Permitting Decisions- Variation and part surrender

We have decided to grant the variation for Carbon Brake Facility, Coventry operated by Meggitt Aerospace Limited.

The variation number is EPR/BN7109IH/V010.

The variation is for increasing production capacity from 25,550t to 48,000t carbon disks per year by:

- Installing four electrically powered high temperature furnaces,
- Adding two spray booths and dust extraction systems for the machining room.
- Installing an electrically powered oven,
- Installing an argon gas storage tank
- increasing permit boundary

This notice also reflects a low risk part surrender - EPR/BN7109IH/S011 - submitted to remove the H2 building which was used to store chemicals and paints, and DAIPC building which was used to store the oxidised polyacrylonitrile fibre. These two building have been added to the permit in 2020 and it has been confirmed that there have been no accidents or spillages during this time. The buildings are no longer in use.

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 summarises the decision-making process to show how the main relevant factors have been taken into account. We have assessed the aspects that are changing as part of this variation, we have not revisited any other sections of the permit.

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

- explains why we have also made an Environment Agency initiated variation
- shows how we have considered the consultation responses

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

Air emissions

The variation proposes nine new emission points to air, numbered in the permit from A27 to A35. These correspond to the Nu-Carb Furnaces, Spray Booth, SECO Oven and Dust Extraction units.

Consarc Nu-Carb Furnaces

The 4 furnaces are electrically powered (600kW power supply) designed to inductively heat the charge under atmospheric pressure with inert gas to 2,900^{o}C (argon or nitrogen). There are no reaction off-gases which require treatment or abatement, just the heating of the carbon preforms to a temperature under inert gas atmosphere to prevent oxidation. The emissions will either be of nitrogen or argon dependant on the heating stage. Each furnace is fitted with a vacuum subsystem that directs the emissions through. The gases will exit through two emission points as each pair of furnaces will share a stack.

Spray booths

Air from the spray booths will be extracted by means of a single 3,000 mm wide expansion chamber. Air will be drawn by one off belt driven axial flow type fan, providing an airflow of 0.7 m/s through the booth. The air will pass a 2 stage fibre glass filter and synthetic final filter. Spray booth filters are fitted inside of the spray booth enclosures so prior to discharge to atmosphere.

SECO oven

The controlled atmosphere elevator furnace oven (heat processing furnace system) is used for primer curing items following application of paint in the new spray booths. No emissions are foreseen.

Particulates

Five new Donaldson dust extraction/collection systems for the machining/cutting process will be installed. These units contain fibre cartridge filters to remove dust from the extracted air prior to emission to atmosphere. The system has an automated collector cleaning pulse system to allow dust to be easily collected

and removed for recovery or disposal and allow for longer use of the filter system.

The applicant has provided an air quality assessment. The assessment covers an evaluation of the impacts on the local area of emissions from the above proposed sources and existing stacks operated on the site. Five parameters are considered in the assessment: Nitrogen dioxide (NO_2), particulate matter with a diameter of 10 microns or less (PM_{10}), volatile organic compounds (VOCs) – modelled as 100% benzene, acetic acid and phosphorus pentoxide (P_2O_5).

PCs for VOCs, acetic acid and P_2O_5, do not exceed 1% of the EAL for long-term (LT) and 10% of the EAL for short-term (ST), as follows:

- **VOCs**: ST 1.79µg/m^3, which is 0.9% of 195µg/m^3 EAL; LT 0.04µg/m^3, which is 0.8% of 5µg/m^3 EAL,
- **Acetic acid**: ST 23.1µg/m^3, which is 0.6% of 3700µg/m^3 EAL; LT 0.321µg/m^3, which is 0.1% of 250µg/m^3 EAL,
- **P_2O_5**: ST 1.33µg/m^3, which is 3.3% of 40µg/m^3 EAL; LT 0.018µg/m^3, which is 1% of 1.75µg/m^3 EAL.

LT and ST for NO_2 and PM_{10} PCs are predicted to exceed the significance thresholds, however no exceedance of the environmental standard is predicted, as follows:

- **NO_2**: ST 24.7µg/m^3, which is 12% of 200µg/m^3 EAL; LT 5.17µg/m^3, which is 13% of 40µg/m^3 EAL.

However, the ST PEC (64µg/m^3) as % of EAL (µg/m^3) is 32 and the LT PEC (24.8µg/m^3) as % of EAL (µg/m^3) is 62.

- **PM_{10}**: ST 26.6µg/m^3, which is 53% of 50µg/m^3 EAL; LT 9.53µg/m^3, which is 24% of 40µg/m^3 EAL.

However, the ST PEC (41.9µg/m^3) as % of EAL (µg/m^3) is 84 and the LT PEC (24.9µg/m^3) as % of EAL (µg/m^3) is 62.

We have conducted our own assessment of the air quality assessment and agree they likely represent a reasonable worst case. We found that PM_{10} to be potentially significant and conducted addition sensitivity testing with the following conclusion:

- No exceedance of the annual environmental standard of 40 µg/m^3 is predicted.
- The 90.41st percentile of 24-hour mean concentrations is not predicted to exceed the environmental standard of 50µg/m^3

The Applicant, whilst we do not consider it was required, has submitted an assessment of odour impacts which shows that the predicted 98th percentile hourly odour concentrations at the nearest sensitive receptor locations are all

well below the 1.5 ouE.m^{-3} benchmark. We agree with the submitted assessment.

