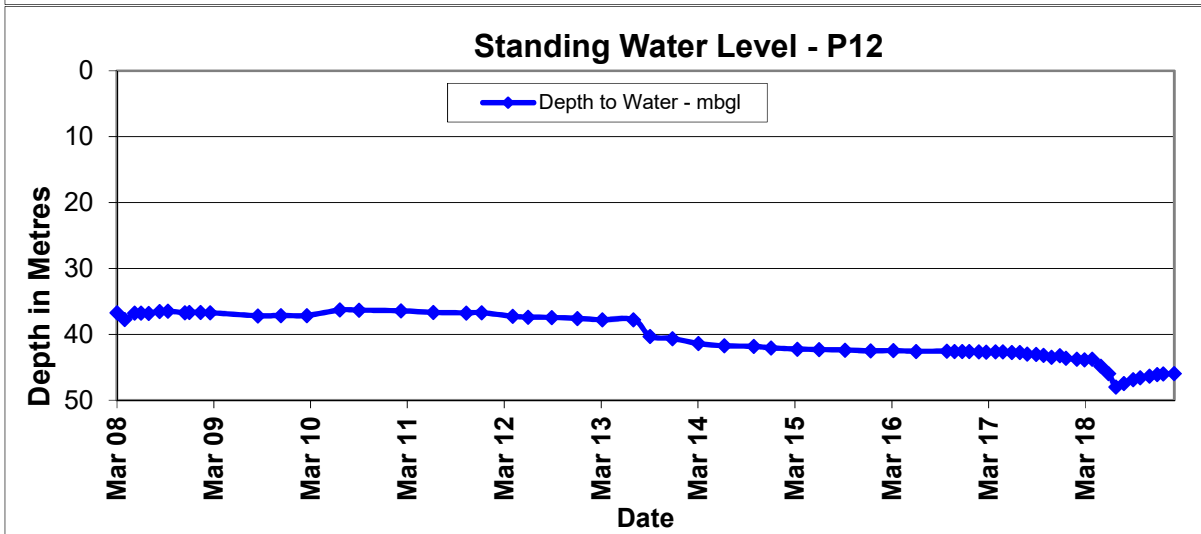
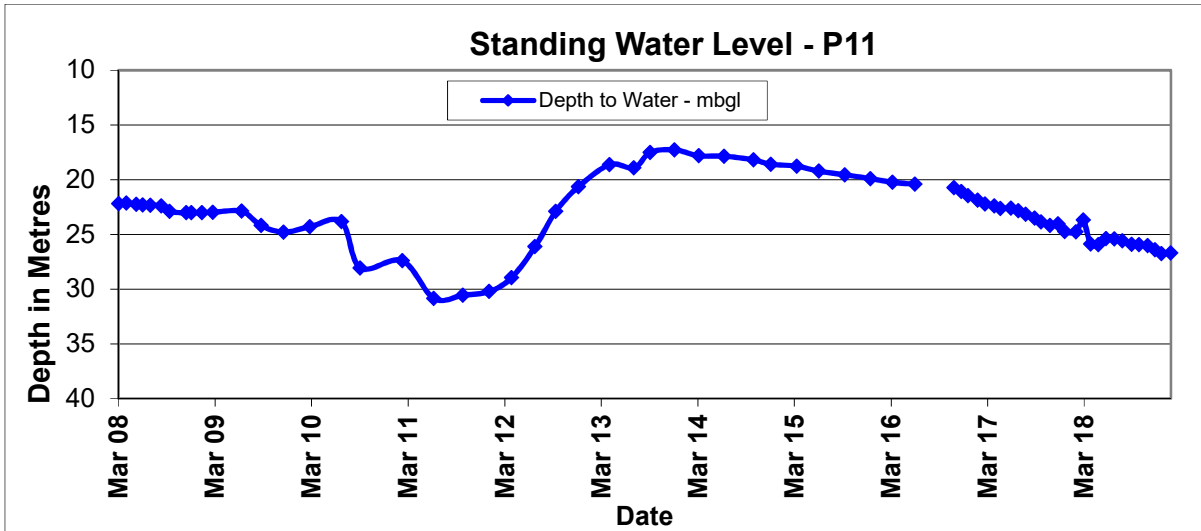
Groundwater monitoring was completed in November 2018. Monitoring results are included below.

