



Ambient Monitoring Report 2015

Permit EPR/BV5386IX Variation EPR/BV5386IX/V003

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Ambient Monitoring Report 2015

Further to the ambient monitoring report provided for the period January to December 2014, below is an update for the period 1st January to 31st December 2015:-

Ambient Monitoring from 1st January 2015

Besides having two site monitors; as from 1st January 2015, the company commenced monitoring of ambient air at a human sensitive receptor which is situated at a local school.

It is performed in conjunction with another company who operate on the same estate thereby using shared resources.

Monthly results have all been within the annual mean requirement of 0.250µg pb/m³ throughout 2015.

Sensitive Receptor - Information and Results

Monitoring station Serial No. TNO 2899 is situated at Garnlydan School and did not have any single monthly result above 0.250µg with the lowest recorded in June 2015 at 0.032µg pb/m³ and the highest being 0.177µg in December 2015.

The trend of annual mean results has increased from the first recorded figure of 0.013µg in January 2015 to 0.084µg in December 2015, however, the monitor was not in service between 24th July and 7th August 2015 when it had been returned to the manufacturer for service and re-calibration.

Road works are still currently on-going to change access roads to the new section of the A465 near Garnlydan, however, it is not known if it would increase the ambient Lead in air level.

Site Monitors

Monthly results have shown that ambient lead in air levels taken from the two site monitors have, in the majority of case, been within the annual mean requirement of 0.250µg pb/m³ throughout 2015.

A brief update of results is as follows:-

1. Monitoring station Serial No.TNT1228 situated to the north east of the site did not have any results above 0.250µg with the lowest recorded in April 2015 at 0.032µg pb/m³ and the highest being 0.239µg in September 2015.

The trend of the annual mean results has reduced from 0.193µg in January 2015 to 0.107µg in December 2015, however, the monitor was not in service between 3rd and 30th November 2015 as it had been returned to the manufacturer for annual service and re-calibration.

It soon emerged that it had a fault with the pump motor so again had to be returned between 1st and 18th December 2015.

2. Monitoring station Serial No.TNT1227 situated to the south west of the site provided one monthly result of 0.278µg pb/m³ in September 2015.

The trend of the annual mean results has reduced from 0.146µg in January 2015 to 0.108µg in January 2015.

Service and re-calibration of the unit was slightly delayed due to the problem discussed at 1 above as the site required one monitor to remain in operation while the other was being serviced, therefore, it was sent away in the early part of 2016.

Investigations of the high September result did not reveal any specific reason for the increased Lead level however, as with the school, it is unknown if work on the new section of the A465 road has had any effect, therefore, it will continue to be monitored.

All results will continue to form part of discussions with the site Compliance Officer from Natural Resources Wales at future visits.

Site Employee Awareness

All appropriate staff are periodically reminded of the need to exercise due care when carrying out external work which has a potential to result in a fugitive Lead emission to air and has previously been the subject of formal toolbox talks whereby individuals are required to acknowledge specific Environmental, Health, Safety and Quality information with their signatures and dates being recorded.

Sampling Arrangements

With regard to sampling arrangements, the company still intend to use the services of Environmental Compliance Ltd (ECL), who are employed to download monthly ambient monitoring data as well as providing basic maintenance and making appropriate arrangements for Lead analysis and the provision of monthly reports.

Calibration and Strategy Review

As discussed above, the ambient air sampler at the school, as well as both site samplers, were re-calibrated by Turnkey Instruments Ltd (TIL).

They were removed by ECL and sent back to TIL at separate times in order to keep disruption to a minimum.

The full ambient monitoring strategy review can be seen on pages 6-8 below.

Below are graphs which represent individual monthly ambient Lead results taken throughout 2015 from the school as well as both site monitors.

