Permit with introductory note

The Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013

Operator Name: McKenzies (Aluminium) Ltd

Installation address: Unit 6 Redlands Crescent
Port of Larne Business Park
Larne
BT40 1AX

Permit number
P0542/16A

Contents

Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 10 of the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013 ("the Regulations") to operate an installation carrying out one or more of the activities listed in Part 1 to Schedule 1 of those Regulations, to the extent authorised by the permit.

The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the condition implied by Regulation 12(9) of the Regulations, that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

The enforcing authority for part A installations in Northern Ireland is the Chief Industrial Pollution Inspector. Under Regulation 8(4) any function of the Chief Inspector may be delegated to any other Inspector appointed by the Department of the Environment and references to the Chief Inspector should be interpreted accordingly.

Brief description of the installation regulated by this permit

The main purpose of the activity

Non-Technical Summary

Aluminium scrap metal entering the yard is received, inspected and visually checked on the weighbridge to confirm quality and compliance. The aluminium scrap is graded according to type and alloy and tipped into segregated covered concrete bays in the storage yard.

Charging Machine

Forklifts and front end loaders are used to load the charge bins with selected aluminium scrap. The charge bins are weighed prior to being emptied into the charging machine. One charge is between 3 to 4 tonnes depending on the density of the scrap.

Melting Furnace

The melting furnace is a tilting rotary furnace with a charge capacity of 15 tonnes. Prior to loading the furnace, the charging machine is moved into position in front of the furnace and below the extraction hood. The charging machine discharges its load via a vibratory conveyor into the furnace. A salt based melting flux is added at this stage of the process.

Once a load has been discharged, the charging machine is moved back into is loading position outside the extraction hood ready to receive its next load. Simultaneously the furnace door is closed and the aluminium scrap (melt) is heated for about 15 minutes. This reduces the volume but does not melt into a liquid state.

The aluminium scrap may contain small amounts of oil and paint and will give rise to VOC and smoke and it is for this reason the whole furnace is installed in a housing which is under negative pressure from the filter plant fan. In addition, the furnace automatically burns off the VOC in an afterburning phase by injecting excess oxygen to allow complete combustion, preventing the release of smoke and unburnt VOC. After 20 minutes the first charge is partially melted, the volatiles burnt off and the furnace is ready to be charged again.

After four or five charges in the furnace with a capacity of 15 tonnes the furnace temperature is increased to 700 °C to rapidly melt the charge.

At this stage the molten metal from the melting furnace is poured out of the furnace and transferred across to the adjacent holding furnace, using a transfer launder.

As soon as the recovered molten aluminium is emptied from the furnace the remaining slag, which contains spent flux and impurities separated during the melting cycle is tipped out of the furnace into a steel slag bin. The slag is taken away to a storage area where it is allowed to cool for a period of 24 hrs in the designated area. With the slag removed, the furnace walls are scrapped clean, using a fork lift and a raking tool.

The whole charge cycle from start to finish takes around 4 hours, making it possible to melt around 90 tonnes/24 hrs.

Holding Furnace

While the rotary melting furnace is the process of melting its charge, around two to three tonnes of solid clean aluminium scrap is melted in the holding furnace, which has a melt rate of three tonnes/hr. Depending on what alloy is produced, some alloying elements can be put in the holding furnace and be preheated. Around 12 to 13 tonnes of liquid aluminium is poured across from the rotary melting furnace into the holding furnace for mixing. At this stage a sample is taken and analysed to show the exact elemental content of the melt.

Prior to alloying, the surface temperature is raised to about 750°C and the surface of the bath cleaned off so there are no oxides or dross on the melt surface. The elements are charged into the furnace using a rotating spoon on a forklift.

Nitrogen is injected into the bath through a series of porous ceramic diffuser plugs that split the nitrogen into an ‘aerosol’ of fine bubbles. The gas injection will remove any hydrogen gas in the molten aluminium and also thoroughly mix the bath so the melt becomes one homogeneous body.

Ingot Casting Machine Operation

The plant is equipped with a fully automatic ingot casting system including ingot stacking and water cooling. The ingot conveyor is fitted with 220 cast iron moulds and each mould produces an 8 kg aluminium ingot. The Ingot line has a design speed of 8 tonnes per hour meaning a 15 tonnes melt from the holding furnace is completed in two hours.

Slag Handling

The furnace is used to melt a very wide variety of aluminium scrap, much of which contains combustible elements, such as paint and oils and in order to maximise the recovery of good aluminium from the scrap, a salt based flux is added and used to separate the liquid aluminium. The amount of flux is determined by the amount of impurities in the aluminium scrap, but generally amounts to 5 -10% of the charge weight. At the end of the melting process the slag is tipped out of the rotary furnace into heavy steel fabricated moulds. These are allowed to cool and solidify and the cooled slag is tipped into suitable bulk tipper lorries for onward transportation.

Dust and Fume Abatement

The furnace has a main hood which collect both the combustion emissions and other emissions during the charging, casting and slag tipping operations. A constant negative pressure is maintained by the filter plant fan. Prior to emissions the exhaust gases are conditioned with a lime adsorbent and filtered in a bag filter with a medium pressure reverse air cleaning system to minimize emissions of particulate and acid gases. The particulate emissions are continuously monitored and recorded.