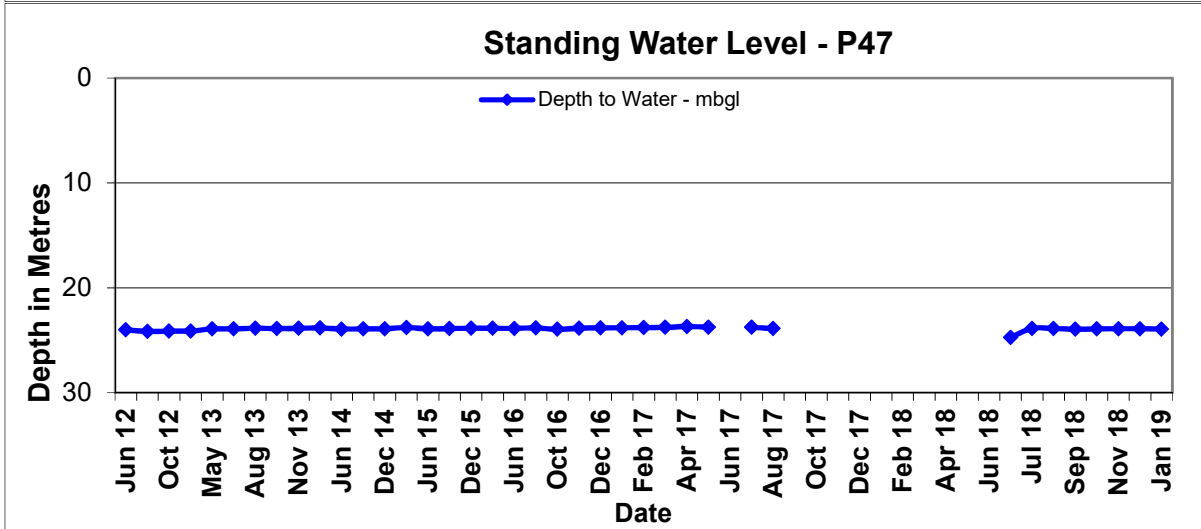
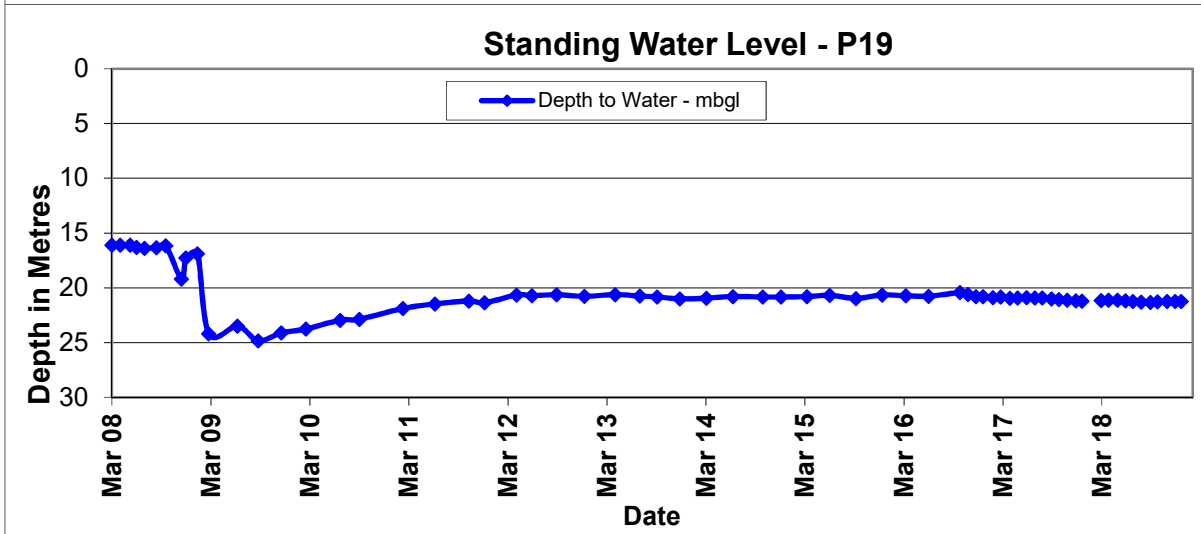
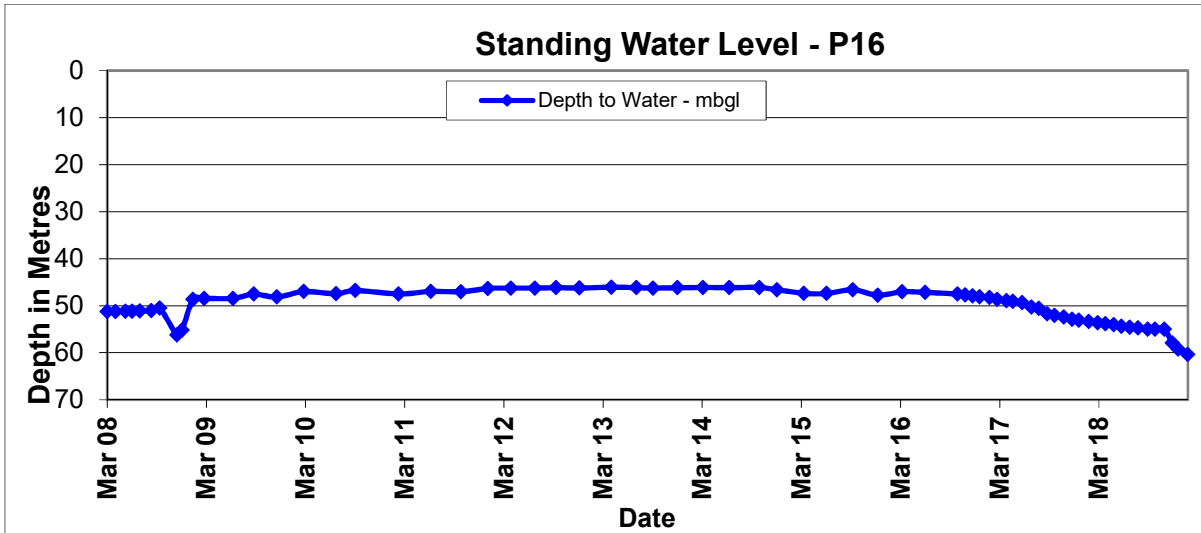