Also shown are details of the annual mean Lead results:-

Garnlydan School

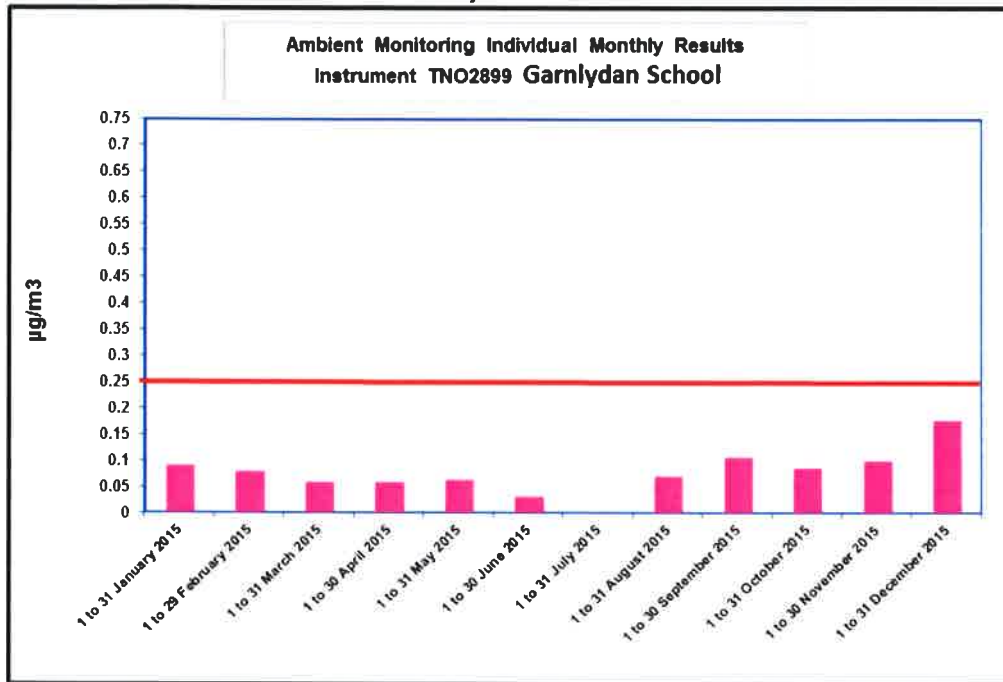


Figure 1 - Graph prepared from individual monthly results taken from a monitor located at Garnlydan School for the period January to December 2015

