

# Part B Application form

# Application for a permit

## Local Authority Pollution Prevention and Control Pollution Prevention and Control Act, 1999 Environmental Permitting (England and Wales) Regulations 2016

#### Introduction

#### When to use this form

This environmental permitting regime is known as and referred to as Local Authority Pollution Prevention and Control ('LAPPC'). Installations permitted under this regime are known as Part 'B' installations. Use this form if you are sending an application for a 'Part B' permit to a Local Authority under the Environmental Permitting (England and Wales) Regulations 2016 ("the EP Regulations"), SI 2016 No.1154.

#### Before you start to fill in this form

You are strongly advised to read relevant parts of the Defra General Guidance Manual issued for LA-IPPC and LAPPC.

This contains a list of other documents you may need to refer to when you are preparing your application and explains some of the technical terms used. You will also need to read the relevant Process Guidance Note(s) as relevant. The EP Regulations can be obtained from The Office of Public Sector Information, or viewed on their website at:

http://www.legislation.gov.uk/uksi/2010/675/contents/made

#### Which parts of the form to fill in

You should fill in as much of this form as possible. The appropriate fee must be enclosed with the application to enable it to be processed further. When complete return to:

Sandwell MBC Public Health Directorate Pollution Control PO Box 2374 Sandwell Council House Oldbury B69 3DE

Email: pollution control@sandwell.gov.uk

#### Other documents you may need to submit

There are number of other documents you will need to send us with your application. Each time a request for a document is made in the application form you will need to record a document reference number for the document or documents that you are submitting in the space provided on the form for this purpose. Please also mark the document(s) clearly with this reference number and the application reference number, if you have been given one, which will be at the top of the form overleaf. If you do not have either of these, please use the name of the installation.

#### Using continuation sheets

In the case of the questions on the application form itself, please use a continuation sheet if you need extra space; but please indicate clearly on the form that you have done so by stating a document reference number for that continuation sheet. Please also mark the continuation sheet itself clearly with the information referred to above.

#### Copies

If you are submitting a paper application, please send the original and 2 copies of the form and all other supporting material, to assist the Authority in conducting any necessary consultation process.

#### If you need help and advice

We have made the application form as straightforward as possible, but please get in touch with us at the local authority address given above if you need any advice on how to set out the information we need.

#### Please get in touch with us by:

Email: pollution control@sandwell.gov.uk

End of Introduction

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LAPPC applica	ation form: to be comp	leted by the operator	
For Local Authority use	1		
Application reference	Officer reference	Date received	

#### A1 Applicant details

#### A1.1 Name of the installation

ARCELORMITTAL CONSTRUCTION LIMITED

## A1.2 Please give the address of the site of the installation

Postcode	B65	OQL	Telephone

The Ordnance Survey national grid reference 8 characters, for example, SJ 123 456 (can be obtained from typing postcode into one of the on-line mapping sites).


#### A1.3 Existing permits:

Please give details of any existing LAPPC or LA-IPPC authorisation for the installation, or any waste management licences or water discharge consents, including reference number(s) and type(s):

THERE ARE NO EXISTING PERMITS

Please provide the information requested below about the "Operator", which means the person who it is proposed will have control over the installation in accordance with the permit (if granted)

A2.1 The Operator – Please provide the full name of company, partnership or corporate body

Trading/business name (if different)

Areelor Mittal NR Ltd. Construction

Registered Office address

Rowley Cake more Regis West Midland's B65 022 Postcode:

Principal Office address (if different)

Postcode:

Company registration number

07052 84

#### A2.2 Holding Companies

Is the operator a subsidiary of a holding company within the meaning of section 1159 of the Companies Act 2006?

No Π

Yes	nan	ne of ultimate hold	ding company	
	Arch	itectural	Steel	Ltd
Regis	stered office a	address		
	Lamont	Business	Park	, Lyns

Rd Irafford Park Marchister

Postcode MI

COLUMN 1	COLUMN 2
Box A Activities in the stationary technical unit	Section in Schedule 1 to the EP Regulations
OPERATION OF A DIISOCYANATE PROCES	SECTION 6. 4 PART B
	(a) (1)
Box B Directly-associated activities	Schedule 1 references (if any)

#### B1.2 Why is the application being made?

The installation is new

A "substantial change" is proposed to the installation

The installation is existing, but changes to the installation or to the EP Regulations means that an LAPPC Part B permit is now required.

#### **B.1.3 Site Maps**

Please provide:-

\* A suitable map showing the location of the installation clearly defining extent of the installations in red

Doc Reference

ence SEE SUPPORTING DOCUMENTATION

\* A suitable plan showing the layout of activities on the site, including bulk storage of materials, waste storage areas and any external emission points to atmosphere

Doc Reference

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Principal Office address (if different)

Postcode

Company registration number:

#### A3.1 Who can we contact about your application?

It will help to have someone who we can contact directly with any questions about your application. The person you name should have the authority to act on behalf of the operator - This can be an agent or consultant.

Name	MR S SIMPSON
Position	PRODUCTION AND MAINTONANCE MANASOR
Address	ARCELORMITTAL CONSTRUCTION LIMITED
CARE	MORE ROAD, ROWLEY RESIS
	Postcode B6509L
Telephone	number 07813 295 239
Fax numbe	r~~\A
email addre	ss steve. simpsondarcelormittal.com

#### B1 About the installation

Please fill in the table below with details of all the current activities in operation at the whole installation.

In **Column 1**, **Box A**, please identify all activities listed in Schedule 1 to the EP Regulations that are, or are proposed, to be carried out in the stationary technical unit of the installation.

In **Column 1, Box B** please identify any directly associated activities that are, or are proposed, to be carried out on the same site which:

- \* have a technical connection with the activities in the stationary
- technical unit
- \* could have an effect on pollution

In **Column 2, for Boxes A and B** please quote the Chapter number, Section number, then paragraph and sub-paragraph number as shown in Part 2 of Schedule 1 to the EP Regulations [For example, *Manufacturing glass and glass fibre where the use of lead or any lead compound is involved*, would be listed as Chapter 3, Section 3.3, Part B(b)].

#### B1.1 Installation table for new permit application

#### B2 The Installation

Please provide written information about the aspects of your installation listed below. We need this information to determine whether you will operate the installation in a way in which all the environmental requirements of the EP Regulations are met.

**B2.1** Describe the proposed installation and activities and identify the foreseeable emissions to air from each stage of the process (this will include any foreseeable emissions during start up, shut down and any breakdown/abnormal operation)

The use of process flow diagrams may aid to simplify the operations

DOC Reference: SEE SUPPORTING DOCUMENTATION

**B2.2** Once all foreseeable emissions have been identified in the proposed installation activities, each emission should be characterised (including odour) and quantified.

Atmospheric emissions should be categorised under the following

- i. point source, (e.g. chimney / vent, identified by a number and detailed on a plan)
- ii. fugitive source (e.g. from stockpiles / storage areas).

If any monitoring has been undertaken please provide the details of emission concentrations and quantify in terms of mass emissions. If no monitoring has been undertaken please state this.

(Emission concentration = e.g. milligrams per cubic metre of air; mass emission = e.g. grams per hour, tonnes per year)

**B2.3** For each emission identified from the installations' activities describe the current and proposed technology and other techniques for preventing or, where that is not practicable, reducing the emissions into the air. If no techniques are currently used and the emission goes directly to the environment, without abatement or treatment then this should be stated.

DOC Reference: Set Suldating Documentation

**B2.4** Describe the proposed systems to be used in the event of unintentional releases and their consequences. This must identify, assess and minimise the environmental risks and hazards, provide a risk based assessment of any likely unintentional releases, including the use of historical evidence. If no assessments have been carried out please state.

DOC Reference: SEE Survey Ting Documentation

**B2.5** Describe the proposed measures for monitoring all identified emissions including any environmental monitoring, and the frequency, measurement methodology and evaluation procedure proposed (e.g. particulate matter emissions, odour etc). Include the details of any monitoring which has been carried out which has not been requested in any other part of this application. If no monitoring is proposed for an emission please state the reason.

Doc Reference: SEE SUPPORTING DOCUMENTATION

**B2.6** Provide detailed procedures and policies of your proposed environmental management techniques, in relation to the installation activities described.

DOC Reference: Size Sheldering Documention

B3 Impact on the Environment

**B3.1** Provide an assessment of the potential significant local environmental effects of the foreseeable emissions (e.g. is there a history of complaints and/or is the installation in an air quality management area ?)

Doc Reference: Sas Supportions Documentation

**B3.2** Are there any sites of special scientific interest (SSSIs) or European protected sites which are within either

- 2 kilometres for an installation which includes Part B combustion, incineration (but not crematoria), iron and steel, and non-ferrous metal activities, or
- 1 kilometre for Part B mineral activities and cement and lime activities, or
- 1/2 a kilometre for all other Part B activities 2 kilometres of the installation?

No performance of the sites Definition of the sites Performance of the

**B3.3** Provide an assessment of whether the installation is likely to have a significant effect on such sites and, if it is, provide an assessment of the implications of the installation for that site, for the purposes of the Conservation of Habitats and Species Regulations 2010 (see appendix 2 of Annex XVII of the General Guidance Manual).

DOC Reference: SEE SUPPORTING DOCUMENTATION

#### **B4** Environmental Statements

**B4.1** Has an environmental impact assessment been carried out under The Town and Country Planning (Environmental Impact Assessment) Regulations 2011, or for any other reason with respect to the installation?

No

Yes Please supply a copy of the environmental impact assessment and details of any decision made

Doc Reference:

#### **B5** Additional information

Please supply any additional information which you would like us to take account of in considering this application.

DOC Reference SUE SURPORTING DOCUMENTATION

#### C1 Fees and Charges

Your application cannot be processed unless the application fee is correct and has been received by the Council. Please contact the Council to find out the current fee and how to pay

Email: pollution control@sandwell.gov.uk

**C1.1** Please give any company purchase order number or other reference you wish to be used in relation to this fee.

#### C2 Annual subsistence charges

If we grant you a permit, you will be required to pay an annual subsistence charge, failure to do so will result in revocation of your permit and you will not be able to operate your installation.

**C2.1** Please provide details of the address you wish invoices to be sent to and details of someone we may contact about fees and charges within your finance section.

Mes	SIMBSON					
ARCEN	-ORMITTAL	Construction	Limit	TED		
CAKENO	ke Rond	, ROWLEY R	Legis			
Postcode:	B65 OQL	- Te	lephone:	07813	295	239

#### C3 Commercial confidentiality

**C3.1** Is there any information in the application that you wish to justify being kept from the public register on the grounds of commercial or industrial confidentiality?

No I

Please provide full justification, considering the definition of commercial confidentiality within the EP regulations.

Doc Reference \_\_\_\_\_

**C3.2** Is there any information in the application that you believe should be kept from the public register on the grounds of national security?

No	
	1

Do not write anything about this information on the form. Please provide full details on separate sheets, plus provide a copy of the application form to the Secretary of State/Welsh Ministers for a Direction on the issue of National Security.

#### C4 Data Protection

The information you give will be used by the Local Authority to process your application. It will be placed on the relevant public register and used to monitor compliance with the permit conditions. We may also use and or disclose any of the information you give us in order to:

- consult with the public, public bodies and other organisations,
- carry out statistical analysis, research and development on environmental issues,
- provide public register information to enquirers,
- make sure you keep to the conditions of your permit and deal with any matters relating to your permit
- · investigate possible breaches of environmental law and take any resulting action,
- prevent breaches of environmental law,
- · offer you documents or services relating to environmental matters,
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows)
- assess customer service satisfaction and improve our service.

We may pass on the information to agents/ representatives who we ask to do any of these things on our behalf.

It is an offence under Regulation 38 of the EP Regulations, for the purpose of obtaining a permit (for yourself or anyone else) to:

- make a false statement which you know to be false or misleading in a material particular,
- recklessly make a statement which is false or misleading in a material particular.

If you make a false statement

- we may prosecute you, and
- if you are convicted, you are liable to a fine or imprisonment (or both).

C5 Declaration: previous offences (delete whichever is inapplicable)

## I/We certify

## EITHER

No offences have been committed in the previous five years which are relevant to my/our competence to operate this installation in accordance with the EP Regulations. OR

The following offences have been committed in the previous five years which may be relevant to my/our competence to operating this installation in accordance with the Regulations:

Signature
Name MR S SIMISON
Position PRODUCTION AND MAINTENANCE MANAGER
Date 22nd Journy 2024

#### C6 Declaration

#### C6.1 Signature of current operator(s)\*

I/We certify that the information in this application is correct. I/We apply for a permit in respect of the particulars described in this application (including supporting documentation) I/We have supplied.

Please note that each individual operator must sign the declaration themselves, even if an agent is acting on their behalf.

For the application from:

Installation name: ARCELOR MITTAL CONSTRUCTION LIMITED
Signature
Name MR S SIMPSON
Position PRODUCTION AND MMINITERNANCE MUNINGER
Date_ 22rd Forwary 2024
Signature
Name
Position
Date

\* Where more than one person is defined as the operator, all should sign. Where a company or other body corporate – an authorised person should sign and provide evidence of authority from the board of the company or body corporate.

# Application for Permitting of the use of a Di isocyanate Process under the Environmental Permitting (England and Wales) Regulation SI 2016 No. 1154

for

ArcelorMittal Construction Limited

Cakemore Road Rowley Regis West Midlands B65 0QL

January 2024

## A1.1 APPLICATION SUMMARY

The installation is as follows; -

## **ArcelorMittal Construction Limited**

#### A1.2 INSTALLATION ADDRESS

The address of the installation is as follows; -

Cakemore Road Rowley Regis West Midlands B65 0QL

## A1.3 EXISTING PERMITS

The Environmental Permitting (England and Wales) Regulations 2016 place duties, via regulations, upon the operators of specified processes.

