
UPPER HUNTER AIR QUALITY MONITORING NETWORK (UHAQMN) – ADVISORY COMMITTEE

MEETING MINUTES – Meeting 11

Date: 27 February 2014

Time: 10:00am – 12:00 noon

File: EF13/5718 DOC14/46591-02

Meeting Location: Singleton Civic Centre.

In attendance: John Tate (Chairperson), Cr Wayne Bedggood, Scott Brooks, Dr Craig Dalton, Craig Flemming, Dr Suzanne Laucht, Lyn MacBain, Cr Sue Moore; Geoffrey Sharrock, Andrew Speechly, Wendy Wales, John Watson

Office of Environment and Heritage (OEH): Matt Riley

Environment Protection Authority (EPA): Mitchell Bennett, Leanne Graham.

Apologies: Dr Catherine Chicken, Patrice Newell

Agenda Item:

1. Acknowledgement of Country

2. Welcome and Introductions

Mr Tate welcomed attendees and introduced Mr Geoffrey Sharrock, new community representative nominated by the Minister.

Mr Sharrock outlined his professional experience in the coal industry in the Hunter and internationally, in roles including exploration geologist, economic analyst, mine manager and company director. Mr Sharrock also has served as a Councillor on Singleton Shire Council and as chairman of boards and committees in sectors including mining, natural resource management and tourism. Mr Sharrock is a land holder at Broke.

3. Apologies (see above)

4. Previous Meeting Minutes and Actions

The Advisory Committee members adopted the minutes from the meeting of 5 December 2013.

Responding to Actions of the previous meeting:

- OEH advised of online publication of the Upper Hunter Air Quality Monitoring Network Annual Report 2012 (Refer to <http://www.environment.nsw.gov.au/aqms/uhaqmnmonitoring.htm>). The report includes case studies which turn data into useful information for the community. OEH apologised for the delay in publication and explained that preparation of the report required detailed quality assurance procedures. It was agreed to inform local councils of the publication.
- OEH advised that preparation of the Annual Report 2013 had commenced and would include case studies.

- EPA and OEH proposed meeting dates for 2014 to report seasonally on network performance:
 - 1 May 2014 reporting summer results (December 2013, January and February 2014)
 - 31 July 2014 reporting autumn results (March, April and May 2014)
 - 16 October 2014 reporting winter results (June, July and August 2014)

Actions outstanding from previous meetings include:

- EPA will email the Annual Report 2012 web link to Committee Members and provide hard copies on request. OEH invited feedback from Committee Members on the case studies.
- OEH will present a discussion paper, at the next meeting, on a proposed method for determining how the Advisory Committee can assess the need for new air quality monitoring stations for the Network.
- Committee Members to facilitate access to Network reports, in liaison with local libraries.

ACTION 1: OEH to prepare a website publication summarising the quality assurance procedures involved in preparing the annual reports for the monitoring network.

5. Community Feedback

EPA provided copies of media articles referring to the Network or the Advisory Committee and published since the previous meeting (6 December 2013 to 26 February 2014).

The Chair referred to the article in which he recommended that the EPA adopts a demerit point system to deal more strongly with mines that breached conditions of environment protection licences. The Chair suggested a system similar to the demerit point system used by the NSW Roads and Maritime Services (RMS), (Newcastle Herald, 25 January 2014, pages 1, 2).

Before general discussion, the Chair introduced Mr Mitchell Bennett who outlined the EPA's powers to suspend licences and to give incentives to improve environmental performance of licensees.

Mr Bennet's key messages were:

- Section 7(5) of the *Protection of the Environment Operations Act 1997* (POEO Act) allows the EPA to suspend or revoke (permanently cancel) a licence if: (a) the licence was obtained improperly, (b) the licence conditions have been contravened, (c/d) the licensed activities have been completed; (e) the licence fees have not been paid, or (f) the licence holder is not fit and proper.
- In 2013, the EPA suspended three and revoked five of 4,000 licences. Licences are suspended mainly due to failure to pay fees.
- The EPA is developing a Risk Based Licencing Framework that proposes to base fees partially on the regulatory history of the licensed premises, for example, the number of penalty notices and prosecutions.
- The Risk Based Licence Framework is similar to the demerit points system used by the RMS, in providing an incentive to comply. In contrast to the RMS demerit system, environment protection licensees with poor environmental performance will pay higher licence fees, rather than lose their licences.