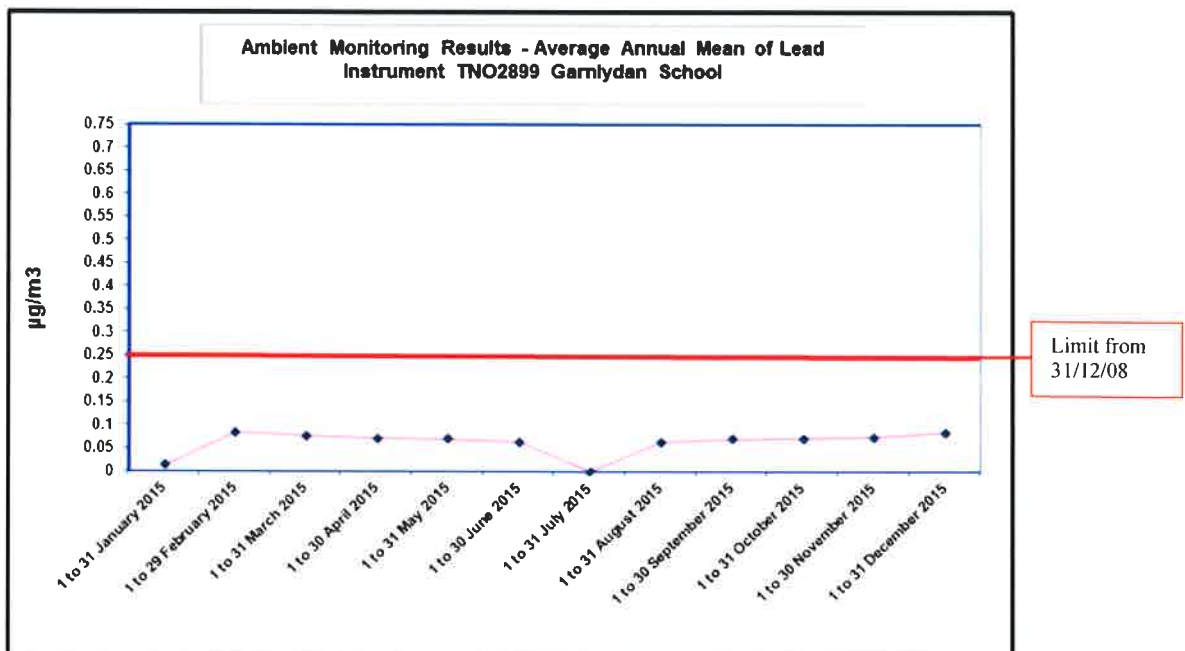


Figure 2 - Graph prepared of average annual mean Lead results at Garnlydan School for the same period as figure 1 above

Site Monitors

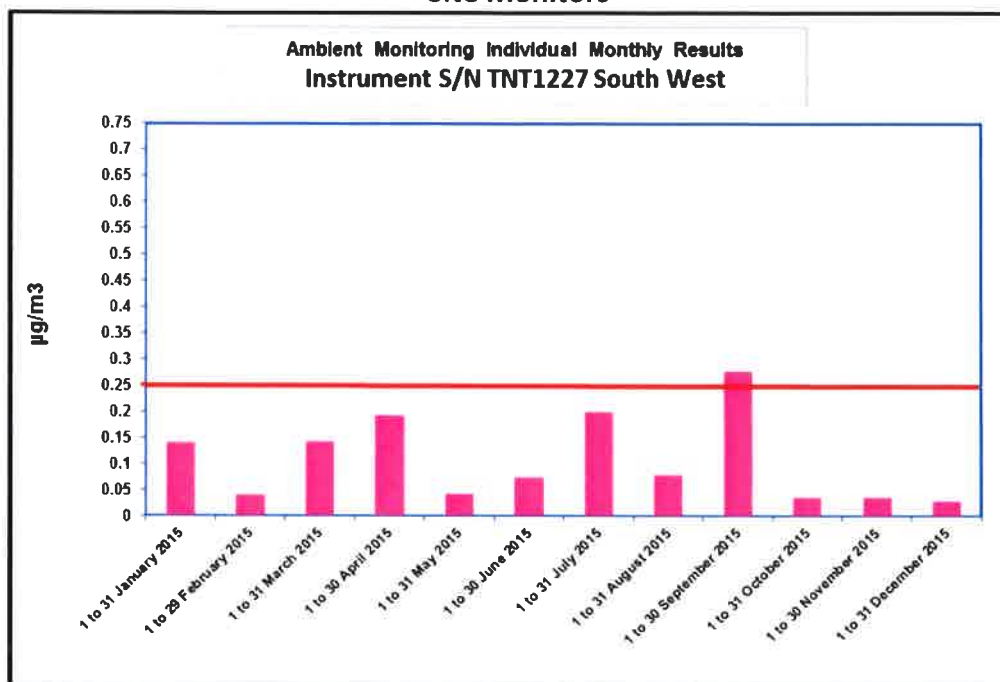


Figure 3 - Graph prepared from individual monthly results taken from site ambient monitoring equipment at the south west of the site for the period January to December 2015