Superseded Licenses/Consents/Authorisations relating to this installation		
Holder	Reference Number	Date of Issue
N/A		

Talking to us

This permit is issued by the Industrial Pollution and Radiochemical Inspectorate of the Northern Ireland Environment Agency. We can be contacted on the telephone using the telephone number 028 9056299 or on the email address IPRI@doeni.gov.uk

If you contact us about this Permit please quote the Permit Number.

The Operator should use the Emergency Hotline telephone number (0800 80 70 60) to notify of any accident which has caused or has the potential to cause water pollution.

Confidentiality

The Permit requires the Operator to provide information to the Chief Inspector. We will place the information onto the public registers in accordance with the requirements of the PPC(IE) Regulations. If the Operator considers that any information provided is commercially confidential, they may apply to the Chief Inspector to have such information withheld from the register as provided in the Regulations. To enable us to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

This Permit may be varied in the future. The Status Log within the Introductory Note to any such variation will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued**.**

Surrender of the permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made. For the applicant to be successful, they would have to be able to demonstrate to the Chief Inspector, in accordance with Regulation 22, where applicable, of the Regulations, that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 20 of the Regulations. A transfer will be allowed unless the Chief Inspector considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit. If the Permit authorises the carrying out of a specified waste management activity, then there is a further requirement that the transferee is considered to be a "fit and proper person" to carry out that activity.

Status Log

Detail	Date	Comment
Application : *P0542/16A*	Duly Made: *10 Sept 2016*	
Permit: *P0542/16A*	Determined: 07 March *2017*	

End of introductory note.

PERMIT

Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013

Permit Number
P0542/16A

The Chief Inspector in exercise of his powers under Regulation 10 of the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013 hereby authorises

McKenzies (Aluminium) Ltd
("the Operator"),

whose Registered Office is
Suite 5 Ormeau House
91-97 Ormeau House
Belfast
County Antrim
BT71 SH

Company registration number **NI 635671**

to operate an Installation at
Unit 6
Port of Larne Business Park
Redlands
Larne
County Antrim
BT40 1AX

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

This permit shall have effect from **13 March 2017**.

Signed

Chief Inspector

Date

Conditions

1 General

1.1 The Permitted Activities

1.1.1 The Operator is authorised to carry out the activities and/or the associated activities specified in Table 1.1.1.

Table 1.1.1 Descriptions or Permitted Activities 1.1.1

Activity under Schedule 1 of the Regulations/ Associated Activity	Description of specified activity	Schedule 1 Activity Reference (if applicable)	Limits of Specified Activity
Melting, including making alloys, of non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where 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	Smelting of Aluminium	2.2 Part A (b)	Receipt of raw material, melting, casting, storage and dispatch of aluminium ingots

1.2 The Site

1.2.1 The activities authorised under condition 1.1 shall not extend beyond the Site, being the area shown edged on the plan at Schedule 5.

1.3 Overarching Management Condition

Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.

1.4 Pre Operation Conditions

1.4.1 Provide the Chief Inspector with an internal and external plan drawing of the process effluent and sewage water drainage systems.

1.4.2 Provide the Chief Inspector with a written procedure for the use of fluxing agents in order to ensure efficient use of the material.

1.5 Off Site Conditions

1.5.1 There are no off site conditions.

1.6 Minor Operational Changes

1.6.1 When the qualification "or as otherwise agreed in writing" is used in a condition of this Permit, the Operator shall seek such agreement in the following manner:

a) the Operator shall give the Chief Inspector written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and

b) such notice shall include an assessment of the possible effects of the proposed change, (including waste production), on risks to the environment from the permitted installation; any relevant supporting assessments/drawings; and the proposed implementation date.

1.6.2 Any change proposed according to condition 1.6.1 shall not be implemented until it has been agreed in writing by the Chief Inspector. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.

2 Operating Conditions and Emission Controls

2.1 In Process Controls

2.1.1 The Permitted Installation shall, subject to the conditions in this Permit, be operated using the techniques and in the manner described in the Application, or as otherwise agreed in writing by the Chief Inspector.

2.1.2 The Operator shall implement and maintain a system for the protection of ground and groundwater and shall carry out reviews at a minimum frequency of every 2 years.

2.1.3 The sulphur content of liquid fuels burned on site shall be in accordance with the Sulphur Content of Liquid Fuels Regulations (Northern Ireland) 2007. The sulphur content of Heavy Fuel oil shall not exceed 1% by weight, and distillate shall not exceed 0.1% by weight).

The Operator shall only use, gasoil, natural gas, or processed fuel oil as fuel or as otherwise agreed in writing by the Chief Inspector.

2.1.4 The Operator may only use processed fuel oil (PFO) that meets the requirements of the NIEA/ Environment Agency / WRAP's "*Quality Protocol – End of waste criteria for the production and use of processed fuel oil from waste lubricating oils*". Where PFO is used as a fuel, the Operator shall:

(i) only accept PFO from a facility permitted to produce PFO;
(ii) obtain a certificate of conformity in accordance with the quality protocol from the PFO producer prior to unloading each delivery of PFO at the Permitted Installation;
(iii) reject any deliveries of PFO that do not meet the quality protocol; and
(iv) keep records of all deliveries of PFO for a minimum of 3 years, (including certificates of conformity with the quality protocol and details of any rejected deliveries).

