

Environmental Permit

Pollution Prevention and Control Act 1999

Environmental Permitting (England and Wales) Regulations 2016

Fusion Incorporated UK Limited.
Barrows Road
The Pinnacles
Harlow
Essex
CM19 5FD

Permit Number
EPR/2.2/19/V1/FI

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Status Log

Detail	Date	Comment
Application Received	15 th March 2019	Duly made
Draft Permit	30 th April 2019	
Permit	5 th June 2019	EPR/2.2/19/V1/FI

Introductory Note

This introductory note does not form part of your Environmental Permit conditions, however it does provide useful information about the Environmental Permitting Regulations:

The following Permit is issued under Regulation 13(1) of the Environmental Permitting (England and Wales) Regulations 2016 (S.I 2016 No. 1154), ("the EPR") to operate a scheduled installation carrying out an activity, or activities covered by the description in Part 2, Section 2.2(b) of Schedule 1 to the Environmental Permitting Regulations, to the extent authorised by the Permit.

Conditions within this Permit detail Best Available Techniques (BAT), for the management and operation of the installation, to prevent, or where that is not practicable, to reduce emissions.

In determining BAT, the Operator should pay particular attention to relevant sections of the LAPPC Process Guidance note 6/35 (13), and any other relevant guidance. Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Note that the Permit requires the submission of certain information to the Regulator, and in addition, the Regulator has the power to seek further information at any time under Regulation 60 of the EPR Regulations provided that the request is reasonable.

Public Registers

Information relating to Permits, including the application, is available on public registers in accordance with the EPR. Certain information may be withheld from the public registers where it is commercially confidential, or if it is in the interest of national security to do so.

Annual Subsistence Fee

In accordance with Regulation 66 of the EP Regulations, the holder of a permit is required to pay a fee for the subsistence of the Permit. This fee is payable annually on 1st April. You are advised that under the provisions of Regulation 66 (5) of the EP Regulations, if you fail to pay the fee due promptly, the Authority may revoke the Permit. You will be contacted separately each year in respect to this payment.

Process Changes

Under the provisions of the EP Regulations, you are required to notify the Council of any proposed change in operation at least 14 days before making the change. This must be in writing and must contain a full description of the proposed change in operation and the likely consequences. Failure to do so is an offence.

If you consider that a proposed change could result in the breach of the existing permit conditions or is likely to require the variation of permit conditions then you may apply in writing under Regulation 20(1) of the EP Regulations. Additionally, if this involves a SUBSTANTIAL CHANGE to the installation you will be required to submit an application, pay the relevant fee and advertise the application accordingly. You may serve a Notice on the Council requesting that they determine whether any change that is proposed would constitute a substantial change before you proceed with application.

Variations to the Permit

The Regulator may vary the Permit in the future, by serving a variation notice on the Operator. Should the Operator want any of the conditions of the Permit to be changed, a formal application must be submitted to the Regulator (the relevant forms are available from the Regulator). The Status Log that forms part of this introductory note will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Transfer of the Permit or part of the Permit

Before the Permit can be wholly or partially transferred to another Operator, an application to transfer the Permit has to be made jointly by the existing and proposed Operators. A transfer will not be approved if the Regulator is not satisfied that the proposed Permit holder will be the person having control over the operation of the installation, or will not comply with the conditions of the transferred Permit. In addition, if the Permit authorises the Operator to carry out a specified waste management activity, the transfer will not be approved if the Regulator does not consider the proposed Permit holder to be a 'fit and proper person' as required by the EPR.

Confidentiality

Harlow Council has a duty to consider the question of confidentiality of information supplied to it. If any information supplied is considered confidential, a statement of which information this applies to and the reasons why it is considered confidential should be specified. The Operator is reminded that he may apply to Harlow Council for the exclusion of information from the public register under the provisions of the Environmental Permitting (England and Wales) Regulations 2016 as amended.

Talking to us

Please quote the permit number if you contact the Regulator about this permit. To give a notification under any condition, the Operator should telephone **01279 446111** or any other number notified in writing by the Regulator for that purpose.

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HARLOW COUNCIL

Pollution Prevention and Control Act 1999
Environmental Permitting (England and
Wales) Regulations 2016 (as amended)



Permt Reference: **EPR/2.2/19/V1/FI**

Name and address of person or incorporated body (A) authorised to operate the installation ('the operator')

Fusion Incorporated UK Limited
Barrows Road
Harlow, Essex
CM19 5FD

Registered number 11677151

Address of permitted installation (B)

Fusion Incorporated UK Limited
Barrows Road
Harlow, Essex
CM19 5FD

Signed _____

05th June 2019

Environmental Health Manager

The Authorised Officer for this purpose

Harlow Council, Environmental Health Services, Civic Centre, The Water Gardens, Harlow,
Essex CM20 1WG. Tel. 01279 446111 Fax. 01279 446767

The installation and description of activities undertaken

This description of the installation and the regulated activity do not form environmental permit conditions, however it does provide useful information about the installation and the activities undertaken. It also provides a reference point in relation to any substantial or non-substantial changes.

