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Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Impalloy Limited

Impalloy Limited Alloys House Willenhall Lane Bloxwich Walsall West Midlands WS3 2XW

Variation application number

EPR/JP3538LX/V005

Permit number

EPR/JP3538LX

Impalloy Limited Permit number EPR/JP3538LX

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Changes introduced by this variation notice/statutory review

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for non-ferrous metals. The opportunity has also been taken to consolidate the original permit and subsequent variations.

The Industrial Emissions Directive (IED) came into force on 7th January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. The BAT Conclusions (BATc) for the non-ferrous metals industries were published on 30th June 2016 in the Official Journal of the European Union (L174) following a European Union wide review of BAT, implementing decision (EU) 2016/1032 of 13th June 2016. The BATc for this installation which apply from 30th June 2020 are 1, 2, 3, 18, 19, 75, 78, 79, 85 and 130. The operator is already compliant with these BATc.

The schedules specify the changes made to the permit. Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made.

All the conditions of the permit have been varied and are subject to the right of appeal.

Brief description of the process

The facility is sited on the Willenhall Lane Industrial Estate, located to the south west of the village of Bloxwich in the West Midlands. The M6 motorway is located 1km to the west of the installation. The installation undertakes a Section 2.2 A(1)(b) activity – the melting and alloying of non-ferrous metals (zinc and aluminium). Two non-ferrous sub-sectors therefore apply to this installation; secondary aluminium production and secondary zinc production.

The installation manufactures a variety of sacrificial anodes (mostly marine) for the protection of immersed steel using aluminium and zinc alloys. The installation uses high grade virgin ingots of aluminium or zinc, melts and alloys them to customer specification, then casts the molten metal into the anodes required. Due to the high quality raw materials used (all raw materials are virgin pure grade materials), and strict temperature control, no fugitive emissions are released. There are no stack emissions to air. No water is used in the process (moulds are air cooled). There are no emissions to water. The installation operates a certified Environmental Management System (ISO 14001).

There are 4 closed reverberatory furnaces with a holding capacity of 6 tonne for aluminium and 12 tonne for zinc (furnaces T2, T3, T4 and T5). There is one closed reverberatory furnace with a 3 tonne holding capacity for aluminium and 4.5 for zinc (furnace T1) and one closed reverberatory furnace with a 1.5 tonne holding capacity for aluminium and 2 tonnes for zinc (Furnace T7). Each furnace is served by its' own electric holding pot, which acts as a receptor for any metal remaining in the launder and for topping up purposes, following any metal shrinkage in the casting.

These furnaces are served by 440KW flat low NO_x hugger burners which are mounted on the roof of the furnace. The furnaces are operated to achieve a casting temperature of 750°c. At the melting stage the roof temperature is set to 900°c with burners on high fire mode. Once the metal is molten the burners switch to low fire mode and maintain the temperature at 750°C. The furnaces are loaded with pure virgin aluminium (no fluxes are used) in the late afternoon (additions are in 1 tonne blocks or 1 tonne bales of 25kg ingots) and melted to a predetermined quantity/batch overnight. Weighted solid additions of trace materials are made to the melt to produce the required alloy. The alloy is tested on a spectrometer prior to casting to ensure that it meets the customer's specification. The molten metal is laundered directly from the furnaces into casting moulds. The furnace is completely emptied prior to reloading. The furnace temperatures are set

and are thermocouple controlled. The furnaces fail safe in the event of a thermocouple failure i.e. the burners will turn off. The hydraulics on all furnaces, which tilt the furnace to enable the molten metal to flow to the launder, are switched off when metal is melting and no casting is taking place.

