Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Mueller Europe Limited

Bilston Copper Shaft Furnace
Oxford Street
Bilston
Wolverhampton
West Midlands
WV14 7DS

Variation application number

EPR/BJ9843IH/V010

Permit number

EPR/BJ9843IH

Bilston Copper Shaft Furnace
Permit number EPR/BJ9843IH

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.

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.

This variation authorises the following changes to the permit:

Addition of a gas-fired reverberatory furnace which will melt scrap copper, refine it and cast it into copper ingots which will then be used as feedstock for the existing shaft furnace. The new activity falls under Section 2.2 Part A(1)(b) Melting, including making alloys of, non-ferrous metals.

The new refinery plant will have two emission points to air (emission points A13 and A14), one associated with the emissions from the furnace during normal operation and a second emission point via a bypass stack which will only be used in the event of an emergency. Both stacks are approximately 22m in height.

The refinery plant will be fitted with low oxides of nitrogen (NOx) burners. It will also have a dedicated abatement system (fume filtration system) for controlling emissions prior to release to atmosphere. The abatement unit comprises the following stages:

• Selective Non Catalytic Reduction (SNCR);

• Spray absorber;

• Dry sorption reactor including both hydrated lime and activated carbon injection; and

• Fabric bag filter.

As the refinery plant is fitted with low NOx burners, we consider that it may be able to achieve low emissions of NOx without use of SNCR. Use of SNCR would require storage of reagent on site and has the potential for emissions of ammonia due to ammonia slip. A pre operational condition (PO1) is included requiring the operator to justify why further NOx abatement is needed prior to use of the SNCR unit.

There will be a cooling water circuit with associated pumps and cooling tower, which will be used to cool the flue gas leaving the new refinery plant.

A water quench using caustic soda solution will be installed to reduce the exhaust gas temperature and to condition the gases prior to the downstream acid gas abatement to optimise the removal of acid gases. Water emissions from the quench system will be discharged to foul sewer under a consent from Severn Trent (emission point S1). A requirement for further sampling and analysis of this effluent is required under improvement condition IC3.

A metal shredder will also be installed on site to shred a proportion of the larger pieces of incoming scrap copper prior to input to the reverberatory furnace. The shredder has a capacity of over 75 tonnes per day and is therefore listed in the permit under a 5.4 A(1)(b) activity. A maximum throughput of 34,000 tonnes per annum of scrap copper is expected to be brought on to the site and stored in the cast yard in dedicated bunkers. The maximum storage capacity on site is 600 tonnes.

The new equipment will be located within an existing building on the site except for the shredder which will be located to the south of the existing building.

The rest of the installation continues to be operated as follows:

Brief description of the process

Bilston Copper Shaft Furnace (the installation) is operated by Mueller Europe Limited. The installation is located in Bilston, Wolverhampton in the West Midlands

The main purpose of the activities at the installation is the production of seamless copper tubing from virgin metal, scrap metal and copper, on a self-contained site.

Raw Materials

Raw materials used in the process include copper cathode, copper phosphorus waffle, copper billet, in-house process scrap and copper scrap.

The site also requires other raw materials including water treatment chemicals, chlorinated organic solvents and tube forming lubricants.

Melting Furnace

The scrap copper is charged into the ASARCO shaft furnace via a top loading system. The copper is heated in the charging section by hot combustion gases from the gas burners. The copper gradually passes from the charge section to the melting section where a temperature of 1100˚C is maintained. The molten copper runs through a tap hole and down a gas heated covered launder into the holding furnace. The shaft furnace is designed to operate 24 hours per day and is rated at 12 tonnes/hr. Emissions from the shaft furnaces are released through the integral chimney, which releases emissions from the furnace to air after first passing through a dedicated filtration plant to remove particulate matter. The holding furnace is gas heated and has a capacity of 12 tonnes of copper.

The emissions from the abatement plant are monitored continuously for carbon monoxide and particulate matter using MCERTs equipment (where available). Improvement in burner technology, and state-of-the-art automatic PLC controlled burner trimming assists in reducing emissions of carbon monoxide and oxides of nitrogen as well as improving thermal efficiency.