The activities undertaken at ArcelorMittal Construction Limited encompass the use of a Di isocyanate process, which are currently detailed in the above regulations for permitting and control by Sandwell Council.

This Permit Application is made in accordance with those provisions detailed by Process Guidance Note PG 6/29 (2012). The assessments of these processes and their environmental effects are detailed within this application.

## A2.1 OPERATOR DETAILS

The operator is; -

## ArcelorMittal Construction Limited

The Registered Office is; -

## A2.2 HOLDING COMPANIES

The holding company involved with the installation is the Arcelor Group.

**B1.1** Installation table for new permit application.

COLUMN 1a	COLUMN 2a
Activities in the Stationary Technical Unit	Schedule 1 References
Operation of a Di isocyanate process	Section 6.4 Part B (a) (iv)
COLUMN 1b	COLUMN 2b
Directly associated activities	Schedule 1 References

# B1.2 REASON FOR THE APPLICATION

The reason why the application is being made is that Di isocyanate activities operated at the site will be encompassed under the provisions of Environmental Permitting (England and Wales) Regulations 2016, Process Guidance Note PG 6/29 (2012), and the Solvent Emissions Directive 1999/13/EC, in respect of releases of organic di isocyanates, volatile organic compounds (VOCs) and total particulate matter.

The site has no other permits in operation.

The main components are defined below:

Ref	Material	Solids Content Kgs	VOC Kgs
1	Organic Di isocyanates.		102 t/a
2	Polyol Resins		250 t/a
		Total	352 t/a

The site will use in excess of 5 tonnes of organic di isocyanate in a 12-month period.

## B1.3 SITE LOCATION

The facility is located in an industrialised area located at; -

## **ArcelorMittal Construction Limited**

## A section of the current OS map is included herein.



#### B1.2 SITE MAPS AND DRAWINGS

The immediate neighbourhood by the site is that of industrial premises on the north, south, west, and east.

The installation has no additional tenants or subtenants nor any other permanent third-party businesses.

## ALL SITE PLANS AND LOCATIONS MAPS ARE IN AN APPENDIX DIRECTORY – PLEASE SEE APPENDIX B

#### B2 THE INSTALLATION

#### **B2.1 INSTALLATION AND ACTIVITIES**

#### **Process Description**

ArcelorMittal Construction Limited is a separate entity that will produce insulating blocks using urethane technologies using MDI based systems.

Technical Guidance Notes used in the preparation of this document are as follows;

Secretary of State's Guidance Note PG 6/29 (2012) - Use of a Di isocyanate Process.

Secretary of State's Guidance – General Guidance Manual on Policy and Procedures for Part B Installations definitions referred to in this permit.

An **Installation** comprises not just any relevant Unit carrying out a part B Activity listed in the Regulations, but also any directly associated Activities which have a Technical Connection with that Activity and which could have an effect on pollution.

An **Operator** is the person (e.g., a Company or Individual) who has control over the operation of the Installation.

**Authorised Officer** shall mean any Officer authorised to carry out duties under the Environmental Permitting (England and Wales) Regulations.

Local Authority shall mean Sandwell Metropolitan Borough Council.

#### Legislation:

The legislation relevant to this permit application is as follows; -

The Environmental Permitting (England and Wales) Regulations.

The Pollution Prevention and Control Regulations 2000.

## 2.1 **Process Operations**

#### 2.1.1 Description of Installation

The process is dedicated to the production of Composite Panels. The panels consist of a sandwich of steel components, mineral glass wool with a polyol and di isocyanate bonding agent. Production is scheduled to commence in 2026.

The process starts with the delivery of coiled steel stock. This is supplied to defined engineering and quality standards. The coil stock is delivered to site and stored ready for used in a defined area of the facility.

As Production demands the coil stock is moved from the Stores/ Goods Inwards areas to a dedicated Production location. The coil is then located onto a dedicated decoiling system. This activity is well established and encompassed within operating procedures. The coil the goes through a number of operations in which it is tensioned, straightened and any defective material is cut and removed from any further processing. The area is fully enclosed to prevent any access by personnel. The process is encompassed with PLC systems to maintain product integrity. The straightened steel stock then passes through a number of pressing, cutting and forming activities to produce purpose made forms which form part of the final assembly.

Each stage of the process is supported by SOPs and QA/QC procedures.

The bonding system provided by the use of MDI based di-isocyanate / polyol technologies. There is no use of TDI is site activities.

Polyol and di-isocyanate process materials are delivered to the site in dedicated IBCs and 205 lts. drums. Once received in Goods Inwards the containers are passed to Stores.

As production demands process chemicals are transferred to dedicated Processing Areas.

These locations have purpose build systems for material storage, distribution and operations.

The chemical components are applied using a dedicated mixing head using a low-pressure gun. At the gun the chemicals instantly react to form an adhesive mix. The gun operates on a PTFE reciprocating bar.

This area is served by a dedicated local exhaust ventilation system (LEV). Releases to atmosphere at this point will comprise urethane and particulate emissions and very low levels of volatile organic compounds (VOCs). Due to the rapid rate of chemical reaction, there is almost no release of MDI to atmosphere.

As the components pass along the spray area, the gun head operates in a reciprocating manner to ensure that all components are fully coated.

The chemicals are all subject to QA/QC controls and the application if fully supported by In house Engineering Standards and SOPs.

All personnel operating the processes are fully trained and authorised to support the activities being used. All personnel will have Training Records.

Personnel encompassed with di isocyanate activities will have training to meet the latest regulations applying to the delivery, storage, use and disposal of di isocyanate technologies (August 2023 issue).

The process will produce approx. 500,000 m<sup>2</sup> when in full production.



This photo shows the application head similar to what will be used in production.



The above photo's show the plant in its assembly phase.







## These photo's show the plant in its assembly phase

Key points have been considered if the process is to perform to its capabilities:

- 1. Chemical make-up and realistic performance expectations.
- 2. Proper equipment, suitable for the specific application.
- 3. Skill of the spray operator: proper training and experience.
- 4. General spray methods.
- 5. Special spray methods for specific parts according to size and shape.
- 6. Problems and solutions.

The various components of the chemical system influence the quality and working properties needed to provide the performance characteristics for the intended end use.

- **The Polyol Resin**: The basic ingredient of the technology is the polyol resin system, which provides the chemical composition that determines the chemical and physical properties of the coating.
- **The Isocyanate Resin**: The basic ingredient of the technology is the MDI prepolymer system, which provides the chemical composition that determines the chemical and physical properties of the coating.
- **Mesamol**; Mesamol is the basis of the cleaning system which is used to maintain the operating plant to defined housekeeping and operational standards.
- **Mineral Glass Wool**; The process encompasses the use of conventional Mineral Glass Wool.

## 2.1.2 Site Operations

List of process areas within the installation and associated emission points, pollutants of concern and PG Note plant required;

Row	Area/Machinery Identification	Pollutants Emitted	Emission Limits	APG Noteement Plant Required
1	Curing Oven	Combustion Gase	-	LEV extraction with appropriate filters systems. (these will be changed on a frequent basis) The Oven and it's LEV will be monitored weekly for efficiency and function
2	Spray Coating Machine	VOC's (Di isocyanate, Mesamol MGW Particulates	50mg/m³ 10 mg/m³	LEV extraction with appropriate filters systems. (these will be changed on a frequent basis) The Area and it's LEV will be monitored weekly for efficiency and function
3	Metal Fabrication Area	Particulates VOCs	10mg/m³ 50mg/m³	The Area and it's LEV will be monitored weekly for efficiency and function

## 2.1.3 Raw Material Storage

At full production the facility has the capabilities to produce approx. 500,000 finished laminate parts per annum. As such the supply of most raw materials will be in bulk.

Resin deliveries are in the form of pre-mixed polyester resin, off loaded on to site in 1110 kg IBCs. Polyol resins are delivered and stored in 225kg drums. A small amount of specialist resins may be delivered in 200 litre metal drums. Drums and IBCs are stored in designated chemical storage area and also in external bund shed.

Bulk resins and mesamol and other chemicals will be stored in their own designated storage areas. Each of these storage areas are independently bunded, the bunds being sealed against any risk of leakage to external drainage and sized to provide 110% of the maximum potential spillage.

## 2.1.4 Material Movement

Unloading of bulk resin is conducted by operator and forklift, and IBCs are unloaded from delivery areas to designated storage areas. Unloading of drummed resins and solvents is also conducted in a similar manner, with an additional clamp fitted to the forklift used to lift 225 kg drums from delivery bays to storage areas.

When required for processing the raw resin will be transported by forklift or sack truck to designated areas. This is also the case for all chemicals. All chemicals transported in this manner are done so using a bunded pallet to minimize spillage and prevent fugitive emissions.

Bulk resins and other chemicals will be stored in their own designated storage areas. Each of these storage areas are independently bunded, the bunds being sealed against any risk of leakage to external drainage and sized to provide 110% of the maximum potential spillage.

## 2.1.5 Monitoring of Emissions

The key emissions from these processes that constitute pollution for the purposes of the application therefore warrant control are those consisting of particulate matter, VOC's and organic di isocyanates.

The following parts of the process may give rise to particulate

- Materials handling and storage
- Product finishing and treatment
- Waste handling, storage and treatment
- Spraying and cutting activities

The following parts of the process may give rise to VOCs:

- Handling, loading and mixing processes involving solvents.
- All cleaning operations using solvent borne cleaning fluids.
- Handling, storage and recovery of waste solvents
- Handling and storage of solvent contaminated wastes
- Spraying and coating activities
- Drying/curing of parts.

## **B2.1 PG NOTE ASSESSMENT - PROCESS TECHNIQUES**

## **Coatings Preparation**

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note Status
1	Mixing and blending vessels should be enclosed during operation	All mixing vessels are closed during normal operation	ArcelorMittal Construction meets PG Note requirement
2	Cleaning solvents should be minimised and reused where technically possible	Dedicated spray systems in place to minimise waste.	ArcelorMittal Construction meets PG Note requirement
3	Production areas should be designed for maximum containment, whilst meeting relevant occupational safety standards and should be inspected regularly as part of a programmed maintenance system	Spray areas have LEV systems. Inspected annually and remedial works carried out as necessary. Weekly LEV function test is on-going in addition to annual compliance test.	ArcelorMittal Construction meets PG Note requirement
4	Where materials that are potentially harmful to the environment may be present in wastewater, measures should be taken to prevent them from entering the water circuit. This includes water used to clean mixing blades, palette knives, mixing vessels etc.	Primary cleaning of machinery is carried out using cleaning agents (Mesamol). Water is not used to clean machinery or products. Spillage and containment in undertaken in accordance with PPC.	ArcelorMittal Construction meets PG Note requirement

## Cleaning

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
6	Cleaning agents should be minimised and reused where possible	Spray equipment periodically cleaned in a designated area.	ArcelorMittal Construction meets PG Note requirement
7	When solvent is used on wipes they held within an enclosed container prior to use. After use they should be stored in an enclosed container, prior to disposal in accordance with the waste regulations.	Mesamol (the only effective cleaning chemical) pre- impregnated wipes are not available. Rags for disposal are put into adhesive waste drums which are closed.	ArcelorMittal Construction meets PG Note requirement
8	Where there is a potential for static build up during production the areas at risk should be treated to prevent static build up which may act as a source of ignition of an explosion.	All ignition sources, electrical or otherwise are isolated as per DSEAR provisions.	ArcelorMittal Construction meets PG Note requirement

## **Drying / Curing Process**

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
9	Cleaning solvents should be minimised and reused where technically possible	Equipment is cleaned in a designated area. Mesamol is used to clean equipment	ArcelorMittal Construction meets PG Note requirement
10	Fan motors should be fitted with VSD controls to minimise energy usage wherever possible	VSDs are not fitted on fan motors as it is not practicable. See Section 2.7 for energy saving initiative priorities	To be agreed with regulator
11	The use of heat recovery systems should be used to reduce primary energy	Heat recovery is in use within the solvent recovery system and oven curing operations	To be agreed with regulator

# **Conversion / Finishing**

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
12	Where waste recovery is not economically or technically possible, opportunities for energy recovery on site or off-site from waste should be sought.	Energy from waste recovery is not feasible as waste volumes are too low. No suitable off-site outlet in NI. Packaging etc. recovered for recycling purposes.	ArcelorMittal Construction meets PG Note requirement
13	Finishing and converting equipment should be enclosed where technically possible to minimise fugitive emissions.	Process area and prep rooms are enclosed to minimise fugitive emissions and ventilation systems are in operation.	ArcelorMittal Construction meets PG Note requirement

## Delivery, Storage and Handling of Input (Raw) Materials

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
14	The operator should ensure that deliveries are carried out in such a way so as to minimise noise, spillage, leaks and dusty emissions	Operational procedures and environmental procedures are in place. All deliveries are supervised and material movements outside of the core hours (7am to 4pm) are minimised.	ArcelorMittal Construction meets PG Note requirement
15	Storage areas should be under cover and protected from the elements to avoid or minimise environmental impact, except where stored materials are in suitable weatherproof containers	Material is stored internally where feasible. External storage on hard standing in weatherproof packaging at the designated area.	ArcelorMittal Construction meets PG Note requirement
16	Storage areas should be hard surfaced	All external storage areas are hard standing.	ArcelorMittal Construction meets PG Note requirement
17	If emissions of particulate matter are visible from ducting, pipework, the pressure relief valve / plant or any other part of the plant, the operation should cease and the cause of the problem rectified prior to further deliveries taking place. Transport of dusty materials should be carried out so as to prevent or minimise airborne particulate matter emissions.	Not applicable	Not applicable
18	Solvent containing materials should be stored in closed storage containers	Solvent and adhesive are in closed storage containers.	ArcelorMittal Construction meets PG Note requirement
19	The storage, handling and use of flammable materials should be undertaken so as to prevent accidents and limit their consequences.	Minimum quantities are stored in the designated storage areas. Segregated storage is implicit wherever possible. Procedures for material use are fully formalised and all products are clearly labelled as are their storage areas.	ArcelorMittal Construction meets PG Note requirement