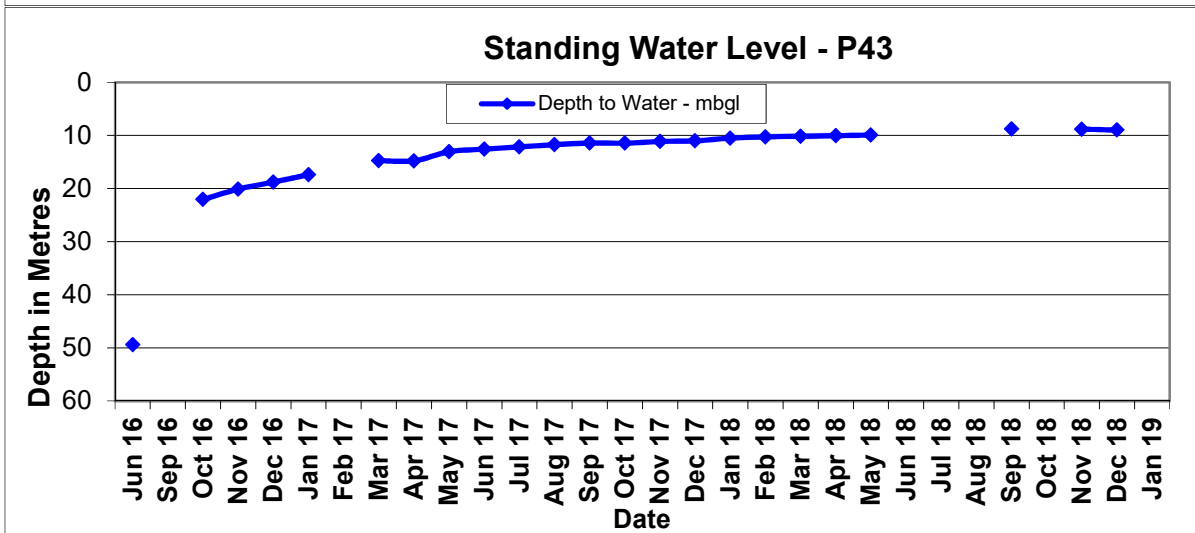
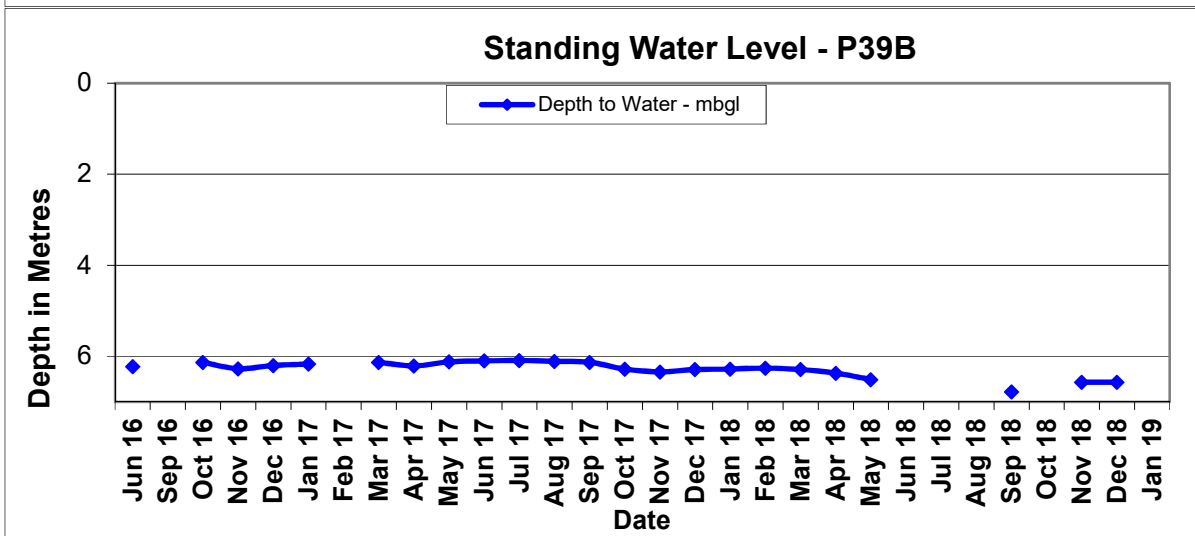