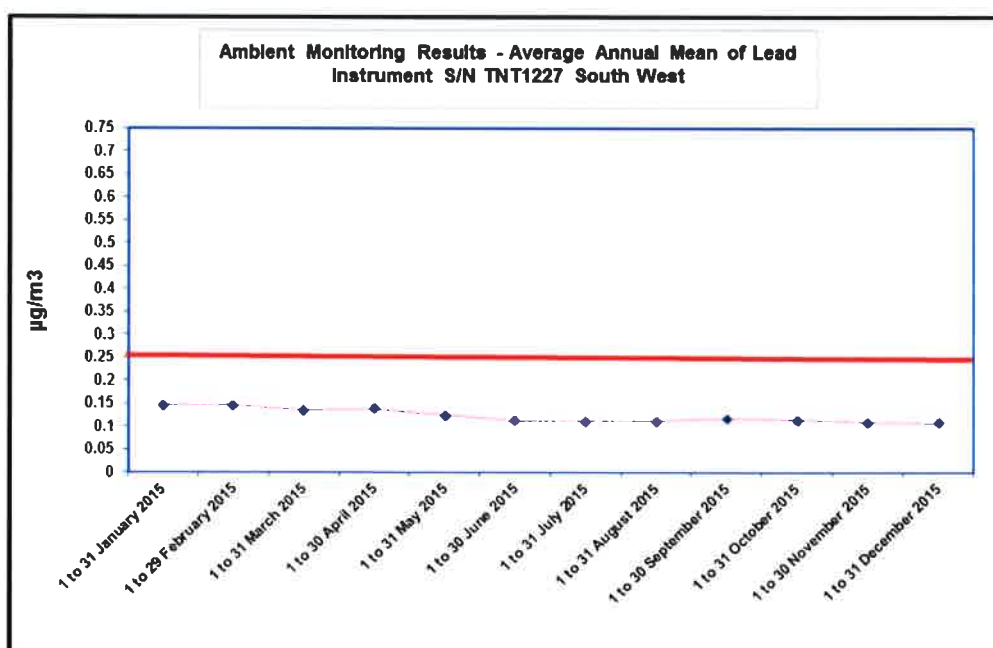


Figure 4 - Graph prepared of site average annual mean Lead results for the same period as figure 3 above

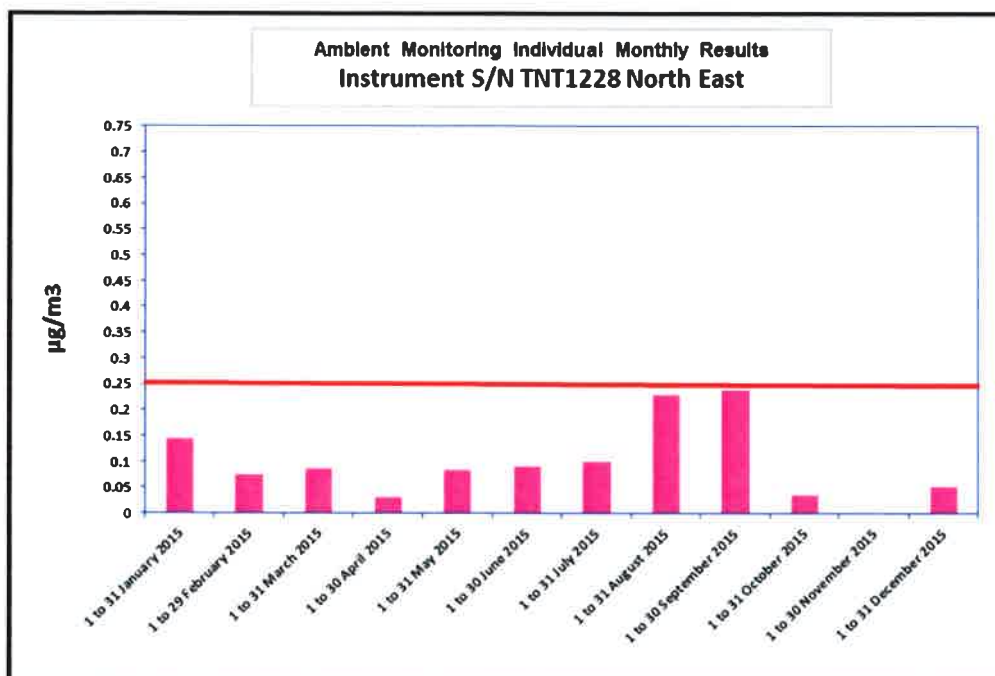


Figure 5 - Graph prepared from individual monthly results taken from site ambient monitoring equipment at the north east of the site for the period January to December 2015