Fusion Incorporated UK Limited is permitted to carry out the following activities at the installation to the extent authorised by Harlow Council and subject to the conditions of this Permit.

Activity listed in Schedule 1 of the EP Regulations	Activities in the Stationary Technical Unit	Limits of specified activity
Section 2.2 Part B	Manufacture of metal powders at a rate of 20 or less tonnes per day Melting of raw metal formulations into liquid alloys. Then atomising and sieving the resulting powder. Then mixing the powders into pastes.	Receipt and storage of raw materials, blending, melting & atomising operations, product storage, maintenance and support areas, waste storage.

Description of Activity;

The main purpose of the activity at the installation is the manufacture of brazing pastes.

The process is a batch operation, with a number of batches possibly of differing composition being processes each day.

Raw materials are delivered by road and enter the premises by a defined route. These materials are stored (all undercover) in defined areas of the building.

Melting

The raw metals are weighed and the quantities recorded on a Heat Sheet. They are then melted to produce the required liquid alloy. There are three induction furnaces, with 30kg max melting and holding capacity. Each furnace is used to manufacture a different family of brazing alloy powders and only one furnace is operated at a time.

The main raw materials used are copper, copper-15% phosphorus master alloy, manganese, nickel, tin and zinc. Fluorides and borates are added as cleaning and dressing agents. All the furnaces have lip extraction of fumes from the melting crucible to the large bag filter (release point A1).

Atomisation

The liquid metal alloys are atomised to produce a powder. The molten metal is allowed to pour through a hole from a holding vessel into a stainless steel chamber and is atomised by blowing with high pressure nitrogen. The nitrogen, plus ultra-fine dust and fume, passes through a cyclone and is exhausted to the large bag filter (release point A1).

Sieving

Atomised powder is collected at the base of the towers. The powder is tapped off and the weight measured so that losses in the upstream process can be determined. The powder is sieved to

obtain the desired particle size range. Any over-sized material is returned to the process. Dust from sieving is extracted to the large bag filter releasing to air (A1).

Mixing

The brazing alloy powder is mixed into a binder to produce the required paste. The binders are generally blends of fluxes and organics, although some are flux-free. The fluxes are mainly inorganic chlorides and fluorides. The organics contain only non-halogenated, generally high boiling point solvents. The mixing is carried out in batch mixing bowls in booths, each of which is extracted to a bag filter, which is fitted with secondary HEPA filters and was installed in 1995 (release point A2). The extraction can be switched from one booth to another. A number of powders are also bought in and mixed on-site at FI UK to manufacture brazing pastes.

Filtration and Exhaust

Depending on the charge weight, composition and power setting of the furnace, a melt will take 30-60 minutes to reach pouring temperature and for the alloy to be thoroughly mixed. During heating of the charge there are emissions from the furnace that are vented through the exhaust stack (Schedule 2, A1) at a height of 12.5 metres after passing through a bag filter. The filter has a differential pressure monitor which is checked and recorded daily under the preventative maintenance program.

The activities authorised by this Permit shall not extend beyond the installation boundary that being the land shown as edged in red on the site plan in schedule 1, and described in the Permit application. The layout of the installation is detailed in site plan in schedule 2.

Conditions

The following Environmental Permit conditions are legal requirements.

Emissions Limits

1. All activities shall comply with the emission requirements and methods and frequency of monitoring set out in **Table 1**.
2. All emissions to air shall be free from persistent visible emissions. Visible emissions shall not exceed Ringelmann Shade 1 as described in British Standard BS 2742:2009.
3. No visible particulate matter shall be emitted beyond the installation boundary.
4. All other releases to air, other than condensed water vapour, shall be free from persistent visible emissions.
5. All emissions to air shall be free from droplets.
6. If the regulated activities are identified as resulting in offensive odour, The Operator shall devise an odour control programme of improvements and maintain an odour management plan.

Monitoring

7. The Operator shall notify the Regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The Operator shall state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
8. The results of non-continuous emission testing shall be forwarded to the Regulator within 8 weeks of completion of the sampling.
9. Adverse results from any monitoring activity shall be investigated by the operator as soon as the monitoring data has been obtained. The operator shall:
 - a. identify the cause and take corrective action;
 - b. clearly record as much detail as possible regarding the cause and extent of the problem, and the remedial action taken;
 - c. re-test to demonstrate compliance as soon as possible; **and** inform the regulator of the steps taken and the re-test results.
10. The introduction of dilution air to achieve emission limits is not permitted.
11. All testing required by condition 1 shall be undertaken during a complete batch cycle production. Should a batch cycle not be compatible with the time available for sampling, then the data required shall be obtained over a minimum period of 2 hours in total
12. The operator shall ensure that relevant stacks or ducts are fitted with facilities for sampling which allow compliance with the sampling standards.

