

Permit with introductory note

Pollution Prevention and Control Regulations 2000

**Knauf Insulation
Pont-y-felin
Cwmbran
Torfaen
NP44 2YQ**

Permit number

BR 8212

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Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I.2000 No.1973) ("the PPC Regulations") to operate an installation carrying out one or more of the activities listed in Part 1 to Schedule 1 of those Regulations, to the extent authorised by the Permit.

The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the condition implied by Regulation 12(10) of the PPC Regulations, that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

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

Brief description of the installation regulated by this permit

Knauf Insulation produces light density glass mineral wool rolls on a single main production line for use as an insulation material. The product range varies from rolls of 25mm to 200mm nominal thickness. The site also produces loose fibre products

The continuous process produces glass mineral wool in two stages. Firstly the glass fibre is produced by melting glass and turning it into fibres. Then, the fibres are bound together in a forming process to give glass mineral wool mat

The process can be sub divided into various sections -

Batch Plant

Raw materials are delivered by road tankers and blown into a series of storage bins. The materials are weighed then blended together and transferred in batches via a pressurised blowing system. The raw materials include sand, dolomite, limestone, soda ash and recycled dust from the Dry Electrostatic Precipitator unit. Recycled cullet (Broken glass) and bought in cullet is added to the furnace with the rest of the raw materials that make up a batch.

Plans are being prepared for the installation of an on site processing plant for recycled bottles, which will be used to sort, clean and mill the glass into sizes and quality suitable for incorporating into the process.

Melting and Fiberising

All site production is supplied from a single oxy-gas furnace. The furnace is provided with a dual fuel facility (Oxy Fuel Gas and LPG, Propane). The furnace is also equipped with an electric induction heating facility for boost. The oxy gas fuel is provided by an associated on-site Oxygen generation plant (operated by BOC Ltd, but not part of the installation)

The molten glass from the furnace passes through the Furnace throat to the forehearth and from the forehearth to 10 sets of spinners that are used to form the fibres. The flow to the spinners is controlled by heating / cooling a series of bushings. Fiberising uses centrifugal force in the spinners to attenuate the fibres and the process uses compressed air and blowers to assist in the process of distributing the fibre onto a moving conveyor

The flue gases from the furnace are cooled prior to entry to the dry electrostatic precipitator before being released to air via a 70m stack. An emergency by-pass is provided for the infrequent occurrences of the precipitator being unavailable.

Binder Plant

The Binder plant blends a 'bought-in' phenol formaldehyde resin binder, which acts as a binding agent that is sprayed onto the fibres, providing the rigidity for the matting. The Binder plant uses recycled process water (wash water) as an ingredient to dilute the binder.

Forming

As they are formed the fibres are sprayed with a binder and use air lapping systems to lay a veil of discontinuous fibres on to a slotted mat conveyor. The mat is held to the conveyor by application of suction in the forming hood. Waste product from edge trim systems is recycled to the forming hood to reduce waste.

A primary water-scrubber for forming and curing exhausts conditions the emissions from the plant.

Curing and Cooling

The line from the forming section passes to the curing section. This is equipped with a large gas-fired curing oven, with five zones, which pass hot air under pressure through the mat to cure the product. The product sits between slatted belts which cure the product to its required thickness. At exit from the ovens the product is cooled by using cooling fans to draw ambient air through the cured product.

A Primary scrubber for forming and curing exhausts conditions the emissions from the plant.

Line Processing and Packaging

The product leaves the curing oven as a continuous mat, which requires further processing. The line processing and packaging systems trim edges, cut to width, cut to depth and cut to length and the product is further processed in a variety of packaging stations, which roll, compress and package the rolls.

The site has two off-line processes. One system produces blown wool products from scrap material. The second system produces bails of material that are sold as a raw material to a third party.

The emissions from the plant are conditioned by dry filter dust extraction systems.

Water is used on site for a number of purposes, including fire systems, domestic and for the production process. The water used during production is

part of a recycled water system known as the 'Wash Water system'. Water is lost from this system by application on the product as part of the 'binder' and through evaporation.

Wash water is also used as part of the abatement system for scrubbing the emissions from the forming, oven and cooling sections using impact jet sprays.

On infrequent occasions when this system becomes out of balance it is necessary to discharge excess water to sewer via a consented discharge agreement. The system is currently topped up using rainwater and mains water.

Surface water falling on roofs and non-contaminated areas of the site is directed via interceptors through to a sump and finally to river.

Abatement

The furnace is Oxy-Gas fired with Propane (LPG) back up fuel. The furnace emission is passed through a Electrostatic precipitator to remove particulate matter. This material is then recycled back into the furnace as a raw material.

