



EnerSys Ltd

IC17 Environmental Permit Condition (NP3030BJ)

Newport Fugitive Emissions Report Summary 2021

EnerSys Ltd Newport
Stephenson Street, Newport,
South Wales
NP19 4XJ

Contents

Introduction	3
Discussion	3
Lead Stack Emission Performance	3
Monthly Stack Emission Reporting	3
Graph 1.0 – Monthly Stack Emission Testing	3
Quarterly Stack Emission Reporting	4
Graph 2.0 – Quarterly Stack Emission Testing	4
Ambient Air Emissions Monitoring	5
Graph 3.0 Annual Average Ambient Monitoring	5
Graph 4.0 – Ambient Air Monitoring 12 Month Data	5
Water Monitoring Diffuse Emissions	6
Graph 5.0 – Annual Average Interceptor Readings 2016 - 2021	6
Fugitive Emission BAT Conclusion Review	6
BAT 5	7
BAT 6	8
AOB	8

Introduction

EnerSys has a conditional requirement under the Environmental Permit NP3030BJ which has been granted to the Stephenson Street Facility in Newport Gwent, to review fugitive emissions and report on achieving BAT 5 and 6 (diffuse emissions) annually in May. This report is evidence to demonstrate a review is conducted as part of the sites permitting conditions.

Discussion

Lead Stack Emission Performance

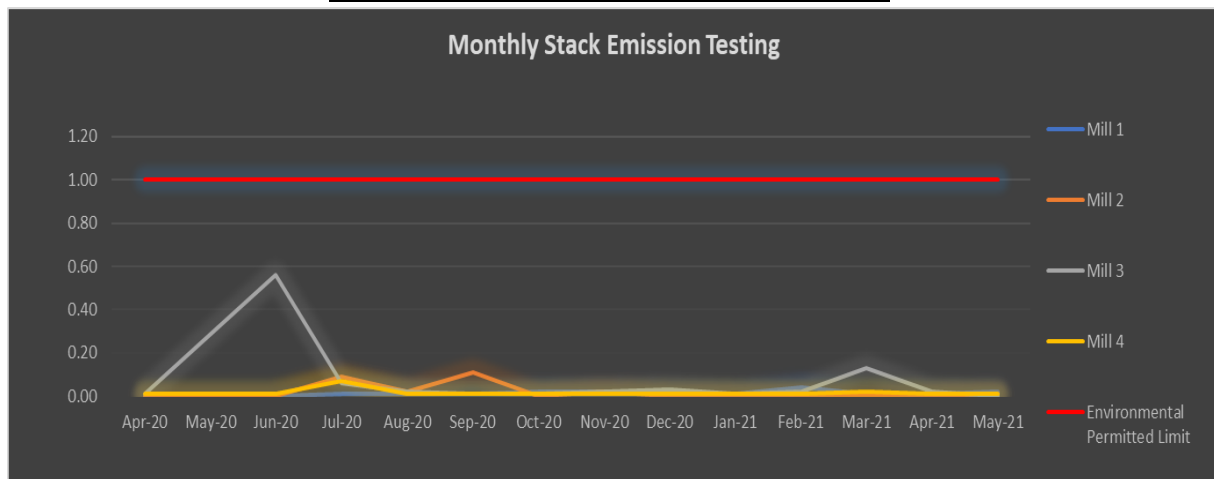
Since the submission of the 2020 fugitive emission report summary, there have been no lead (Pb) stack emission breaches.

Improvements have been made regarding coordination between the EHS and onsite engineering and maintenance activities over the course of 2020. The two departments are being increasingly proactive in scheduling and communicating onsite testing and scheduled downtime for improvements and planned maintenance. Furthermore, the EHS department have become more proactive in investigating increased trends of stack emissions.

Over the course of 2020 and 2021 the EHS Department have looked to increase the engagement of the engineering and maintenance departments within the investigation procedure including them within root cause analysis and proposed mitigation measures when increasing emission trends or outliers have been identified on abatement equipment.

