



Alkali Environmental Supplementary Information

Monitoring Organisation

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Operator

Biowise Ltd
Albion Lane
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Client

Walker Resource Management Ltd
18 Manor Square
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Installation

Biowise Albion Lane Composting
Facility

Project Number

19248

Version

1

Objectives

Introduction

Alkali Environmental Ltd were commissioned by Walker Resource Management Ltd to carry out emissions monitoring to determine the release of prescribed pollutants from Biowise Albion Lane Composting Facility under prescribed operating conditions.

Further information was requested by Walker Resource Management Ltd regarding the monitoring. The response to this request forms the basis of this document which follows a question-and-answer format.

Q1 – Sample Grid System

Question

Please confirm if the grid system and the requirement for one sample per physical location was employed during the sampling, given that you proposed that each ASP was to be divided into 15 no. 40m² grids and that a single air sample was to be taken from each grid.

Answer

- The sampling strategy employed was the proposed 5x3 grid:
 - Fans on condition: a single air sample was taken from 12 of the 15 equal areas on each bay.
 - Fans off condition: a single air samples was taken from 3 of the 15 equal areas on a diagonal transect across each bay.
- Where possible the sample hood was positioned in the centre point of the grid area, however in some cases the hood position was moved slightly for technical and safety reasons:
 - The topography of the ASP – the surface was uneven which meant that the hood could not always be placed with stability or sufficient seal without disturbing the waste by means of mechanical redistribution. This would have not been favourable due to the possible effect this may have on the release of pollutants to be sampled and also hazards in doing so which could not be adequately controlled.
 - Unacceptable risk – some areas of the surface were unstable particularly towards the front of the pile near the slope. For this reason, sampling was restricted to areas with a suitable exclusion zone.

Q2 – Grid System Diagrams

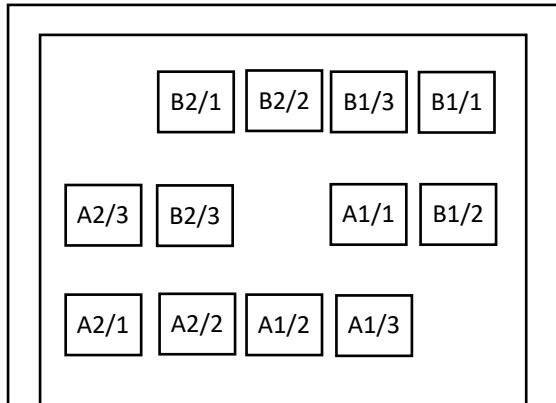
Question

Please show by means of a diagram where the sample hood locations were physically located on each bay and match the odour results to the location and bay. Please make clear which hood locations were used for taking the samples when the fans were shut off.

Answer

Fans on:

Diagram:



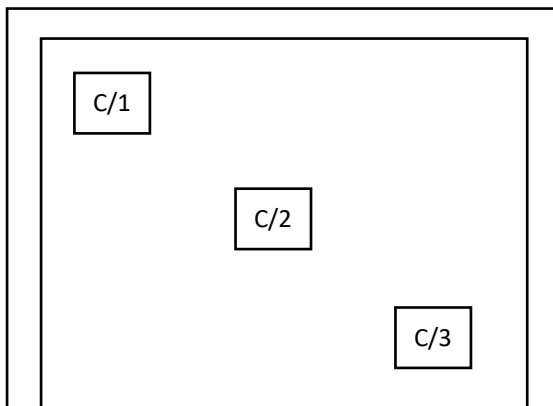
Samples in Order:

Odour: B1/1, B1/2, B1/3, A2/1, A2/2, A2/3, A1/1, A1/2, A1/3, B2/1, B2/2, B2/3

Ammonia, VOCs & Hydrogen Sulphide: A1/1, B2/3

Fans Off

Diagram:



Samples in Order:

Odour: C/1, C/2, C/3

Ammonia, VOCs & Hydrogen Sulphide: C/2

Q3 – Representative Sampling

Question

Please describe the measures taken to ensure that the sampling locations chosen were representative of the ASP surface, and that the potential for variability in air flow across the surface

of each ASP bay, and for preferential channelling of air (especially on the front slope and in proximity to the bay walls), was taken into account.

Answer

- Samples were taken into a grid pattern to try and avoid any bias of selecting any particular location. Each bay was sampled in the same pattern and samples were taken in the same order.
- Waste appeared to be packed tightly against the bay walls, around the sensors and on the front slope. No visible plumes of moisture were observed emanating from the bay walls, temperature sensors or front slope.
- Visible plumes of moisture were observed to be generally even and homogeneously distributed across the surface.
- It was not possible to sample in proximity to the front slope due to an unacceptable level of risk presented by factors such as the instability of the slope, the steepness of the slope, and hazards present at ground level.

Q4 – Waste Age Range

Question

Please state the specific age range (in days) at the time of sampling of the compost in each ASP bay.

Answer

- This information is to be provided by WRM.

Q5 – Waste Filling Duration

Question

Please state (in days) how long the bay with the freshest compost took to fill prior to the sampling taking place and the interval, if any, (in days) between the completion of the filling and the day the sampling was carried out.

Answer

- This information is to be provided by WRM.

Q6 – Monitoring Operation

Question

Provide any further evidence of how the hood was employed during the monitoring operation including any images.

Answer

Sampling with the fans on was conducted using passive sampling hoods. Samples were taken from ports on the chimneys. Samples with the fans off were taken using ventilated sampling, samples were taken from the axis of the chimneys. Odour samples were taken using the lung principle from the respective hoods.



Sampling using a passive sampling hood

Q7 – Individual Flow Rates

Question

Provide the individual flow rates for each sample collected across the ASP piles.

Answer

- It is unclear if this question refers to the sample collection flow rate (ie. the flow of sample gas through the analyte) or the flow rate collected through the sample hood at each position.
 - In the case of the former: these are available in the monitoring report appendices.
 - In the case of the latter: individual flow rates were below the limit of detection and cannot be reported to any level of confidence. It is understood that calculations of design flow rates have been used for the modelling.