## **Raw Materials**

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
20	<ul> <li>The operator should:</li> <li>Maintain an inventory covering the principal types of raw material used</li> <li>Annually review alternatives for the principal types of raw materials used with regard to their environmental impact.</li> <li>Have quality procedures to control the specification of raw materials used, in order minimise any potential environmental impact.</li> <li>Complete any long-term studies needed into the less polluting options and make any material substitutions identified within the review period.</li> </ul>	<ul> <li>Monthly inventory stock files are in place.</li> <li>Materials are reviewed as part of the management review process.</li> <li>Quality procedures are in place to control the specification of raw materials as part of the ISO9001 quality management system.</li> </ul>	ArcelorMittal Construction meets PG Note requirement
21	The operator shall for substances or preparations which because of their content of VOC are assigned risk phrases R40, R45, R46, R49, R60 or R61 must be replaced, as far as possible by less harmful substances and preparations within the shortest possible time	Review being carried out currently.	Review being carried out currently

#### Waste Minimisation

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PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
22	The operator should carry out a waste minimisation audit at least as frequently as the review period of the permit. The methodology used and an action plan for optimising the use of raw materials should be submitted to the regulator within 2 months of completion of the audit	Aspects of process waste have been considered. A site wide waste audit has not been carried out at the site in the last 2 years.	Currently under review
23	If an audit has not been carried out in the last 2 years prior to the submission of the application, then the first audit should take place within 18 months of the issue of the permit.	See above.	Currently under review
24	Specific improvements resulting from the recommendations of the audits should be carried out within a timescale approved by the regulator	See above.	Currently under review

The site's compressed air is produced by purpose made compressor units; these units are subject to statutory inspection and testing on an annual basis, this being undertaken via an accredited third-party contractor.

Site management ensure that all portable appliances have been formally recorded and tested in accordance with statutory PAT provisions; any equipment failing this testing protocol is immediately removed from site for disposal.

The site's local exhaust ventilation systems are subject to statutory inspection and testing under the Control of Substances Hazardous to Health Regulations as per Regulation 9.2. Any LEV not meeting the required standard will be isolated electrically and formally withdrawn from any further use until repair has been completed. LEV function is routinely tested on a weekly basis.

The extraction stacks associated with the site's production activities will be subject to annual inspection, and where necessary cleaning and maintenance, under the same regulation and also PUWER.

Personnel are fully trained to use the manufacturing plant and associated equipment, and how to adjust them for optimum production and in the correct use of air pressure regulators.

Personnel are fully trained to understand the importance of using compliant equipment, having adequate LEVs, having the correct filter cases fitted in the dust abatement systems, and the importance of proper maintenance. Any deviation from these control parameters is formally reported to the site's Cell Leader, Shift Manager or General Manager. Once any issue is raised appropriate remediation is then required.

Personnel will be made fully aware of the site's Permit and formally trained in its significance and specific aspects.

The site is declared as a "No Smoking" facility and there is a specific prohibition of smoking in all areas other than those specifically dedicated for this function.

All equipment used within the facility will confirm to current statutory provisions and whilst the use of personal radios may be allowed, their use will be strictly limit to units which have been PAT and noise approved. The site operates a ban on the use of radios.

All operators will be issued, trained and use suitable RPE and PPE; this to include antistatic clothing to prevent any potential for electric discharge ignition.

All site activities in coating production processes will be encompassed by work instructions, supervision and management. However, given the range and diversity of products being processed these must be to some degree generic rather than specific.

All activities undertaken in the sire's processes will be fully supported by Health & Safety and specific risk assessments.

Access to the site is via authorised persons only and the Reception area has a dedicated Booking In system to record all visitors.

All contractors to the site must formally be booked in and are routinely escorted by site management to their place of work.

All contractor work must be fully supported by appropriate Risk Assessments and Method Statements prior to the commencement of any work; this being reviewed by the Environmental Representative as a condition of contract.

All activities encompassed within the coating production processes operated at the installation are supported by specific equipment specifications, process controls, planned maintenance, quality assurance and product verification procedures.

The buildings in which the processes take place are maintained at set temperature during production hours; this being maintained by the use of purpose-built space heating units.

## **Operational Plan**

Details below describe the process of work undertaken at ArcelorMittal Construction Limited through the production process from collection to delivery.

#### Chemical Delivery, Use, Storage and Disposal

The installation's chemical storage is located within the site's existing buildings on substantial, reinforced concrete slabs.

In establishing suitable control measures for the delivery of raw and intermediate materials, site management ensure that; -

- 1. All containment vessels are bone fide, purpose built.
- 2. All containment structure is purpose built in accordance with engineering specifications.
- 3. All bunding is subject to scheduled inspection record and corrective action.
- 4. All bunds are visually monitored using documentation.
- 5. All containment and bunding losses are subject to a site "Spillage & Containment" procedure.
- 6. All containment and bunding is subject to internal audit.
- 7. Bulk containment and enclosures are subject to British Standards in respect of suitable materials.
- 8. Spillage control kits are maintained on site.
- 9. All materials supplied to site require submission of appropriate material environmental and health & safety data sheets prior to commencement of supply.
- 10. All materials supplied to site are delivered in appropriate containers albeit 5, 10, 25, 50, 110, 205, 225 and 1150 litre packages.
- 11. Dry materials are supplied in suitable bags.
- 12. Assessments of adequacy of containment are undertaken by competent personnel.
- 13. <u>All</u> localised spillages are subject to appropriate address by the site management and supervision.
- 14. Major spillages are subject to immediate, formal notification of the Environment Agency.
- 15. All containers of product are visually inspected / examined as part of the acceptance process. Damaged containers are rejected or subject to specific assessment.
- 16. All 25kg dry sacks are to UN standard 5H4.
- 17. All 1000lt IBCs are to UN Standard 31 HA1.
- 18. All 25lt Polyethylene containers are to UN standard 3H1 or RH1.
- 19. All loading / unloading activities take place on hardstanding.
- 20. All procedures are outlined in the site's EMR.
- 21. All FLT drivers are formally made aware of what to do in the event of an accident, incident or unauthorised release of product during delivery, storage or general transport.

In regard to Pollution Prevention and Control site management have established; -

(i) site drainage plans.

- (ii) drainage marking, specifically identifying foul and storm systems, via colour coding, is scheduled within the site action plan.
- (iii) site awareness training in respect of drain status.
- (iv) a dedicated EHS notice board for disclosure of information to work force.
- (v) emergency contact numbers in the event of an incident occurring.
- (vi) specific management roles and responsibilities to deal with incidents and accidents.

The site includes maintenance areas in which machine coolants, lubricants, oils and greases, various compressed gases and fuel oils are stored on site in dedicated storage areas.

The initiatives have been developed to ensure that once process materials are in use, storage or ongoing as intermediates, plant and equipment is effectively maintained to ensure its integrity. These initiatives have been developed to be plant specific and general in application.

These measures are consistent with the site's Pollution Prevention Practices and Pollution Prevention Guidance Notes.

Site management will pursue the lidding and containment of process vessels in respect of spill minimisation and pollution prevention and loss of chemicals to atmosphere.

Site management will assess on a schedule basis the capability in respect of emergency preparedness and score the outcome.

All non - conformances determined by inspection will be review by site management.

The site is in due process of establishing formal documentation specifically for the recording and forward planning of critical environmental performance monitoring. This documentation will be maintained for a period of no less than 4 years.

## The Waste Storage Area

Process wastes from the general site activities, will be stored in the installation's Waste Storage Area.

The areas are constructed using chemically resistant, re-enforced concrete in the base.

#### **Stack Heights**

As defined in Process Guidance Note PG 6/29 (2012), clauses and conditions are specifically detailed to encompass the following aspects of the site's extraction systems with regard to: -

- (i) Local topography
- (ii) Effective stack / chimney height
- (iii) Minimum stack / chimney height
- (iv) Chimney vent restrictors
- (v) Minimum point of exit mean velocity

The releases sourced from site activities will be discharged to atmosphere via dedicated LEV systems.

The significance of dark or black smoke will be addressed by formal procedure and by use of Ringelmann Shade Cards, once the permit is in operation.

Abatement equipment, where required, will meet; -

- (i) All workplace COSHH exposure limit provisions.
- (ii) All PG 6/29 (2012) emission limit provisions.
- (iii) Dispersion and minimum stack height calculation provisions, where and if agreed by the regulator.

#### (iv) Ongoing Pollution Prevention and Control Activities

Releases are minimised via the use of:

- (i) continuous monitoring of process activities
- (ii) annual compliance monitoring of VOC and TPM releases
- (iii) annual compliance monitoring of mean efflux velocity
- (iv) planned equipment maintenance
- (v) day by day QA/QC with respect to process control
- (vi) routine scheduled cleaning of plant and equipment
- (vii) use of trained operating and maintenance personnel
- (viii) use of best available technology
- (ix) dedicated storage facilities
- (x) dedicated primary and secondary containment
- (xi) dedicated operation control procedures and documentation
- (v) Process Controls Documents (Refer to Appendix C)

# B2.2 DESCRIBE THE OTHER PROPOSED TECHNIQUES AND MEASURES, INCLUDING ABATEMENT PLANT, (E.G. BAG FILTERS, WET COLLECTORS) TO ACHIEVE THE AIMS IN B2.1

#### 2.2 PROCESS ABATEMENT TECHNIQUES

#### 2.2.1 Air Emissions

#### Release to Atmosphere

Permitted solvent and total particulate releases to atmosphere will be lost from the site's tanks and abatement plant, Releases to Air are recorded as RA 1 - 3. The release points are included in the photographs included in the application.

The site uses convention dust control equipment to prevent losses to the environment. This encompasses the use of purpose-built units that utilise conventional filter media to prevent dust loss. These units separate out particulates from the air and these are removed on a routine basis from dedicated collector bins. The filter media is subject to routine inspection and test and replacement where necessary. The filter media is specifically suited to the particle size being produced by site activities.

Spent filter media forms part of the site's waste stream and disposed of as general non-hazardous waste via an approved 3<sup>rd</sup>. party waste contractor.

All site-sourced wastes such as filters, bags, general packaging, banding etc are dealt with via a dedicated Waste Skip that is lidded and maintained in a closed position when not in use. This is done to maintain the "Duty of Care" for the prevention of harm in respect of vandals, trespassers, animal, children and thieves and the prevention of wind blow waste losses beyond the site boundary.

The chemical storage associated with the external Store has also been considered for its fugitive loss potential. All products contained within this purpose-built Store are fully maintained to prevent any unauthorised release to any environment. The Store is maintained fully closed at all times other than when access is required. The Store has its own built-in bund to catch any material losses.

Losses to atmosphere from the facility's Compressor House have been considered and evaluated. Losses of air separated oil and water are contained within dedicated control units within the Compressor House. These are purpose-built units specifically designed for this purpose; as such there are no oil water loses from compressor "blow off" activities. The Compressors are maintained in a purpose-built facility with bunding to contain any oil/lubricant/grease losses and underlying concrete pad to prevent losses to underlying soils.

Again, the Compressor house is maintained with a dedicated lock to prevent any unauthorised access. There are no VOC or TPM loses to the environment sourced from operation of the Compressor House.

Release to atmosphere from the use of a Forklift Truck are considered. The site's FLT is fully maintained via a dedicated 3<sup>rd</sup> party contractor; part of this maintenance schedule includes ensuring that the FLTs motive power unit is compliant with statutory provisions. The results of FLT maintenance are recorded and reported to site management.

Releases to atmosphere from the site's use of space heating are minimised by the use of planned maintenance. The maintenance of the site's space heating is subject to monitoring and all results are formally recorded and reported to site management to ensure compliance with statutory provisions.

Release to atmosphere from IBCs has been considered and the correct use If lidding and containment at all times control all such releases.

## **Visible Odours and Emissions**

ArcelorMittal Construction management will respond to any odour control equipment malfunction, any incident of odours being detected during the site inspection and to complaints. In cases where offensive odours are detected beyond the process boundary site management will undertake an assessment of process operations and odour controls.

If, after this assessment, there is no obvious cause of odour release it may be necessary to check the odour arrestment plant performance.

Visible and odorous emissions should be limited and monitored as follows. Abnormal emissions require action as described in paragraph below "Fugitive/Abnormal Conditions".

All reasonably practicable steps should be taken to minimise the duration and visibility of visible emissions during start-up and shut down, and changes of fuel or combustion load.

- Emissions from combustion processes should in normal operation be free from visible smoke and in any case should not exceed the equivalent of Ringelmann Shade as described in British Standard BS 2742.
- All releases to air, other than condensed water vapour, should be free from persistent visible emissions.
- All emissions to air should be free from droplets.
- The aim should be there should be no offensive odour beyond the process boundary, as perceived by the regulator.
- Visual and olfactory assessments of emissions should be made frequently and at least once each day whilst the process is in operation. The time, location and result of these assessments should be recorded.

#### 2.2.1.1 Techniques for Preventing Release to Atmosphere

#### **Solvent Emissions**

The limits imposed on the process are given in the Guidance Note and are specified within the permit.

#### Choice of Material

Perhaps the simplest measure employed to control di isocyanate vapour is to ensure that the detail formulation of the resin uses the minimum practical level of di isocyanate.

#### **Closed Storage**

All bulk storage and mixing vessels containing resin are closed or lidded. As di isocyanate vapour is heavy and will tend to remain above the surface of liquid resin unless disturbed, the use of a closed vessel significantly reduces the likelihood of vapour being entrained by air movement and released into the immediate environment.