Continuous Casting

Molten copper is passed directly from the holding furnace to a continuous casting machine. Copper phosphorus alloy pellets are mixed with the melt as it exits the holding furnace, and phosphorus de-oxidised copper “logs” are produced. An automatic dosing unit ensures a controlled addition of copper phosphorus pellets to the molten metal. This minimises excess usage and helps reduce production of fugitive phosphorus pentoxide fume.

All launders incorporate ceramic tip burners to enable close covering of the launder in order to improve thermal efficiency and prevent fugitive emissions. The covers are easily removed for essential maintenance.

The logs are cut to the required length by a vertical flying saw, complete with chip exhaust system, all local to the casting machine.

A second saw is used to cut shorter lengths from the logs of the cast machine for further processing. These shorter lengths are referred to as “billets”.

Extrusion/ Drawing

The billets are heated in a gas fired oven prior to being extruded into a long, hollow tube at the start of the continuous tube production line. From here the extrusions are drawn down to the required size using a draw bench fitted with energy efficient motors and single shot drawing lubricant equipment. Synthetic or mineral oil based metal forming lubricants are used. Due to the elevated temperatures low smoking lubricants are used.

Annealing

Tubes requiring intermediate tempers are heat treated in controlled atmosphere “bright annealing” furnaces. The tubes will be annealed using a 500kW inline induction annealing furnace. These are gas fired or electric and use a nitrogen or hydrogen atmosphere system dependent upon the specification.

On completion of the annealing process the tube will pass through a straightening unit.

Product Finishing

Finished copper tube may be degreased in chlorinated solvent to achieve customer specifications. The company has 2 chlorinated solvent tanks that contain a total of 25.5m^3 of solvent. The solvent tanks have a re-circulation loop to enable the solvent to be cleaned and periodically replaced. The solvent tanks are vented to atmosphere through installed ducting.

Tube finishing includes a saw and eddy current unit. Once the tubing has passed through the finishing phase the final product is then directed to the warehouse for storage.

The site operates an Environmental Management System that is compliant with ISO 14001 and an ongoing Energy Efficiency Action Plan as part of the company's Energy Management System.

Releases to the environment

Releases to air from the shaft furnace and holding furnace are made through a single stack (A2) following abatement via a bag filter with adsorbant injection. The other main emission to air is the bay degreaser (A4) and is part of the solvent emission activity listed in Table S1.1.

Site surface water is discharged to sewer under trade effluent consent from Severn Trent or to surface water via an interceptor.

There are no releases to groundwater or land.

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

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 BJ9843IH	Received 19/12/2001	
Response to request for information	Request dated 18/02/2002	Response dated 15/06/2002
Response to second request for information	Request dated 24/07/2002	Response dated 07/01/2003
Request by Agency to extend determination to 01/11/2002	Request dated 02/07/2002	Request accepted 03/07/2002
Request by Operator to extend determination period to 21/12/2002	Request dated 02/10/2002	Request accepted 08/10/2002
Request by Operator to extend determination period to 31/01/2003	Request dated 09/12/2002	Request accepted 16/12/2002
Permit BJ9843IH	Determined 31/03/2003	
Application for variation	Received 11/12/2003	
Request by Environment Agency to extend determination period to 11/05/2004	Request dated 24/02/2004	Request agreed 02/03/2004
Variation BX1292IY	Determined 19/04/2004	
Variation RP3532ST	Determined 07/07/2005	
Variation LP3036XX	Request dated 02/04/2008	
Variation LP3036XX	Determined 08/08/2008	

