



## MEETING MINUTES

**Date:** 30 June 2011  
**File:** FIL08/6990-09

**Time:** 12:30pm – 4:00pm

**Meeting Location: Jerrys Plains.** The meeting was preceded by site inspections of the proposed monitoring station sites at Wybong and Jerrys Plains.

### **Meeting 5 of the Upper Hunter Air Quality Monitoring Network (UHAQMN) – Advisory Committee**

**In attendance:** Cathy Cole (Chairperson), Martin Addinall, Wayne Bedggood, Craig Dalton, Craig Flemming, Rory Gordon, Ben Harrison, Murray James, Lyn McBain, Kenneth McDonald, Patrice Newell, David O'Brien, Carol Russell, Wendy Wales

Office of Environment and Heritage (OEH): Mitchell Bennett, Alan Betts, Grahame Clarke, Chris Eiser, Jason Potts, Jackie Teal

Communication Wise: Liz Griffiths

**Apologies:** Nicholas Hall (Ben Harrison replacing), John Neely (Martin Addinall replacing), John Watson (David O'Brien replacing)

### **Agenda Item:**

#### **1. Acknowledgement of Country**

#### **2. Apologies (see above)**

The chair welcomed Murray James from Upper Hunter Shire Council.

#### **3. Minutes of Previous Meeting**

The Advisory Committee minutes from the meeting held on 24 March 2011, were adopted.

#### **4. Actions Arising from Previous Meeting**

The Chairperson summarised the actions arising from the previous meeting:

- why recent data was unavailable from the website and the function of the “exceedence” search function on the website;
- the addition of automated notification of subscribers into the health alert;
- obtaining necessary approvals and detailed design works for sites at Aberdeen and Warkworth Village;

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- “Community Feedback” as an agenda item;
  - Draft six-monthly report; and
  - Outline of process and proposed timetable for the Committee to advise on the remaining functions in the Committee’s terms of reference.

OEH advised that temporary data gaps are due to interrupted communications, but data is posted on the website once these issues are resolved. The “exceedences” search function is now operational. Power failures result in permanent data gaps. Automated notification for subscribers to the health alert system is being tested. All other actions would be dealt with under items listed on the Meeting 5 Agenda.

## **5. Progress Report**

OEH advised that three stations are now running, one at Singleton, one at Muswellbrook and one at Maison Dieu. Four stations, Camberwell, Bulga, Mount Thorley and North-West Singleton (Rix’s Creek), are under construction and should be on-line by the end of July 2011. Four other sites are going to tender. These are Aberdeen, North-West Muswellbrook, Warkworth and Singleton South. The sites at Muswellbrook North West and Singleton South require consultation with Muswellbrook and Singleton Council on flooding issues. The project is on-track to have all 14 stations operating by the end of 2011.

## **6. Terms of Reference**

OEH reported that the Committee’s Terms of Reference have been edited to incorporate the new names of government agencies.

## **7. Upcoming Issues**

OEH advised that OEH would be seeking advice from the Advisory Committee on the drafting of a regulatory framework for the ongoing funding and operation of the air quality monitoring network.

A Committee member asked whether the Committee’s advice would be sought on quality assurance issues. OEH advised that providing advice on the ongoing operation of the Network is one of the specific terms of reference of the Advisory Committee.

Two Committee members advised that more explanation of missing data is needed on the OEH website.

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A Committee member asked what progress had been made to include oxides of nitrogen (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) monitoring in the Network. OEH advised that negotiations are being finalised with the power industry to fund the installation of NO<sub>x</sub> and SO<sub>2</sub> monitors at Singleton and Muswellbrook.