Any changes from the above arrangements must be agreed in writing with the Chief Inspector.

2.1.5 The operator shall ensure that dross is kept dry and stored under cover at all times; any spills of dross shall be cleaned up using dry cleaning procedures only.

2.1.6 All furnace operations shall be monitored for melt temperature, oxygen and carbon monoxide in order to control efficient combustion.

2.1.7 The furnace shall be fitted with sealed charging door systems to minimise fugitive emissions during operations.

2.1.8 In the case of abnormal operations, failure of the abatement plant, furnace or CEM, the operator shall stop feeding material to furnace.

2.2 Emissions

2.2.1 Emissions to Air (other than odour, noise and vibration)

2.2.1.1 Emissions to air from the emission point specified in Table 2.2.1.1 shall only arise from the source specified in that Table at the locations specified in the Application.

Table 2.2.1.1: Emission Points to Air Table 2.2.1.1: Emission Points to Air

Emission Point Reference/Description	Source
A1	Filter Plant Stack

2.2.1.2 The limits for emissions into air for the parameter(s) and emission point(s) set out in Table 2.2.1.2 shall not be exceeded.

Table 2.2.1.2: Emission limits into air

Release Point	Parameter	Value	Monitoring requirement	Notes
A1	Smoke	Ringelman Shade 1	• Determined by British Standard BS 2742:1969. This limit applies to all times except for a maximum of 15 minutes on start up from cold, in which case the emissions shall not exceed the equivalent of Ringelmann Shade 2	• 14 days' advance notification of testing required. Compliance demonstrated if the concentration of any spot test does not exceed this value
	Total Particulate Matter (All furnace operations-charging, fluxing, melting, pouring)	20 mg/m^3	• Continuous indicative monitoring with recording • Annual Monitoring Determined by BS EN 13284-1	
	Chlorine (Degassing)	5 mg/m^3	• Annual monitoring, method of analysis to be agreed with the Chief Inspector	
	Chloride, expressed as Hydrogen Chloride (Fluxing Operations)	5 mg/m^3		
	Fluoride expressed as Hydrogen Fluoride (Fluxing Operations)	5 mg/m^3		
	Oxides of Nitrogen	200 mg/m^3		
	Dioxins	1 ng/m^3		

2.2.1.3 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions to air from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.2 Emissions to Water [other than emissions to sewer]

2.2.2.1 There shall be no emission to water from the permitted installation

2.2.2.2 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions to water from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant. The Operator shall not allow any release that would cause a breach of an EQS established to implement the Water Framework Directive (classification, priority substances and shellfish waters) regulations (Northern Ireland) 2015, or Directive 2008/105/EC on Environmental Quality Standards in the field of Water Policy.

2.2.3 Emissions to Sewer

2.2.3.1 No emission shall be made to any sewer from the permitted installation

2.2.3.2 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions to sewer from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant. The Operator shall not allow any release that would cause a breach of an EQS established to implement The Water Framework Directive (Priority Substances and Classification) Regulations (Northern Ireland) 2011 or Directive 2008/105/EC on Environmental Quality Standards in the field of Water Policy.

2.2.4 Emissions to Land

2.2.4.1 This Part (2.2.4) of the Permit shall not apply to emissions to groundwater.

2.2.4.2 There shall be no emission to land from the permitted installation.

2.2.5 Emissions to Groundwater

2.2.5.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any hazardous substance or non-hazardous pollutant, as defined in the Groundwater Regulations (Northern Ireland) 2009.

2.2.5.2 For substances other than those in condition 2.2.5.1, the Operator shall use BAT to prevent or where that is not practicable to reduce emissions to groundwater from the Permitted Installation, provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.6 Odour

2.2.6.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:

- limiting the use of odorous materials;
- restricting odorous activities;
- controlling the storage conditions of odorous materials;
- controlling processing parameters to minimise the generation of odour;
- optimising the performance of abatement systems;
- timely monitoring, inspection and maintenance; and
- employing, where required by the Chief Inspector, an approved odour management plan;

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.6.2 All emissions to air from the installation shall be free from offensive odour as perceived by an Inspector outside of the installation boundary but the Operator shall not be taken to have breached this condition if it has used BAT to prevent, or where that is not practicable, to reduce, such odorous emissions.

2.3 Management

2.3.1 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

Training

2.3.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.3.3 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.

2.3.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep a record of all relevant training.

Maintenance

2.3.5 All plant and equipment used in operating the Permitted Installation shall be kept in good operating condition.

2.3.6 The Operator shall maintain a record of relevant plant and equipment covered by condition 2.3.5 and for such plant and equipment:

- A written or electronic maintenance programme; and
- Records of its maintenance.

Incidents and Complaints

2.3.7 The Operator shall maintain and implement written procedures for:

- Taking prompt remedial action, investigating and reporting actual or potential non compliance with the conditions of this permit;
- Investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques and near misses) and prompt implementation of appropriate actions; and
- Ensuring that detailed records are made of all such actions and investigations.

2.3.8 In the event that a breach of any permit condition poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the Operator shall immediately suspend the operation of the installation or the relevant part of it until compliance with permit conditions has been restored.

2.3.9. The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment. The record shall give the date and time of complaint, nature of complaint, name of complainant (if given), a summary of any investigation and any actions taken.