Abnormal events

13. In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions the operator shall:
 - a. investigate and undertake remedial action immediately;
 - b. adjust the process or activity to minimise those emissions; **and**
 - c. promptly record the events and actions taken.
14. The regulator shall be informed without delay, whether or not there is related monitoring showing an adverse result:
 - a. if there is an emission that is likely to have an effect on the local community; **or**
 - b. in the event of the failure of key arrestment plant, for example, bag filtration plant.

Process controls

15. The operator shall ensure that the temperature of melted alloy is adequately controlled to prevent excessive fuming during pouring.
16. Emissions from melting alloys, atomising, sieving and mixing shall be extracted at source by the dust extraction units and collected into the filter bag dust collection system. Filter bags shall be changed as required and securely bagged or stored in enclosed containers whilst awaiting disposal.
17. Main bag filters shall be fitted with pressure drop indicators.
18. A minimum discharge velocity of 15m/s shall be applicable to all stacks. The discharge shall be vertically upwards.
19. Chimneys and vents shall not be fitted with any restriction at the final opening, such as a plate, cap or cowl.
20. All potential dusty materials shall be stored in covered containers or under cover.
21. The operator shall ensure that any spillage of particulate material is cleaned up immediately by wet or vacuum cleaning.
22. Transfer of potentially dusty material (raw materials, processed materials and waste materials) shall be carried out by methods that minimise the potential of emissions and spillages.

Maintenance

23. All plant and equipment capable of causing or preventing emissions shall be maintained in accordance with the manufacturer's instructions. Records shall be kept of such maintenance.
24. The dust extraction system and filter bag-house shall be thoroughly checked and inspected periodically. These checks shall be recorded and made available to the Operator on request.
25. Chimney, flues and duct work shall be inspected regularly to prevent the accumulation of material. Any such cleaning or inspection shall be recorded and made available to the Operator on request.

26. Spares and consumables subject to continual wear shall be held on site or shall be available at short notice from guaranteed suppliers.

Training

27. All staff whose functions could impact on air emissions from the activity shall receive appropriate training on those functions. This should include:
- a. awareness of their responsibilities under the permit;
 - b. steps that are necessary to minimise emissions during start-up and shutdown;
 - c. actions to take when there are abnormal conditions, or accidents or spillages that could, if not controlled, result in emissions.

Records

28. The operator shall keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments, collectively referred to as the logbook. The records forming the logbook may be written or electronic records and shall be:
- a. kept on site;
 - b. be made available for inspection by the Regulator at any reasonable time;
 - c. be supplied to the Regulator on demand and without charge;
 - d. be legible;
 - e. be made as soon as reasonably practicable;
 - f. be retained at the Permitted Installation, or other location agreed by the regulator in writing; and
 - g. Kept by the operator for at least two years; **and**
 - h. Made available for the regulator to examine.
29. If any records are kept off-site they shall be made available for inspection within one working week of any request by the regulator.
30. If the Operator proposes to make a change in operation of the installation, he must, at least 14-days before making the change, notify the Regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change in operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

Best available techniques

31. The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit.

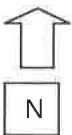
Table 1 - Emission limits, monitoring and other provisions

Row	Substance	Source	Emission limits/provisions	Type of monitoring	Monitoring frequency
Whole site and all authorised emission points					
1	Visible emissions	Site	No visible emissions to cross site boundary	Operator observations	Once a day when the furnaces are being charged.
2	Visible emissions	All authorised emission points	No abnormal emission	Operator observations	Once a day when the furnaces are being charged.
3	Droplets, persistent mist fume and smoke	All emissions to air (except steam and condensed water vapour)	No droplets, no persistent mist, no persistent fume. No visible smoke except during start up of dryers and then no darker than Ringelmann 1	Visual observations	Once a day when the furnaces are being charged.
4	Particulate matter	Melting, holding and pouring processes <i>Release Point A1</i>	20 mg/m ³	Periodic particulate monitoring	Annual
<p>Notes</p> <p>*All periodic monitoring results shall be checked by the operator on receipt and sent to the Council within 8 weeks of the monitoring being undertaken.*</p> <p>The reference conditions for limits in Table 1 are: 273.1K, 101.3kPa, without correction for water vapour content, unless stated otherwise, All periodic monitoring shall be representative, and shall use standard methods.</p> <p>The emission limits do not apply during start-up and shut down. All emissions shall be kept to a minimum during these periods.</p>					