A Committee member asked whether information could be provided to the Committee on the air quality monitors being established by NSW Health. OEH explained that it is assisting NSW Health with a project to operate a number of portable OSIRIS air quality monitors in the Upper Hunter. The monitors are currently at the Singleton monitoring station for side-by-side comparisons before also being installed at Muswellbrook and Camberwell. The OSIRIS monitors use a method of measuring PM<sub>2.5</sub> particles that is different to the continuous Beta Attenuation Monitors (BAM) installed at Singleton and Muswellbrook. The OSIRIS monitor cannot be directly compared to the BAM because OSIRIS monitors are only recognised as “indicative particle monitors”, rather than an approved compliance monitor.

NSW Health advised that these monitors are part of a project being run by NSW Health to compare the relative variability in PM<sub>2.5</sub> particles at as many as possible of the Network monitoring sites. This information will be useful to assess whether there is a need for more comprehensive PM<sub>2.5</sub> monitoring across the Network.

OEH advised that, while it is useful for Committee members to be aware of the NSW Health project, this project is outside the Terms of Reference of the Committee.

## **8. Site Assessment Report**

OEH presented detailed information on a proposed monitoring site five kilometres outside Merriwa on the Merriwa-Scone Road. The site is intended to monitor background particle levels. OEH advised that because the landscape in this area is undulating and open, it is not difficult to find a site that complies with the relevant siting and technical standards. The recommended site was selected because it met all of the technical standards and has favourable access to a power supply.

Nearby cultivation may impact on this monitor, but this is unavoidable in the Merriwa area. A Committee member suggested that this could be noted on the OEH website.

The Committee endorsed the recommended site near Merriwa.

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OEH presented detailed information on a preferred monitoring site on the Coolmore Stud property near Jerrys Plains. This site has access to power and satisfies the technical standards for a monitoring site. The likely impact of a nearby gravel track on the monitoring station was discussed. OEH advised that it considered that these impacts would be short-lived and would be unlikely to significantly impact 24 hour averages. OEH explained that many landowners in the area had been approached about establishing a monitoring site on their property, but all were concerned about the visual impact a monitoring station would have on their property.

The Committee endorsed the recommended site near Jerrys Plains.

OEH presented detailed information on two potential monitoring sites at Wybong, one near Wybong community hall, and the other near St Mark's Church. Both sites have similar potential to satisfy the relevant site establishment standards and power supply. Advice provided by air quality consultant, Nigel Holmes, is that neither site is likely to be effective as a regional air quality monitoring site because the hilly terrain near both sites is expected to interfere with regional air movement.

Muswellbrook Council advised that there were about 65 households in the Wybong area and that St Mark's Church was closer to the centre of this population than Wybong Hall. Mangoola Coal Mine operates a PM<sub>10</sub> air quality monitor about 750 metres from Wybong Hall.

Some members of the Committee expressed their view that a monitor should not be placed at Wybong because it will not provide regional air quality data and hence will be different from the rest of the network. Others expressed a view that monitoring of the local air quality near the Wybong community was sufficient justification for establishing a monitor in this area.

The majority view of the Committee was that a monitor should be established at the proposed site near St Mark's Church Wybong.

## **9. Website Development Project**

Liz Griffiths (Communication Wise) presented the results of focus group testing of the proposed webpage that is being developed to accommodate data from the Upper Hunter Air Quality Monitoring Network. These focus groups comprised people from a range of educational backgrounds. They included members of the Advisory Committee, community

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members and professionals with an existing interest in air quality, and community members with no particular background or interest in air quality issues.

The webpage was found to be generally useable, but some of the information could be more clearly explained and labelled. Specific examples were provided for consideration by OEH.

It was also recommended consideration be given to the colour-coding system on the new webpage. The colour-coding system is based on 24 hour averaged data, so it may not be transferable to the display of hourly data on the new webpage.

A Committee member suggested that stippling could replace the solid colours used to better represent dust concentrations.

OEH advised that many of the recommended changes are now being incorporated into the new webpage.