2.4 Efficient use of Raw materials (including water)

2.4.1 Raw Material Selection

2.4.1.1 The Operator shall maintain the details of raw materials used in the installation submitted in the Application. The Operator shall review raw materials used in order to identify whether there are suitable alternatives which would reduce environmental impact at least every 3 years and submit a record of the review as part of the report referred to in condition 4.3.

2.4.1.2 No unsorted scrap aluminium materials shall be stored in the area shown edged on the plan at Schedule 5.

2.4.1.3 All scrap aluminium materials shall be sorted prior to loading into the furnace to prevent introduction of dirty or deleterious materials into the furnace. Sorted aluminium scrap shall be stored in a designated area forming part of the area shown edged on the plan at schedule 5.

2.4.1.4 The operator shall record the mass weight in tonnes off all the raw material used in the process. The data recorded should be used to produce an annual yield to input efficiency report. The report should identify industry benchmarks for comparison of the process efficiency and present an improvement plan where necessary.

2.4.2 Waste Minimisation Audit

2.4.2.1 The Operator shall carry out a waste minimisation audit at least every 3 years. The methodology used and an action plan for increasing the efficiency of the use of raw materials shall be submitted to the Chief Inspector as part of the report referred to in condition 4.3.

2.4.3 Water Use

2.4.3.1 The Operator shall carry out a review of water use, (water efficiency audit), at least every 3 years. The methodology used and an action plan for increasing the efficiency of the use of water shall be submitted to the Chief Inspector as part of the report referred to in condition 4.3.

2.4.3.2 The Operator shall ensure that incoming water use is directly measured and recorded.

2.5 Waste Handling and Storage

2.5.1 The Operator shall design, maintain and operate all facilities for the storage of waste on site to prevent, or where that is not possible to minimise releases to air, water or land during normal operation and to minimise the risk of accidental releases.

2.5.2 Waste materials specified in Table 2.5.1 shall only be stored on the site in the location and manner specified in that Table.

Table 2.5.1: Waste stored on site

Description of Waste	Location of Storage on Site	Manner of Storage	Storage Conditions
General Waste	Hard Standing	Covered Skip	Open to the elements
Salt Slag	Under Cover	Storage Bays	Bins under cover & loose under cover
Filter Plant Dust	Under Cover	Palletised	Sealed IBC or bulk bags
Iron Scrap	Open Bay	Storage Bay	Open to the elements
Hydraulic Fluid	Bunded Area	Drums as required	Bunded area
Diesel	Bunded Area	Drums as required	Bunded Area

2.5.3 Waste materials produced by the furnace operations such as dross and metals shall be properly handled and stored such as not to produce dust or odour.

2.6 Waste Recovery and Disposal

2.6.1 The Operator shall maintain the waste recovery and disposal table or description, (for materials removed from the Permitted Installation), that was submitted in the Application. The Operator shall review the techniques used for recovery or disposal of each material at least every 3 years and justify these as the most appropriate. A record of the review shall be submitted to the Chief Inspector as part of the report referred to in condition 4.3.

2.6.2 The Operator shall maintain and implement a system that ensures a record is made of the quantity, composition, origin, destination, (including whether this is a recovery or disposal operation), and where relevant the removal date of any waste that is removed from the Permitted Installation.

2.6.3 The Operator shall only remove materials from the Permitted Installation for recovery or disposal using appropriately authorised carriers/facilities.

2.7 Energy Efficiency

2.7.1 The Operator shall maintain and update annually an energy management system that shall include, in particular, the monitoring of energy flows and targeting of areas for improving energy efficiency.

2.7.2 The Operator shall design, maintain and operate the permitted installation so as to secure energy efficiency. Energy efficiency shall be secured in particular by:

- ensuring that the appropriate operating and maintenance systems are in place;
- ensuring that all plant is adequately insulated to minimise energy loss or gain;
- ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;
- employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;
- where building services constitute more than 5% of the total energy consumption of the installation, identifying and employing appropriate energy efficiency techniques; and
- by maintaining an energy efficiency plan which identifies energy saving techniques that are applicable to the activities and their associated environmental benefit and prioritises them.

2.8 Accident Prevention and Control

2.8.1 The Operator shall operate in accordance with and maintain the accident management plan submitted or described in the Application. The plan shall be reviewed at least every 3 years or as soon as practicable after an accident, whichever is earlier. Where the plan is reviewed after an accident, the Chief Inspector must be notified of the results of the review within 2 months of its completion, otherwise a record of the review shall be submitted to the Chief Inspector as part of the report referred to in condition 4.3.

2.8.2 In the event of an accident which has caused, is causing or has the potential to cause significant pollution, the operator shall immediately take measures to limit the environmental consequences and to prevent further possible accidents.

2.9 Noise and Vibration

2.9.1 The permitted installation shall be designed, operated and maintained so as to avoid reasonable cause for annoyance from noise or vibration, in particular by:

- equipment maintenance, (e.g. fans, pumps, motors, conveyors and mobile plant);
- use and maintenance of appropriate attenuation, (e.g. silencers, barriers, enclosures);
- timing and location of noisy activities and vehicle movements;
- periodic checking of noise emissions, either qualitatively or quantitatively; and

- maintenance of building fabric; and
- employing, where required by the Chief Inspector, an approved noise management plan;

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.9.2 Emergency generators/alarms/sirens/release valves shall only be tested between the hours of 10.00 and 17.00 Monday to Friday and not on any Public Holiday.