In the event of a failure of the Electrostatic Precipitator system an emergency bypass stack is used.

Forming of the fibres is achieved using propriety equipment that has been changed in September 2002, reflecting technology associated with Knauf. The formed fibre is cooled by the application of process water through a spray to reduce binder losses and subsequently reduce emissions. Binder chemistry is a propriety formulation designed to achieve the required product performance and reduce forming emissions.

Further information relating to the activities at the installation can be found in the Non-Technical Summary and main IPPC Application documents held on the Public Registers located at the following offices:

The Environment Agency, Rivers House, St Mellons Business Park, St Mellons, Cardiff CF3 0EY.

Torfaen County Borough Council , County Hall, Cwmbran, NP44 2WN

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
None		

Superseded Licenses/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
KnaufAlcopor Ltd	AI0535/BS8265	6/9/02

Talking to us

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

The Operator should use the Emergency Hotline telephone number (0800 80 70 60) or any other number notified to it to give a notification under condition 5.1.1.

Confidentiality

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

Variations to the permit

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

Surrender of the permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made. For the applicant to be successful, they would have to be able to demonstrate to the Agency, in accordance with Regulation 19 of the PPC Regulations, that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 18 of the PPC Regulations. A transfer will be allowed unless the Agency considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit. If the Permit authorises the carrying out of a specified waste management activity, then there is a further requirement that the transferee is considered to be a "fit and proper person" to carry out that activity.

Status Log

Detail	Date	Comment
Application BR8212	Received 16/07/02	
Response to request for information	Request dated 23/08/02	Response dated 20/09/02
Response to request for information	Request dated 08/10/02	Response dated 21/11/02
Response to request for information	Request dated 16/12/02	Response dated 09/04/03
Request by Agency to extend determination to 30 May 2003	Request dated 10/04/03	Response dated 14/04/03
Permit BR8212	Determined 30/05/03	

End of introductory note.