Monthly Stack Emission Reporting

Graph 1.0 – Monthly Stack Emission Testing

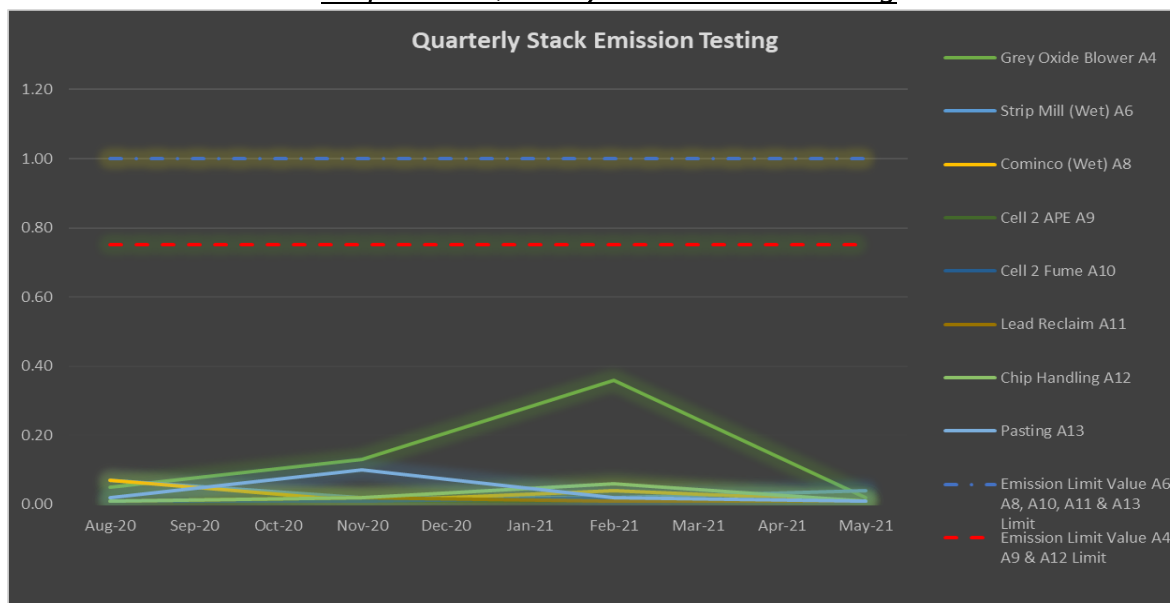


From the data presented in Graph 1.0 (above) it can be determined that all monthly stack emission tests for the oxide mills have been below the facility's environmental permit emission limit value (ELV). No fugitive emissions have occurred over the last 12 months and EnerSys continues keep emission levels below the facility's environmental permit emission limit value (ELV).

There was an increase in the Mill 3 reading in 2020. On investigation it was determined that the door to the filters was not closed properly due to contracted maintenance work being conducted. Procedure now in place to check all abatement equipment prior to handover and startup of equipment. No further issues have been encountered

Quarterly Stack Emission Reporting

Graph 2.0 – Quarterly Stack Emission Testing



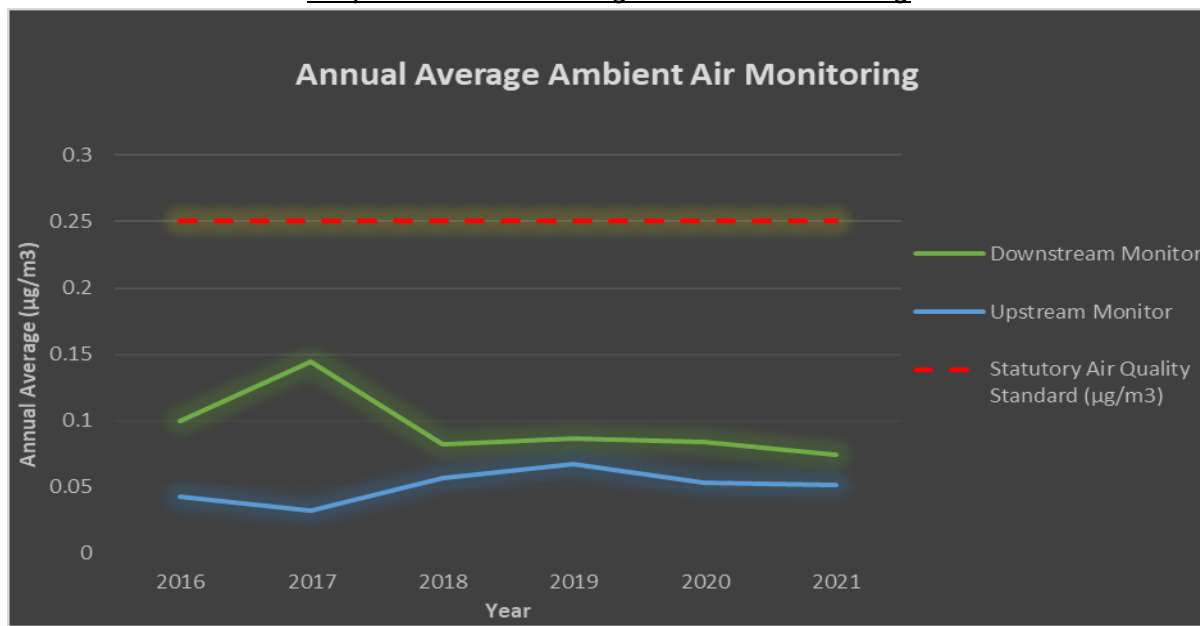
From the data presented in Graph 2.0 (above) it can be determined that all quarterly stack emission tests for abatement equipment have been below the facility's environmental permit ELV. No fugitive emissions have occurred over the last 12 months and EnerSys continues keep emission levels below the facility's environmental permit ELV's.

