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## **Permit with introductory note**

The Environmental Permitting (England & Wales) Regulations 2016

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EnerSys Ltd.

EnerSys Newport  
Stephenson Street  
Newport  
South Wales  
United Kingdom  
NP19 4XJ

Permit number

EPR/NP3030BJ

# **EnerSys Newport**

## **Permit number EPR/NP3030BJ**

### **Introductory note**

**This introductory note does not form a part of the permit**

The main features of the permit are as follows:

EnerSys Newport manufactures lead-acid batteries at the facility in Stephenson Street, Newport. The main production activities involve the manufacturing of grey lead oxide from pure lead, the production of battery electrodes from lead or lead/tin alloys, coating of the electrodes with a grey lead oxide/red lead oxide based paste, assembly of batteries, filling of the battery cells with sulphuric acid followed by charging (forming) the cells, testing and packaging. The installation is located in an industrialised area south of Newport town centre close to the tidal reaches of the River Usk Estuary. The operator holds ISO14001 certification.

The installation is split into four discrete operational units referred to as Cells. Cell 1 incorporates casting areas, the lead oxide mills, the pasting area and the battery plate drying ovens. In Cell 2 the prepared battery plates are placed in battery boxes, the individual cells connected with lead straps and sealed with lids. In Cells 3 and 4 the batteries are charged (formed) capped, tested and packed. Cell 1 has three continuous casting machines, the Strip Mill, Cominco Caster and Concast all of which incorporate two melting pots. The melting capacities by process are Strip Mill 80 tonnes, Cominco 50 tonnes and Concast 14 tonnes, so 144 tonnes per day in total. These melting capacities are above the 4 tonne threshold and are therefore Part A1 listed activities. There are four high temperature oxide Mills in Cell 1: Oxide Mill 1, Oxide Mill 2, Oxide Mill 3 and Oxide Mill 4 with capacities of 14 tonnes per day for Mills 1 and 2 and 24 tonnes per day for Mills 3 and 4. There are three pasting lines where the grids formed in the continuous casters are filled with lead oxide pastes. The pasted grids are cut, stacked and craned into stillages before being loaded into 26 drying ovens for drying prior to the assembly process in Cell 2. In Cells 3 and 4 the sealed batteries are filled with sulphuric acid by five filling machines. The batteries are then charged (formed) over a period of up to seven days using a 420V DC supply.

The installation is equipped with abatement equipment to treat the majority of emissions to the environment. The installation has combustion units in place to supply space heating. The combined capacity of the combustion units is <20 MW and have therefore been screened as not having a significant impact on the environment. There are 70 identified discharge release points to air. Releases from discharge stacks A1 (Oxide Mill 1), A2 (Oxide Mill 2), A3 (Oxide Mill 3) and A63 (Oxide Mill 4) are all treated by dry bag filtration prior to discharge.

A4 (grey oxide handling), A9 and A10 (assembly and nugget casters), A11 (lead reclaim), A12 (chip handling system) and A13 (Pasting Area) also use dry bag filtration to remove lead prior to release to atmosphere. A6 (strip Mill Melting Pots) and A8 (Cominco and Concast Melting Pots) are treated by wet scrubber prior to discharge. Discharge points A5 (Red oxide blower), A7 (Pasting Process) and A14 (Old Waste Management Area) are no longer in use.

There is one release point to sewer from an on-site effluent treatment plant (ETP) and one release point of site run off to an un-named reën leading to the River Usk. The site run off is discharged by means of an interceptor. The interceptor can be fully isolated so that in the event of a potentially contaminating spillage the reën would not be contaminated. The production areas which are liable to become contaminated with lead oxide are served by a dedicated process effluent drainage system that feeds into the Effluent Treatment Plant located in Cell 1. The ETP treats process effluent from the Pasting and Oxide Mill areas and uses a combination of settlement, pH adjustment and flocculation to remove lead and sulphate from the effluent before discharging to sewer. There is also a backup loop to recycle the effluent internally and re-treat if necessary.

The permit has previously been varied on four occasions between 2008 and 2013 due to process changes.

The site is within 10Km of European sites, these include the SPA Severn Estuary and the SAC River Usk.