Permit

Pollution Prevention and Control
Regulations 2000



**ENVIRONMENT
AGENCY**

Permit

Permit number

BR8212

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973), hereby authorises

Knauf Insulation Ltd ("the Operator"),

whose Registered Office is

P.O. Box 10

St Helens

Merseyside

WA10 3NS

Company registration number 1926842

to operate an Installation at

Pont-y-felin

Cwmbran

Torfaen

NP44 2YQ

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

Signed



D.Walters

Authorised to sign on behalf of the Environment Agency

Date

30 May 2003

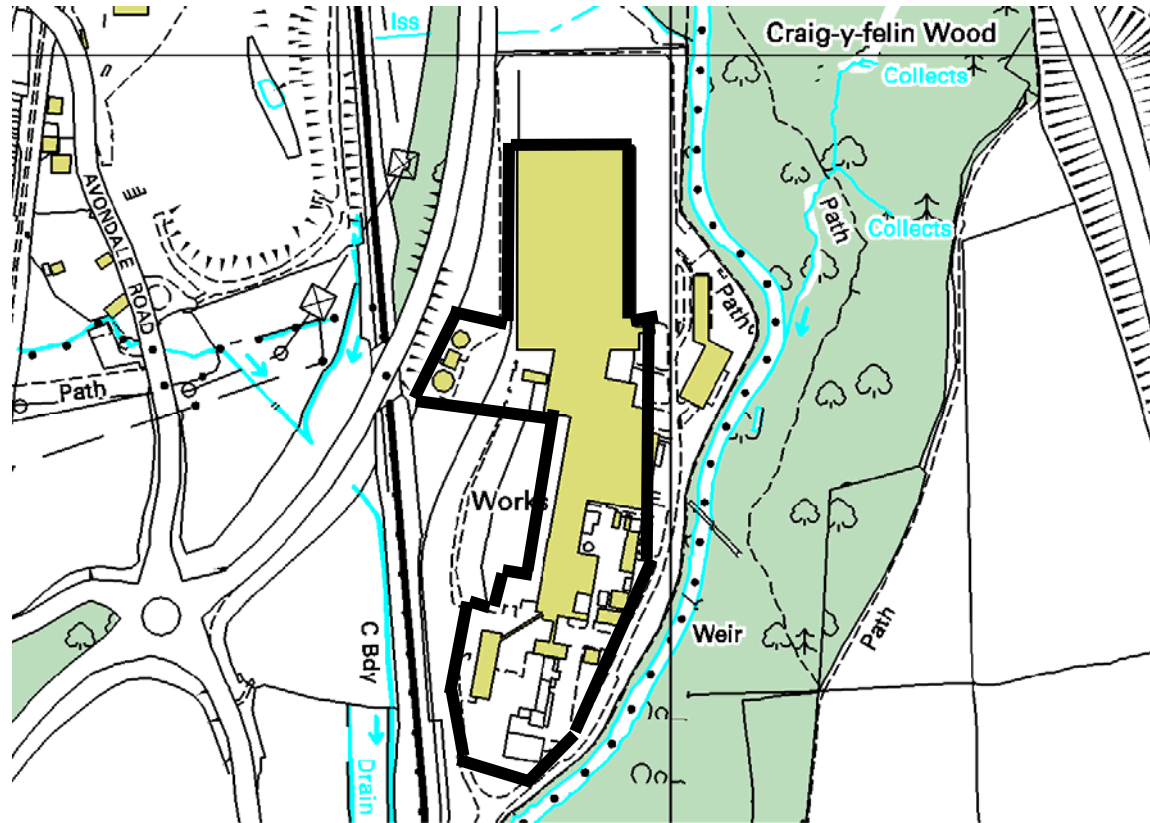
Conditions

1 The permitted installation

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

Table 1.1.1			
Activity under Schedule 1 of the Regulations/ Associated Activity	Description of specified activity	Schedule 1 Activity Reference (if applicable)	Limits of specified activity
Manufacture of Glass Fibre	Manufacture of Glass Fibre	3.5 A(1)(b)	Receipt of raw materials to material being packed.
Storage and Production of recycled glass cullet	Storage, sorting and cleaning of recycled glass cullet	Directly associated activity	From delivery of bottle / plate to delivery to melting furnace
Water discharges to foul sewers	Discharge of process water and site drainage from the installation.	Directly associated activity	From interceptors to point of entry to sewer
Water discharges to controlled waters	Discharge of rainwater and un-contaminated surface water from the installation.	Directly associated activity	From interceptors to point of entry to controlled waters
Waste handling and storage	Handling and storage of various solid and liquid wastes from the process	Directly associated activity	From point of generation to point of off-site removal

- 1.1.2 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the area shown edged in green on the plan below



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1.1.3 There are no pre-operation conditions

2 Operational Matters

2.1 Management techniques and control

- 2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be managed and controlled as described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency.

Table 2.1.1 : Management and control

Description	Parts	Date Received
Application	The response to question 2.1 given in Section 2.1 of the application	16/07/02
Response to 2nd Schedule 4 Part 1 Notice	Response to questions 1 & 2	21/11/02

- 2.1.2 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.
- 2.1.3 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.
- 2.1.4 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.
- 2.1.5 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.

2.2 Raw materials (including water)

- 2.2.1 The Operator shall, subject to the conditions of this Permit, use raw materials (including water) as described in the documentation specified in Table 2.2.1, or as otherwise agreed in writing by the Agency.

Table 2.2.1 : Raw materials (including water)

Description	Parts	Date Received
Application	The response to question 2.2 given in Section 2.2 of the application	16/07/02
Response to 2nd Schedule 4 Part 1 Notice	Response to questions 3 & 12	21/11/02

- 2.2.2 The Operator shall review the water efficiency audit implemented by condition 9.1.1 and record the results of the review in writing -
- (a) whenever changes are proposed to the installation which might have an impact on the plan; and

(b) in any case, not less frequently than once in every period of four years

2.3 Operating Techniques

2.3.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.3.1, or as otherwise agreed in writing by the Agency.

Table 2.3.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.3 given in Section 2.3 of the application	16/07/02
Response to 2nd Schedule 4 Part 1 Notice	Response to questions 7-11, 13,14	21/11/02

2.3.2 Emissions during normal operations shall be free from visible smoke, and shall not exceed the equivalent of Ringlemann Shade 1 at any time.

2.3.3 The operator may submit in writing, for agreement by the Agency, a proposal to trial alternative batch raw materials or binder raw materials. Any such proposal submitted under this condition shall be regarded as 'otherwise agreed in writing' for the purposes of condition 11.1.1

2.3.4 The process shall be conducted in a manner that minimises operation with the dry electrostatic precipitator on by-pass.

2.3.5 The operator shall inform the Agency of any period of by-pass of the dry electrostatic precipitator

(a) when planned, at least 48 hours before and in writing; or

(b) in the case of an emergency as soon as practicable.

2.4 Groundwater protection

2.4.1 The Permitted Installation shall, subject to the conditions of this Permit, be controlled as described in the documentation specified in Table 2.4.1, or as otherwise agreed in writing by the Agency.