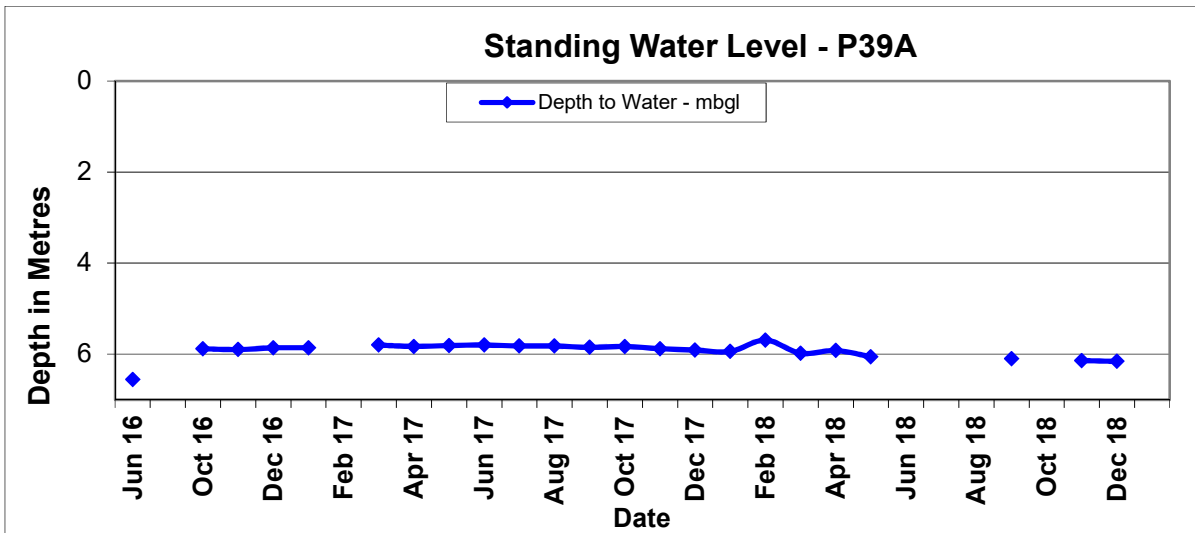