## **10. System Performance**

OEH reported that from Network commencement to 1 June 2011, there has been one exceedence of the PM<sub>10</sub> assessment criteria at Singleton and two at Maison Dieu. The small gaps in the Muswellbrook data occurred due to power and equipment failures. OEH is reasonably confident that these problems have been overcome. Data gaps will also occur during periods of scheduled routine maintenance. OEH has staff located in the Hunter Region to service the network and minimise any Network downtime. Recent PM<sub>2.5</sub> data from the Beta Attenuation Monitor (BAM) at Muswellbrook shows higher values than the Tapered Element Oscillating Microbalance (TEOM) measuring PM<sub>10</sub> at the same time. This is due to the differences in the way in which the instruments operate. The BAM only heats the incoming sample stream to remove moisture, whereas the TEOM heats the monitor's entire enclosure to 50°C, resulting in the loss of more volatiles, which are the organic components of the air sample most commonly found with smoke emissions. By vaporising these volatiles in the particle stream, the mass of the sample is reduced. This process is more noticeable in winter when volatiles from smoke emissions are present and is also more noticeable in the finer PM<sub>2.5</sub> fraction of the particle stream.

Some Committee members expressed concern about how the community might perceive the differences in the measured results of the two instruments.

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OEH advised that the TEOMS being used to measure PM<sub>10</sub> in the UHAQMN comply with Australian Standards and also are designated as a Federal Equivalent Method (FEM) by the USEPA. There is no current Australian Standard for PM<sub>2.5</sub>, but the BAMs do have USEPA status as a Federal Equivalent Method for PM<sub>2.5</sub>. The most appropriate continuous measurement of fine particles, especially PM<sub>2.5</sub> continues to be a controversial issue worldwide.

### **11. Six-monthly Report**

OEH advised that it intends to prepare a report explaining the Network status, system performance and monitoring results and sought guidance from the Committee on the information to be included in the report and the format of the report.

A Committee member highlighted the need to identify the target audience for this report. The Committee considered that the report needed to be easily read and understood and that more detailed contextual information would be best appended to the six-monthly report or put on the OEH website.

A member suggested that the report needed to answer the question “Is the air safe to breathe?”

**ACTION 1:** OEH will circulate a draft of the six-monthly report prior to the next meeting.

### **12. Process for Confirmation of Minutes**

Muswellbrook Council expressed concern that meeting minutes are unavailable for wider distribution until they are endorsed at the following meeting.

**ACTION 2:** OEH will distribute media releases and dot-points to all committee members following each meeting.

### **13. Community Feedback**

Some community representative Committee members advised that the community was suspicious about missing data on the website. A Community member suggested a log of the reasons for missing data be kept on the website.

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OEH responded that power and equipment failures and scheduled maintenance will cause data gaps. In other circumstances, such as a failed telecommunication link between the monitoring station and the central data base the data is not lost and is captured and posted at a later time on the website. OEH advised that it has staff based in the Hunter to service and maintain equipment but there may be circumstances when a delay will occur in rectifying a Network fault, particularly on weekends when staff are not rostered on. These infrequent events are unlikely to impact the overall performance of the Network.

#### **14. Media Clippings**

OEH distributed recent media articles, a press release and a summary of correspondence related to the Network.

#### **15. General Business**

- Clarification was sought regarding the use of the “6<sup>th</sup> highest measurement” in the system performance report. OEH explained that the PM<sub>10</sub> National Environment Protection Measure (NEPM) allows for 5 days per annum exceedence of the assessment criterion. If the 6<sup>th</sup> highest PM<sub>10</sub> measurement during a 12 month period is less than 50µg/m<sup>3</sup> then the site will have complied with the NEPM criteria.
- The chair advised that she had obtained temporary full-time employment with a NSW government agency in a role related to recreation and tourism. She advised that she was willing to continue her role as the independent chair provided the Committee did not see this as a potential conflict of interest. No concerns were expressed by Committee members or OEH.

#### **Next meeting date:**

17 November 2011 in Singleton.

**Prepared by:** Mitchell Bennett (OEH)

**Reviewed by:** Cathy Cole (Chair)

**Minutes adopted:** 17 November 2011