Table 2.4.1: Groundwater protection

Description	Parts	Date Received
Application	The response to questions 2.4 given in Sections 1.3 & 2.4 of the application	16/07/02
Response to 1st Schedule 4 Part 1 Notice	Response to questions 1-7, 9 - 11	20/09/02

2.5 Waste handling and storage

- 2.5.1 The Operator shall, subject to the conditions of this Permit, handle and store waste as described in the documentation specified in Table 2.5.1, or as otherwise agreed in writing by the Agency.

Table 2.5.1: Waste handling and storage

Description	Parts	Date Received
Application	The response to question 2.5 given in Section 2.5 of the application	16/07/02
Response to 1st Schedule 4 Part 1 Notice	Response to question 8	20/09/02

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

Table 2.5.2: Waste stored on site

Description of Waste	Location of Storage on Site	Manner of Storage	Storage Conditions
Furnace Cullet	L1	Dedicated Storage Bays	As described in amended Table 2.5.1 and Figs 1.2 A,B and C
Third Party Cullet	L1	Dedicated Storage Bays	As described in amended Table 2.5.1 and Figs 1.2 A,B and C
Waste oils & greases	L2	Bunded compound	As described in amended Table 2.5.1 and Figs 1.2 A,B and C
Material for off site disposal (metal, paper and plastic)	L3	Skips 1, 2 and 4	As described in amended Table 2.5.1 and Figs 1.2 A,B and C

2.6 Waste recovery and disposal

- 2.6.1 The Operator shall, subject to the conditions of this Permit, recover and dispose of waste as described in the documentation specified in Table 2.6.1, or as otherwise agreed in writing by the Agency.

Table 2.6.1: Waste recovery and disposal

Description	Parts	Date Received
Application	The response to question 2.6 given in Section 2.6 of the application	16/07/02

2.7 Energy Efficiency

- 2.7.1 The Operator shall, subject to the conditions of this Permit, use energy as described in the documentation specified in Table 2.7.1, or as otherwise agreed in writing by the Agency.

Table 2.7 1: Energy efficiency

Description	Parts	Date Received
Application	The response to question 2.7 given in Section 2.7 and Appendix I of the application	16/07/02
Response to 2nd Schedule 4 Part 1 Notice	Response to questions 17 & 18	21/11/02

- 2.7.2 The Operator shall produce a report annually on the energy consumption of the installation. This report shall be sent to the Agency.
- 2.7.3 The Operator shall have an energy efficiency plan which shall be updated annually.

2.8 Accident prevention and control

- 2.8.1 The Operator shall, subject to the conditions of this Permit, prevent and limit the consequences of accidents as described in the documentation specified in Table 2.8.1, or as otherwise agreed in writing by the Agency.

Table 2.8.1 : Accident prevention and control

Description	Parts	Date Received
Application	The response to question 2.8 given in Section 2.8 of the application	16/07/02
Response to 2nd Schedule 4 Part 1 Notice	Response to questions 19 & 20	21/11/02

2.9 Noise and vibration

- 2.9.1 The Operator shall, subject to the conditions of this Permit, control noise and vibration as described in the documentation specified in Table 2.9.1, or as otherwise agreed in writing by the Agency.

Table 2.9.1 : Noise and vibration

Description	Parts	Date Received
Application	The response to question 2.9 given in Section 2.9 and Appendix E of the application	16/07/02

2.10 Monitoring

- 2.10.1 The Operator shall, subject to the conditions of this Permit, carry out, evaluate and assess monitoring as described in the documentation specified in Table 2.10.1, or as otherwise agreed in writing by the Agency.

Table 2.10.1 : Monitoring

Description	Parts	Date Received
Application	The response to question 2.10 given in Section 2.10 of the application	16/07/02
Response to 2nd Schedule 4 Part 1 Notice	Response to questions 21-23	21/11/02

- 2.10.2 Where requested in writing by the Agency, the Operator shall provide at least 14 days advance notice of undertaking monitoring/spot sampling.

- 2.10.3 There shall be provided:

- safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2, unless otherwise specified in that Schedule; and
- safe means of access to other sampling/monitoring points when required by the Agency.