Status log of the permit		
Description	**Date**	**Comments**
Application for variation EPR/BJ9843IH/V004	Duly made 18/01/2012	
Variation EPR/BJ9843IH/V004	Determined 27/02/2012	New EPR reference introduced
Application for variation EPR/BJ9843IH/V005	Duly Made 16/02/2015	Application to add fourth copper tube finishing line
Additional information received	16/02/2015 & 17/02/2015	
Variation EPR/BJ9843IH/V005 Determined	09/04/2015	
Part surrender application EPR/BJ9843IH/S006	Duly made 27/11/2017	Application to surrender part of the permitted area.
Part surrender determined EPR/BJ9843IH	01/02/2018	Part surrender complete.
Regulation 60 Notice dated 16/12/2016 (Notice requiring information for statutory review of permit)	Response Received 10/08/2017	Technical standards detailed in response to the information notice. Information to demonstrate that relevant BAT Conclusions are met for the non-ferrous metals industries as detailed in document reference L174.
Regulation 61 Notice dated 06/02/2018 (Notice requiring information for statutory review of permit)	Responses Received 09/02/2018 and 20/02/2018	Further information / clarification with regard to BAT conclusions 2-5, 7-10, 12, 20, 23, 25-36, 42-44, 46-48, 50 and 51.
Further information requests on 02/05/18 04/05/2018	Responses received 04/05/2018	Details of surface water discharges and de-greaser used.
Further information requests on 10/05/2018	Responses received 10/05/2018	Receipt of site plan with emission points labelled
Further information requests on 24/05/2018	Responses received 24/05/2018	Receipt of techniques for BAT 48, diffuse dust emissions plan and climate change agreement clarification.
Environment Agency initiated variation EPR/BJ9843IH/V007 Variation determined EPR/BJ9843IH/V007	04/06/2018	Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16 Varied and consolidated permit issued
Application EPR/BJ9843IH/V008 (variation and consolidation)	Duly made 25/07/2018	Application to include new solvent degreaser and associated abatement equipment
Further Information Request on 14/09/2018	Response received 18/09/2018	Updated site plan with amended emission point, clarification on disposal of carbon filters
Variation determined EPR/BJ9843IH/V008	06/11/2018	Varied permit issued.
Application for variation EPR/BJ9843IH/V009	Duly made 23/11/2018	Application to install a gas engine to provide electricity.
Variation determined EPR/BJ9843IH/V009	24/10/2019	Varied permit issued.
Application for variation EPR/BJ9843IH/V010	Duly made 23/09/2020	Application to add copper refinery and shredder to permit.

Status log of the permit		
Description	**Date**	**Comments**
Response to Schedule 5 notice dated 19/10/2020	Response received 27/10/2020	Clarification on emissions to air, noise, effluent, drainage, raw materials and BAT Conclusions 10, 13, 22 and 25.
Further information received in response to information request	24/03/2021	Clarification on shredder operating hours.
Further information received	01/04/2021	Further information on additives to be used.
Further information received	20/04/2021 and 27/04/2021	Further information about cooling towers.
Variation determined EPR/BJ9843IH/V010 (Billing ref. LP3805BR)	28/04/2021	Varied permit issued.

Other Part A installation permits relating to this installation		
Operator	**Permit number**	**Date of issue**
E.On Connecting Energies Limited	EPR/XP3805PY	23/10/2019

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

Permit number

EPR/BJ9843IH

Issued to

Mueller Europe Limited ("the operator")

whose registered office is

Oxford Street
Bilston
Wolverhampton
West Midlands
WV14 7DS

company registration number **03316088**

to operate an installation at

Bilston Copper Shaft Furnace
Oxford Street
Bilston
Wolverhampton
West Midlands
WV14 7DS

to the extent set out in the schedules.

The notice shall take effect from 28/04/2021

Name	Date
Simon Hunt	**28/04/2021**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit EPR/BJ9843IH/V010 as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BJ9843IH

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BJ9843IH/V010 authorising,

Mueller Europe Limited ("the operator")

whose registered office is

Oxford Street
Bilston
Wolverhampton
West Midlands
WV14 7DS

company registration number **03316088**

to operate an installation at

Bilston Copper Shaft Furnace
Oxford Street
Bilston
Wolverhampton
West Midlands
WV14 7DS

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

Name	Date
Simon Hunt	**28/04/2021**

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.

1.1.4 The operator shall comply with the requirements of an approved competence scheme.

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.

1.5 Multiple operator installations

1.5.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

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 red excluding the land shown edged in green on the site plan at schedule 7 to this permit. The land edged in red represents the extent of the installation covered by this permit and the land edged in green represents the extent of the site covered by the other operator of the installation.

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 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 table S2.2; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

2.3.5 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.

2.3.6 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 the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

2.5.1 The operations specified in schedule 1 table S1.4 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 tables S3.1, S3.2 and S3.3.

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 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 3.5.1 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, S3.2 and,S3.3 unless otherwise agreed in writing by the Environment Agency.

3.6 Fire prevention

3.6.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.6.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, 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.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.6 The operator shall submit an annual solvent management plan in order to demonstrate compliance with the requirements of the Industrial Emissions Directive, by 31 January each year in respect of the previous year.

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 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.

