

Walleys Quarry Report



Staffordshire County Councils Health and Care Overview & Scrutiny Committee

Environment Agency report to inform committee meeting on 20 November 2023

Explanatory

The Environment Agency does not provide health advice. Our responses below are limited to comments about the data provided by the Mobile Monitoring Facilities (MMFs) rather than the conclusions drawn from that data.

Qu 1. What has happened in respect of the environmental monitors?

The Environment Agency has 3 Mobile Monitoring Facilities (MMFs) located at Walleys Quarry which monitor the ambient air quality. These MMFs monitor pollutants such as hydrogen sulphide (H₂S), methane (CH₄), oxides of nitrogen (NO_x), sulphur dioxide (SO₂), different particulate matter size fractions (Total Suspended Particulate (TSP), PM₁₀ and PM_{2.5}) and the BTEX group of organic compounds.

We established that we misinterpreted how the new model analyser that we have been using to monitor H₂S emissions around Walleys Quarry should have been calibrated. This means that H₂S data collected by these analysers before September 2023, including those currently at Walleys Quarry, are likely to have a greater degree of uncertainty than previously understood. It is only the data for H₂S that is affected.

We discovered the issue as part of a routine audit and immediately began an investigation. We put an additional analyser into MMF 9 on Friday 1 September 2023 and checked and calibrated it between 4 and 5 September 2023. This allowed us to collect data for a short period in order to understand the impact of the issue. On 21 September 2023 we concluded that the original analyser at MMF9 was likely to have been under-recording H₂S during the period when the additional analyser was also in use.

2. Do we now have access to reliable data about emissions from the site – and what is this data showing?

We remain confident in data on all the pollutants other than hydrogen sulphide. This data continues to be used by UK Health Security Agency (UKHSA) in their health risk assessments.

MMF9 was calibrated with the adjusted calibration method on 4th and 5th September 2023, and we are confident in the data reported from 1 September 2023.

MMF1 and MMf2 were calibrated using the adjusted calibration method on 19th Oct 2023. The calibration slopes between sulphur dioxide and hydrogen sulphide within

the analysers, had not drifted relative to each other since the beginning of September. Therefore, we are confident that this data from the beginning of September is also reliable.

The results from the beginning of September for all MMFs has been provided to UKHSA and published on our Engagement HQ site [here](#).

In summary the results are:

MMF	% of time above 30min WHO odour annoyance threshold of 7ug/m3	Average concentration (to be compared with US EPA long-term (lifetime) health-based guidance value of 2ug/m3)
MMF1	0.8%	1.7ug/m3
MMF2	0.2%	1.1ug/m3
MMF9	6.0%	1.7ug/m3

3. Are you in a position to retrospectively amend historic data to reliably calculate the cumulative exposure of local residents to hydrogen sulphide and other pollutants?

We remain confident in data on all the pollutants other than hydrogen sulphide. This data continues to be used by UK Health Security Agency (UKHSA) in their health risk assessments which include cumulative exposure.

The scale of any under-reporting of H2S will vary over time and between different H2S analysers in the MMFs. It is important that we understand this properly.

We have sought advice from the manufacturer and have developed a methodology for re-adjusting the historic data.

This methodology is being reviewed by an independent group of experts, led by Defra's Chief Scientific Advisor, Gideon Henderson.

The group met on 01 November 2023 to discuss terms of reference and the information initially provided. Actions are now being worked on. While we do not yet have timescales for completion of the review, we are working hard to ensure the review and report is completed as soon as possible. We will ensure all partners and the community are kept informed of progress.

4) What is the risk assessment of the impact on the health of local residents?

The Environment Agency does not provide health advice.