

Permitting Decisions – Variation of a Low Impact Installation

We have decided to grant the variation for Universal Matter Wilton operated by Universal Matter GBR Ltd

The variation number is EPR/EP3731CX/V002.

The variation is to add a new dispersion pilot plant to the installation as a directly associated activity (DAA). The Operator's name is also being updated from "Applied Graphene Materials (UK) Limited" to "Universal Matter GBR Ltd" with no change to the legal entity.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision considerations](#) section to show how the main relevant factors have been taken into account

Unless the decision document specifies otherwise, we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Key issues of the decision

Assessment of the impact of air emissions

Background

The permit variation adds a new dispersion pilot plant to the installation as a DAA. The plant disperses carbon powders in a liquid media (solvent, waters or resins) without the occurrence of a chemical reaction. During the process, solvent vapours are emitted due to a low level nitrogen purge of the system. The

nitrogen purge is required to prevent a flammable atmosphere within dispersion vessels.

The applicant assessed the impact of Volatile Organic Compound (VOC) emissions from the pilot dispersion plant (new emission point A7) in line with the our online guidance ([“Air emissions risk assessment for your environmental permit”](#), gov.uk).

VOC impacts were assessed against criteria for the protection of human health. Whilst there are several habitats, including European sites, within an appropriate screening distance of the installation, toxicological impacts from VOCs on habitats are not yet understood, therefore impacts on habitats are not currently assessable.

Methodology

Our online guidance ([“Air emissions risk assessment for your environmental permit”](#), gov.uk) sets out how emissions risk assessments should be completed, by calculating the impact of the emissions and comparing against appropriate environmental standards.

The methodology uses a concept of process contribution (PC), which is the estimated concentration of any emitted substance after dispersion into the receiving environmental media, at the point where the magnitude of the concentration is the greatest. The simple method of calculating PCs for screening purposes is based upon the dispersion factors used. The dispersion factor assumes worst case dispersion conditions with no allowance made for thermal or momentum plume rise. Therefore, the PCs calculated are likely to be an overestimate of the actual maximum concentrations.

The applicant submitted an H1 risk assessment with their application, which calculates the short-term and long-term PCs, and compares with relevant Environmental Standards (ES).

We consider PCs to be insignificant if:

- The long-term PC is less than 1% of the relevant ES; and
- The short-term PC is less than 10% of the relevant ES.

The long term 1% PC insignificance threshold is based on the judgements that:

- It is unlikely that an emission at this level will make a significant contribution to air quality; and
- The threshold provides a substantial safety margin to protect health and the environment.

The short term 10% PC insignificance threshold is based on the judgements that:

- Spatial and temporal conditions mean that short term PCs are transient and limited in comparison with long term process contributions; and
- The threshold provides a substantial safety margin to protect health and the environment.

Where an emission is screened out in this way, we would normally consider the applicant's proposals for the prevention and control of the emission to be acceptable.

Where an emission cannot be screened out as insignificant, it does not necessarily mean that the impact will be significant. However, to be classed as a Low Impact Installation (LII), there must be no likelihood that a release of any substance from the entire installation would be at a rate greater than insignificant.

Assessment and Audit

The Applicant's H1 assessment considered an array of VOCs from the new air emission point (A7). The approach toward calculating PCs from A7 is conservative because each VOC listed in the H1 tool assumes the corresponding solvent is being used at its maximum concentration, with a 100% operating mode. In practice, it is a batch process, which is not running 24/7, and each solvent would only be used in a fraction of the batches produced. Therefore, the PCs calculated are larger than we would see in practice.

Our audit of the risk assessment highlighted that the Applicant assessed only VOC emissions from emission point A7. However, VOCs are also emitted from the installation via emission points A1 and A6. The applicant confirmed that VOC emissions from A1 and A6 are wholly benzene. As all VOC emissions from the new process are speciated, and do not include benzene, we agreed that a reassessment which included VOCs from A1 and A6 would not be required.

As noted, all the VOCs released from emission point A7 are speciated. However, several do not have associated ES's to compare PCs against. In this situation, air emissions can be grouped and treated as benzene. However, in this instance, we recognized that the environmental risk from the emissions is likely to be very low, and therefore performed a risk-based screening using other appropriate proxies.

Proxies were chosen based upon having a similar chemical structure, with similar, but more conservative hazard phrases. The proxies utilised are more hazardous to human health, and we therefore consider this to be an appropriately conservative approach.

All calculated long-term PCs are less than 1% of the relevant ES, and short-term PCs are less than 10% of the relevant ES. Therefore, we agree with the

Applicant's conclusions that releases of VOCs from the installation are insignificant.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has been made.

We have accepted the claim for confidentiality.

We have excluded the detailed dispersion process description, certain raw materials (additives) used in the dispersion process, and the scale of production.

We consider that the inclusion of the relevant information on the public register would prejudice the applicant's interests to an unreasonable degree.

The decision was taken in accordance with our guidance on confidentiality.

Identifying confidential information

We have not identified any additional information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 1 of RGN 2 'Interpretation of Schedule 1' and Appendix 2 of RGN2 'Defining the scope of the installation'.

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

The site

The operator has provided a plan which we consider to be satisfactory.

These show the extent of the site of the facility, including emissions and discharge points.

The plan is included in the permit.

Site condition report

The operator has provided a description of the condition of the site, which we consider is not satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

We are satisfied that the site condition report shows pollution of land and water from the activity is unlikely. An improvement condition has been included in the permit to ensure that the IED Stage 1 – 3 baseline requirements are adequately addressed.

Given the potential for historical contamination, we recommended that baseline reference data was collected, as we would consider any contamination found at surrender / during the operational phase of the permit to be caused by the permitted activities on site and remediated by the operator required. The applicant is aware of this and has chosen not to complete intrusive sampling, accepting a baseline of 'zero' (no contamination present). This is the same approach taken when applying for the bespoke LII permit in 2018.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified as there is no established pathway for impacts to occur.

The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator's risk assessment is satisfactory.

Low impact installation criteria

We have reviewed the assessment provided by the operator to demonstrate that the facility can meet the low impact installation criteria.

The operator's assessment shows that the facility satisfies the low impact installation criteria as specified in the Environment Agency's Environmental Permitting application form guidance notes at the time the permit application was duly made.

General Operating techniques

We have reviewed the techniques proposed by the operator and compared these with the low impact installation criteria and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in condition 2.3.1 in the environmental permit.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme.

We have included an improvement programme to ensure that an updated site condition report is provided.

Emission limits

We have decided that emission limits are not required in the permit.

The scale of operation of the pilot plant is sufficiently low to ensure emissions are insignificant.

Monitoring

Monitoring has not changed as a result of this variation.

Management system

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.