2.10 Monitoring

2.10.1 The Operator shall maintain and implement an emissions monitoring programme that ensures emissions are monitored from the specified points, for the parameters listed in and to the frequencies and methods described in Table 2.2.1.2 and that the results of such monitoring are assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions.

2.10.2 The Operator shall carry out the monitoring of the process operation detailed in Table S3 to the frequencies and methods described in that Table.

2.10.3 The Operator shall notify the Chief Inspector at least 14 days in advance of undertaking monitoring and/or spot sampling, where such notification has been requested in this Permit.

2.10.4 The Operator shall maintain records of all monitoring taken or carried out (this includes records of the taking and analysis of samples instrument measurements (periodic and continuous), calibrations, examinations, tests and surveys) and any assessment or evaluation made on the basis of such data.

2.10.5 Monitoring equipment, personnel and organisations used for the emissions monitoring programme in condition 2.10.1 of this Permit shall be covered by:

- MCERTS certification or accreditation where available; or
- Accredited to EN ISO/IEC 17025 *"General requirements for the competence of testing and calibration laboratories"*;

unless otherwise agreed in writing with the Chief Inspector.

2.10.6 The Operator shall provide in accordance with BS EN 15259 *"Air quality – Measurement of stationary source emissions – Requirements for measurement sections and sites and for the measurement objective, plan and report"*

- a measurement plan prior to commencing an emissions test;
- safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2 to this Permit, and
- safe means of access to other sampling/monitoring points when required by the Chief Inspector.

2.10.7 The Operator shall, subject to IMP 1, ensure that the sampling locations for emission points listed in Table 2.2.1.1 are clearly labelled with the emission point reference in that table.

2.10.8 The Operator shall carry out monitoring of the condition of groundwater and soil and compare with the measurements in the baseline report, where applicable, at least every 5 years for groundwater and every 10 years for soil.

2.10.9 The Operator shall take monthly representative samples of PFO using IP475 and have them analysed for the parameters and by methods specified in the Quality Protocol referred to in condition 2.1.6 by a laboratory accredited to ISO 17025, or as otherwise agreed in writing.

2.10.10 The furnace shall, at least annually be tested for the effectiveness of combustion. This shall be achieved my measuring the O2, CO2 and CO levels within the furnace. Limits on parameters shall be determined, which indicate the limits between which the measured values must lie for combustion to be considered satisfactory. Results shall be recorded in the log book together with the air and oil pressures at the time of testing.

2.11 Closure and Decommissioning

2.11.1 The Operator shall maintain and operate the Permitted Installation so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:

- attention to the design of new plant or equipment;
- the maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out.; and
- the maintenance of a site closure plan to demonstrate that the installation can be decommissioned avoiding any pollution risk and returning the site of operation to a satisfactory state.

2.11.2 Notwithstanding condition 2.11.1 of this Permit, the Operator shall carry out a full review of the Site Closure Plan at least every 3 years and a record of the review shall be submitted to the Chief Inspector as part of the report referred to in condition 4.3.

2.11.3 The site closure plan shall be implemented on final cessation or decommissioning of the permitted activities or part thereof.

2.11.4 The Operator shall give at least 30 days written notice to the Chief Inspector before implementing the site closure plan.

2.12 Multi-operator Installations

2.12.1 This is not a multi-operator installation.

3 Records

3.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:

(i) be made available for inspection by the Chief Inspector at any reasonable time
(ii) be supplied to the Chief Inspector on demand and without charge
(iii) be legible
(iv) be made as soon as reasonably practicable
(v) indicate any amendments which have been made and shall include the original record wherever possible; and
(vi) be retained at the Permitted Installation, or other location agreed by the Chief Inspector in writing, for a minimum period of 4 years from the date when the records were made.

4 Reporting

4.1 One original and two copies of all reports and notifications required by this Permit, and notifications required by Regulation 18 of the Regulations, shall be sent to the Chief Inspector at the address notified in writing to the Operator by the Chief Inspector.

4.2 The Operator shall, unless otherwise agreed in writing, submit reports of the monitoring and assessment carried out under Condition 2.10, as follows:

a) in respect of the parameters and emission points specified in Table S2 to Schedule 2 and Table S3 to Schedule 3;
b) for the reporting periods specified in Table S2 to Schedule 2 and Table S3 to Schedule 3 using the forms specified in Tables S4 to Schedule 4;
c) giving the information from such results and assessments as may be required by the forms specified in those Tables; and
d) to the Chief Inspector within 28 days of the end of the reporting period.