RGB Aerial Photography - (c)Bluesky International Limited

OS Text

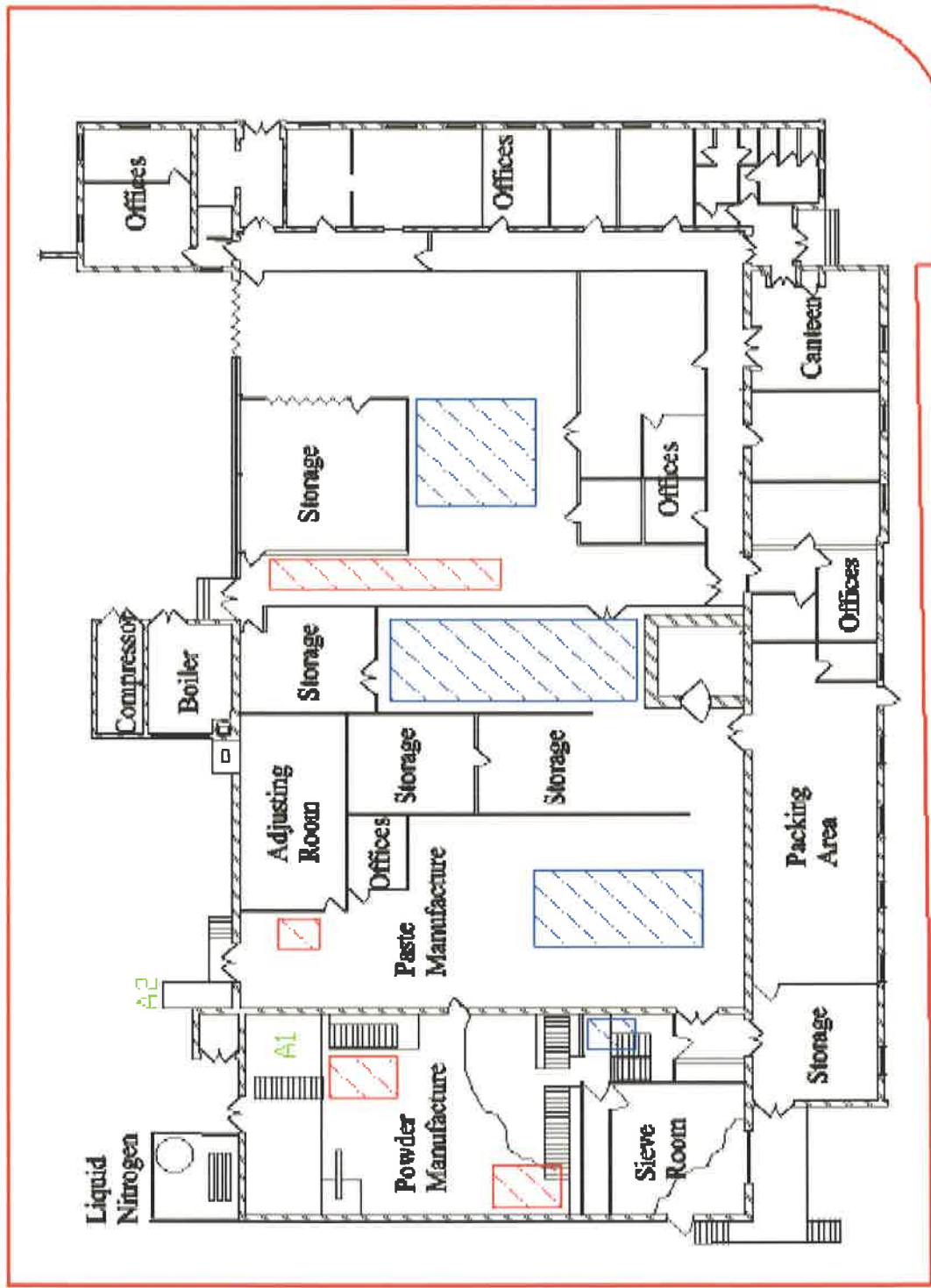


Fusion Incorporated UK Ltd
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Fusion Incorporated UK LTD



Right to Appeal

You have the right of appeal against this permit within 6 months of the date of the decision. The Council can tell you how to appeal. You will normally be expected to pay your own expenses during an appeal.

You will be liable for prosecution if you fail to comply with the conditions of this permit. If found guilty, the maximum penalty for each offence if prosecuted in a Magistrates Court is £50,000 and/or 6 months imprisonment. In a Crown Court it is an unlimited fine and/or 5 years imprisonment.

Our enforcement of your permit will be in accordance with the [Regulators' Compliance Code](#).