4.4 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 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**
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	**Copper Refinery** From receipt of material into storage bunkers, discharge to casting line and then input to the shaft furnace. Waste types as specified in Table S2.2 **Shaft furnace** From receipt of material in the furnace charging bins to intermediate storage prior to the extrusion process. Waste types as specified in Table S2.2
Section 5.4 A(1)(b)(iv)	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day in shredders of metal waste.	From input of metal waste to the shredder to input of shredded metal waste to the furnace. Waste types as specified in Table S2.2.
Activities under Schedule 14 to Environmental Permitting Regulations (Solvent emission activity)	Degreasing of components prior to surface treatment using more than 5 tonnes per annum of tetrachloroethylene (halogenated volatile organic compound carrying the H351 hazard statement).	From receipt of raw materials to disposal of waste solvent.
Directly Associated Activity		
Raw materials storage and handling	Receipt, handling and storage of copper cathode, copper waffle and copper scrap and all process substances.	Receipt of raw materials until used in the process.
Off-gas collection, abatement and discharge systems.	Localised extraction hoods, ducting, bag filter and stacks.	Collections of air emissions to exit point via stacks.
Finishing activities	Billets extruded into copper tubing annealing, and cutting.	Billet storage and handling, extrusion, annealing, and cutting. Includes plant services, die cleaning, process materials storage.

Table S1.1 activities		
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**
Water discharges to controlled waters	Discharge of site drainage from the installation.	From site drainage to entry into Darlaston Brook.
Effluent discharge to foul sewer	Discharge of site cooling water and water from the copper refinery flue gas quench system.	From production of cooling water and flue gas quench effluent to discharge to external foul sewer.
Storage and handling of solid and liquid wastes	Handling, storing and removal of all wastes from site.	From separation of wastes to despatch from installation.
Emergency power generation	Operation of an emergency diesel pump.	Receipt of fuel to emissions to combustion gases.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application BJ9843	The response to questions 2.4 given in section 2.4 of the application.	19/12/2001
Response to Schedule 4 Part 1 Notice	Response to question 27	15/06/2002
Response to Regulation 60 Notice – request for further information dated 06/12/2016	Technical standards detailed in response to BAT Conclusions 2-5, 7-10, 12, 20, 23, 25-36, 42-44, 46-48, 50 and 51 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 emissions for non-ferrous metals industries	Received 17/03/2017
Response to Regulation 61 Notice – request for further information dated 06/02/2018	Further information and/or clarification on BAT Conclusions 2, 3, 4, 5, 7, 8, 10, 12, 20, 23, 25-36, 42-44, 46-48, 50 and 51 of the notice provided under Regulation 61(1) of Environmental Permitting Regulations.	Received on 09/02/2018 and 20/02/2018
Receipt of additional information to the Regulation 60 Notice, requested by emails dated 02/05/2018 and 04/05/2018	Details of surface water discharges and de-greaser used	Received 04/05/2018
Receipt of additional information requested by email dated 10/05/2018	Receipt of site plan with emission points labelled	Received 10/05/2018
Receipt of additional information requested by email dated 24/05/2018	Receipt of techniques for BAT 48, diffuse dust emissions plan and climate change agreement clarification.	Received 24/05/2018
Variation Application EPR/BJ9843IH/V008	Responses to questions in Parts C2 and C3 of the application form. Application supporting documents dated 18 July 2018: • MUE001 (Cover letter, including technical overview of proposed systems)	Received 20/08/2018