4.3 The Operator shall, within 18 months of the issue of this Permit, submit a report on the matters listed in conditions 2.4.1.1, 2.4.2.1, 2.4.3.1, 2.6.1, 2.8.1, and 2.11.2 and shall thereafter submit an updated report every 36 months**.**

4.4 The Operator shall, unless otherwise agreed in writing, submit on the following to the Chief Inspector by the 31 January each year:

(i) a report on the energy consumed over the previous calendar year, providing the information listed in Table S5.1 in Schedule 5;
(ii) a report of a review of fugitive emissions detailing such releases and the measures taken to reduce them;
(iii) where the Operator has an environmental management system applying to the Permitted Installation which encompasses annual improvement targets, a report of the previous year's progress against such targets;
(iv) a completed Pollution Inventory Reporting Form in respect of the operation of the Permitted Installation during the previous year in accordance with the instructions and definitions included in the Form;

4.5 The results of reviews of the system for protection of ground and groundwater referred to in condition 2.1.2 and any changes made shall be reported to the Chief Inspector within 1 month of the review or change.

5 Notifications

5.1 The Operator shall notify the Chief Inspector **without delay** of:-

a) the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance;
b) the detection of any fugitive emission which has caused, is causing or may cause significant pollution;
c) the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution,
d) any accident which has caused, is causing or has the potential to cause significant pollution;
e) any other breach of a permit condition; and
f) if the equipment used to continuously monitor or record any of the parameters specified in Table 2.2.1.2 becomes unavailable.

5.2 The Operator shall submit written confirmation to the Chief Inspector of any notification under condition 5.1 of this Permit by sending:-

a) the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
b) the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;
and such information shall be in accordance with that Schedule.

5.3 The Operator shall give written notification as soon as practicable, of any of the following:

a) permanent cessation of the operation of part or all of the Permitted Installation;
b) cessation of the operation of part or all of the Permitted Installation for a period, likely to exceed 1 year; and
c) resumption of the operation of part or all of the Permitted Installation after a cessation notified under 5.3(b).

5.4 The Operator shall notify the Chief Inspector, as soon as practicable, of any information concerning the state of the site which adds to that provided to the Chief Inspector as part of the Application or to that in the site condition report.

5.5 The Operator shall notify the following matters to the Chief Inspector, in writing, within 14 days of their occurrence:

(i) any change in the Operator's trading name, registered name or registered office address;
(ii) a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);

or

(iii) any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

5.6 Where the Operator has entered into a Climate Change Agreement with the Government, the Operator shall notify the Chief Inspector within one month of:

(i) a decision not to re-certify that Agreement;
(ii) a decision to terminate that Agreement;
(iii) a failure to comply with an annual target under that Agreement at the end of a target period.

or

(iv) any subsequent decision to re-certify such an Agreement.

5.7 Where the Operator uses PFO as fuel, the Operator shall notify the Chief Inspector prior to the following:

(i) using PFO as a fuel;
(ii) ceasing to use PFO as a fuel; or
(iii) changing PFO supplier(s).

6. Improvement Programme

6.1 The Operator shall complete the requirements specified in Table 6.1 by the date specified in that Table, and shall send written notification of the date of completion of each requirement to the Chief Inspector, at the Reporting Address, within 14 days of the completion of each such requirement.

Table 6.1.: Improvement Programme Requirements

Ref.	Requirement	Date
IMP 1	The Operator shall ensure that the sampling locations for emission points listed in Table 2.2.1.1 are clearly labelled with the emission point reference in that table.	3rd April 2017
IMP 2	The Operator shall provide the Chief Inspector with a written environmental training needs analysis for all relevant employees and contractors, (i.e. for anyone whose action could impact the environment or compliance with the conditions of this permit)	3rd April 2017
IMP 3	The operator shall provide the Chief Inspector with a written maintenance programme for all relevant equipment, failure of which would have an adverse impact on the environment, including personnel or contractors responsible for same, (i.e. list of key equipment and spare parts as well as those responsible for their maintenance)	1st June 2017
IMP 4	Provide access and test platform to sampling port for release points A1 that comply with the requirements specified in Monitoring Guidance Note M1 or as otherwise agreed in writing by the Chief Inspector.	1st June 2017
IMP 5	The operator shall provide the Chief Inspector with a written report to demonstrate compliance of releases from release points A1 with emissions limits specified in Table 2.2.1.2 within three months of starting operation of the plant.	23th June 2017
IMP 6	The operator shall provide the Chief Inspector with a noise assessment around the site periphery and submit a report on the findings.	1st May 2017

Table 6.1.: Improvement Programme Requirements (Cont)		
IMP 7	The Operator shall review the current containment measures within the installation for all potentially polluting substances identified and agreed with the Chief Inspector. The assessment will take into account requirements of BAT1 – 2 of Section Aluminium and aluminium alloys of Sector Technical Guidance Note EPR 2.03 and Control of Pollution (Oil Storage) Regulations (Northern Ireland) 2010. Particular attention should be given to, but not limited to, the following areas: - Raw Material Store - Wet Processing Areas - All oil storage Areas - Waste Storage Areas A written report shall be forwarded to the Chief Inspector including an agreed timetable for implementation of any recommendations.	28th April 2017
IMP 8	The Operator shall provide the Chief Inspector with a written plan to meet requirements of condition 2.1.2 and 2.10.8.	30th May 2017
IMP 9	A written report based on commissioning results and two 6 monthly tests shall be forwarded to the Chief Inspector within 12 months after starting operation of the furnace defining the limits of parameters for O_2, CO_2 and CO levels which will achieve optimum combustion in the furnace.	13th March 2018
IMP10	Provide the Chief Inspector with a report of tests to determine the volume, temperature and emissions of NO/NO_2 from release point A1and a written report of a comparison with input data used in the dispersion modelling study submitted in support of the application to justify that environmental impact of releases to air was insignificant	30th May 2017

7. Interpretation

7.1 In this Permit, the following expressions shall have the following meanings:

"Application" means the application for this Permit or to vary any condition of this permit together with any response to any notice served under the Regulations and any operational change agreed under the conditions of this Permit.