It can be identified from graph 2.0 (above) that the grey oxide blower (A4) emission point was elevated in Feb 2021. Due to this rise an investigation was undertaken to identify the root cause for the anomaly. Through an investigation it was identified that the abatement equipment and subsequent ductwork was scheduled for a clean down and service. This was scheduled by engineering and maintenance, however, was delayed due to governmental guidance on the outbreak of COVID19. An outcome of the investigation was to prioritize and undertake the ductwork and maintenance activities.

Although there was an elevated result within Feb 2021 on Emission point A4 the elevated result was below the emission limit value that is specified within EnerSys Environmental Permit: NP3030BJ. It is of note that although EnerSys saw a peak emission value of 0.36Mg/M³ the average value for the A4 emission point for the last 12 months is 0.14Mg/M³.

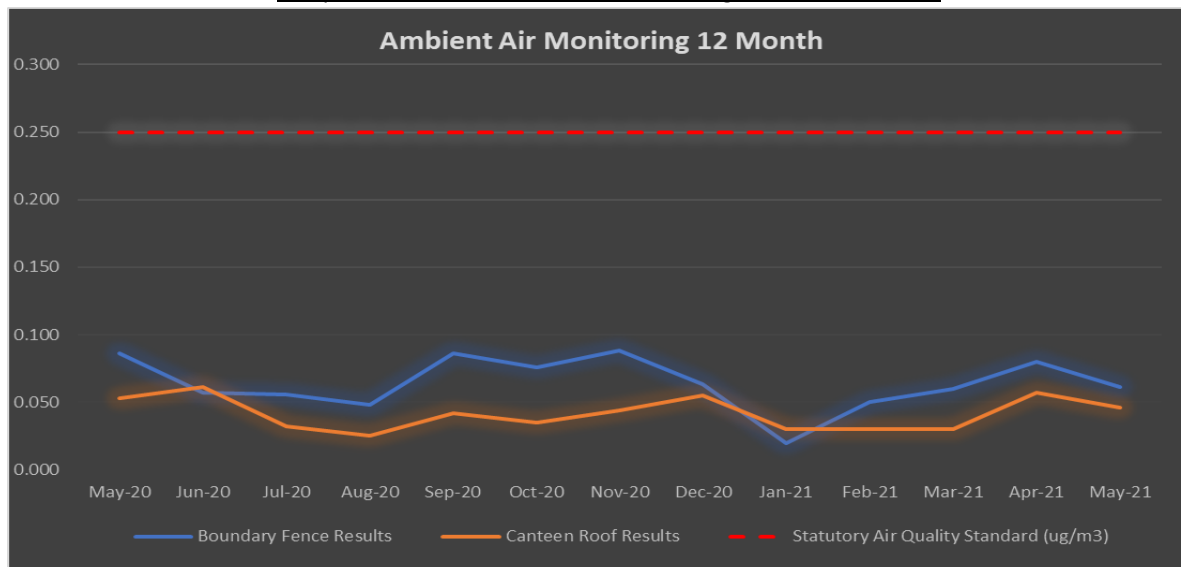
Ambient Air Emissions Monitoring

Graph 3.0 Annual Average Ambient Monitoring



From the data presented in graph 3.0 (above) it can be identified that ambient air monitoring testing have been conducted at the boundaries (both upstream and downstream) of the on the EnerSys site located on Stephenson Street. It can be concluded from the results that the annual average ambient air monitoring results are tracking well below the statutory air quality standard within the UK.