#### **Process Equipment**

Unlike most mixing spray guns which use air pressure to propel the resins in an atomised stream, the spray guns used in production have been designed to avoid this. Whilst compressed air is still the motive power, it is used to drive a pump which directly pressurises the resins supplied to the gun head, where it is released through a specially shaped nozzle to produce a fan of droplets (i.e. not atomised) which is beneficial to processing and also reduces the release of di isocyanate.

Extraction equipment in the location is wired in parallel to fans in the area. Fugitive emissions from spray booths as a result of careless operations will therefore be eliminated.

#### **Process Abatement and Extraction**

ArcelorMittal Construction has di isocyanate fume extraction system which has been designed by to meet and exceed the COSHH guidelines.

The recommended air flow speed is between 0.3 and 0.5m/s. The system is designed to exceed this level while considering the running the cost of the system.

#### **Process Technique**

Di isocyanate vapour is mainly released as the resin mixture undergoes the condensation reaction which eventually creates the finished part. It is normal, however, to have to build up the thickness of the laminate in a number of passes.

#### **Fugitive Emissions/Abnormal Events**

As described in earlier sections measures are taken to control the release of di isocyanate vapour from all processes. In general, this involves the extraction of vapour from areas where it is known to be present and exhausting it in a controlled manner. In order that fugitive emissions are not made, the design of the factory extraction systems is such that a slight negative pressure exists within the factory. In addition, the flow of air is generally from the front of the factory where doors are located, towards the rear where extraction equipment is located.

In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions ArcelorMittal Construction management and the operator will:

- Investigate and undertake remedial action immediately.
- Adjust the process or activity to minimise those emissions; and
- Promptly record the events and actions taken.

The regulator should be informed without delay:

- If there is an emission that is likely to have an effect on the local community; or
- In the event of the failure of key arrestment plant, for example, bag filtration plant

#### Spillage Response

Risk of a major spillage is considered to be low, albeit theoretically possible.

Bulk storage is in IBCs with their own dedicated bunding and movement out of them is by manual handling/forklift. IBCs are caged in a protective framework to aid storage but also minimise risk of damage or punctures.

Full IBC's will only be held inside the factory space in dedicated pallet racking, minimising the risk of passing damage. There have been no recorded instances of spillages from IBCs at the site.

Localised spillage from small containers within the factory may occur.

Well established procedures for clean-up of these spillages exist, comprising of containment with sand or clay absorbent granules, catalysation (if not already catalysed for use) then clean-up as solid material waste for subsequent disposal.

Operatives receive specific training in this technique to minimise risks under the Health and Safety guidance, which also serve to minimise emissions.

Spill kits and absorbent granules and safety wear are available both inside the factory and in the yard.

#### **Dust Control**

Practice has shown that the best method of ensuring that dust does not escape to the atmosphere is to use a containment booth which is connected to a high-volume extraction and filtration unit. In this manner dust is captured for disposal as solid waste and represents no risk of emission to the atmosphere.

By ensuring that all products requiring trimming pass through the booth immediately after spraying there is a minimised risk of cutting being completed in the open and allowing dust to spread unchecked.

Dust captured by the vacuum filtration unit is bagged and disposed of daily.

Where drilling is required during assembly, local vacuum filtration units will be supplied to capture dust. Generally, however, the drilling operations produce heavier swarf which will fall to the ground if not captured by the vacuum units.

Daily housekeeping measures will be in place to ensure debris on the floor is cleaned away.

Finally, should dust become airborne in the factory there is a small risk that it could be entrained with the air volume extracted through the spray bays.

It is not expected that the spray areas themselves would produce any dust as the process uses a wet resins. However, as a backup measure each spray bay will be equipped with a corrugated paper filter to capture any possible discharge. This is disposed of as a solid waste.

#### **Compliance Monitoring**

Continuous indicative monitoring is used as a management tool. In conjunction with continuous recording it identifies any trends in emissions; for example, that emissions are gradually increasing, which may indicate a need for maintenance. It can also be used with or without continuous recording to trigger an alarm when there is a sudden increase in emissions; for example, if abatement plant fails. For a given concentration of particulate the output level varies with the instrument.

It should be noted that not all monitors provide a linear response to an increase in particulate matter. The monitor should be set up to provide a baseline output when the plant is known to be operating under the best possible conditions; i.e. such that emissions are fully compliant with the requirements.

The instrument manufacturer should be able to set an output level which corresponds to around 75% of the emission limit, to trigger the alarms.

Thus, the alarms are activated in response to this significant increase in particulate loading above the baseline, so that warning of the changed state is given before an unacceptable emission occurs.

Over a number of years Regulations have become more developed. As a result, ArcelorMittal Construction have been required to introduce systems of monitoring and control in response. In respect of di isocyanate vapour and any associated particulates this is now standardised in a dual approach:

- Annual di isocyanate and particulate checks from exhaust stacks.
- Annual employee exposure monitoring for di isocyanate vapour and inhalable particulates.

Both of these regimes are carried out by a third-party agency Consequently it is intended that this approach will be continued, and the results submitted as part of the annual maintenance submission for the authorisation currently applied for.

Additionally, routine maintenance checks will be carried out on all extraction equipment both to conform to COSHH Regulations and also to ensure that equipment is in full working order. Measurement points are designed into all exhaust ductwork and a permanent means of access provided.

The need for and scope of testing, and the frequency and time of sampling depend on local circumstances, operational practice and the scale of operation.

As part of proper supervision, the ArcelorMittal Construction will monitor emissions, make tests and inspections of the process and keep records.

Site management will keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments.

The records should be:

- Kept on site.
- Kept by ArcelorMittal Construction for at least two years; and
- Made available for the authorised personnel.

The regulator will be informed of monitoring to be carried out and the results; the results should include process conditions at the time of monitoring. ArcelorMittal Construction should provide a list of key arrestment plant and have a written procedure for dealing with its failure, in order to minimise any adverse effects.

The company will notify the regulator at least 14 days before any periodic monitoring exercise to determine compliance with emission limit values. ArcelorMittal Construction will state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.

The results of non-continuous emission testing will be forwarded to the regulator within 8 weeks of the completion of the sampling. Adverse results from any monitoring activity (both continuous and non-continuous) should be investigated by the operator as soon as the monitoring data has been obtained/received. The operator should:

- Identify the cause and take corrective action.
- Record as much detail as possible regarding the cause and extent of the problem, and the action taken by the operator to rectify the situation.
- Re-test to demonstrate compliance as soon as possible; and
- Notify the regulator.

#### **Environmental Impact**

ArcelorMittal Construction management are currently working towards ISO - certification.

Consequently, the company is currently in the process of developing an Environmental Policy and procedures. It currently uses only authorised and validated waste disposal contractors and seeks to minimise its contribution to waste and energy use.

The site currently operates 'best practice' procedures whilst specific environmental procedures are being developed.
# 2.2: PG Note ASSESSMENT - PROCESS ABATEMENT

#### Point Sources to Air

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
25	Ensure that all operations which generate emissions to air are contained and adequately extracted to suitable abatement plant, where this is necessary to meet specified emission limits	Dust captured in filters prior to release to atmosphere. Di isocyanate & solvent emissions vented directly to atmosphere via a LEV extraction system.	ArcelorMittal Construction meets PG Note requirement.
26	Ensure that emissions from combustion processes in normal operation are free from visible smoke and in any case do not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS2742	Not Applicable only boiler emissions to consider.	Not Applicable
27	Vents and Chimneys: The operator should ensure that hot emissions take place from the minimum practicable number of stacks. This is particularly important when new plants are being designed or when changes are being made to existing processes. If practicable a multi-flue stack should be used	15 stacks are in situ at present	ArcelorMittal Construction meets PG Note requirement.
28	Ensure that vent and stack heights are sufficient to ensure adequate dispersion under all normal operating conditions	Vent and stack heights are under review. Significant vents will be determined in current IPPC licence	To be agreed with regulator
29	Ensure that the minimum vent height is 3 metres above roof ridge height of any building within a distance to 5 times the uncorrected vent height and in no circumstances should it be less than 8 metres above ground level (Note : this provision does not apply to workplace dust extraction units)	Air dispersion modelling will be carried out for the stacks at the site (if required)	To be agreed with regulator
30	Be able to demonstrate to the regulator that all reasonable practicable steps are taken during start up and shut down, and changes of fuel or combustion load in order to minimise emissions	Operational procedures for start-up/ shut down / fuel changeover are in the process of being reviewed.	Procedures currently being reviewed
31	Investigate the cause and nature of any persistent visible emissions and provide a report to the regulator	Not Applicable	Not Applicable
32	Ensure that all emissions of water vapour are free from droplet fallout	Not applicable	Not applicable
33	Ensure that liquid entrainment in the duct of wet abatement, leading to droplet fallout, does not occur as a result of the linear flow rate within the duct exceeding 9 m / s	Not applicable. No wet abatement systems at installation	Not applicable
34	Ensure that flues and ductwork are cleaned to prevent accumulation of materials, as part of the routine maintenance system	Cleaned as part of weekly maintenance system	ArcelorMittal Construction meets PG Note requirement
35	Ensure that exhaust gases discharged through a stack achieve an exit velocity of greater than 15 m / sec during normal operating conditions to achieve adequate dispersion	Velocity is adequate to achieve dispersion requirements	To be agreed with regulator
36	Ensure that stacks are not fitted with any restriction at the final opening such as a plate, cap or cowl, with the exception of a cone which may be necessary to increase the exit velocity of the emissions	Stacks are fitted with cones to increase velocity.	To be agreed with regulator
37	Where possible, ductwork should be sufficiently lagged to prevent condensation of liquids, in particular solvents within the duct.	There are no large runs of ductwork prior to release to atmosphere. Lagging is not justified.	ArcelorMittal Construction meets PG Note requirement
38	Combustion processes should use low NOx burners.	Only the oven to consider. Combustion processes use low NOx burners.	ArcelorMittal Construction meets PG Note requirement

### Point Sources to Surface Water and Sewer

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
39	The operator should ensure that all emissions are controlled as a minimum to avoid a breach of water quality standards (Calculations and / or modelling to demonstrate this may be required to be provided to the regulator)	Not Applicable	Not Applicable
40	Run-off from the installation should be controlled and managed where necessary (given the nature of the run-off) treated before discharge in a suitable effluent plant	Any surface water will run into the foul water drainage system	Not Applicable
41	All interceptors are impermeable, are subject to visual inspection and any contamination removed at a frequency agreed with the regulator	Not Applicable	Not Applicable
42	Procedures for dealing with the discharges from bunds should be in place	Site practices are in place to check bund contents prior to release. Bund pumps are locked. Where contaminated contents are disposed of as hazardous.	ArcelorMittal Construction meets PG Note requirement
	Off Site Effluent Treatment:		
43	Where effluent is treated off site at a sewage treatment works it is demonstrated that: all appropriate measures have been taken to reduce effluent volume and pollutant concentration.		
	the treatment provided at the sewage treatment works is as good as would be achieved if the emission was treated on site, based on reduction of load (not concentration) of each substance to the receiving water.	Not applicable	Not Applicable
	the probability of sewer by-pass via storm, emergency or combined sewer overflows or at intermediate sewage pumping stations is acceptably low and a suitable monitoring programme is in place for emissions to sewer, taking into consideration the potential inhibition of any downstream biological processes		
44	Operations should be controlled to minimise fugitive emissions	Housekeeping practices are in place to ensure solvent & dust emissions are minimised.	ArcelorMittal Construction meets PG Note requirement
45	<ul> <li>Dust: The following general techniques should be employed where appropriate:</li> <li>a) covering of skips and vessels</li> <li>b) avoidance of outdoor or uncovered stockpiles</li> <li>c) enclosed conveyors, pneumatic conveying (noting the higher energy needs), minimising drops.</li> <li>d) regular housekeeping</li> </ul>	Skips, compactors etc. are all covered. All powders are dispensed within dust booths fitted with LEV extraction. Milling and grinding areas within the prep and spray booths are cleaned on a daily basis	ArcelorMittal Construction meets PG Note requirement

# **Control of Fugitive Emissions to Air**

PG Note Ref		PG Note Technique	ArcelorMittal Construction Practice	PG Note status
	VOC: a)	For VOC where the operator uses the Emission and Fugitive limits or the Total Emission Limit Value for compliance, the Fugitive VOC emission must be determined in accordance with the Solvent Management Plan. Once completed it need not be done again until the equipment is modified in such a way as to affect the potential functive release of VOC	a) ArcelorMittal Construction perform a chemical usage check for controlling solvent usage against production.	
	b)	When transferring volatile liquids, the following techniques should be employed – subsurface filling via filling pipes extended to the bottom of the container, the use of vapour balance lines that transfer the vapour from the container being filled to the one being emptied or an enclosed system with extraction to suitable abatement plant where abatement is necessary to meet the emission limits.	b) Not applicable.	
	c)	Vent systems should be chosen to minimise breathing emissions e.g. pressure / vacuum valves and, where relevant, should be fitted with knock out pots and appropriate abatement equipment	<ul> <li>c) Process equipment is designed to ensure minimum emissions to atmosphere.</li> </ul>	
	d)	Where possible the application of the coating should be carried out in contained conditions	d) Coating applications are carried out in contained conditions.	
46	e)	Where pre impregnated wipes are used they should be held within a closed container prior to use	e) Small quantities of impregnated wipes are used and recycled on site.	N/A at present
10	f)	Prior to removal from site, used wipes and other items contaminated with organic solvent should be placed in suitably labelled metal bins fitted with a self-closing lid	<ul> <li>f) If not reused on site, wipes are disposed off site along with hazardous waste.</li> </ul>	Items a) to m) to be agreed with the regulator.
	g)	Bins should be emptied at least daily, as the contents not only present a fire hazard, but may undergo spontaneous combustion (especially if contaminated with certain types of coating residues)	<ul> <li>g) All bins are emptied into large skips outside the premises at regular times during each shift the end of each working day</li> </ul>	
	h)	For materials that may undergo spontaneous combustion, special bins that allow air to circulate beneath and around them to aid cooling should be used	h) Not applicable.	
	i)	Application of cleaning organic solvents should be from a contained device or automatic system when applied directly	<ul> <li>i) Dispensing of solvent for cleaning takes place under controlled conditions.</li> </ul>	
	j) k)	Closed cleaning systems should be used wherever possible Ductwork should be enclosed and sealed to prevent fugitive loss of VOC	<ul><li>j) Process equipment is cleaned in an enclosed solvent location if needed.</li><li>k) All ductwork is enclosed and sealed to prevent</li></ul>	
	I)	All drying ovens should be operated under balanced or negative pressure to reduce VOC emissions at entry and exit point. All other apertures within the oven must be sealed sufficiently.	fugitive loss. I) Drying ovens are operated under balanced conditions	
	m)	Drying systems should operate to maximise the drying efficiency. Complete drying reduces the fugitive emission level of organic solvents left in the product.	m) Drying systems are operated to ensure maximum drying efficiency.	