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

Status Log of the permit		
Detail	Date	Response Date
Application NP3030BJ	Received 06/01/05	
Response to request for information	Request 31/03/05, 19/10/05 & 27/10/05	06/06/05, 14/07/05, 23/11/05 & 01/12/05
Permit determined	19/12/05	
Application for variation EA/EPR/NP3030BJ/V002	Received 04/06/08	Duly made 24/06/08
Variation EA/EPR/NP3030BJ/V002 issued	30/06/08	
Application for variation EA/EPR/NP3030BJ/V003	Received 26/05/11	Duly made 15/06/11
Variation EA/EPR/NP3030BJ/V003 issued	20/06/11	

Variation Application EPR/NP3030BJ/V004	Duly Made 26/06/13	
Revised site plan submitted	25/09/13	
Variation Application EPR/NP3030BJ/V004 determined	26/09/13	
Regulation 60 Notice dated 25/07/16 (Notice requiring information for statutory review of permit)	Response received 16/12/16	Technical standards detailed in response to the information notice. Information to demonstrate that relevant BAT conclusions are met for non-ferrous metal production
Natural Resources Wales Variation Application EPR/NP3030BJ/V005 (Variation and Consolidation)	18/05/17	Natural Resources Wales Variation and consolidation following the non- ferrous metals sector review and normal variation to make changes to the process and emissions on-site

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

**EPR/NP3030BJ**

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

**EnerSys Ltd.** (“the operator”),

whose registered office is

**Stephenson Street**

**Newport**

**South Wales**

**United Kingdom**

**NP19 4XJ**

company registration number 00731261

to operate an installation at

**Stephenson Street**

**Newport**

**South Wales**

**United Kingdom**

**NP19 4XJ**

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

Name	Date
<i>ADavies</i>	18/05/2017

Authorised on behalf of Natural Resources Wales

# 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.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme [or other approval issued by Natural Resources Wales].

### 1.2 Energy efficiency

- 1.2.1 For the following activities referenced in schedule 1, table S1.1 (A1 to A8.) 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 For the following activities referenced in schedule 1, table S1.1 (A1 to A8.) 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 (a) For the following activities referenced in schedule 1, table S1.1 (A1 to A8.) 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 Natural Resources Wales.
- (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales 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 Natural Resources Wales.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.3 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.
- 2.3.4 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 Improvement programme**

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by Natural Resources Wales.
- 2.4.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales within 14 days of completion of each improvement.

# **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 tables S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 For the following activities referenced in schedule 1, table S1.1 (A1 to A8.) Where a substance is specified in schedule 3 table S3.2 or S3.3 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.
- 3.1.4 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 Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales 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 Natural Resources Wales.
- 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 Natural Resources Wales, 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 Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales 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 Natural Resources Wales.

### **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 Natural Resources Wales, 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 Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales 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 Natural Resources Wales.

### **3.5 Monitoring**

- 3.5.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:
  - (a) point source emissions specified in tables S3.1, S3.2 and S3.3;
- 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 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.
- 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, S3.2, S3.3 unless otherwise agreed in writing by Natural Resources Wales.

## **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 Natural Resources Wales, 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 Natural Resources Wales.

### **4.2 Reporting**

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.
- 4.2.2 For the following activities referenced in schedule 1, table S1.1 (A1 to A8.) A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) 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 Natural Resources Wales, 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 Natural Resources Wales, 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 (a) In the event 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 Natural Resources Wales,
  - (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) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
  - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event 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 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales 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.
- 4.3.5 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) Natural Resources Wales 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.
- 4.3.6 Natural Resources Wales shall be given at least 14 days' notice before implementation of any part of the site closure plan.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, Natural Resources Wales 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 "without delay", in which case it may be provided by telephone.