"Background concentration" means the same as "background quantity" as defined in paragraph 8 to Part 2 to Schedule1 of the Regulations.

"BAT" means Best Available Techniques, as defined in Regulation 3 of the Regulations.

"Biannual" means twice per year with at least five months between tests.

"Chief Inspector" means the person so appointed under Regulation 8 of the PPC Regulations.

"*Fluorinated (F) gases*" are hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF_6) and chlorofluorocarbons (CFC).

"Fugitive emission" means an emission from the Permitted Installation that is not from an emission point listed in Tables 2.2.1.1, 2.2.2.1 or 2.2.3.1 of this Permit, excluding emissions of odour and noise specifically controlled under sections 2.2.6 or section 2.9 of this Permit.

"Groundwater" means all water which is below the surface of the ground in the saturation zone and in direct contact with the soil and sub-soil.

"Inspector" means a person appointed under Regulation 8 of the Regulations.

"$L_{Aeq,T}$" means the equivalent continuous A-weighted sound pressure level in dB determined over time period T.

"$L_{A90,T}$"means the A-weighted sound pressure level in dB exceeded for 90% of the time period T.

"L_{AFmax}" means the maximum A-weighted sound level measurement in dB measured with a fast time weighting.

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

"*Monitoring*" includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

"NATO" means the North Atlantic Treaty Organization.

"*Ozone Depleting Substances (ODS)"* are hydrobromofluorocarbons (HBFC) and hydrochlorofluorocarbons (HCFC).

"*PAH*" means Poly-cyclic aromatic hydrocarbon and comprises of Anthanthrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[b]naph(2,1-d)thiophene, Benzo[c]phenanthrene, Benzo[ghi]perylene, Benzo[a]pyrene, Cholanthrene, Chrysene, Cyclopenta[c,d]pyrene, Dibenzo[ah]anthracene, Dibenzo[a,i]pyrene, Fluoranthene, Indo[1,2,3-cd]pyrene and Naphthalene.

"*PCB*" means Polychlorinated Biphenyl. Dioxin like PCBs are the non-ortho and mono-ortho PCBs listed in the table below;

Dioxin like PCBs			
Congener	**WHO-TEF (1997/8)**		
	Humans/mammals	***Fish***	***Birds***
Non-ortho PCBs			
3,4,4',5 – TCB (81)	0.0001	0.0005	0.1
3,3',4,4' – TCB (77)	0.0001	0.0001	0.05
3,3',4,4',5 – PeCB (126)	0.1	0.005	0.1
3,3',4,4',5,5' – HxCB (169)	0.01	0.00005	0.001
Mono-ortho PCBs			
2,3,3',4,4' – PeCB (105)	0.0001	<0.000005	0.0001
2,3,4,4',5 – PeCB (114)	0.0005	<0.000005	0.0001
2,3',4,4',5 – PeCB (118)	0.0001	<0.000005	0.00001
2',3,4,4',5 – PeCB (123)	0.0001	<0.000005	0.00001
2,3,3',4,4',5 – HxCB (156)	0.0005	<0.000005	0.0001
2,3,3',4,4',5' – HxCB (157)	0.0005	<0.000005	0.0001
2,3',4,4',5,5' – HxCB (167)	0.00001	<0.000005	0.00001
2,3,3',4,4',5,5' – HpCB (189)	0.0001	<0.000005	0.00001

"*Permitted Installation*" means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

"*The Regulations*" means the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013 and words and expressions defined in the Regulations shall have the same meanings when used in this Permit.

"*Staff*" includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

"*Year"* means calendar year ending 31 December.

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

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

a) in relation to gases 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, 11% dry for waste; and/or

b) in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with correction for water vapour content (dry).

7.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wordings of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.

Schedule 1

Confirmation of condition 5.1 notifications, in accordance with condition 5.2
This Schedule outlines the information that the Operator must provide to the Chief Inspector to satisfy condition 5.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements must 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 Regulations.

Part A

Permit Number			
Name of Operator			
Location of Installation			
Location of the emission			
Time and date of the emission			
Substance(s) emitted	Media	Best estimate of the quantity or the rate of emission	Time during which the emission took place
Measures taken, or intended to be taken, to stop the emission			

Part B

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 or harm which has been or may be caused by the incident	
The dates of any unauthorised emissions from the installation in the preceding 24 months	
Name*	
Position	
Signature	
Date	

[Note * Authorised to sign on behalf of Operator.]

Schedule 2

Reporting of monitoring data

Parameters for which reports shall be made, in accordance with condition 4.2 of this Permit, are listed below.

Table S2: Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Total Particulate Matter	A1	12 Monthly	01 Jan 2017
Chlorine	A1	12 Monthly	01 Jan 2017
Gaseous chlorides as HCl	A1	12 Monthly	01 Jan 2017
Gaseous fluorides as HF	A1	12 Monthly	01 Jan 2017
Dioxine	A1	12 Monthly	01 Jan 2017
Oxides of Nitrogen	A1	12 Monthly	01 Jan 2017

Schedule 3

Forms to be used

Unless otherwise agreed in writing between the Chief Inspector and the Operator, the following forms are to be used for reports submitted to Chief Inspector.