The moulds are air cooled. When solid, the anodes are removed from the moulds, dressed, inspected, painted where required and packaged for dispatch.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

| Status log of the permit | | | | |
|---|----------------------------|---|--|--|
| Description | Date | Comments | | |
| Application EPR/BJ9762IL/A001 | Received 17/12/01 | Application for non-ferrous metals processing facility | | |
| Additional information received | 11/06/02 | | | |
| Additional information received | 15/07/02 | | | |
| Permit determined BJ9762IK/A001 | 20/12/02 | Original permit issued to Trident Alloys Limited. | | |
| Variation application BJ9762IK/V002 (Ref: BU9742IM) | Received 20/05/03 | Application to vary permit | | |
| Variation determined BJ9762IK/V002 | 27/06/03 | | | |
| Variation application BJ9762IK/V003 (Ref: BV4827IF) | Received 30/07/03 | Part transfer of permit | | |
| Variation determined BJ9762IK/V003 | 29/09/03 | | | |
| Application EPR/JP3538LX/T001 (full transfer of permit BJ9762IK) | Received 29/03/06 | Application to transfer the permit in full to Impalloy Limited. | | |
| Transfer determined EPR/JP3538LX/T001 | 08/06/06 | Full transfer of permit complete. | | |
| Variation application EPR/JP3538LX/V002 (Ref: TP3037XV) | Received 28/05/08 | Application to vary permit. | | |
| Variation determined EPR/JP3538LX/V002 | 18/10/08 | Varied permit issued. | | |
| Part surrender application EPR/JP3538LX/S004 | Duly made 06/03/14 | Application to surrender an unused section of the permitted area. | | |
| Part surrender determined EPR/JP3538LX/S004 | 27/05/14 | Part surrender complete | | |
| Variation application EPR/JP3538LX/V003 (variation and consolidation) | Duly made 27/05/14 | Application to vary and update the permit to modern conditions. | | |
| Variation determined EPR/JP3538LX/V003 | 31/07/14 | Varied and consolidated permit issued in modern condition format. | | |
| Regulation 60 Notice dated 16/12/16 | Response Received 28/03/17 | Technical standards detailed in response to the information notice. | | |

| Status log of the permit | | | | |
|--|----------|--|--|--|
| Description | Date | Comments | | |
| (Notice requiring information for statutory review of permit) | | Information to demonstrate that relevant BAT Conclusions are met for the non-ferrous metals industries as detailed in document reference L174. | | |
| Environment Agency initiated variation EPR/JP3538LX/V005 (variation and consolidation) | 16/01/18 | Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16 | | |
| Variation determined EPR/JP3538LX/V005 (PAS / Billing Ref: TP3235JS) | | Varied and consolidated permit issued | | |

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

EPR/JP3538LX

Issued to

Impalloy Limited ("the operator")

whose registered office is

Alloys House Willenhall Lane Bloxwich Walsall West Midlands WS3 2XW

company registration number 05482132

to operate an installation at

Alloys House Willenhall Lane Bloxwich Walsall West Midlands WS3 2XW

to the extent set out in the schedules.

The notice shall take effect from 16/01/2018

| Name | Date |
|-----------|------------|
| Tom Swift | 16/01/2018 |

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 - consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/JP3538LX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/JP3538LX/V005 authorising,

Impalloy Limited ("the operator"),

whose registered office is

Alloys House Willenhall Lane Bloxwich Walsall West Midlands WS3 2XW

company registration number 05482132

to operate an installation at

Alloys House Willenhall Lane Bloxwich Walsall West Midlands WS3 2XW

to the extent authorised by and subject to the conditions of this permit.

| Name | Date |
|-----------|------------|
| Tom Swift | 16/01/2018 |

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
 - (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

- 1.2.1 The operator shall:
 - (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
 - (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities:
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
 - (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
 - (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Pre-operational conditions for future development

2.4.1 The operations specified in schedule 1 table S1.3 shall not commence until the measures specified in that table have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 table S3.1.

- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
 - (a) point source emissions specified in table S3.1;
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
 - (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
 - (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production /treatment data set out in schedule 4 table S4.2; and
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
 - (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

- 4.3.1 In the event:
 - (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
 - (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.4 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
 - (a) the Environment Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.5 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.6 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
 - (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

| Table S1.1 Activities | | | | | |
|---|--|--|--|--|--|
| Activity listed in Schedule 1 of the EP Regulations | Description of specified activity | Limits of specified activity | | | |
| Section 2.2 A(1)(b): | Melting, including making alloys of, non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where- (i) the plant has a melting capacity of more than 4 tonnes per day for lead or cadmium or 20 tonnes per day for all other metals, and (ii) any furnace (other than a vacuum furnace), bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 or more tonnes (zinc and aluminium) | From charging of furnaces to the transfer to the finishing activities. | | | |
| Directly Associated Activity | | | | | |
| Finishing activities | Dressing and painting of zinc and aluminium castings, painting | From receipt of zinc and aluminium castings to finished product (anodes) | | | |

| Table S1.2 Operating | j techniques | |
|--|--|------------------|
| Description | Parts | Date Received |
| Application BJ9762IK/A001 | Raw materials (including water) -Response to questions 2.2 given in section TAL IPPC B2.2.1 and B2.2.2 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to questions 5 to 12 inclusive. | 11/06/02 |
| Application BJ9762IK/A001 | Operating Techniques - Response to questions 2.3 given in section TAL IPPC B2.3 and Appendices 1,2, 1(i), 2(i),2(ii) and 3 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to questions 15 to 23 inclusive. | 11/06/02 |
| Application BJ9762IK/A001 | Groundwater Protection - Response to questions 2.4 given in section TAL IPPCB2.4 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to questions 24 and 25. | 11/06/02 |
| Application BJ9762IK/A001 | Waste handling and storage - Response to questions 2.5 given in section TAL IPPC B2.5 and Appendix 1 of the application. | 17/02/01 |

| Response to Schedule 4 Part 1 notice | Response to question 26. | 11/06/02 |
|---|---|----------------------------|
| Application BJ9762IK/A001 | Waste recovery and disposal - Response to questions 2.6 given in section TAL IPPC B2.6 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to question 27. | 11/06/02 |
| Application BJ9762IK/A001 | Energy Efficiency - Response to questions 2.7 given in section TAL IPPC B2.7.1 and B2.7.2 and B2.7.3 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to questions 28 and 29. | 11/06/02 |
| Application BJ9762IK/A001 | Accident prevention and control - Response to questions 2.8 given in section TAL IPPC B2.8 and appendices 1,2,3,4 and 5 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to questions 30 to 32 inclusive. | 11/06/02 |
| Application BJ9762IK/A001 | Noise and vibration - Response to questions 2 given in section 2.9 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to question 40. | 11/06/02 |
| Application BJ9762IK/A001 | Monitoring - Response to questions 2.10 given in section 2.10 and Appendix 1 of Section B2.10 of the application. | 17/02/01 |
| Response to Schedule 4 Part 1 notice | Response to questions 33 to 38 inclusive. | 11/06/02 |
| Application BJ9762IK/A001 | Decommissioning - Response to questions 2.11 given in section TAL IPPC B2.11 of the application. | 17/02/01 |
| Application EPR/JP3538LX/V003 | Responses to Parts C2 and C3 section 3 of the application form and referenced supporting documentation. | 27/05/14 |
| Response to Regulation 60 Notice – request for further information dated 06/12/16 | Technical standards detailed in response to BAT Conclusions 1, 2, 3, 4, 18, 19, 75, 78, 79, 85 and 130 of the notice provided under Regulation 60(1) of Environmental Permitting Regulations. Best available techniques as described in BAT Conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial | Received 28/03/17 |
| Response to request for further information 06/12/17 | emissions for non-ferrous metals industries Further clarification in regard to operating techniques and BAT Conclusion 3 of the BAT Conclusions for Non-Ferrous Metal Industries. | Received 22/12/17 15/01/18 |

| Table S1.3 Pre-operational measures for future development | | | |
|--|------------------------------|--|--|
| Reference | Operation | Pre-operational measures | |
| 1 | Spray booth abatement system | At least two weeks prior to the commencement of commissioning the spray booth, the Operator shall submit a written report detailing the final design to include details of the proposed abatement system and potential emissions to air. | |
| | | The spray booth shall not be brought into operation until written approval is received from the Agency. | |