# Schedule 1 - Operations

**Table S1.1 activities**

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S2.2 (A)(1)(b) Melting, including making alloys, of nonferrous 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.	Lead melting <ul style="list-style-type: none"> <li>• Nugget casters 1/2, 3 &amp; 4</li> <li>• Cominco caster pots 1&amp;2</li> <li>• Strip mill pots 1&amp;2</li> <li>• Cast on strapping lines 1 to 4</li> <li>• Continuous casting pots 1 &amp; 2</li> <li>• Re-melt Furnace and associated Ingot caster</li> </ul>	Receipt of raw materials to battery product dispatch.
A2	S4.2 (A)(1)(a)(v) – Production of inorganic chemicals	Production of lead oxide – Grey Oxide Mills 1,2,3,4	Receipt of raw materials to inclusion in pasting process
A3	S4.2 (A)(1)(c)(vi) – Manufacturing using, and possibly causing emissions of, lead	Releases of lead to air – Pasting Lines 1,2,3,4	Receipt of raw materials to production of lead oxide paste
<b>Directly Associated Activity</b>			
A4	Effluent treatment plant	Disposal of non-hazardous effluent	From receipt of effluent to dispatch to sewer or dispatch of water back to process.
A5	Surface water discharge	Discharge of site run-off to surface water.	From receipt of surface water to release to an unnamed blind ree leading to River Usk.
A6	Product Assembly	Assembly, charging and case sealing of batteries	From receipt of charged plates to despatch of batteries, disposal of waste and emission of exhaust gases.
A7	Storage of product	Finished goods storage and dispatch	From receipt of completed batteries for storage to final product dispatch
A8	Combustion of fuel oil	Space heating boiler <20MW	From receipt of fuel to disposal of waste and release of combustion products

**Table S1.2 Operating techniques**

Description	Parts	Date Received
PPC Permit Application NP3030BJ	The response to questions 2.1 and 2.2 given in pages 9 – 40 of the application.	06/01/05
PPC Permit Application NP3030BJ	Emergency response plan received as further information Application site report	06/06/05
Variation Application EPR/NP3030BJ/V004	Supporting Information P1716/R002 – Section 6	26/06/13
Response to Regulation 60 notice	The response and supporting information requested by NRW and submitted by email	16/12/16
Variation Application EPR/NP3030BJ/V005	P2414-R001 Supporting Information Document – All Sections	28/02/17

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
IC17	<p>The operator shall submit, for approval by Natural Resources Wales, a report setting out progress to achieving the BAT Conclusions and BAT-AEL's where BAT is currently not achieved, but will be achieved by the 30<sup>th</sup> June 2020. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> <li>1) Current performance against the BAT Conclusions and BAT-AEL.</li> <li>2) Methodology for reaching the AELs.</li> <li>3) Associated targets / timelines for reaching compliance by 30<sup>th</sup> June 2020.</li> </ol> <p>The report shall address all of the relevant BAT Conclusions</p>	1 <sup>st</sup> May 2018 (annually thereafter)
IC18	<p>In order to reduce lead monitoring from monthly to annually on emission points A1, A2, A3 and A63, the operator shall submit to NRW, within one month of the issue of the permit variation, a methodology for determining the percentage of lead present within the discharge to air.</p> <p>Following NRW approval of the methodology, the operator shall submit a report, for approval discussing the results of the monitoring exercise and justify the reasons to reduce the monitoring frequency. Until this is approved monthly monitoring of lead from A1, A2, A3, and A63 will continue on a monthly basis.</p>	1 <sup>st</sup> November 2017

## Schedule 2 - Waste types, raw materials and fuels

**Table S2.1 Raw materials and fuels**

Raw materials and fuel description	Specification
-	.

## Schedule 3 – Emissions and monitoring

**Table S3.1a Point source emissions to air – emission limits and monitoring requirements – until 29<sup>th</sup> June 2020**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period (Note 1)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method (Note 2)</b>
A1 - Point A1 on Revised Site Plan ENL 05	Oxide Mill 1 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
A2 - Point A2 on Revised Site Plan ENL 05	Oxide Mill 2 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
A3 - Point A3 on Revised Site Plan ENL 05	Oxide Mill 3 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
A4 - Point A4 on Revised Site Plan ENL 05	Grey oxide handling via stack	Lead	0.75 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A5 - Point A5 on Revised Site Plan ENL 05	Red oxide handling via stack	Lead	0.25 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A6 - Point A6 on Revised Site Plan ENL 05	Strip mill wet scrubber	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A7 - Point A7 on Revised Site Plan ENL 05	Pasting process and nugget casting via wet scrubber and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A8 - Point A8 on Revised Site Plan ENL 05	Cominco/Concast via wet scrubber and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A9 - Point A9 on Revised Site Plan ENL 05	Assembly area via fabric filter and stack	Lead	0.75 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A10 - Point A10 on Revised Site Plan ENL 05	Assembly area via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004