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
	• MUE002 (General equipment specification) • MUE 003 (Carbon filter system specification) • MUE 005 (Control of solvents and emissions) • MUE 006 (Degreaser operation) • MUE009 (Emission testing and frequency plans)	
Response to Schedule 5 Notice dated 14/09/2018	• Letter (Response to Question 2) • Doc 001 (amended boundary plan showing new emission point A4) • Doc 002 (Disposal of controlled wastes)	18/09/2018
Application EPR/BJ9843IH/V010	Responses to questions in Parts C2 and C3 of the application form including the following referenced supporting documents: • MUE001: Bilston Copper Shaft Furnace Permit Variation, dated 20/04/2020 • Location Plan MUE 015C, Issue 5 • Site Location Plan, dated April 2020 • Risk Assessment MUE 009B • BAT Assessment MUE 011 • Noise Impact Assessment – NOVA Acoustics Ltd MUE 012 • EMS Refinery Process Flow Draft MUE 007A • 11518p_Air Quality Assessment for Permit_20200417 MUE 013	21/04/2020
Application EPR/BJ9843IH/V010 Response to Schedule 5 Notice dated 19/10/2020	• Letter: Ref Schedule 5 Response 001, dated 23/10/2020 • DRG 1 Carbon Tank 1 • DRG 2 Carbon Tank 2 • DRG 1 Ammonia Tank	27/10/2020
Further information received EPR/BJ9843IH/V010	Clarification on shredder operating hours.	24/03/2021
Further information received EPR/BJ9843IH/V010	• Letter outlining the chemical storage levels of the 3 active additives (MUE015B) • Material Safety Data Sheets for the three key chemicals • Factory plan of the locations of the chemical storage points, this covers all of the factory including the refinery.	01/04/2021
Further information received EPR/BJ9843IH/V010	Further information on cooling towers including: • EA Cooling Tower Letter • Cooling Tower Layout Plan • Drainage Plan, CL2446	20/04/2021 and 27/04/2021

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The operator shall undertake a review of periodic monitoring for emissions to air of TVOC and PCDD/F from emission point A2. The review will be made with reference to BAT 10 of the BAT Conclusions for the Non-Ferrous Metals Industries (Commission Implementing Decision EU2016/1032) and shall justify, with appropriate evidence, the frequency of monitoring to be employed at the installation from 30 June 2020. The evidence required under this condition shall include analysis and interpretation of monitoring results for each substance, and performance against the relevant BAT-AEL. Consideration should be given to inter alia the nature of the raw materials, fluxing agents, refining chemicals used; operational stability; and process monitoring associated with operation of abatement plant. The quantity of monitoring data considered must be justified and be sufficient so as to demonstrate that the results are statistically representative of emissions during normal operations, covering the concentration range and mass emission rate of substances emitted at all stages of the process. A report on the above review shall be submitted to the Environment Agency to facilitate agreement in writing of the appropriate monitoring provision at the installation.	Complete
IC2	The operator shall undertake a detailed review of available options for fire detection and protection for the ASARCO filtration plant. The review shall consider early detection of potential fires through monitoring temperature rises, as well as spark carry over from the furnace into the filtration plant. The review shall consider early detection and suppression systems, either automatic or manually activated to reduce the potential for a fire within the filtration plant. A copy of the final report and conclusions shall be submitted to the Environment Agency, including a firm time bound plan of work for implementing any practical improvements identified by the review.	Completed
IC3	The operator shall undertake a programme of sampling and analysis of the quench produced after cooling the furnace gases exiting the new reverberatory furnace to establish concentrations of acidic compounds and heavy metals including mercury, cadmium and zinc. These should be used to establish inputs to an H1 risk assessment to determine if the levels going to sewer (emission point S1) can have a significant impact and if so propose a method for reduction or alternative disposal. The sampling, analysis and risk assessment data shall be submitted in writing to the Environment Agency for approval along with a timetable for any alternative methods of reduction or disposal identified.	6 months after commissioning of the copper refinery permitted by variation EPR/ BJ9843IH/V010
IC4	The operator shall submit a report to the Environment Agency for approval covering the following: 1. An assessment and analysis of the concentration of dust emissions produced by the metal shredder; 2. A best available techniques review of the potential options for mitigation and abatement of dust emissions from the shredder; 3. Details of the proposed option(s) for mitigation/abatement if applicable; 4. Details of the maintenance and monitoring that will be carried out for a proposed option; and 5. A proposed timeline for installation.	3 month following the commissioning of the copper shredder permitted by variation EPR/ BJ9843IH/V010

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	Any mitigation or abatement proposed shall be installed in accordance with the approved timeline.	
IC5	Following commissioning of the copper refinery and shredder the Operator shall prepare and submit a comprehensive noise assessment report undertaken by an experienced and suitably qualified person in accordance with the procedures given in BS4142:2014 (Methods for rating and assessing industrial and commercial sound). The assessment shall include the assessment of the impact of operational noise emissions upon surrounding sensitive receptors arising from the operation against the relevant benchmarks for assessment set out in BS4142:2014. If the report does not demonstrate that there will be no adverse effect, the noise management and mitigation proposals must be amended accordingly and the noise assessment updated to reflect the changes.	6 months following the commissioning of the copper shredder permitted by variation EPR/ BJ9843IH/V010
IC6	The operator will develop procedures to ensure that training is provided in the refining aspects introduced through permit variation EPR/BJ9843IH/V010. The procedures shall include but is not limited to the following points; who will be trained, timescales for training, training content and any checks that will be carried out for continued competence. This report shall be submitted to the Environment Agency in writing for approval and the procedures once approved incorporated into the site Environmental Management System.	6 months following the commissioning of the copper shredder permitted by variation EPR/ BJ9843IH/V010