In discussion, Advisory Committee members made the following points:

- Broad community feedback is that mines need to improve environmental performance and that fines are too low to offer a financial incentive to improve performance.
- The discussion raised the question of whether issues of environmental performance and regulation lie within the Advisory Committee's Terms of Reference. Some Advisory Committee members welcomed the opportunity to discuss issues of community concern regarding mine regulation.

EPA offered to provide further information on the regulation of the environmental performance of mines and the proposed Risk Based Licensing system.

ACTION 2: EPA to facilitate a briefing to the Advisory Committee on regulatory power, roles and responsibilities of the EPA and NSW Planning and Infrastructure (now Department of Planning and Environment) with regard to the environmental performance of mines.

ACTION 3: EPA to facilitate a briefing to the Advisory Committee on EPA's proposed Risk Based licensing Framework.

6. Network Performance Report and System Performance

Mr Riley (OEH) reported on the Network's performance for the period 1 December 2013 to 31 January 2014, providing details of the Network's operation and data capture and monitoring results. For PM₁₀ data, all of the 14 network sites achieved the 95% online operational target for the two month period.

In the larger population centres, all daily average PM₁₀ levels were below 50 µg/m³ throughout the period (62 days) at Muswellbrook and Aberdeen. Daily average PM₁₀ levels were above 50 µg/m³ for one day at Singleton (51.4 µg/m³).

At the smaller population centres, daily average PM₁₀ levels above 50 µg/m³ occurred on four days at Maison Dieu, three days at Camberwell, Warkworth and Jerrys Plains, and one day at Bulga and Wybong. Warkworth recorded the highest daily average PM₁₀ level of 67.9 µg/m³ across the network for the period.

At the Network's diagnostic sites, operating close to mines, daily average PM₁₀ levels were above 50 µg/m³ on two days at Singleton NW and Mount Thorley. All daily average PM₁₀ levels were below 50 µg/m³ throughout the period at Muswellbrook NW.

The background site Merriwa experienced a daily average PM₁₀ level above 50 µg/m³ for one day during the period. Singleton South experienced daily average PM₁₀ levels less than 50 µg/m³ throughout the period.

For PM_{2.5}, Camberwell and Muswellbrook achieved over 95 % online performance throughout the period. At Singleton, scheduled calibration of the monitoring instrument in December reduced online performance to 91% for the period.

Daily average PM_{2.5} levels were better than 25 µg/m³ throughout the reporting period at all three sites, Singleton, Muswellbrook and Camberwell.

Sulfur dioxide (SO₂) monitoring achieved above 95% online performance for the period at Singleton and Muswellbrook. Hourly average SO₂ levels were better than the benchmark (20 pphm) throughout the period.

Nitrogen dioxide (NO₂) monitoring at Muswellbrook and Singleton achieved above 95% online performance for the period. Hourly nitrogen dioxide (NO₂) levels at Singleton and Muswellbrook were better than the benchmark (12 pphm) throughout the period.

Meteorological monitoring achieved above 95% online performance throughout the period at all the 14 monitoring stations.

Mr Riley provided an interpretation of the monitoring results presented as time series graphs. The elevated daily average PM₁₀ level (51.4 µg/m³) at Singleton in late December was associated with a bushfire event. Spikes in SO₂ levels over Muswellbrook were likely to be associated with poor dispersion of a plume of power station emissions during stable atmospheric conditions.

Website statistics and subscriptions to air quality alerts showed increasing interest in the Network.

In discussion, Mr Riley noted the challenge of comparing monthly monitoring data with national standards which were based on annual performance criteria. Mr Riley added that such issues with the NEPM [National Environment Protection (Ambient Air Quality) Measure] were being discussed under the National Plan for Clean, a Commonwealth Government forum.

The Chair thanked Mr Riley for the report and reiterated the importance of providing meaningful information on air quality to the wider community.

7. Improvements in Industry-Operated Monitoring

Mr Mitchell Bennett (EPA) gave a presentation to open discussion on the future of the current industry-operated air quality monitoring sites, given that the 14 station OEH-operated Network has been established.

Mr Bennett made the following key points:

- Coal mines in the Upper Hunter Valley currently operate 417 air quality monitors at an estimated cost of over \$3 million per annum.
- With such a large amount of monitoring data much of it is not analysed or used in a meaningful way.
- Technological advancements allow the collection of continuous data that can be quickly made available to the public.
- Discussion on the future of the current industry-operated air quality monitoring sites requires consideration of the purpose of monitoring in general. Typically, the two main purposes are:
 - Impact assessment, to work out what levels of air pollution people are experiencing.
 - Emissions monitoring, to work out what levels of air pollution are emitted from a source.