**Table S3.1a Point source emissions to air – emission limits and monitoring requirements – until 29<sup>th</sup> June 2020**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period (Note 1)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method (Note 2)</b>
A11 - Point A11 on Revised Site Plan ENL 05	Re-melt furnace	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A12 - Point A12 on Revised Site Plan ENL 05	Chip handling via fabric filter and stack	Lead	0.75 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A13 - Point A13 on Revised Site Plan ENL 05	T1 pasting area via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A14 - Point A14 on Revised Site Plan ENL 05	Waste storage area (break apart) via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
A15 to A62 - Corresponding to points A15-A62 on Revised Site Plan ENL 05	Drying Ovens	No Parameters Set	-	-	-	-
A63 - Point A63 on Revised Site Plan ENL 05	Oxide Mill 4 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
A64 - Point A64 on Revised Site Plan ENL 05	Re-melt Furnace Burner Flue	No Parameters Set	-	-	-	-
A65 - Point A65 on Revised Site Plan ENL 05	Oven 25	No Parameters Set	-	-	-	-
A66 - Point A66 on Revised Site Plan ENL 05	Oven 26	No Parameters Set	-	-	-	-
A67 - Point A67 on Revised Site Plan ENL 05	Oven 26	No Parameters Set	-	-	-	-

**Table S3.1a Point source emissions to air – emission limits and monitoring requirements – until 29<sup>th</sup> June 2020**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period (Note 1)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method (Note 2)</b>
A68 - Point A68 on Revised Site Plan ENL 05	Battery Washing	No Parameters Set	-	-	-	-
A69 - Point A69 on Revised Site Plan ENL 05	Cell 2 Tool Room	No Parameters Set	-	-	-	-
A70 - Point A70 on Revised Site Plan ENL 05	Cell 1 Tool Room	No Parameters Set	-	-	-	-

Note 1 – See condition 6.1.3 for reference conditions

Note 2 – Or to an EN, BS or ISO standard as otherwise approved in writing by Natural Resources Wales

**Table S3.1b Point source emissions to air – emission limits and monitoring requirements – From 30<sup>th</sup> June 2020**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period (Note 1)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method (Note 2)</b>
A1 - Point A1 on Revised Site Plan ENL 05	Oxide Mill 1 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A2 - Point A2 on Revised Site Plan ENL 05	Oxide Mill 2 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A3 - Point A3 on Revised Site Plan ENL 05	Oxide Mill 3 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A4 - Point A4 on Revised Site Plan ENL 05	Grey oxide handling via stack	Lead	0.75 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002

**Table S3.1b Point source emissions to air – emission limits and monitoring requirements – From 30<sup>th</sup> June 2020**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period (Note 1)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method (Note 2)</b>
A5 - Point A5 on Revised Site Plan ENL 05	Red oxide handling via stack	Lead	0.25 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A6 - Point A6 on Revised Site Plan ENL 05	Strip mill wet scrubber	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A7 - Point A7 on Revised Site Plan ENL 05	Pasting process and nugget casting via wet scrubber and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A8 - Point A8 on Revised Site Plan ENL 05	Cominco/Concast via wet scrubber and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A9 - Point A9 on Revised Site Plan ENL 05	Assembly area via fabric filter and stack	Lead	0.75 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A10 - Point A10 on Revised Site Plan ENL 05	Assembly area via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A11 - Point A11 on Revised Site Plan ENL 05	Re-melt furnace	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A12 - Point A12 on Revised Site Plan ENL 05	Chip handling via fabric filter and stack	Lead	0.75 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A13 - Point A13 on Revised Site Plan ENL 05	T1 pasting area via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002