Table S1.4 Pre-operational measures for future development		
Reference	**Operation**	**Pre-operational measures**
PO1	Selective Non-Catalytic Reduction abatement system	The operator shall submit a report to the Environment Agency for approval outlining levels of NOx versus the ELVs specified in the permit and a justification of why further abatement in the form of SNCR is required.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
-	-

Table S2.2 Permitted waste types and quantities for melting of non-ferrous metals.	
Maximum Quantity	**34,000 tonnes per annum**
Waste code	**Description**
17	**Construction and Demolition Wastes (including excavated soil from contaminated sites**
17 04	**metals (including their alloys)**
17 04 01	Copper, bronze, brass

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**
A1	ASARCO Shaft Furnace Stack [1]	No parameters set	-	-	-	-
A2 on site plan in schedule 7	Abatement plant (including bag-plant) serving ASAR CO Shaft Furnace	Particulate Matter	5 mg/m^3	Average over the sampling period	Once a year	BS EN 13284-1 and MID
		Total Volatile organic compounds (as carbon)	30 mg/m^3	Average over the sampling period	Once a year	BS EN 12619
		PCDD/F (as I-TEQ/Nm^3) [4]	0.1 ng/m^3	Average over the sampling period	Twice a year	BS EN 1948 parts 1, 2 & 3 and MID
		Oxides of nitrogen (as NOx)	100 mg/m^3	Average over the sampling period	Once a year	BS EN 14792
		Hydrogen chloride	10 mg/m^3	Average over the sampling period	Once a year	BS EN 1911
		Phosphorus (as P_2O_5)	5 mg/m^3	Average over the sampling period	Twice a year	BS EN 14385
A4 on site plan in schedule 7	3 Bay Degreaser	Tetrachloroethylene [2]	20 mg/m^3	Average over the sampling period[3]	Twice a year	EN/TS 13649
A6 on site plan in schedule 7	In-line Annealing Furnace – 10 bay	No parameters set	No limit set	-	-	-
A7 on site plan in schedule 7	In-line Annealing Furnace – 10 bay	No parameters set	No limit set	-	-	-
A12 on site plan in schedule 7	In-line Annealing Furnace – 9 bay	No parameters set	No limit set	-	-	-
A13 on site plan in schedule 7	Reverberatory furnace emergency bypass stack	No parameters set	-	-	-	-

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**
A14 on site plan in schedule 7	Abatement plant serving reverberatory furnace	Particulate Matter	5 mg/m^3	Average over the sampling period	Once a year	BS EN 13284-1 and MID
		Total Volatile organic compounds (as carbon)	30 mg/m^3	Average over the sampling period	Once a year	BS EN 12619
		PCDD/F (as I-TEQ/Nm^3) **4**	0.1 ng/m^3	Average over the sampling period	Twice a year	BS EN 1948 parts 1, 2 & 3 and MID
		Oxides of nitrogen (as NOx)	100 mg/m^3	Average over the sampling period	Once a year	BS EN 14792
		Hydrogen chloride	10 mg/m^3	Average over the sampling period	Once a year	BS EN 1911
		Phosphorus (as P_2O_5)	5 mg/m^3	Average over the sampling period	Twice a year	BS EN 14385
		Ammonia [5]	10 mg/m^3	Average over the sampling period	Once a year	EN ISO21877 or CEN TS 17337
A15	Extraction serving the copper shredder **6**	Particulate matter	5 mg/m^3	Average over the sampling period	Bi-annual	BS EN 13284-1

1. This Emission Point will only be used to vent the furnace to air in an emergency, during start-up and approximately six times a year during melting down operations for repair and shutdowns. Melting down operations shall take no longer than nine hours.