# Fugitive Emission to Surface Water, Sewer and Groundwater

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
47	For VOC where the operator uses the Emission and Fugitive limits or the Total Emission Limit Value for compliance, the Fugitive VOC emission must be determined in accordance with the Solvent Management Plan. Once completed it need not be done again until the equipment is modified in such a way as to affect the potential fugitive release of VOC.	Solvent management plan may need to be completed.	To be agreed with regulator.
48	Connections to bulk storage tanks should be located within a contained area, fixed and locked when not in use.	Resin bulk storage is bunded and locked in containers. Solvent bulk storage bunded On floor mobile bunds used for mobile operations on the factory floor	ArcelorMittal Construction meets PG Note requirement.
49	The integrity of storage tanks should be inspected, recorded and documented particularly where corrosive substances are involved. These inspections should be included in the maintenance schedule.	Storage tanks are checked as part of the Bund inspection procedure currently being reviewed and recorded.	ArcelorMittal Construction are in the process of reviewing procedures to meet both the requirements of PG Note.
50	<ul> <li>With regard to subsurface structure the operator should:</li> <li>Establish and record the routing of all installation drains and pipework.</li> <li>Identify all subsurface sumps and storage vessels.</li> <li>Engineer systems to minimise leakages from pipes and ensure swift detection if they do occur, particularly where hazardous (i.e. listed) substances are involved.</li> <li>Provide, in particular, secondary containment and / or leakage detection for such subsurface pipework, sumps and storage vessels.</li> <li>Establish an inspection and maintenance programme for all subsurface structures e.g. pressure tests, leak tests, materials thickness checks or CCTV.</li> </ul>	<ul> <li>A site drainage drawing is not available at present.</li> <li>Storage vessels and associated pipework are contained within bunded areas. Uncontained pipework is minimised by design.</li> <li>Bund integrity testing is carried out on interceptors and bunds on a daily basis basis.</li> </ul>	Currently in development stage.

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
51	<ul> <li>For surfacing, the operator should</li> <li>Ensure that all operational areas are equipped with an impervious surface, spill containments kerbs, sealed construction joints, and connection to a sealed drainage system unless the operator justifies that this is not necessary to the satisfaction of the regulator</li> <li>Keep records of the design and condition of the surfacing of all operational areas- relevant information may include as appropriate, capacities, thicknesses, falls, material, permeability, strength / reinforcement and resistance to chemical attack</li> <li>Have an inspection and maintenance programme of impervious surfaces and containment kerbs</li> <li>Justify where operational areas have not been equipped with an impervious surface, spill containment kerbs, sealed construction joints and connected to a sealed drainage system</li> </ul>	<ul> <li>All operational areas are covered by an impervious surface. Whether or not all process drains are connected to foul sewer will be confirmed once the drainage survey has been completed.</li> <li>Site maintains records at present.</li> </ul>	To be agreed with the regulator.
52	<ul> <li>The operator should ensure that all tanks containing liquids whose spillage could be harmful to the environment are contained. The operator should ensure that all bunds: <ul> <li>Are impermeable and resistant to the stored materials.</li> <li>Have no outlet that (that is, no drains or taps) and drain to a blind collection point.</li> <li>Have pipework routed within bunded areas with no penetration of contained surfaces.</li> <li>Are designed to catch leaks from tanks or fittings.</li> <li>Should be at least 110% of the largest tank.*</li> <li>Are visually inspected weekly and any contents pumped out or otherwise removed under manual control after checking for contamination.</li> <li>Where not frequently inspected, are fitted with a high-level probe and an alarm as appropriate?</li> <li>Have an annual maintenance inspection (normally visual but extending to water testing where structural integrity is in doubt)</li> </ul> </li> <li>* A Code of Practice on the use and storage of solvents is being drawn up and will be published on the Defra website <ul> <li>www.defra.gov.uk/environment/water/ground/solvents/index.</li> </ul> </li> </ul>	Bunds at the installation meet all the specified requirements and are fit for purpose. A procedure for bunds inspection is currently being developed.	To be agreed with regulator.
53	<ul> <li>All sumps should:</li> <li>Be impermeable and resistant to stored materials.</li> <li>Be subject to regular visual inspection agreed with the regulator and any contents pumped out or otherwise removed after checking for contamination</li> </ul>	Not applicable. There are no sumps in use at the installation.	Not applicable

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
54	<ul> <li>All storage tanks should:</li> <li>Be fitted with high level alarms or volume indicators to warn of overfilling. Where practicable the filling system should be interlocked to the alarm system preventing overfilling</li> <li>Have delivery connections located within a bunded area, fixed and locked when not in use?</li> <li>Have their integrity inspected, recorded and documented, particularly where corrosive substances are involved.</li> <li>These inspections should be included in the maintenance schedule.</li> </ul>	Not applicable. There are no chemical storage tanks in use at the installation.	Not applicable
PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note status
55	<ul> <li>Storage areas and containers should be designed and operated to minimise the risk of fugitive releases to surface water, sewer and groundwater, in particular:</li> <li>Storage areas should be located away from watercourses and should be protected against vandalism.</li> <li>The maximum storage capacity of storage areas should be stated and not exceeded.</li> <li>The maximum storage period for containers should be specified.</li> <li>Storage areas and silos should be inspected at least once a week to check for signs of leakage or potential leakage.</li> </ul>	External storage areas for resins are bunded and locked containers. Maximum storage capacities are signed and not exceeded. Materials are reviewed monthly. Where items are out of specification or not used they are written off and disposed of as required. A scheduled stock take is also in place to check quantity and quality of materials	ArcelorMittal Construction meets PG Note requirement. Any amendments to be agreed with regulator.

The following stacks are associated with the installation's activities;

Stack Reference	Release Sourced from	
RA1	Dust Extraction	
RA2	Dust Extraction	
RA3	Di isocyanate I Extraction	

Each stack is of conventional steel construction.

Release Component	Constituents	Source of Emission
Total Particulate Matter (TPM)	Total Particulate Matter (TPM) This is primarily based upon mineral glass wool and process trimming activities.	
Volatile Organic Compounds (VOCs)	Mesamol, di isocyanate and miscellaneous aliphatics	Process and spray application systems, tanks and mixer plant equipment
Di isocyanates	Di isocyanates Di isocyanates	
	Carbon monoxide and dioxide (CO and CO <sub>2</sub> )	
	Oxides of Nitrogen including NO, NO2	Space Heater systems and Oven
Process sourced gases	Oxides of Sulphur (SO <sub>2</sub> )	systems
	Water Vapour	
	VOCs (methane)	

# **B2.2.1 EMISSION MONITORING**

Several emission points will be subject to specific release monitoring studies and the installation has significant EHS monitoring data.

ARCELORMITTAL CONSTRUCTION LTD									
	SUMMARY OF ESG STACK SAMPLING REPORTS								
Stack	Shape	Release Temp C	Mean Efflux Velocity m/sec	Mass Flow Rate m3/hr at ref conds	Dia. m	C.S.A m²	Filter Media	Di isocyanate mg/m³	TPM mg/m³
RA 1	Circular	280 – 290	15 m/sec	4.82 m <sup>3</sup> /sec	0.64	0.3216	N/A	<0.1	-
RA 2n	Circular	280 – 290	15 m/sec	0.7362 m <sup>3</sup> /sec	0.25	0.04908	N/A	<0.1	-
RA 3	Circular	280 * 290	15 m/sec	1.059 m <sup>3</sup> /sec	0.30	0.0706	N/A	-	<10

A specific study of emissions sourced from the installations' activities will be undertaken when fully operational in line with the provisions of PG 6/29 (2012).

### **B2.3 MANAGEMENT AND PREVENTION TECHNIQUES**

#### 2.3.1 Management Techniques

Important elements for effective control of emissions include:

- Information, instruction, training and supervision is given to all operatives as is necessary on the process and procedures to be undertaken when carrying out any task or activity.
- Information, instruction, training and supervision as necessary to ensure as far as is reasonably practicable is given to all operatives on the safe operation and maintenance of plant and equipment used as part of the processes undertaken.
- Effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air is carried out at regular intervals, through statutory inspections and regular maintenance regime. Operatives are instructed in care and maintenance checks as part of their training.
- Spares and consumables are available at short notice in order to rectify breakdowns rapidly. This is important with respect to arrestment plant and other necessary environmental controls.

Spares and consumables, in particular, those subject to continual wear are held on site, or should be available at short notice from guaranteed suppliers, so that plant breakdowns can be rectified rapidly.

#### 2.3.2 Environmental Management Systems

Effective management is central to environmental performance; it is an important component of PG Note of achieving compliance with permit conditions. The company (ArcelorMittal Construction) is currently working towards certification and operates an environmental management system.

The system has been developed to implement the company's Environmental Policy and consists of an annual review of the installation's environmental aspects and impacts (as indicated in B2.4).

The company also operates an accredited quality system (ISO9001).

Responsibility for environmental issues at the installation is with the Production Manager who is responsible for the management of the environmental management system and correspondence with the regulator and handling environmental complaints etc. The wider site management team have joint responsibility for delivering the environmental compliance and improvement programmes within the workplace.

#### 2.3.3 Operation and Maintenance

The company is working towards a planned preventive maintenance system (PPM). Environmental maintenance tasks and environmental activities are scheduled as part of this system. This system is reviewed on a regular basis and updated as necessary.

Operational spares for environmental equipment are held on site. The stores are managed by a designated store manager and as such set regular reviews (weekly) on stock items and levels to be held on site.

#### 2.3.4 Audits (Internal)

An internal auditing system will shortly be in place at the installation as part of the environmental management system (EMS) to review the management system, check effectiveness of operational procedures, housekeeping, environmental accidents etc. Each department carries out a weekly environmental, health and safety checklist. This checklist report is audited by the management team.

#### 2.3.5 Training

ArcelorMittal Construction have developed a site wide training matrix that specifically incorporates training programmes to ensure that all relevant employees are aware of their obligations under the environmental permitting regime. This also includes relevant contractors.

Staff at all levels need the necessary training and instruction in their duties relating to control of the process and emissions to air. In order to minimise risk of emissions, particular emphasis is given to control procedures during start-up, shut down and abnormal conditions.

Training may often specifically be addressed in the EMS referred to above.

Training of all staff with responsibility for operating the process includes:

- Awareness of their responsibilities under the permit.
- Minimising emissions on start-up and shut down.
- Action to minimise emissions during abnormal conditions.

The company maintains a statement of training requirements for each operational post and keeps a record of the training received by each person whose actions may have an impact on the environment. These documents will be made available to the regulator on request.

#### 2.3.6 Contractors

All contractors on the site receive Contractor Control Induction training.

All contractors' operations are supervised under the Designated Representative (DR) system where they report to a designated ArcelorMittal Construction employee (usually a Health and Safety Representative).

Contractors are made aware of their responsibilities with respect to the environment (correct disposal of wastes etc) whilst working on the ArcelorMittal Construction site.

#### 2.3.7 Environmental Records

ArcelorMittal Construction maintain records of raw material use, utilities consumption and production information on a monthly basis. This information is used to track materials and identify abnormal consumption patterns.

#### 2.3.8 Accidents / Incidents / Complaints

All non-conformances / incidents are reported to the Production Manager or authorised person for investigation and corrective action. This system captures and addresses all environmental and health and safety incidents, accidents and near misses.

All reports are reviewed, and appropriate corrective and preventive measures are implemented. This system will be tracked and reviewed as part of regular EHS meetings until all actions are closed out.

Fire prevention techniques are used to prevent a possible fire or explosion hazard at the premises. An Emergency Procedures Manual has been developed to detail the steps to be taken in the event of an emergency. The environmental consequences of an incident have been considered as part of the system.

The company also operates a complaints procedure for handling external complaints.