Monitoring results show the recent rounds have been relatively stable. As covered in previous reports, P13 is 30 m deep and targets the Garrawilla Volcanics. A production bore, WB2, is approximately 300 m to the south and targets the same aquifer and as such the drop in water level in P13 is likely associated with production from WB2.

#### Surface Water Monitoring

No wet weather discharges from licensed discharge points occurred during the December 2018 to February 2019 period.

## Subsidence

Narrabri Mine has monitored the subsidence movement across the surface of LW103 to LW108 in accordance with the approved Extraction Plans (LW101 and LW102 are no longer monitored). The table below outlines the maximum subsidence parameters recorded as part of the subsidence monitoring program and a comparison with the maximum predicted subsidence parameters as outlined in the Extraction Plan.

<b>Longwall Panels (LW) 103 to LW108</b>		
	Maximum Predicted Extraction Plan	Maximum Measured
Line 101 – Centre of LW101 – Monitoring has ceased		
Line 102 – Centre of LW102 – Monitoring has ceased		
Line 103 – Centre of LW103 – Northern		
Subsidence (m)	2.75	2.729
Tilt (mm/m)	62	40.2
Tensile Strain (mm/m)	20 – 30 <sup>^</sup>	18.8
Compressive Strain (mm/m)	26 – 39 <sup>^</sup>	32.0
Angle of Draw (°, Degrees)	22.5 – 26.5	15.2
Line 103 – Centre of LW103 – Southern		
Subsidence (m)	2.75	2.583
Tilt (mm/m)	62	30.3
Tensile Strain (mm/m)	20 – 30 <sup>^</sup>	9.3
Compressive Strain (mm/m)	26 – 39 <sup>^</sup>	10.2
Angle of Draw (°, Degrees)	22.5 – 26.5	20.2
Line 104 – Centre of LW104 – Northern		
Subsidence (m)	2.75	2.802
Tilt (mm/m)	65	48.4
Tensile Strain (mm/m)	22 – 33 <sup>^</sup>	42.6
Compressive Strain (mm/m)	28 – 42 <sup>^</sup>	42.3
Angle of Draw (°, Degrees)	22.5 – 26.5	15.8
Line 104 – Centre of LW104 – Southern		
Subsidence (m)	2.75	2.713
Tilt (mm/m)	65	31.3
Tensile Strain (mm/m)	22 – 33 <sup>^</sup>	8.1
Compressive Strain (mm/m)	28 – 42 <sup>^</sup>	6.7
Angle of Draw (°, Degrees)	22.5 – 26.5	13.2
Line 105 – Centre of LW105 – Northern		
Subsidence (m)	2.75	2.674
Tilt (mm/m)	57	46.5
Tensile Strain (mm/m)	18 – 27 <sup>^</sup>	18.1
Compressive Strain (mm/m)	23 – 35 <sup>^</sup>	44.6
Angle of Draw (°, Degrees)	22.5 – 26.5	17.9
Line 105 – Centre of LW105 – Southern		
Subsidence (m)	2.75	2.626
Tilt (mm/m)	57	25.2
Tensile Strain (mm/m)	18 – 27 <sup>^</sup>	7.1