Argon Tank

The argon gas used in the Nu-Carb furnaces will be stored in a cryogenic storage tank with a storage capacity for 11,000 litres of liquid argon. Argon will be converted to gas by two vaporiser and pipe delivered to the furnace. No emissions are foreseen.

The tank specification shall be in accordance with all relevant statutory requirements and will be fitted with:

- Control valves, relief valves, and interconnecting pipe work.
- Liquid level gauge, pressure gauge and instrumentation.
- Pressure building vaporiser and control regulator.

No emissions to surface water and groundwater are foreseen as part of this variation.

Management System

MAL operates an Environmental Management System (EMS) which is certified and complies with the requirements of ISO14001. This is updated to incorporate the proposed change.

Habitat assessment

Ensor's Pool (SAC) is located approximately 8,050m away from the site.

The following Local wildlife sites are also within 2km of the site: Prologis Country Park, Greenwood Farm Pastures, Bassford Bridge Meadow, Foleshill Gasworks and Three Spires Sidings, Longford Nature Park, Former Bell Green Goods Yard, North Brook Lane, Sandpits Lane Meadow, Houldsworth Crescent Corridor.

The applicant has derived percentage contributions to nitrogen deposition from the modelled NOx concentrations. The deposition rates are calculated using empirical methods recommended by the Environment Agency.

The PC does not exceed 1% of the critical load at any of the habitat sites listed above and we agree that the impacts screen out as insignificant.

Changes to the site boundary

Variation

The increase in boundary is requested to accommodate the proposed changes to the processes. A new building is being constructed to house the new furnaces, oven, spray booths and dust extraction systems. The argon tank will be located outside the building.

The site condition report (SCR) has been updated to provides a coherent record of the site and its baseline conditions at the time of permitting. An assessment of new relevant hazardous substances used, produced, and emitted by the facility has been provided. The chemicals are stored in containers fitted with bunds on impermeable floors. Spillage kits are available within reach. The storage area is bunded with a secondary drain & pit. We consider the pollution risk to be very low.

Surrender

The following facilities are removed from the permitted site boundary:

- H2 Building – Used to store chemicals and paints in drums and containers. An inventory of the chemicals stored in the containers has been provided.
- DAIPC Building – Used to store the Oxidised polyacrylonitrile fibre. This is non-hazardous and, in a fibre, therefore posed limited environmental risk from storage.

The site has confirmed that there have been no accidents or spillages in this area whilst it has been included in the permit boundary in 2020.

Based on the use and environmental management and compliance procedures implemented, and that the condition of the land has not deteriorated during the lifetime of the permit, we agreed that the application is a low-risk part surrender. Measures have been in place to ensure that the surrender areas were returned to a satisfactory state by the Operator.

We have revived the evidence provided as part of the part surrender and agree that the area has been returned to a similar state as it was when incorporated in the permit.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

Identifying confidential information

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

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Local Authority - Environmental Health
- Health and Safety Executive
- Director of Public Health England
- Food Standards Agency

The comments and our responses are summarised in the consultation responses section.

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 2 of RGN2 ‘Defining the scope of the installation’, Appendix 1 of RGN 2 ‘Interpretation of Schedule 1’.

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 plans which we consider to be satisfactory.

These show the extent of the site of the facility, including the 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 satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

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.

We have consulted Natural England on our Habitats Regulation assessment for information only.

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.

The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment**,** all emissions may be screened out as environmentally insignificant**.**

Operating techniques

We have reviewed the techniques proposed by the operator and compared these with the relevant technical guidance and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Operating techniques for emissions that screen out as insignificant

Emissions of NO_2, PM_{10}, VOCs, acetic acid, and P_2O_5 have been screened out as insignificant, and so we agree that the applicant's proposed techniques are Best Available Techniques (BAT) for the installation.

We consider that the emission limits included in the installation permit reflect the BAT for the sector.

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

Improvement programme

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

We have included improvement programme IC19 to ensure that the emission estimates provided in the Air quality assessment are verified against actual emissions.

Emission limits

Emission Limit Values (ELVs) and equivalent parameters or technical measures based on Best Available Techniques (BAT) have been added for the following substances: NO_2, PM_{10}, VOCs, acetic acid, and P_2O_5

We have included these limits based on non-statutory Environmental Quality Standards (EQS).

Monitoring

We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified: NO_2, PM_{10}, VOCs, acetic acid, and P_2O_5.

These monitoring requirements have been included to comply with our Environmental standards.

We made these decisions in accordance with Environmental Permitting Regulations

Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.

Reporting

We have added reporting in the permit for the following parameters: NO_2, PM_{10}, VOCs, acetic acid, and P_2O_5.

We made these decisions in accordance with Environmental Permitting Regulations.

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.

We only review a summary of the management system during determination. The applicant submitted their full management system. We have therefore only reviewed the summary points.

A full review of the management system is undertaken during compliance checks.

Previous performance

We have assessed operator competence. There is no known reason to consider the applicant will not comply with the permit conditions.

No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.

Financial competence

There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.

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.

Consultation Responses

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public, and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from UKHSA West Midlands

Brief summary of issues raised: None

Summary of actions taken: N/A

No other responses were received.