# 2.3.2. MANAGEMENT TECHNIQUES - PG NOTE ASSESSMENT

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note compliance status
56	<ul> <li>Operations and Maintenance</li> <li>Effective operational and maintenance systems should be employed on all aspects of the installation whose failure could impact on the environment, in particular there should be:</li> <li>Documented operational control procedures.</li> <li>A documented preventative maintenance schedule, covering all plant whose failure could lead to impact on the environment, including major "non productive " items such as tanks, pipework, retaining walls, bunds, ducts and filters: this should be reviewed and updated annually</li> <li>Documented procedures for monitoring emissions</li> </ul>	<ul> <li>Operational control procedures are in place as particular of the installation whose failure could impact on the environment, in there should be:</li> <li>umented operational control procedures.</li> <li>cumented preventative maintenance schedule, covering all plant se failure could lead to impact on the environment, including major productive " items such as tanks, pipework, retaining walls, bunds, s and filters: this should be reviewed and updated annually umented procedures for monitoring emissions</li> <li>Operational control procedures are in place as particulation whose failure could impact on the environment, including major productive " items such as tanks, pipework, retaining walls, bunds, s and filters: this should be reviewed and updated annually umented procedures for monitoring emissions</li> </ul>	
57	The regulator should be provided with a list of key process equipment and abatement equipment. Such equipment should be provided with alarms or other warning systems which indicate equipment malfunction or breakdown. Such warning systems should be maintained and checked to ensure continued correct operation, in accordance with the manufacturer's recommendations.	Environmental aspects are considered as part of this review system.	Works ongoing.
58	Essential spares and consumables should be held on site or be available at short notice from suppliers, so that plant breakdown can be rectified rapidly	Stock Listing is held on site by the facilities contractor. Inventory balance to assess if adequate stock levels for all items are held. Changes to level of supplies kept on site is agreed with ArcelorMittal Construction on a weekly basis	ArcelorMittal Construction meet PG Note requirement.
59	Records of breakdowns should be kept and analysed by the operator in order to eliminate common failure modes	Breakdowns recorded on a maintenance procedure (maintenance issues). Outcomes reviewed at daily module meetings and weekly site meetings. Corrective and preventive action carried out immediately where required.	ArcelorMittal Construction meet PG Note requirement.
60	A competent person should be appointed to liaise with the regulator and the public with regard to complaints. The regulator should be informed of the designated individual.	The EMR has responsibility for all communications with the LA and the public with regard to complaints.	ArcelorMittal Construction meet PG Note requirement.
61	A high standard of housekeeping should be maintained	Safety Checklists including environmental aspects are carried out by each department on a weekly basis. Compliance is then checked through Monthly Management Team audits of areas.	ArcelorMittal Construction meet PG Note requirement.
62	Audits All audit records of raw materials usage, water usage, energy usage and waste production should be referenced to annual production	Monthly financial reports are compiled to show usage against metres of material coated. These figures are reviewed at monthly management meetings.	ArcelorMittal Construction meet PG Note requirement

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note compliance status
63	<ul> <li>Competence and Training Training systems, covering the following items, should be in place for all relevant staff: <ul> <li>Awareness of the regulatory implications of the permit</li> <li>Awareness of all potential environmental impacts under normal and abnormal circumstances</li> <li>Awareness of the procedures for dealing with a breach of the permit conditions</li> <li>Prevention of accidental emissions and action to be taken when accidental emissions occur</li> <li>Awareness of all operating procedures</li> </ul></li></ul>	ArcelorMittal Construction has an annual Training Matrix in place which is reviewed on a regular basis. The training needs listed is addressed as part of the training modules delivered. Need to ensure that it is extended to cover key personnel.	ArcelorMittal Construction meet PG Note requirement.
64	The skills and competencies necessary for key posts (which may include contractors and those purchasing equipment and materials) should be documented and records of training needs and training received for these posts maintained.	As above and skills etc. determined as part of contractor and staff selection process.	ArcelorMittal Construction meet PG Note requirement.
65	The potential environmental risks posed by the work of contractors should be assessed and instructions provided to contractors about protecting the environment while working on site	All contractors on site are controlled by the Production and Maintenance Manager. He is responsible for ensuring that the correct ArcelorMittal Construction procedures are followed on site. Where applicable safe works permit systems, method statements etc are used to control contractors on site.	ArcelorMittal Construction meet PG Note requirement.
66	Consumption of organic solvents should be minimised through good process control, using the appropriate techniques for the system as described in the Guidance Note GG 13, Cost effective Management of Solvents in the Printing and Coating industries (Ref 6), produced by the Environmental Technology Best Practice Programme	The site stores and monitors solvent use in line with best practice guidelines for the purposes of fulfilling the Solvent Emission Directive	ArcelorMittal Construction meet PG NOTE requirement.
67	Accidents / incidents / non - conformances: There should be written procedures for investigating incidents, (and near misses), including identifying suitable corrective action and following up.	Accidents on site are captured in the Incident Prevention Reporting system. Corrective and Preventive actions are assigned to responsible individuals, tracked and closed out accordingly.	ArcelorMittal Construction meet PG Note requirement.

# B2.4 DESCRIBE THE METHODOLOGY PROPOSED TO BE USED IN THE EVENT OF UNINTENTIONAL RELEASES TO AIR AND THEIR CONSEQUENCES, INCLUDING IDENTIFICATION, ASSESSING AND MINIMISING THE ENVIRONMENTAL RISKS AND HAZARDS.

#### 2.4.1. Environmental Aspect Assessment

It should be Noted that the quantity and type of materials stored at ArcelorMittal Construction does not exceed the threshold quantity values for either a lower or top tier site under the Control of Major Accident Hazard (COMAH) Regulations.

The Environmental risks and hazards of accidents and their consequences are currently being documented within the ArcelorMittal Construction Environmental Management System (EMS).

Risks and hazards are considered within the identification of Environmental Aspects Procedure.

The environmental aspects of the sites activities and products are considered for normal, abnormal, emergency, past, present and future activities.

The aspect form outlines the nature of the environmental issue / concern and the procedures and systems that are in place to minimise its' effect.

The impact areas considered are as follows:

- Emissions to atmosphere
- Water issues
- Materials storage
- Land contamination
- Waste management
- Resource use
- Local community and environmental issues
- Indirect issues

Environmental aspects and associated impacts are identified via an internal review of the organisation's activities, products and services led by the Environmental Management Representative.

This review accounts for impacts, which are actual, or possible, direct or indirect, which occur under normal, abnormal or emergency conditions. It is revisited on at least an annual basis to allow for the need for inclusion of additional aspects or when changes to the activities, products and services of the organisation occur.

The aspects/impacts of activities, products and services are entered into the Register of Aspects and Significance Assessment).

The Register draws together the relevance of legal environmental requirements, whether the aspect is under control or influence (i.e., direct/indirect) of the organisation, and the conditions under which it produces an impact (i.e., normal, abnormal, emergency).

### Aspects Significance Evaluation

Significance scores are defined for each aspect using a numeric system as follows: -

1. Severity of Impact	Score
Insignificant environmental effect (negligible effect on flora / fauna /	1
humans)	
Minor environmental effect (moderate effect on flora / fauna	3
/humans)	
Major environmental effect (Fatal effect on flora	5
/fauna/ humans)	

2. Scale of Impact	Score
Low (impact is negligible, or minor resource consumption /waste	1
generation)	
Medium (impact is noticeable on local level, or moderate resource	5
consumption/waste generation)	
High (impact is noticeable on global level or national level, or high	10
resource consumption/waste generation)	

3. Probability of Impact	Score
Impact not likely to occur due to controls in place and/or absence of	1
occurrence in the past.	
Impact likely to occur due to limited controls in place, or past history	5
of occurrence	
Impact very likely to occur due to low level of controls, or high	10
risk of occurrence (Note: resource consumption aspects always	
score 10)	

4. Duration	Score
Short – impact occurs less than once a day or never	1
Long – impact occurs at least once a day, but not continuously	3
Continuous – impact occurs continuously during working hours	5

5. Legislation	Score
Compliant with environmental legislation or not applicable to the	1
organisation	
Draft or forthcoming legislation, or borderline	5
non-compliance	
Non-compliant with legal environmental requirements or unsure	20
about compliance	

The five numbers are then multiplied together to give a "total" score for each aspect. This "total" score is used to determine if an aspect is low, medium or high significance as specified in the flowchart below.

#### **Reducing the Significance of Environmental Aspects**

To reduce the potential for pollution and to ensure the continual improvement of the Company shall typically use the following control measures: -

- Review activities with a view to accepting a lower risk substance/process.
- Setting of control limits.
- Regular environmental monitoring.
- Operational control mechanisms and procedures.
- Preventive and routine maintenance.
- Training of employees.
- Provision of secondary containment (e.g., spill kits and bunds).

In the event of abnormal operating circumstances at the site; -

- (i) all process plant can be shut down with immediate effect with regard to permitted activities.
- (ii) all mixers would be immediately shut down.
- (iii) all production activities would cease within the facility
- (iv) site management would implant spillage and containment controls where appropriate.
- (v) site management would notify the regulator of the event, its date/time of occurrence.
- (vi) site management would isolate/evacuate the premises.
- (vii) site management would compile an "event" log and formally record all appropriate controls required.

The significant process controls operated at the site would ensure that all process releases would be terminated in the shortest possible period of operation and that secondly, the process would not be restarted until any fault had been repaired/remediated.

As such limited unauthorised releases, other than a catastrophic scenario, would be dealt with by rapid response and minimisation of environmental consequences.

In the event of a catastrophic situation such as a major fire, site management would implement their emergency procedures and leave the site to the appropriate personnel.

# 2.4.2. Accidents – PG Note Assessment

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note compliance status	
68	Accidents / incidents / non conformances There should be written procedures for investigating incidents and near misses, including identifying suitable corrective action and follow up.	IPR (Injury Prevention Report) system Injury Notification Form and system	ArcelorMittal Construction practice meets PG Note requirement	
69	<ul> <li>The operator should maintain an accident management plan that identifies the hazards, assesses the risks and identifies the measures required to reduce the risk of potential events or failures that may lead to an environmental impact. The plan should identify:</li> <li>The actions to be taken to minimise these potential occurrences; and</li> <li>The actions to deal with such occurrences so as to limit their consequences</li> </ul>	Accidents are assessed as part of the EMS system impact evaluation procedure. Abnormal and normal operating circumstances are considered.	ArcelorMittal Construction practice meets PG Note requirement	
70	<ul> <li>In the case of abnormal emissions arising from an accident, such as a spillage for example, the operator should:</li> <li>Investigate immediately and undertake remedial action as soon as practicable.</li> <li>Promptly record the events and actions taken</li> <li>Ensure the regulator is made aware, as soon as practicable</li> </ul>	IPR system is used to ensure that all incidents are investigated. Incidents are signed off by HSE Manager Officer who will be responsible for reporting environmental incidents to NIEA in line with the proposed environmental permit	To be agreed with regulator	
71	Suitable solvent containment and spillage equipment should be readily available in all solvent handling areas	Chemical spill kits are available in key areas where solvent and chemicals are used around the factory.	ArcelorMittal Construction practice meets PG Note requirement	
72	Adequate provision to contain potential liquid and solid spillage should be provided	Chemical and Oil spill kits are in place around the site	ArcelorMittal Construction practice meets PG Note requirement	
73	Appropriate precautions should be taken to prevent ignition of flammable materials	Fire Risk Assessments have been carried out for all areas of the site and associated actions carried out. These are reviewed on a regular basis.	ArcelorMittal Construction practice meets PG Note requirement	
74	All spillages should be cleared as soon as possible; solids by vacuum cleaning, wet methods, or other appropriate methods or other appropriate techniques may be used, however dry sweeping of dusty spillages should not be permitted	Departmental housekeeping procedures ensure all spillages are addressed immediately.	ArcelorMittal Construction practice meets PG Note requirement	
75	The handling and use of flammable and explosive materials should be carried out in accordance with the requirements of the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)	DSEAR assessment has been carried out for the site and reports are available. The site has been zoned accordingly.	ArcelorMittal Construction practice meets PG Note requirement	
76	Areas where flammable organic solvents and organic solvent containing materials are handled or used should be suitably contained to minimise the potential spread for fire	Fire risk assessments have been carried out for all areas of the site and associated actions carried out. These are reviewed on a regular basis.	ArcelorMittal Construction practice meets PG Note requirement	
77	The storage, handling and use of flammable materials should be undertaken so as to prevent accidents and limit their consequences.	Where feasible flammable materials are transferred by enclosed means. Where materials are decanted into vessels drum lip vent extracts are used to remove flammable material.	ArcelorMittal Construction practice meets PG Note requirement	

The *relative risk and hazards* presented at the site by abnormal unauthorised releases to atmosphere are considered to be of limited consequences due to: -

- (i) The low levels of VOC, combustion fume and inorganic compounds releases discharged to atmosphere even in a short term "unintentional" event.
- (ii) The current "event driven" systems, procedures and practices operated on site, including "emergency response" initiatives.
- (iii) The level of awareness of management of the implications of environment legislation and its significance.
- (iv) The high level of awareness of the management team to the environmental implications of legislation.

#### The site has no significant history of unauthorised releases.

# B2.5 DESCRIBE THE PROPOSED MEASURES FOR MONITORING EMISSIONS TO AIR INCLUDING ANY ENVIRONMENTAL MONITORING, AND THE FREQUENCY, MEASUREMENT METHODOLOGY AND EVALUATION PROCEDURE PROPOSED.

#### 2.5.1 ENVIRONMENTAL MONITORING MATRIX

ArcelorMittal Construction is currently in the process of developing an Environmental Monitoring Procedure as part of its' Environmental Management System.

This is in the form of a Monitoring and Measuring Matrix which details what needs to be measured, what the test methodology should be, what the relevant limits are, who requires the testing and where the test reports should be recorded and retained.

A copy of the Monitoring Matrix is shown below (Table 2.5.2.1).

# 2.5.2 Monitoring

Air emission points are monitored on a regular basis to ensure that emissions are within the current environmental permit limits.

Visual Daily observations are made by the installation staff on start-up and 2 further occasions during the day to ascertain that the stacks are functioning correctly by observing fumes or smoke etc, and if required subsequent adjustments are made to suppression systems if required.