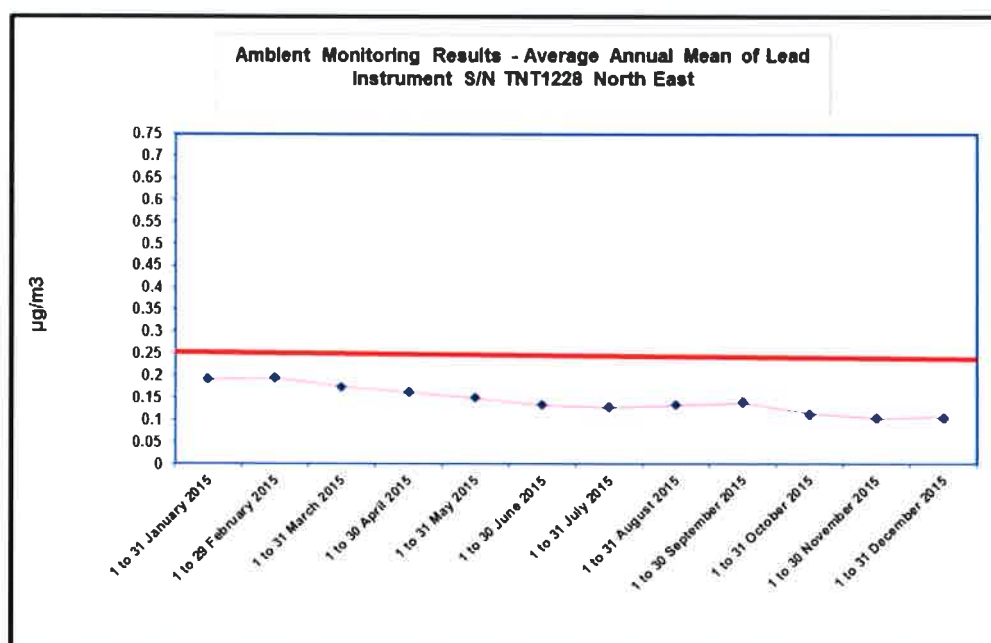


Figure 6 - Graph prepared of site average annual mean Lead results for the same period as figure 5 above

Yuasa Battery (UK) Ltd - Ambient Lead Monitoring Strategy

Background, Locations and Equipment

Yuasa Battery (UK) Ltd, currently have two site ambient monitoring locations situated to the north east and south west of the site. A plan identifying the positions can be seen at page 9 below.

Previously, the company has consulted with two companies, namely Turnkey Instruments Limited (TIL) who manufacture and service ambient air monitoring equipment and Environmental Compliance Limited (ECL) who are able to provide maintenance, filter changes and prepare monthly reports.

At a site meeting held on 9th September 2005, Topas samplers were discussed, and it was noted that the equipment was Mcerts approved and very much updated when compared with the previous ambient monitor used at the site. It also offered the option of installing a met station and of the two monitors later purchased; the north east monitor was also fitted with a met station.

The Topas instrument is able to provide a continuous and simultaneous indication of PM1, PM2.5, PM10 and TSP mass fractions and has a filter holder that accepts a 25mm filter so as to collect dust particles that can be removed and subsequently analysed for dust and metals.

The monitor located to the south west of the site was previously chosen taking into consideration a roadway leading to an adjacent unit which, at the time, was occupied by a road haulage and storage company although, at present, the unit remains empty.