- The Network provides data that can be used for impact assessment at a number of scales:
 - In the larger population centres of Singleton, Muswellbrook and Aberdeen, the network data can be used for impact assessment against NEPM standards.
 - In the smaller communities of Camberwell, Jerrys Plains, Wybong, Aberdeen, and Bulga, Network data can be used to assess what levels people are experiencing.
 - Diagnostic sites of Singleton NW, Singleton S, Muswellbrook NW, Merriwa, Warkworth, Maison Dieu and Mt Thorley provide data to indicate the direction from which dust may be coming on days when communities are experiencing elevated levels.
- Emissions monitoring of dust from diffuse sources, such as mines, is more difficult than monitoring emissions from industrial stacks. Currently, industry-operated monitoring instruments collect dust emitted from numerous dispersed sources. A specific mine cannot be held accountable for all the dust measured by the individual monitoring instrument.
- EPA's Duststop program is making steps toward monitoring emissions from specific coal mining activities and EPA has developed a handbook to assist mines to adopt appropriate and objective measures of dust emissions.

Existing industry-operated air monitoring instruments attempt to perform multiple purposes, including impact assessment at the nearest receiver, mine management purposes and measurement of the emission from each mine. EPA is proposing to simplify mine monitoring to focus on a continuous monitors located nearer to mine operations and aligned with the predominant wind direction, to monitor impacts upwind and downwind of mining operations.

Industry representatives on the Advisory Committee noted that monitoring costs would be reduced if this proposal was adopted.

Mr Bennett invited discussion of the strength and weaknesses of the EPA's proposed approach. The Advisory Committee members noted the following:

- The community may perceive that fewer monitors would mean a loss of protection, which may increase current community perception that they are not protected adequately.
- Land holders with on-site monitors would be reluctant for monitors to be removed because they value knowing how much dust is deposited on their land.
- Current dust deposition gauges and high volume samplers are inadequate for monitoring mine operations.
- Most mines use continuous monitors. Relocation of continuous monitors, scrutinised by EPA, would provide more useful data on specific mining operations.
- Improved management of dust would improve community confidence in the regulation of mines.

Industry representatives noted that the NSW Government gave a commitment to mines to improve industry monitoring during the establishment of the Network; and that most mines use valley wide modelling to forecast wind speed and direction, to help plan mining activity so that the dust impacts were minimised.

Mr Bennett clarified that while the EPA's proposal may reduce the number of impact assessment monitoring locations, it would allow closer monitoring of emissions from each mine which would ensure that impacts were still managed.

Mr Scott Brooks noted that the proposed approach would not extinguish a land holder's right to an air quality assessment.

Mr Bennett concluded that the EPA had no firm timeframe for introducing the proposed changes and it was seeking early feedback on its proposals.

Mr Bennett offered to inform the Advisory Committee of further consultation via a standing agenda item.

In response to a request by the Chair, supported by the Advisory Committee, the EPA agreed to facilitate the preparation of a discussion paper to be distributed before the next meeting.

ACTION 4: EPA to facilitate the preparation and distribution of a paper for Advisory Committee members discussing the proposed improvements to industry-operated air quality monitoring.

The Chair thanked the EPA, OEH and the Advisory Committee for their contributions to discussion.

8. General Business

Industry representatives questioned whether the scope of the Advisory Committee's Terms of Reference included consideration of the regulation and compliance of mines. The EPA replied that although such discussion had not been the concern of the Advisory Committee to date, briefings on regulation and compliance could be arranged if requested.

Mr Brooks requested a future discussion on how the monitoring data from the Network may be accessed and used in a more meaningful way by mines and offered to provide more information at a future meeting.

Ms Lyn MacBain requested clarification of the roles of NSW Planning and Infrastructure (now the Department of Planning and Environment) and the EPA in the approval and regulation of mining activity.

In response to questions, the EPA advised that it was investigating the impact of a recent mining blast at Muswellbrook. The EPA had requested a report on the circumstances leading to the incident and advised anyone who experienced an impact to contact the EPA.

ACTION 5: NSW Planning and Infrastructure (now the Department of Planning and Environment) to lead discussion on how the monitoring data from the Network may be accessed and used in a more meaningful way by mines.

ACTION 6: EPA and NSW Planning and Infrastructure (now the Department of Planning and Environment) to provide at the next meeting a summary of their respective roles in the approval and regulation of mining activity.

The meeting closed at 12:55 pm.

Next meeting date: Thursday 1 May 2014.

Minutes Reviewed by: John Tate (Chair)