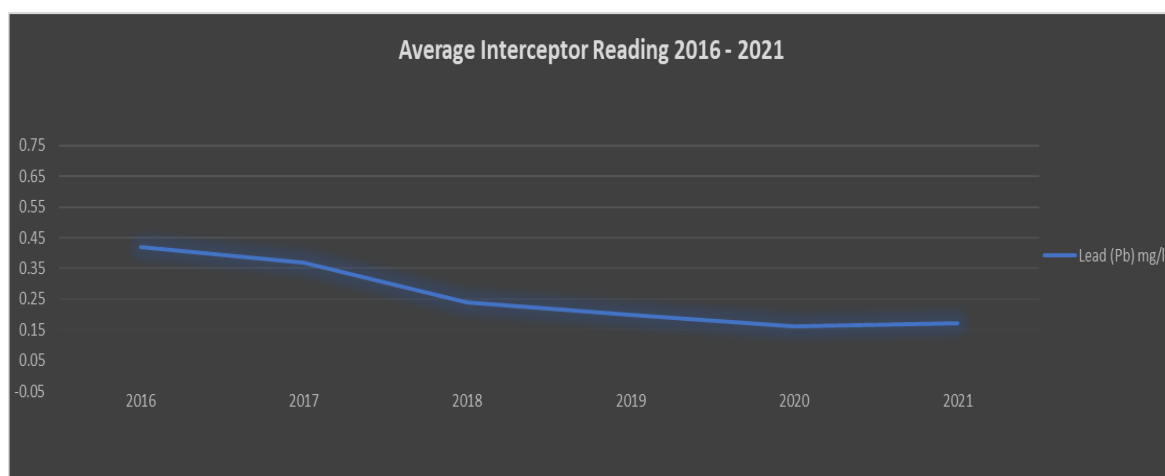
Graph 4.0 – Ambient Air Monitoring 12 Month Data



It can be determined from the data presented within Graph 4.0 (above) that over the last 12 months lead (Pb) levels within the ambient air surrounding the facility is below the maximum statutory air quality standard of 0.25ug/M³. Although no trends can be seen within Graph 4.0 as discussed above it can be seen in Graph 3.0 (annual average ambient monitoring) an overall reduction can be seen in both the downstream (boundary fence) and the upstream (canteen roof).

Water Monitoring Diffuse Emissions

Graph 5.0 – Annual Average Interceptor Readings 2016 - 2021



From Graph 5.0 (above) it can be determined that the annual average interceptor readings are below the environmental emission limit value. Over the last 6 years average interceptor readings have seen a decrease in lead levels (from 0.42mg/l in 2016 to 0.17mg/l in 2021). This decrease can be associated with an increase in frequency in cleaning and inspection regimes associated with the interceptor.

Fugitive Emission BAT Conclusion Review

A fugitive emissions reduction plan commenced in 2017 which targeted specific areas of the facility, the aim of the fugitive emissions reduction plan was to contain lead (Pb) at source.

In 2019, a re-assessment of the facility was undertaken due to major changes within the EHS and Engineering/Maintenance Departments. Over 2019 the site was re-benchmarked against the BAT Conclusions for the Non-ferrous Metals Sector, to ensure validity of and accuracy and to capture any changes within the facility since 2017.

Through the re-assessment and benchmarking of the fugitive emissions reduction plan identified two areas were highlighted as requiring further improvement. These were BAT Conclusions 5 and 6 regarding fugitive/diffuse emissions.

BAT 5

In order to prevent or, where this is not practicable, to reduce diffuse emissions to air and water, BAT is to collect diffuse emissions as much as possible nearest to the source and treat them.