<b>Longwall Panels (LW) 103 to LW108</b>		
	Maximum Predicted Extraction Plan	Maximum Measured
Compressive Strain (mm/m)	23 – 35 <sup>^</sup>	9.9
Angle of Draw (°, Degrees)	22.5 – 26.5	16.6
<b>Line 106 – Centre of LW106 – Northern</b>		
Subsidence (m)	2.75	2.584*
Tilt (mm/m)	47	41*
Tensile Strain (mm/m)	14 – 21 <sup>^</sup>	12.2*
Compressive Strain (mm/m)	18 – 27 <sup>^</sup>	17.1*
Angle of Draw (°, Degrees)	22.5 – 26.5	25.5*
<b>Line 107 – Centre of LW107 – Northern</b>		
Subsidence (m)	2.75	2.738*
Tilt (mm/m)	53	28.0*
Tensile Strain (mm/m)	20	10.3*
Compressive Strain (mm/m)	24	12.4*
Angle of Draw (°, Degrees)	26.5	24.7*
<b>Line 108 – Centre of LW108 – Northern</b>		
Subsidence (m)	2.75	2.515*
Tilt (mm/m)	46	36.3*
Tensile Strain (mm/m)	15	16.2*
Compressive Strain (mm/m)	20	38.9*
Angle of Draw (°, Degrees)	32.1	27.6*
<b>Line A – Cross Panel Survey Line</b>		
Subsidence (m)	2.75	2.680*
Tilt (mm/m)	65	56.3*
Tensile Strain (mm/m)	22 – 33 <sup>^</sup>	39.0*
Compressive Strain (mm/m)	28 – 42 <sup>^</sup>	33.0*
Angle of Draw (°, Degrees)	22.5 – 26.5	24.2*
<b>Line B – Pine Creek Tributary 1 – Monitoring has ceased</b>		
<b>Line D – Pine Creek</b>		
Subsidence (m)	2.75	2.842*
Tilt (mm/m)	65	45.5*
Tensile Strain (mm/m)	22 – 33 <sup>^</sup>	10.8*
Compressive Strain (mm/m)	28 – 42 <sup>^</sup>	15.2*
Gradient Change (%)	Up to 6	4.54*
<b>Line E – Pine Creek Tributary 1 Crossline 1 – Monitoring has ceased</b>		
<b>Line F – Pine Creek Tributary 1 Crossline 2 – Monitoring has ceased</b>		
<b>Line G – Pine Creek Tributary 1 Crossline 3 – Monitoring has ceased</b>		
<b>Line H – Cross Panel Survey Line</b>		
Subsidence (m)	2.75	2.669*
Tilt (mm/m)	53	32.0*
Tensile Strain (mm/m)	13 – 20 <sup>^</sup>	9.2*
Compressive Strain (mm/m)	16 – 24 <sup>^</sup>	5.9*

\* - subsidence development incomplete.

^ - values for 'smooth' and 'discontinuous' (i.e. crack affected) subsidence profiles.

Based on the above table the subsidence predictions for the most recently completed survey, i.e. LW108 northern line, indicate:

- The maximum subsidence measurements were within the predicted value of 2.75 m with a maximum measured value of 2.515 m.
- The maximum tilt measurements recorded were within the predicted value of 46 mm/m with a maximum measured value of 27.0 mm/m.
- The maximum tensile strain measurement, i.e. 16.1 mm/m, exceeded the maximum predicted value of 15 mm/m. However, 98% of all values were within the predicted range.
- The maximum compressive strain measurement, i.e. 35.4 mm/m, exceeded the maximum predicted value of 20 mm/m. However, 97% of all values were within the predicted range.

The centreline subsidence results for LW101 to LW108 indicate that the Garrawilla Volcanics and Basalt Sill have not reduced subsidence through spanning behaviour and that the maximum subsidence is also considered closer to 63% of the average mining height of 4.3m.