2. Limit value refers to mass of compounds in mg/Nm^3, and not to total carbon.

3. At least three measurement values shall be obtained during each measurement exercise

4. Average over the sampling period of at least six hours

5. If SNCR is operational following completion of pre operational condition PO1.

6. Emission limit value and monitoring and reporting requirements only required if agreed under improvement condition IC4.

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 on site plan in schedule 7 emission to Darlaston Brook	Surface Water Run-off via interceptor	Total suspended solids	35 mg/ml	Instantaneous (Spot meter)	Twice a year	In accordance with Environment Agency M18 Guidance or as agreed in writing with the Environment Agency
		pH	6-9	Instantaneous (Spot meter)	Twice a year	
		Zinc and, its compounds expressed as Zn	500 µg/l	Instantaneous (Spot meter)	Twice a year	
		Copper and its compounds expressed as Cu	500 µg/l	Instantaneous (Spot meter)	Twice a year	
		Lead and its compounds expressed as Pb	50 µg/l	Instantaneous (Spot meter)	Twice a year	
		Cadmium and its compounds, expressed as Cd	10 µg/l	Instantaneous (Spot meter)	Twice a year	
		Chemical oxygen demand (COD)	125 mg/l	Instantaneous (Spot meter)	Twice a year	
		Total hydrocarbon oil	2000 µg/l	Instantaneous (Spot meter)	Twice a year	

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 on site plan in schedule 7 emission to Severn Trent public foul sewer	Site cooling water and flue gas quench from copper refinery	Total suspended solids	400 mg/l	Instantaneous (Spot meter)	Twice a year	In accordance with Environment Agency M18 Guidance or as agreed in writing with the Environment Agency
		pH	6-10	Instantaneous (Spot meter)	Twice a year	
		Copper and its compounds (as Cu)	5 mg/l	Instantaneous (Spot meter)	Twice a year	
		Zinc and its compounds (as Zn)	25 mg/l	Instantaneous (Spot meter)	Twice a year	

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**
		Chemical Oxygen demand (COD)	600 mg/l	Instantaneous (Spot meter)	Twice a year	

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

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	A2, A4, A14, A15	Every 6 months	1 January, 1 July
Emissions to water Parameters as required by condition 3.5.1	W1	Every 6 months	1 January, 1 July
Emissions to Sewer Parameters as required by condition 3.5.1	S1	Every 6 months	1 January, 1 July

Table S4.2 Annual production/treatment	
Parameter	**Units**
Copper products	tonnes

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Water usage	Annually	m^3
Energy usage	Annually	MWh
Total raw material used	Annually	Tonnes/tonne of finished product
Particulates and CO released to air	Annually	Kg/tonne of finished product
Waste disposal (excluding material sent for recovery)	Annually	Tonnes/ tonne of finished product

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form air 1 or other form as agreed in writing by the Environment Agency	08/03/2021
Water	Form water 1 or other form as agreed in writing by the Environment Agency	03/09/2018
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	03/09/2018
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	03/09/2018
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	03/09/2018

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Particulates/CO	Form Performance 1 or other form as agreed in writing by the Environment Agency	03/09/2018
Waste	Form Performance 1 or other form as agreed in writing by the Environment Agency	03/09/2018

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	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant 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)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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**

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) Notification requirements for the detection of any significant adverse environmental 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 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.	

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.

“BAT-AELs” means BAT-associated emission levels, i.e. the emission levels associated with the best available techniques for emissions to air and/or water, as set out in the Non-Ferrous Metals BAT Conclusions.

“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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

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

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

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.

For the determination of the toxic equivalence (I-TEQ) value stated as a release limit the mass concentrations of the following dioxins and furans have to be multiplied with their equivalence factors before summing.

Equivalence factor:

Dioxins

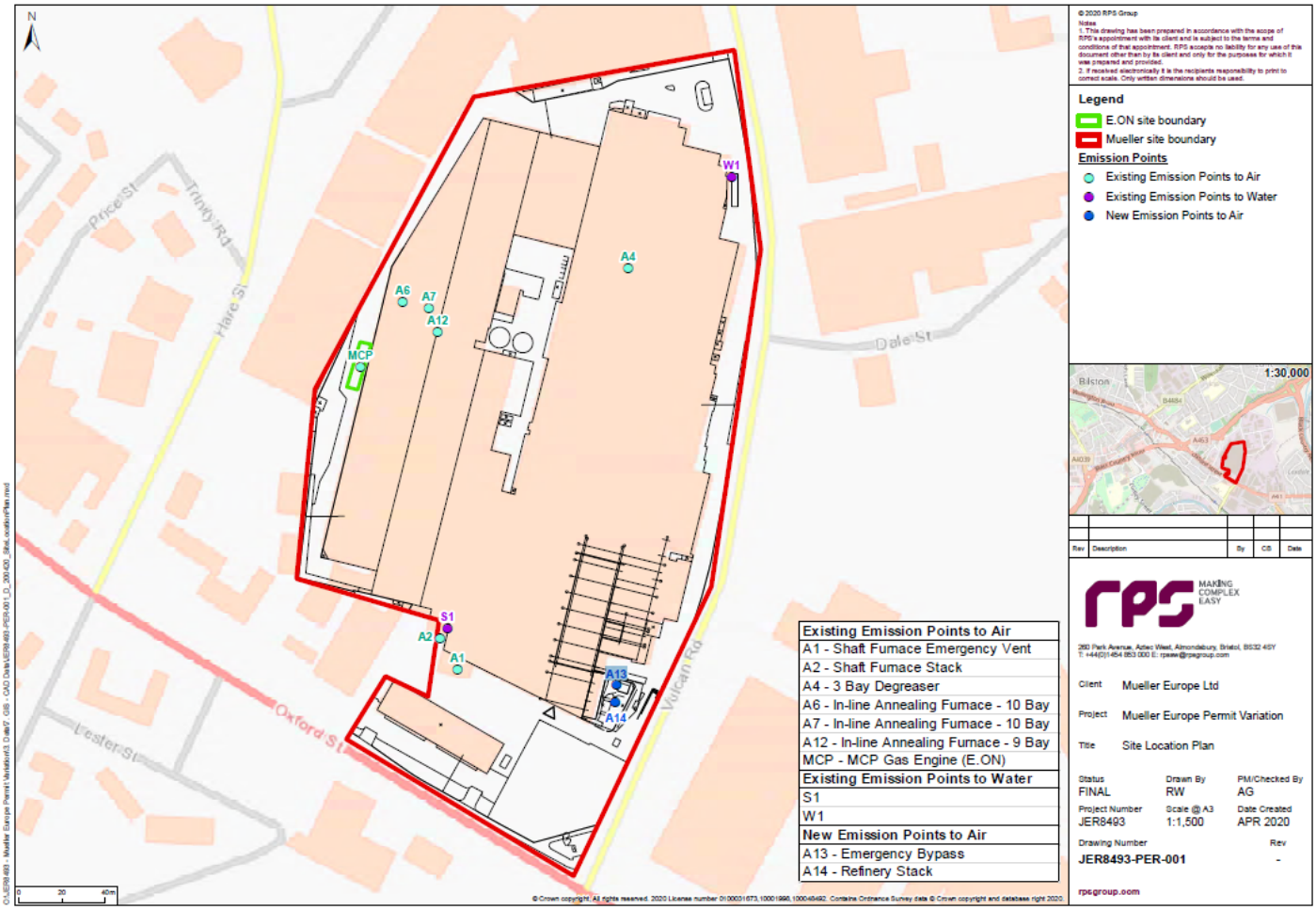
2,3,7,8 Tetrachlordibenzodioxin (TCDD)	1
1,2,3,7,8 Pentachlordibenzodioxin (PeCDD)	0.5
1,2,3,4,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,7,8,9 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,6,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,4,6,7,8 Heptachlordibenzodioxin (HpCDD)	0.01
Octachlordibenzodioxin (OCDD)	0.001

Furans

2,3,7,8 Tetrachlorodibenzofuran (TCDF)	0.1
2,3,4,7,8 Pentachlorodibenzofuran (PeCDF)	0.5
1,2,3,7,8 Pentachlorodibenzofuran (PeCDF)	0.05
1,2,3,4,7,8 Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,7,8,9 Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,6,7,8 Hexachlordibenzofuran (HxCDF)	0.1
2,3,4,6,7,8 Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,4,6,7,8 Heptachlordibenzofuran (HpCDF)	0.01
1,2,3,4,7,8,9 Heptachlordibenzofuran (HpCDF)	0.01
Octachlordibenzofuran (OCDF)	0.001

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



END OF PERMIT