The company concerned very often allowed lorries to park near Yuasa's west perimeter fence, therefore an area was selected to the south of the west gate thereby positioning it away from where vehicles were known to regularly park. Consideration was also given to the comments made at a meeting held with a previous Site Compliance Officer when the area was also agreed to be a satisfactory location in which to position it.

The north east monitor was originally placed at the rear of factory No.2 at a distance approximately just over half the length of the site, however, following a site meeting with Natural Resources Wales, the location situated to the north east of the site was changed in November 2014 as the location had become overgrown with trees and shrubbery which was considered could affect the results.

Locations of External and Site Monitors

The main monitor is located at a local school at grid ref SO16622 12328 and the positions of the two site monitoring locations can be seen on the plan at page 9.

Roles and Responsibilities

The HSE Manager is responsible for maintenance and annual re-calibration of the two site ambient monitors as well as working in conjunction with another local company to arrange maintenance and re-calibration of the monitor located at the nearby school.

He is also responsible for filter collection and exchange, downloading of data at around the beginning of each month and also for results data being recorded into a data-base which is capable of producing graphs to monitor site and external ambient Lead in air trends which are also discussed at internal Health, Safety and Environment local and Team Meetings.

Also, members of Yuasa's site management carry out weekly environmental compliance checks, which include the sites of the two ambient monitors.

Sample Collection, Data Download and Frequency of Sampling

Monthly sampling is performed as required under site permit EPR/BV5386IX, Variation EPR/BV5386IX/V003.

Samples from the external and site monitors are removed monthly by ECL and sent to a UKAS approved laboratory for Lead analysis to be performed. At the same time, ambient data is downloaded to computer from all monitors as well as meteorological data from the school and north east site met stations.

Any maintenance or servicing identified will be assessed and, where necessary, referred to ECL and/or TIL, as appropriate.

Monitor Calibrations

On an annual basis, the external, and site ambient monitors, will be removed at separate times by ECL and sent to TIL for servicing and re-calibration, following which, they will be re-fitted again by ECL.

Times of unavailability are recorded in an electronic log.

Operation and Maintenance Arrangements

As stated above, any maintenance required to the equipment is the responsibility of the HSE Manager and any maintenance required will be referred to ECL/TIL for appropriate action.

ECL will ensure the following scope of work is adhered to:-

Sampling for particulate matter and Lead will be carried out to meet the requirements of Technical Guidance Note M8, Monitoring Ambient Air.

ECL will carry out the collection of filters on a monthly basis.

The collected filters will be placed in a clean petri dish and, in the case of site samples, will be sealed in the presence of Yuasa personnel and subsequently sent to RPS Laboratories, Manchester, who hold UKAS accreditation for the analysis of Lead collected on the filters.

A field blank will be undertaken for each survey carried out.

Ambient data from the two site monitors will be downloaded from both instruments which will then be re-set to commence data capture for the following period and, at the same time, the north east site monitor will also have its met data downloaded.

The monitor at the school location will also follow the same procedure, as appropriate.

On completion of all work undertaken with the monitors, the flow rates will be measured to ensure the correct flow specification is being achieved.

Data will be submitted based on an analytical turnaround of 10 working days (two weeks) from receipt of samples at the sub-contract laboratory, normally within 3 weeks.

Particulate and Lead results will be forwarded to Yuasa for reporting purposes and results will be corrected using the collected site met data so as to represent the airborne concentration of particulate and Lead leaving the site.

Reporting

When received, results from the school monitor, will be checked in accordance with the Air Quality Objective for the annual mean of Lead (at present $0.25\mu\text{g pb/m}^3$), and where a Lead sample is found to be higher than the Standard, Yuasa will inform Natural Resources Wales by email or telephone and afterwards by completing a schedule 1, notification of abnormal emissions form.

Where results are satisfactory, all other reporting will be carried out annually as required by the site permit.

Review

A full review of this strategy will be undertaken if there is any change that would affect it, or in any case every two years.

Review Date – 18th February 2016.



Figure 5 - Plan showing the locations of site ambient monitors