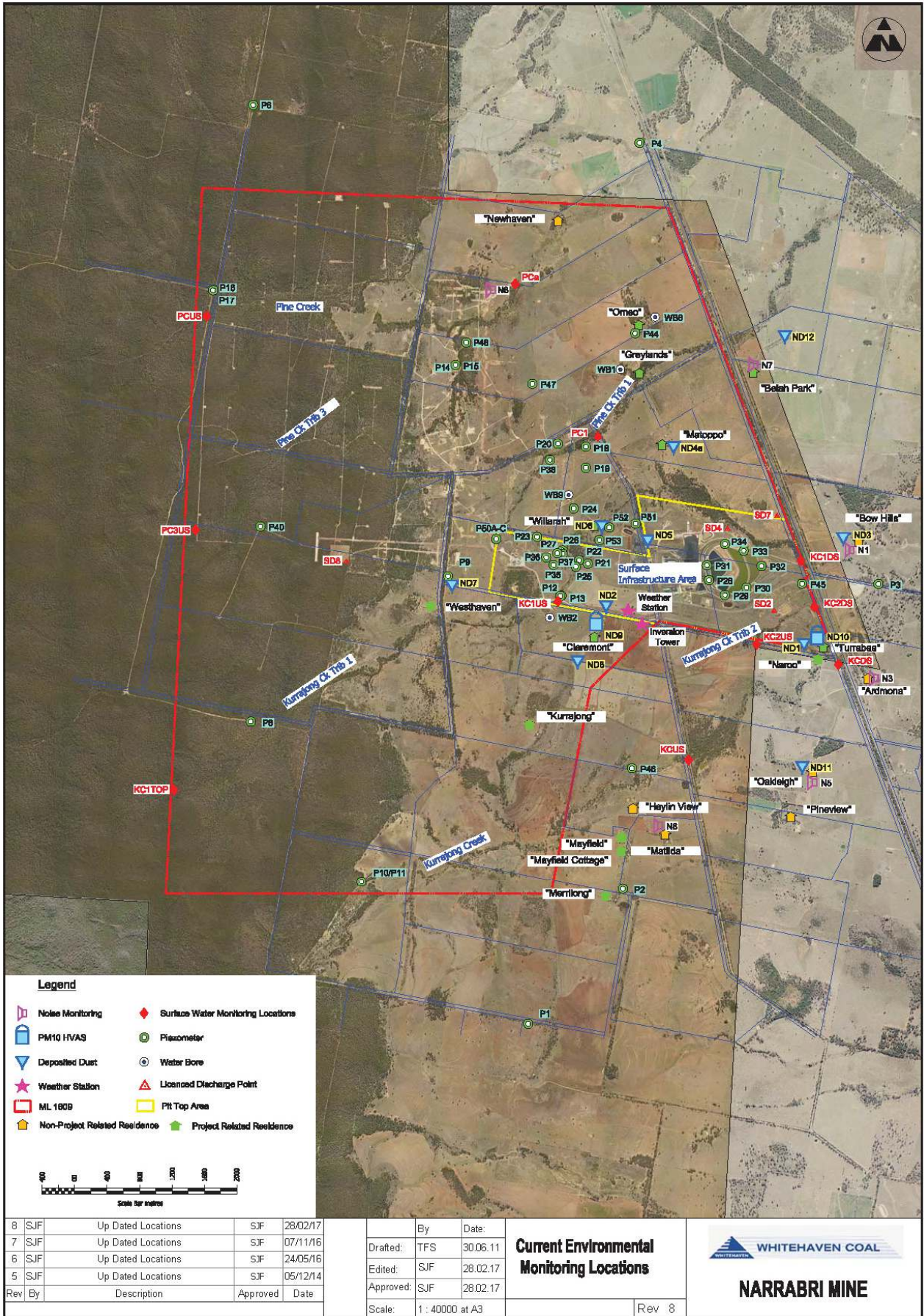
### **Complaints**

Four formal complaints were received during the period December 2018 to February 2019. The three complaints from December and January related to dust and were from the same complainant and were managed at the time. The complaint from February was a follow-up from a previous complaint that included a range of issues. This residence is now being added to the sites EPL for noise monitoring.

### **Environmental Incident(s)**

No environmental incidents occurred during the September to November 2018 period.





Rev	By	Description	Approved	Date
8	SJF	Up Dated Locations	SJF	28/02/17
7	SJF	Up Dated Locations	SJF	07/11/16
6	SJF	Up Dated Locations	SJF	24/05/16
5	SJF	Up Dated Locations	SJF	05/12/14

By	Date
Drafted: TFS	30.06.11
Edited: SJF	28.02.17
Approved: SJF	28.02.17
Scale:	1 : 40000 at A3

**Current Environmental Monitoring Locations**

Rev 8