Schedule 2 – Waste types, raw materials and fuels

| Table S2.1 Raw materials and fuels | | | | |
|------------------------------------|----------------------------|--|--|--|
| Raw materials and fuel description | Specification | | | |
| Zinc | Virgin high grade material | | | |
| Aluminium | Virgin high grade material | | | |

Schedule 3 – Emissions and monitoring

| Table S3.1 Point source emissions to air – emission limits and monitoring requirements | | | | | | |
|--|---|-----------|------------------------------|------------------|----------------------|-------------------------------|
| Emission point ref. & location | Source | Parameter | Limit (including unit) | Reference period | Monitoring frequency | Monitoring standard or method |
| A2 [Point A2 on Foundry 3D plan in application EPR/JP3538LX/V003] | Exhaust from spray booth abatement system | Note 1 | Note 1 | Note 1 | Note 1 | Note 1 |

^{1.} To be determined upon completion of Pre-operational measure, reference 1 in table S1.3

Schedule 4 – Reporting

| Table S4.1 Reporting of monitoring data | | | | |
|--|--------|--------|--------|--|
| Parameter Emission or monitoring period point/reference Reporting period begin | | | | |
| Emissions to air | Note 1 | Note 1 | Note 1 | |
| Parameters as required by condition 3.5.1. | | | | |

1. To be agreed in writing with the Environment Agency following completion of Pre-operational measure, reference 1 in table \$1.3

| Table S4.2: Annual production | | |
|-------------------------------|--------|--|
| Parameter Units | | |
| Annual production | tonnes | |

| Table S4.3 Performance parameters | | | | |
|-----------------------------------|----------|--------|--|--|
| Parameter Frequency of assessment | | Units | | |
| Energy usage | Annually | MWh | | |
| Total raw material used | Annually | tonnes | | |

| Table S4.4 Reporting forms | | | | |
|------------------------------|---|--------------|--|--|
| Media/parameter | Reporting format | Date of form | | |
| Energy usage | Form energy 1 or other form as agreed in writing by the Environment Agency | 16/01/18 | | |
| Other performance indicators | Form performance 1 or other form as agreed in writing by the Environment Agency | 16/01/18 | | |

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number

| Name of operator | | | | |
|--|--|--|--|--|
| Location of Facility | | | | |
| Time and date of the detection | | | | |
| | | | | |
| | any malfunction, breakdown or failure of equipment or techniques, nce not controlled by an emission limit which has caused, is pollution | | | |
| To be notified within 24 hours of | detection | | | |
| Date and time of the event | | | | |
| Reference or description of the location of the event | | | | |
| Description of where any release into the environment took place | | | | |
| Substances(s) potentially released | | | | |
| Best estimate of the quantity or rate of release of substances | | | | |
| Measures taken, or intended to be taken, to stop any emission | | | | |
| Description of the failure or accident. | | | | |
| | | | | |
| (b) Notification requirements for the breach of a limit | | | | |
| To be notified within 24 hours of detection unless otherwise specified below | | | | |
| Emission point reference/ source | | | | |

Parameter(s)