**Table S3.1b Point source emissions to air – emission limits and monitoring requirements – From 30<sup>th</sup> June 2020**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period (Note 1)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method (Note 2)</b>
A14 - Point A14 on Revised Site Plan ENL 05	Waste storage area (break apart) via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Quarterly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A15 to A62 - Corresponding to points A15-A62 on Revised Site Plan ENL 05	Drying Ovens	No Parameters Set	-	-	-	-
A63 - Point A63 on Revised Site Plan ENL 05	Oxide Mill 4 via fabric filter and stack	Lead	1.0 mg/m <sup>3</sup>	Spot Sample	Monthly Spot Sample	BS EN 14385:2004
		Particulates	5.0 mg/m <sup>3</sup>	Hourly Average	Annual	BS ISO 13284-1:2002
A64 - Point A64 on Revised Site Plan ENL 05	Re-melt Furnace Burner Flue	No Parameters Set	-	-	-	-
A65 - Point A65 on Revised Site Plan ENL 05	Oven 25	No Parameters Set	-	-	-	-
A66 - Point A66 on Revised Site Plan ENL 05	Oven 26	No Parameters Set	-	-	-	-
A67 - Point A67 on Revised Site Plan ENL 05	Oven 26	No Parameters Set	-	-	-	-
A68 - Point A68 on Revised Site Plan ENL 05	Battery Washer	No Parameters Set	-	-	-	-
A69 - Point A69 on Revised Site Plan ENL 05	Cell 2 Tool Room	No Parameters Set	-	-	-	-
A70 - Point A70 on Revised Site Plan ENL 05	Cell 1 Tool Room	No Parameters Set	-	-	-	-

**Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements**

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 – Point S1 on Application Site Layout Plan	Uncontaminated site surface water run-off via interceptor	Lead and its compounds	2.0 mg/l	Spot Sample	Weekly when there is a flow to the reën	BS EN ISO 11885:1998, BS 6068-2.60:1198 (Note 1)

Note 1: Or an EN, BS, ISO or SCA blue book standard as agreed in writing with Natural Resources Wales

**Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements**

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 – Point F1 on Application Site Layout Plan	Effluent Treatment Plant	Lead and its compounds	2.0 mg/l	Spot Sample	Weekly	BS EN ISO 11885:1998, BS 6068-2.60:1998 (Note 1)
		pH	>6 and <11	Spot Sample	Daily	BS 6068-2.5:1995, ISO 10523:1994 (Note 1)

Note 1: Or an EN, BS, ISO or SCA blue book standard as agreed in writing with Natural Resources Wales

**Table S3.4 Process monitoring requirements**

<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
S1	Sulphates	Monthly Spot Sample	BS 6068: Section 2.53:1997	-
S1	Suspended Solids	Monthly Spot Sample	BS EN872:1996, BS 6068- 2.54:1996	-
S1	Flow	Continuous	Site specific method as agreed with Natural Resources Wales	-

## Schedule 4 – Reporting

**Table S4.1 Reporting of monitoring data**

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1, A2, A3, A63	Every 3 months	01/01/2006
Emissions to air Parameters as required by condition 3.5.1.	A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14	Every 3 months	01/01/2006
Emissions to air Parameters as required by condition 3.5.1.	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A63	Every 12 months	30/06/2020
Emissions to water Parameters as required by condition 3.5.1	S1	Every 12 months	01/01/06
Lead and its compounds	S1	Every 3 months	01/01/2006
pH	S1	Every 3 months	01/01/2006
Sulphates	S1	Every 3 months	01/01/2006
Suspended Solids	S1	Every 3 months	01/01/2006
Flow m <sup>3</sup> /day	S1	Every 3 months	01/01/2006
Lead and its compounds	W1	Every 3 months	01/01/2006

**Table S4.2 Annual production/treatment**

Parameter	Units
Batteries Produced	tonnes

**Table S4.3 Performance parameters**

Parameter	Frequency of assessment	Units
Total energy usage	Annually	kWh/tonne
Total water usage	Annually	m <sup>3</sup> /tonne
Total waste recovered	Annually	tonnes/tonne
Total waste disposed	Annually	tonnes/tonne
Mass lead released	Annually	kilograms