Row	Substance	Source	Limit/Provision	Type of Monitoring	Monitoring Frequency
1 Total Particulate Matter		Spray-up processes and finishing	10 mg/m³	Indicative monitoring and recording to comply with BS ISO	Continuous Monitoring
		operations		9090.2003	Annual
2	VOC	Application of resins	Mass emission of di isocyanate per tonne of resin used should not exceed 100Kg	Flame Ionisation Detection (FID) Photo Ionisation Detection (PID) Infrared Vapour Analysis	Annual
3	1005	Resin transfer moulding	Mass emission of di isocyanate per tonne of resin used should not exceed 20kg	Flame Ionisation Detection (FID) Photo Ionisation Detection (PID) Infrared Vapour Analysis	Annual
4	Odour	Contained and Fugitive sources	Emissions are free from offensive odour	Determination by process assessment	Daily
5	Di isocyanate	Di isocyanate or resins used in the process	Di isocyanate or resins used should not contain more than 0.5% benzene impurity	Indicative Monitoring	Annual

The need for monitoring will depend on local circumstances, operational practice, scale of operation and seasonality.

As part of proper supervision, the operator will monitor emissions, make test and inspections of the process and keep records according to the stipulations agreed with the regulator.

The operator will keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments.

All record will be kept on site for a minimum of 2 years and should be made available to the regulator on request.

Emission Point	Test Required	Frequency	Legislation limits	Method	Type of Record	Responsibility	Copy Information to be sent to	Comment
Spray Processes Continuous Indicative Monitoring	Particulate	To be agreed with regulator	20 mg/m <sup>3</sup>	Competence of contractor (UKAS etc) and use appropriate method as designated in M series guidance	Hard copy	Environmental Representative	Local Authority EHO	Within 28 days of test and records retained on site
Spray Processes Annual Extractive Monitoring to BS ISO 9096:2017	Particulate	To be agreed with regulator, and completed annually	20 mg/m <sup>3</sup>	Competence of contractor (UKAS etc) and use appropriate method as designated in M series guidance	Hard copy	Environmental Representative	Local Authority EHO	Within 28 days of test and records retained on site
Emissions Continuous Indicative Monitoring	VOC	To be agreed with regulator	50 mg/m <sup>3</sup> as 30 minute mean	Competence of contractor (UKAS etc) and use appropriate method as designated in M series guidance	Hard copy	Environmental Representative	Local Authority EHO	Within 28 days of test and records retained on site
Arrested Emissions Annual Extractive Monitoring to BS ISO 9096:2017	VOC	Completed annually	50 mg/m <sup>3</sup> as 30 minute mean	Competence of contractor (UKAS etc) and use appropriate method as designated in M series guidance	Hard copy	Environmental Representative	Local Authority EHO	Within 28 days of test and records retained on site
Application of Di isocyanate – emissions of di isocyanate	VOC	Completed annually	Not to exceed 100 kg	Competence of contractor (UKAS etc) and use appropriate method as designated in M series guidance	Hard copy	Environmental Representative	Local Authority EHO	Within 28 days of test and records retained on site
Visual stack assessment of all stacks	Observation using Ringelmann Chart	To be agreed with regulator	Unusual results to be investigated by Maintenance	Security contractor	Daily log book	Environmental Representative	Environmental Representative	Retained on site for inspection for at least 1 yr
Odour assessment	Observation	To be agreed with regulator	Unusual results to be investigated	Security contractor	Daily log book	Environmental Representative	Environmental Representative	Retained on site for inspection for at least 1 yr
Solvent consumption	Quantity	To be agreed with regulator	Ensure completed	Environmental Representative	Hard copy. ET10 & mass balance	Environmental Representative	Local Authority EHO	None
Oven Emissions	% Combustion efficiency CO, SOx NOx	To be agreed with regulator	N/A	Environmental Representative	Hard copy	Contractor copy	Copy to Environmental Representative	None
Industrial Hygiene monitoring (WEL)	VOC Dust	Annual	Various	ArcelorMittal Construction / Contractor	Hard copy	Environmental Representative	Retained on site	None
Electricity	Quantity	Monthly & Quarterly	Ensure completed	Environmental Representative	Hard copy. & mass balance	Environmental Representative	Local Authority EHO	None
Oil	Quantity	Monthly & Quarterly	Ensure completed	Environmental Representative	Hard copy. & mass balance	Environmental Representative	Local Authority EHO	None

Emission Point	Test Required	Frequency	Legislation limits	Method	Type of Record	Responsibility	Copy Information to be sent to	Comment
Gas	Quantity	Monthly & Quarterly	Ensure completed	Environmental Representative	Hard copy. & mass balance	Environmental Representative	Local Authority EHO	None
Water	Quantity	Monthly & Quarterly	Ensure completed	Environmental Representative	Hard copy. & mass balance	Environmental Representative	Local Authority EHO	None
Noise Internal	Noise meter reading	Every 2 years	< 85 dBa	ArcelorMittal Construction	Hard copy	Environmental Representative	Retained on site	None
Noise External	Noise meter reading	6 monthly	< 60 dBa	ArcelorMittal Construction	Hard copy	Environmental Representative	Retained on site	None
Bunds	Visual Inspection	Monthly	Empty if more than 10% full	ArcelorMittal Construction	Hard copy	Site Services Co- ordinator	Retained on site	None
Bund Integrity	Testing	Annual	See BS standard	BS	Hard copy	Site Services Co- ordinator	Retained on site	None
Forklift	Service contract	Annual	-	Environmental Representative	Hard copy	Contract copy	Copy to Environmental Representative	None
Forklifts	Annual Inspection	Annual	-	ArcelorMittal Construction	Hard copy	Site Services Co- ordinator	Retained on site	None
Fire Extinguishers	Visual inspection and weighed	Monthly	-	ArcelorMittal Construction	Hard copy	Site Services Co- ordinator	Retained on site	None
Fire Extinguishers	Inspection	6 monthly	-	Agreed Contractor	Hard copy	Contract copy	Copy to Environmental Representative	None
Spill Kit Checks	Check and re-fill	Monthly	-	Safety dept. check, ArcelorMittal Construction_supervisor	Hard copy	NIEA records	Copy to Environmental Representative	None
Fire checklist	Check	Bi monthly	-	Fire check, ArcelorMittal Construction Fire Wardens	Hard copy	NIEA records	Copy to Environmental Representative	None
Air Conditioning	Check	Annual	-	Contractor	Hard copy	Contractor copy	Copy to Environmental Representative	None
LEV / roof points	Survey investigation	Annual	Various	Contractor (Nederman)	Hard copy	Contract copy	Copy to Environmental Representative	None
Gas Cylinder checklist	Check	Annual	-	Contractor	Hard copy	Contractor copy	Copy to Environmental Representative	None
Packaging regulations	Data collected	Annual	Required if > 50 tonnes on UK market	ArcelorMittal Construction / Contractor compliance scheme	Packaging Recovery Notes	Purchasing	Contractor.	Legal requirement to complete

#### 2.10.2. ENVIRONMENTAL MONITORING - PG NOTE ASSESSMENT

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note Compliance status
78	<ul> <li>Monitoring and Reporting</li> <li>The need for and scope of testing and the frequency and time of sampling depend on local circumstances, operational practice, and the scale of operation. As part of proper supervision, the operator should monitor emissions, make tests and inspections of the process and keep records, in particular the operator should keep records of audits, inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments. Monitoring may include process variables and operating conditions where relevant to emissions. In such cases:</li> <li>Current records should be kept on site and be made available for the regulator to examine.</li> <li>Records should be kept by the operator for at least 2 years</li> </ul>	<ul> <li>Process variables such as quantities of raw materials and wastes containing solvent, flammability limits within ovens are recorded on a continuous basis.</li> <li>Visual assessments of stack emissions are carried out on a daily basis and recorded.</li> <li>A monitoring procedure and timetable currently being developed as part of the site Environmental Management System to detail what monitoring is to be done, where records are to be held and how long for will be agreed with the regulator.</li> </ul>	To be agreed with the regulator
79	The regulator needs to be informed of monitoring to be carried out and the results. The results should include process conditions at the time of monitoring	Monitoring currently taking place	To be agreed with the regulator
80	The operator should notify the regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The operator should state the provisional time and date of monitoring, pollutants to be tested and methods to be used.	To be agreed with the regulator	To be agreed with the regulator
81	The results of non-continuous emission testing should be forwarded to the regulator within 8 weeks of the completion of the sampling	To be agreed with the regulator	To be agreed with the regulator
82	<ul> <li>Adverse results from any monitoring activity (both continuous and non-continuous) should be investigated immediately. The operator should ensure that:</li> <li>The cause has been identified and corrective action taken.</li> <li>As much detail as possible is recorded regarding the cause and extent of the problem and the action taken to rectify the situation</li> <li>Re-testing to demonstrate compliance is carried out as soon as possible,</li> <li>And the regulator is notified</li> </ul>	Where an adverse result is identified an environmental incident report will be raised the cause is investigated and suitable corrective action carried out and the sample point re-tested as necessary. This procedure is currently being detailed in the installation's Monitoring Procedure under the ISO procedures	To be agreed with the regulator
83	The regulator needs to be notified about certain events and expects the operator to respond to problems which may have an effect on emissions to air. Such problems may arise within the process itself or with the abatement plant, for example.	This will be a requirement under the site's proposed PPC.	To be agreed with the regulator
84	<ul> <li>In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions:</li> <li>Investigation and remedial action should be undertaken immediately.</li> <li>The process or activity should be adjusted to minimise those emissions; and the events and actions taken should be promptly recorded.</li> <li>In the case of non-conformance causing immediate danger to human health, operation of the activity should be suspended.</li> </ul>	In the case of an abnormal emission etc. an environmental incident report is raised the cause is investigated and suitable corrective action carried out as necessary. This procedure will be detailed in the installation's Monitoring Procedure under the terms of ISO currently being developed.	To be agreed with the regulator

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note Compliance status
5	<ul> <li>The regulator should be informed without delay:</li> <li>If there is an emission that is likely to have an effect on the local community.</li> <li>Or in the event of the failure of key abatement plant, for example bag filtration plant or scrubber units</li> <li>If continuous monitoring shows an emission concentration exceeding double the limit value</li> </ul>	The HSE Officer is responsible for communicating with the NIEA about these events.	To be agreed wi the regulator
6	Care is needed in the design and location of sampling systems in order to obtain representative samples for all release points: Sampling points on new plant should be designed to comply with the British or equivalent standards. E.g. ISO 9096:2017, BS EN 13284-1 or BS ISO 12141:2002 for sampling particulate matter in stacks. The operator should ensure that adequate facilities for sampling are provided on stacks or ducts. Where monitoring is not in accordance with the main procedural requirements of the relevant standard, deviations should be reported as well as an estimation of any error invoked.	Each of the sampling points proposed will be designed in such a way that a representative sample can be taken from the process. Adequate facilities will be put in place on stacks or ducts being sampled to ensure that the representative sample can be taken safely. Any deviations from the normal sampling regime or procedure are also reported to the Regulator where necessary.	To be agreed with the regulator
87	Continuous monitoring is normally expected for the main releases identified. Where continuous monitoring is required by the permit it should be carried out as follows: All continuous monitoring readings should be on display to appropriately trained operating staff. Instruments should be fitted with audible and visual alarms, situated appropriately to warn the operator of arrestment plant failure or malfunction. The activation of alarms should be automatically recorded. All continuous monitors should be operated, maintained and calibrated (or referenced) in accordance with the manufacturer's instructions, which should be made available for inspection by the regulator. The relevant maintenance and calibration (or referencing) should be recorded. All new continuous monitoring equipment should be designed for less that 5% downtime over any 3-month period	Continuous monitoring will be carried out as to the requirements of the local regulator.	To be agreed with the regulator
88	<u>Monitoring and reporting of emissions to air</u> Exhaust flow rates of waste gases should be consistent with the efficient capture of emissions, good operating practice and meeting the requirements of the legislation relating to the work-place environment	Operator exposure levels will be monitored as part of the company's Industrial Hygiene monitoring programme to meet legal requirements. Reports can be made available upon request.	To be agreed with the regulator
89	The introduction of dilution air to achieve emission concentration limits should not be permitted	This practice does not take place at the installation.	Not Applicable
90	Dilution air may be added for waste gas cooling or improved dispersion where justified, but this should not be considered when determining the mass or concentration of the pollutant in the waste gases	This practice does not take place at the installation.	Not Applicable

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note Compliance status
	Periodic visual assessment of releases should be undertaken as required by the regulator to ensure that all final releases are colourless, free from persistent visible emissions and free from droplets	Log book of visual observations on stack emissions should be maintained on a daily basis as per proposed IPPC licence requirements. Records retained by HSE Officer.	To be agree with regulator
92	<ul> <li>Calibration and compliance monitoring should meet the following provisions as appropriate. No result should exceed the emission concentration limits specified, except where either: <ul> <li>a) data is obtained over at least 5 sampling hours in increments of 15 minutes or less; or</li> <li>b) at least 20 results are obtained where sampling time increments of more than 15 minutes are involved AND in the case of a) or b)</li> <li>c) no daily mean of all 15-minute mean emission concentration should exceed the specified emission concentration limits during normal operation (excluding start up and shut down) and</li> <li>d) no 15-minute mean emission concentration should exceed the specified emission concent</li></ul></li></ul>	Calibration and compliance monitoring equipment will be set up to ensure that these the emission results can be assessed under these requirements.	To be agreed with regulator
93	Where continuous quantitative monitoring is undertaken, compliance with c) and d) above should be demonstrated on a daily basis	To be agreed with regulator	To be agreed with regulator
94	<ul> <li>For unabated releases of VOC calibration and compliance monitoring must meet the following provisions as appropriate: no result should exceed the emissions concentration limits specified, except where:</li> <li>The average of all the emission readings taken during the periodic measurements does not exceed the emission limit</li> <li>None of the hourly averages of the emission readings exceed the emission limit by a factor of more than 1.5</li> </ul>	To be agreed with regulator	To be agreed with regulator
95	No result should exceed the emission concentration limits specified	To be agreed with regulator	To be agreed with regulator
96	Where abatement equipment is required to comply with the particulate matter provisions of the Note. Then the particulate matter emission should be continuously monitored to indicate performance of the abatement equipment (using techniques such as differential pressure across filter, water flow on wet backed booths, in duct / across duct particulate monitor)	Particulate monitoring requirements at the installation will be agreed with the regulator under the terms of the Environmental licence.	To be agreed with regulator