Table S4:Reporting Forms	
Media/parameter	**Form Number**
Air	A1

Form A1

RELEASES INTO AIR

Operator: McKenzies (Aluminium) Ltd **Permit Number: P0542/16A**

Spot Monitoring Results (mg/m^3 unless otherwise stated)

Release Source - A1

Pollutant	Date Test Carried Out	Measured Concentration	Mean CEM Concentration over the spot sampling period
Total Particulate Matter (TPM)			
Chlorine			[redacted]
Gaseous chlorides as HCl			
Gaseous fluorides as HF			
Dioxine			
Oxides of Nitrogen			

Copies of report(s) to be provided

Signed …….

Date……..

(authorised to sign as representative of McKenzies (Aluminium) Ltd

Schedule 4

Reporting of Energy Consumption

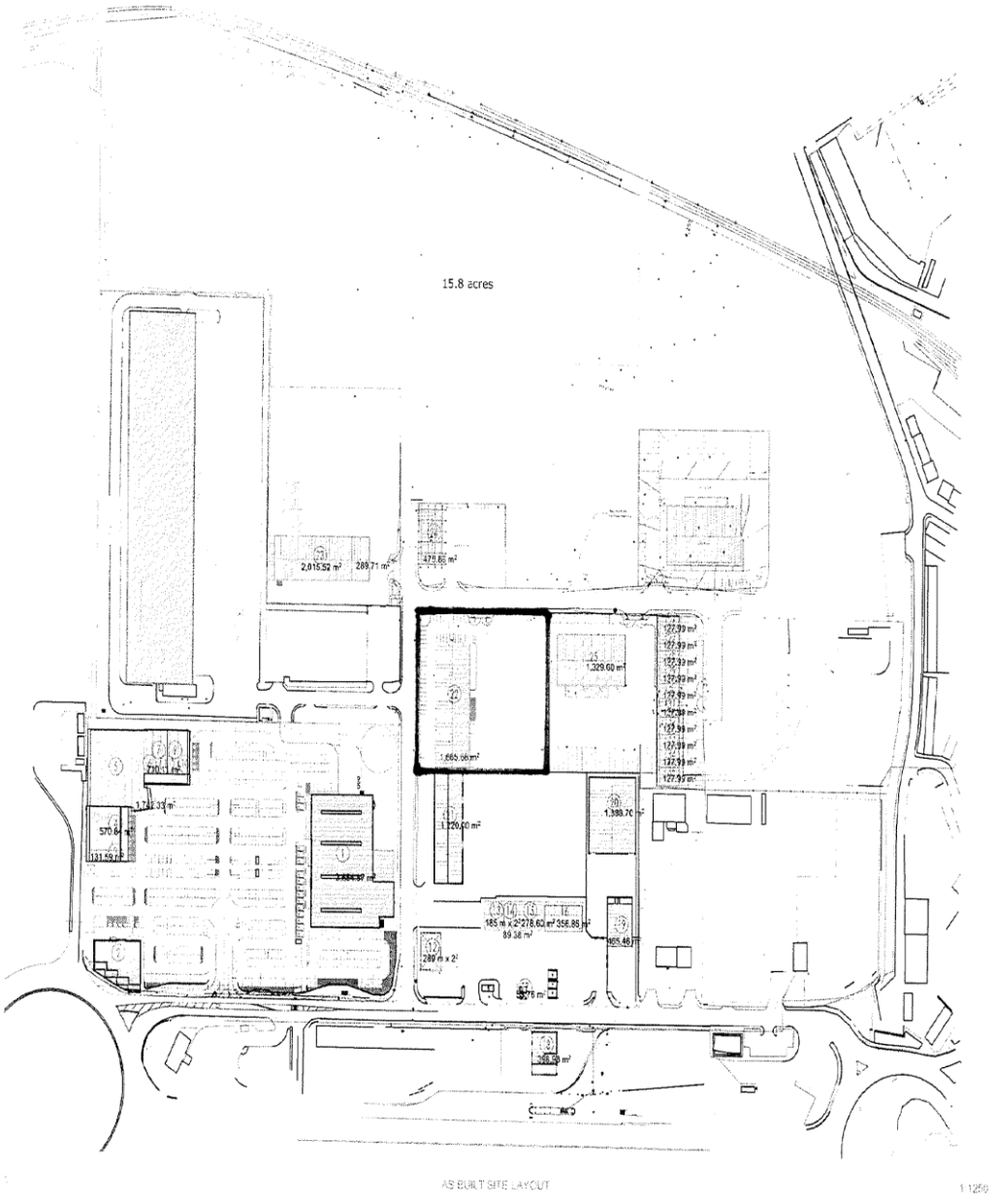
Table S4.1 Energy Consumption				
	Delivered MWh	Primary MWh	MWh / tonne**	% of total
Grid Electricity*				
Generated Electricity	-			
Gas				
Oil				
Waste				
Other				

* Specify conversion factor of primary source to delivered energy

** Provide information per MWe where appropriate, or define other reference.

Schedule 5

Site Plan



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