**Table S4.4 Reporting forms**

Media/parameter	Reporting format	Date of form
Air	Form air 1 (A1) or other form as agreed in writing by Natural Resources Wales	18/10/05
Sewer	Form sewer 1 (S1) or other form as agreed in writing by Natural Resources Wales	18/10/05
Water	Form water 1 (W1) or other form as agreed in writing by Natural Resources Wales	18/10/05
Water usage	Form water usage 1 (WU1) or other form as agreed in writing by Natural Resources Wales	18/10/05
Energy usage	Form energy 1 (E1) or other form as agreed in writing by Natural Resources Wales	18/10/05
Waste Return	Form waste return (R1) or other form as agreed in writing by Natural Resources Wales	18/10/05

**Table S4.4 Reporting forms**

<b>Media/parameter</b>	<b>Reporting format</b>	<b>Date of form</b>
Other performance indicators	Form performance 1 (PI1) or other form as agreed in writing by Natural Resources Wales	18/10/05



# 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	

<b>(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment</b>	
<b>To be notified Immediately</b>	
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>(b) Notification requirements for the breach of a permit condition</b>	
<b>To be notified immediately</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

<b>(c) In the event 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:</b>	
<b>To be notified immediately</b>	
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 submitted as soon 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.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* 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.

*“emissions to land”* includes emissions to groundwater.

*“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.

*“MCERTS”* means the Environment Agency’s Monitoring Certification Scheme.

*“year”* means calendar year ending 31 December.

*“authorised officer”* means any person authorised by Natural Resources Wales 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.

*“background concentration”* means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

*“hazardous property”* has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

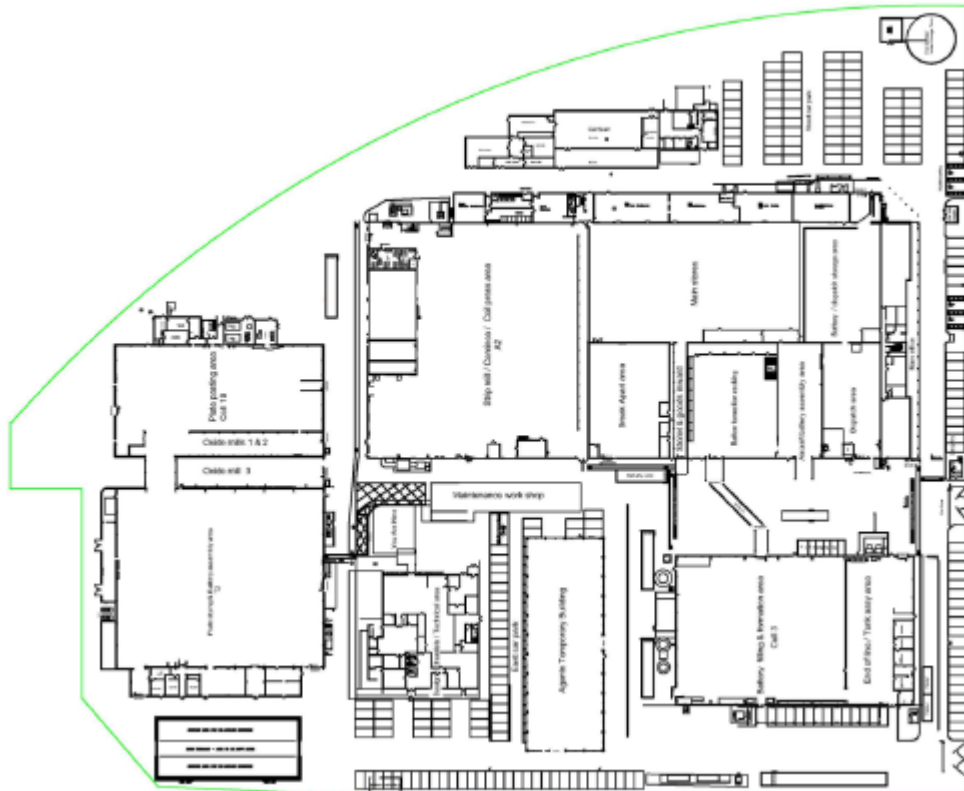
*“Industrial Emissions Directive”* means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

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:

- (a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- (b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

## Permit Number EPR/NP3030BJ



End of Permit