PG Note Ref	PG Note Technique	ArcelorMittal Construction Practice	PG Note Compliance status
97	<ul> <li>Monitoring and Reporting Emission to Water and Sewer</li> <li>The appropriateness of the monitoring provisions will vary depending upon the sensitivity of the receiving water and should be proportionate to the scale of the operations, nature of the discharge and receiving water. For each release point the following information is required:         <ul> <li>The specific volume flow from the process to sewer / controlled water</li> <li>The quality of the receiving water</li> <li>The volume of discharge compared to the percentage dry river flow of the receiving water</li> </ul> </li> </ul>	Not applicable. No wet waste generated. All site drainage directed to foul.	Not Applicable
98	Monitoring and Reporting of Waste         The following should be monitored and recorded         • the physical and chemical composition of the waste         • its hazard characteristics         • Handling precautions and substances with which it cannot be mixed	Waste data are being recorded for regulatory and corporate requirements as specified. Waste handling methods are defined within the Waste Management Procedure in the EMS Manual currently under construction	ArcelorMittal Construction meets PG NOTE requirement
99	Monitoring of VOC The definitions provided must be used in all calculations relating to the Solvent Management Plan (SMP)	Currently under development	To be agreed with regulator
100	For all installations, the SMP should be used to determine the solvent consumption annually	Currently under development	To be agreed with regulator
101	For all installations using the emission and fugitive limits, the SMP should be used for determining fugitive emissions. Once completed, it need not be repeated until the equipment is modified	Currently under development	To be agreed with regulator
102	For all installations using the reduction scheme, the SMP should be used to determine the actual emissions annually	Currently under development	To be agreed with regulator
103	For all installations using the total emission limit value the SMP must be used to determine the Total Emission and Solvent Input annually. In addition, the SMP should be used for determining the fugitive emissions. Once completed, it need not be repeated until the equipment is modified.	Currently under development	To be agreed with regulator

#### B3 DESCRIBE THE NATURE, QUANTITIES AND SOURCES OF FORESEEABLE EMISSIONS

An emissions inventory for the installation has been developed from current PPC license conditions, PG Note Standards and other environmental information held by the company.

# B4.1 PROVIDE AN ASSESSMENT OF THE POTENTIAL SIGNIFICANT ENVIRONMENTAL EFFECTS OF THR FORESSEABLE EMISSIONS TO AIR

#### Emissions to Air:

The key emissions from these processes that constitute pollution control for the purposes of Regulations and therefore warrant control are those consisting of particulate matter, di isocyanates and Solvent Emissions (VOC's).

#### **Particulate Matter**

The following parts of the process may give rise to particulate matter in the form of dust:

- Cutting and trimming of composite parts.
- On site transfer of dusty materials.
- Spray application processes and finishing operations.

Practice has shown that the best method of ensuring that dust does not escape to the atmosphere is to use a containment which is connected to a high-volume extraction and filtration unit. In this manner dust is captured for disposal as solid waste and represents no risk of emission to the atmosphere.

Dust raised by the trimming operations of composite parts outside the containment will be subject to daily inspection by the operator to ensure that the operation is only carried out in a well-ventilated area.

The levels of dust generated on site may be subject to local circumstances, operational practice, scale of operation and seasonality.

Levels of dust will increase during the summer months compared to that generated in the winter months. As part of proper supervision, the operator will monitor dust emissions to ensure that it is not creating a nuisance to other personnel, and it is undertaken in a well-ventilated area.

#### **Total Particulate Matter**

Total Particulate Matter sourced from the site's activities are considered in terms of their environmental fate. Any inorganic" components of release will encompass naturally occurring minerals. These are all present in nature and are normally stable long term.

Components such as UV additives will degrade rapidly and have very little environmental impact, short or long term.

The overspray particulates will be enclosed within a resin matrix and the urethane matrices will be rapidly degraded by UV radiation and hydrolysis.

Most of the VOCs sourced from site activities will be released to the atmosphere where they will degrade by reaction with photo-chemically produced hydroxyl radicals with a half-life of a few months and will be subject to direct photolysis.

The "viscous" nature of the products produced will mean that very little Pm 10, Pm 5 and Pm 2.5 are generated.

Biodegradation of organic components is possible in natural waters but will probably be very slow compared with evaporation. It will not be expected to significantly adsorb to sediment or to bio-concentration in aquatic organisms.

#### **Solvent Emissions**

The following parts of the process may give rise to Solvent Emissions in the form of VOC's:

- Application of sprayed coating.
- Resin transfer.
- Odour- Contained and Fugitive sources.
- Di isocyanate or resins used in the process.

Di isocyanate is mainly released as the wet mixture undergoes the condensation reaction which eventually creates the finished part, and consequently is the major VOC released into the air during production.

#### Volatile Organic Compounds- Environmental Impact

Most of the VOCs sourced from site activities will be released to the atmosphere where it will degrade by reaction with photo-chemically produced hydroxyl radicals with a half-life of a few months and will be subject to direct photolysis.

Releases to water will primarily be removed by evaporation. Biodegradation is possible in natural waters but will probably be very slow compared with evaporation. It will not be expected to significantly adsorb to sediment or to bio-concentration in aquatic organisms.

Releases to soil will evaporate rapidly from near-surface soil and partially leach into groundwater where its fate is unknown. VOCs are not expected to bio-concentrate in the food chain.

#### **VOC – Environmental Fate**

**Terrestrial Fate:** When spilled on land, VOCs are expected to evaporate from near surface soil into the atmosphere because of their high vapour pressures. Although little work has been done on their adsorptivity, it is probable that each will not leach through subsoil into groundwater. Degradation in groundwater is unknown. Hydrolysis in soil or groundwater is not an important process under normal environmental conditions.

**Aquatic Fate:** VOCs will be primarily lost by evaporation to the atmosphere that should take several hours depending on wind and mixing conditions.

Biodegradation is possible in natural waters but will probably be very slow compared with evaporation. Little is known about adsorption or bio-concentration in aquatic organisms to sediment but these are not likely to be significant processes. Hydrolysis is not an important process under normal environmental conditions.

**Atmospheric Fate**: VOCs released into the atmosphere will degrade by reaction with hydroxyl radicals with a halflife of several months (1-3). They may be subject to direct photolysis.

A very small fraction of the chemicals potentially may diffuse to the stratosphere where they will rapidly degrade by photolysis and reaction with chlorine radicals. Any moderately soluble VOCs will be expected to partially return to earth in rain but only in very limited amounts.

#### **Combustion Fume**

Combustion fume results from the use of natural gas in the operation of the site's space heaters and Spray Bake Booth burner systems and is made up on several components as follows; -

#### Sulphur Dioxide and Oxides of Nitrogen

Sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO, NO<sub>2</sub> and NO<sub>3</sub>), along with other chemical compounds, are released during the combustion of natural gas, these gases react in the atmosphere with water, oxygen, and other chemicals, they form acidic compounds. Sunlight increases the rate of most of these reactions.

The resulting substances are wet (acid rain, snow, or fog) or dry (acidic gases or particulates) and may drift far from the original source before falling to the earth.

The negative effects of these acidic deposits include damage to forests, soil, and aquatic ecosystems, damage to infrastructure and human health, and reduced visibility.

#### Carbon Dioxide (CO<sub>2</sub>)

Carbon dioxide is one of the most common greenhouse gases in the atmosphere and is regulated through the natural carbon cycle, where carbon dioxide is emitted into the air and reabsorbed by vegetation and water. This cycle is upset by the emission of additional carbon dioxide from human activities.

Because natural cycles cannot absorb these additional emissions, a large portion of carbon dioxide remains in the atmosphere and increases climate change.

The primary human source of carbon dioxide is the burning of fossil fuels for electricity, heat, and transportation.

#### Carbon Monoxide (CO):

This gas is created when the carbon in natural gas is not entirely burned during combustion and can have serious impacts on human health. The majority of carbon monoxide emissions come from the use of fossil fuels in transportation. When released into the air, carbon monoxide can expect heart disease and damage the human nervous system. Carbon monoxide also has an indirect effect on global climate change, and is a criteria pollutant.

#### **Emissions to Water**

No trade effluent is produced within the installation. If there is any surface water run-off or spills of liquids etc, these will be contained with appropriate spills and the local authorities informed.

#### **Noise Monitoring**

Levels of noise within the installation must remain less than 5 dBA below the background levels. For any levels above 5 dBA, mitigation should be carried out immediately to reduce levels.

The relative risk and hazards presented at the site are considered to be of limited consequences due to: -

- (i) The extremely low levels of VOC and inorganic compounds releases discharged to atmosphere.
- (ii) The current systems, procedures and practices operated on site, including "environmental quality resource" initiatives.
- (iii) The level of awareness of management of the implications of environment legislation and its significance.
- (iv) The commitment to future development to reduce environmental emissions, by addressing new technology and application options.
- (v) The high level of awareness of the management team to the environmental implications of legislation.

#### B4.2 PROVIDE AN ASSESSMENT OF WHETHER THE EMISSIONS TO AIR FROM THE INSTALLATION ARE LIKELY TO HAVE A SIGNIFICANT EFFECT ON A EUROPEAN SITE AND, IF IT IS, PROVIDE AN ASSESSMENT OF THE IMPLICATIONS OF THE INSTALLATION FOR THAT SITE, FOR THE PURPOSES OF THE CONSERVATION (NATURAL HABITATS ETC) REGULATIONS (NI) 1995.

Operating the process is not anticipated to have adverse effects on any SSSI, ANOB, built heritage, sensitive receptor, surface or ground water, nor be a contributor to contamination of any surrounding land.

#### 5.1 IN WHICH DISTRICT COUNCIL AREA IS THE INSTALLATION LOCATED?

The Installation is located in the area of

Sandwell Metropolitan Borough Council whose address is as follows;-

SANDWELL MBC PUBLIC HEALTH DIRECTORATE POLLUTION CONTROL PO BOX2374 SANDWELL COUNCIL HOUSE OLDBURY WEST MIDLANDS B69 3DE

# B5.2 ARE THERE ANY AREAS OF SPECIAL SCIENTIFIC INTEREST WHICH ARE WITHIN 2 KMS OF THE INSTALLATION?

Not applicable. The site is not within 2km of designated ASSI's.

# B5.4 ARE THERE ANY EUROPEAN SITES, AS DEFINED BY REGULATION 10 OR THE CONSERVATION (NATURAL HABITATS) REGULATIONS NI 1995, WHICH MAY BE AFFECTED BY EMISSIONS FROM THE INSTALLATION?

Operating the process is not anticipated to have adverse effects on any local conservation habitat.

#### ENVIRONMENTAL POLICY

The Company currently operates its own Environmental Policy..

#### **ENVIRONMENTAL ORGANISATION**

Specific environmental responsibilities are already defined in the company's management activities and are defined in the Production and Maintenance Manager's environmental signatory.

#### WASTE MANAGEMENT AND MINIMISATION

The site's Waste Management is directly under the control of the Directors who have responsibility for the disposal of all "special" and general wastes.

The site operates a fully documented procedure for the disposal of waste.

Full documentation is maintained in accordance with Section 17 protocols and the Special Waste Regulations in accordance with Section 62 protocols and Hazardous Waste Regulations.

Ongoing site initiatives for the minimisation of these wastes include a review of plant and abatement techniques. Several schemes are undergoing feasibility studies at the time of submission.

Wastes generated from site activities are dealt with via approved and licensed Waste Contractors. Environmental auditing of the waste contractors will form part of the Company's "Cradle to Grave" monitoring initiative.

All wastes which may contain traces or residues of process materials will be stored on site in a dedicated, fenced storage compound prior to disposal via an approved contractor.

#### POLLUTION CONTROL INITIATIVES

In accordance with pollution prevention and control initiatives as part of the precept of resource minimisation, the Company have established ongoing procedures to comply with this aspect of regulation.

This includes routine environmental audit.

#### SPILLAGE AND CONTAINMENT

Site management have implemented specific spillage and containment procedures to deal with potential incidents.

#### REACH

Site management have attended a REACH awareness course (2 day)

#### **DI ISOCYANATE AWARENESS**

Site management are aware of the latest regulations relating to the delivery, handling, storage, distribution and disposal of isocyanate technologies.

# C1.1 APPLICATION FEE

The application fee is as follows; -

£1640.00

# C1.2 ORDER NUMBER

The application does not carry an order number.

# C3.1 COMMERCIAL CONFIDENTIALITY

For the purpose of the provisions of this application it is the intent of ArcelorMittal Construction Limited to request the process detail and chemical components information contained herein not to be encompassed initially by Commercial Confidentiality.

However, should more specific data or information be required to support this application, ArcelorMittal Construction Limited reserves the right to revoke this and reassess the Commercial Confidentiality clause proviso.

# C3.2 PUBLIC REGISTER

For the purpose of the provisions of this application it is the intent of ArcelorMittal Construction Limited to request the process detail and chemical components information contained herein not to be placed on the Public Register.

# C4 DATA PROTECTION

For the purpose of the provisions of this application it is the intent of ArcelorMittal Construction Limited to request the process detail and chemical components information contained herein remains within data protection legislation in its disclosure.

**APPENDIX A** 

# APPENDIX B

# SITE LAYOUT MAPS