February 2017 start of gap analysis on diffuse lead emission for Metallica, Waste Management, Assembly and Maintenance Departments. Creation of an action plan for each area which will be driven through monthly EHS meetings. Focus is to prevent, control and collect diffuse emissions at source and treat before they enter the environment.

Aug 2019 - Review of the GAP analysis on diffuse lead emissions for Metallica, Waste Management, Assembly and Maintenance Departments. Review of the action plan for each identified area. Review of technologies to capture diffuse emissions undertaken and subsequent capital investment to install capture/abatement equipment.

March 2020 - In order to prevent or where this is not practicable, to reduce diffuse dust emissions to air EnerSys have identified the most relevant diffuse dust emission sources onsite and has installed abatement equipment this is in the form of enclosed processes with suitable extraction to abatement equipment. The abatement equipment has been identified within the Environmental Permit NP3030BJ that is held by the facility and have been provided alphanumeric emission points. The points are being monitored on both a monthly and/or quarterly basis as per the conditions of the environmental permit with any fugitive emissions reported to the competent authorities.

Any planned and/or proposed changes to operations that may affect the conditions on the environmental permit is discussed and agreed with the competent authority prior to commencement.

Initially in May 2020 and again within May 2021 - Business decision taken to not implement immediate upgrade in equipment, due to major capital investment required. However, EnerSys will review the incorporation of capture/abatement equipment and look at replacing the existing equipment with new BAT compliant equipment at the existing equipment's end of life and/or when purchasing new equipment.

With respect to diffuse emissions to surface water, all practicable measures for foreseeable incidents are implemented to prevent diffuse emissions occurring onsite. If a diffuse or fugitive emission occurs the facility has an interceptor that can be closed to capture any diffuse emissions from leaving the facility. All surface water on the facility (including run off from hard surfaces, roofs, and hard standings) must pass through the onsite interceptor prior to leaving site.

Emission monitoring of the interceptor is conducted on a weekly basis. Water passing into the interceptor is automatically sampled and tested. Testing is conducted both internally (through the onsite laboratory) and externally (through an MCERT's accredited laboratory). From Graph 5.0 it can be determined that the since 2016 the annual average interceptor readings have been below the sites environmental limit value for lead (Pb) and have seen a downward trend in the average concentration of lead (Pb) levels from 0.42mg/l (2016) to 0.17mg/l (2021).

BAT 6

In order to prevent or, where this is not practicable, to reduce diffuse dust emissions to air, BAT is to set up and implement an action plan on diffuse dust emissions, as part of the environmental management system (see BAT 1), that incorporates both of the following measures:

- a) Identify the most relevant diffuse dust emission sources (using e.g. EN 15445);
- b) Define and implement appropriate actions and techniques to prevent or reduce diffuse emissions over a given time frame.

Initially in March 2020 and again reviewed in March 2021 - In order to prevent or where this is not practicable, to reduce diffuse dust emissions to air EnerSys have identified the most relevant diffuse dust emission sources onsite and has installed abatement equipment this is in the form of enclosed processes with suitable extraction to abatement equipment. The abatement equipment has been identified within the Environmental Permit NP3030BJ that is held by the facility and have been provided alphanumerical emission points. The points are being monitored on both a monthly and/or quarterly basis as per the conditions of the environmental permit with any fugitive emissions reported to the competent authorities.

Any planned and/or proposed changes to operations that may affect the conditions on the environmental permit is discussed and agreed with the competent authority prior to commencement.

May 2021 - To date emission of substances from the facility not controlled by emission limits including odor continues not to cause pollution

AOB

EnerSys continues to run a global lean project called EOS (EnerSys Operating System) with the aim of taking waste in all forms out of the business and standardizing work practices across factories. Part of the progress being made via EOS is visual management of site, 5S and a focus on Company image amongst others. All these drivers have helped to improve environmental performance on site and will continue to do so.

EnerSys remains committed to:

- Protecting the environment,
- Preventing pollution and reducing emissions,
- Meeting all compliance obligations as a minimum performance requirement,
- Enhancing environmental performance,
- Continually improving the environmental management system.



Jack Brimble, Environmental Lead, 11th June 2021.



Shane Alder, EHS Manager, 11th June 2021.