Measured value and uncertainty

Date and time of monitoring

| (b) Notification requirements for | the breach of a li | mit | | | | | |
|--|--|---------------------------|---------------------|--|--|--|--|
| To be notified within 24 hours of | detection unless | otherwise specified belo | DW . | | | | |
| Measures taken, or intended to be taken, to stop the emission | | | | | | | |
| | | | | | | | |
| Time periods for notification follo | Time periods for notification following detection of a breach of a limit | | | | | | |
| Parameter | | | Notification period | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| (c) Notification requirements for t | the detection of a | any significant adverse e | nvironmental effect | | | | |
| To be notified within 24 hours of | detection | | | | | | |
| Description of where the effect on the environment was detected | | | | | | | |
| Substances(s) detected | | | | | | | |
| Concentrations of substances detected | | | | | | | |
| Date of monitoring/sampling | | | | | | | |
| Part B – to be submit | | n as practicable | • | | | | |
| Any more accurate information on the matters for notification under Part A. | | | | | | | |
| Measures taken, or intended to be taken, to prevent a recurrence of the incident | | | | | | | |
| Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission | | | | | | | |
| The dates of any unauthorised emissions from the facility in the preceding 24 months. | | | | | | | |
| | | • | | | | | |
| Name* | | | | | | | |
| Post | | | | | | | |
| Signature | | | | | | | |
| Date | | | | | | | |

^{*} authorised to sign on behalf of the operator

Schedule 6 - Interpretation

"accident" means an accident that may result in pollution.

"application" means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

"authorised officer" means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

"average over the sampling period" means the average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated, as defined in the *General Considerations* section of the Non-Ferrous Metals BAT Conclusions. For batch processes, the average of a representative number of measurements taken over the total batch time or the result of a measurement carried out over the total batch time can be used.

"daily average" means the average over a period of 24 hours of valid half-hourly or hourly averages obtained by continuous measurements, as defined in the *General Considerations* section of the Non-Ferrous Metals BAT Conclusions. A half-hourly or hourly average shall be considered valid if measurements are available for a minimum of (a) 20 minutes during the half hour, or (b) 40 minutes during the hour. The number of half-hourly or hourly averages so validated shall not exceed 5 per day.

"EP Regulations" means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

"groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"Industrial Emissions Directive" means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

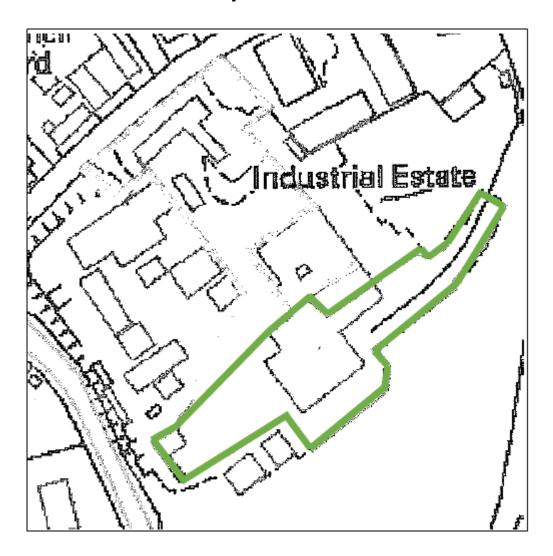
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes and not subject to BAT-AELs for air emissions, the concentration in dry air at a temperature of 273.15K, at a pressure of 101.3 kPa, and with an oxygen content of 3% dry for liquid and gaseous fuels and 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources and not subject to BAT-AELs for air emissions, the concentration at a temperature of 273.15K and at a pressure of 101.3 kPa, with no correction for water vapour content; and/or
- in relation to emissions from non-combustion sources subject to BAT-AELs for air emissions, the concentration in dry air at a temperature of 273.15K and at a pressure of 101.3 kPa; and/or
- in relation to emissions from combustion processes subject to BAT-AELs for air emissions, the concentration in dry air at a temperature of 273.15K and at a pressure of 101.3 kPa, and with an oxygen content of 3% dry for liquid and gaseous fuels and 6% dry for solid fuels.

"year" means calendar year ending 31 December.

Schedule 7 – Site plan



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END OF PERMIT