2.11 Decommissioning

- 2.11.1 The Operator shall, subject to the conditions of this Permit, make provision for decommissioning the installation as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

Table 2.11.1 : Decommissioning

Description	Parts	Date Received
Application	The response to question 2.11 given in Section 2.11 of the application	16/07/02

- 2.12 Multi-operator installations
- 2.12.1 This is not a multi-operator installation

3 Records

- 3.1.1 A record (a "Specified Record") shall be made of:-
- a any malfunction, breakdown or failure of plant, equipment or techniques (including down time and any short term and long term remedial measures) that may have, has had or might have had an effect on the environmental performance of the Permitted Installation. These records shall be kept in a log maintained for that purpose;
 - b all monitoring and sampling taken or carried out in accordance with the conditions of this permit and any assessment or evaluation made on the basis of such data.
- 3.1.2 There shall be made available for inspection by the Agency at any reasonable time:
- a Specified Records;
 - b any other records made by the Operator in relation to the operation of the Permitted Installation ("Other Records").
- 3.1.3 A copy of any Specified or Other Records shall be supplied to the Agency on demand and without charge.
- 3.1.4 Specified Records and Other Records shall:-
- a be legible;
 - b be made as soon as reasonably practicable; and
 - c indicate any amendments which have been made and shall include the original record wherever possible.
- 3.1.5 Specified Records and Other Records shall be retained for a minimum period of [4] years from the date when the records were made
- 3.1.6 For all waste received at or produced from the Permitted Installation, the Operator shall record (and shall retain such records for a minimum of 4 years)
- a its composition, or as appropriate, description;
 - b the best estimate of the quantity produced;
 - c its disposal routes; and
 - d the best estimate of the quantity sent for recovery.
- 3.1.7 A record shall be made at the Permitted Installation of any complaints concerning the Installation's effect or alleged effect on the environment. The record shall give the date of complaint, time of complaint, a summary of any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose.

4 Reporting

- 4.1.1 All reports and notifications required by this Permit, or by Regulation 16 of the PPC Regulations, shall be sent to the Environment Agency at the address notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall report the parameters listed in Table S2 to Schedule 2 as follows:
- a in respects of the emission points specified;
 - b for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - c giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - d sending the report to the Agency within 28 days of the end of the reporting period.
- 4.1.3 The Operator shall, within 36 months of the issue of this Permit, submit a report on potential environmental improvements to the Permitted Installation. For each of the subject areas identified in Section 2 of the appropriate technical guidance, the report shall assess the costs and benefits of alternative techniques that may provide environmental improvement. This shall include, but not be limited to, those techniques listed in guidance. The methodologies used should be based on those given in Agency guidance note IPPC H1 (Environmental Assessment and Appraisal of BAT) and should justify, against the Best Available Techniques criteria, where potential improvements are not planned to be implemented. As part of their management system the Operator shall submit an updated report every 36 months.
- 4.1.4 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.5 Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them.

5 Notifications

- 5.1.1 The Operator shall notify the Agency **without delay** of:-
- a the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance;
 - b the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution;
 - c the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution; and
 - d any accident which has caused or may have the potential to cause pollution.
- 5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1 of this Permit by sending:-
- a the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
 - b the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;
- and such information shall be in accordance with that Schedule.
- 5.1.3 The Operator shall give written notification as soon as practicable, of any of the following:
- a permanent cessation of the operation of any part of or all of the Permitted Installation;
 - b cessation of the operation of any part of or all of the Permitted Installation for a period, likely to exceed 1year; and
 - c resumption of the operation of any part of or all of the Permitted Installation after a cessation notified under 5.1.3(b).
- 5.1.4 The Operator shall notify the following matters to the Agency, in writing, within 14 days of their occurrence:
- i any change in the Operator's trading name, registered name or registered office address;
 - ii a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);
 - iii any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.
- 5.1.5 Where the Operator has entered into a Climate Change Levy Agreement with the Government, the Operator shall, within 14 days, notify the Agency, in writing, in the event that the Secretary of State has not re-certified that agreement.

- 5.1.6 Where the Operator has entered into the Emissions Trading Scheme by taking on a voluntary target with a financial incentive, the Operator shall, within 14 days, notify the Agency, in writing, of either:
- a** a decision by the Operator to withdraw from the Scheme; or
 - b** failure to comply with the Emissions Trading Scheme at the end of the 5 year period covered by the Scheme.

6 Emissions

6.1 Emissions into air

- 6.1.1 Emissions to air from the emission point(s) specified in Table 6.1.1 shall only arise from the source(s) specified in that Table.

Table 6.1.1: Emission points into air

Emission point reference/description	Source	Location of emission point
A1	Release from furnace, post electrostatic precipitator	Point A1 on Figure 4.4 of application
A2	Release from Emergency Stack	Point A2 on Figure 4.4 of application
A3	Release from forming & curing ovens and cooling zone	Point A3 on Figure 4.4 of application
A4	Release from Batch Plant.	Point A4 on Figure 4.4 of application

- 6.1.2 The limits for emissions into air for the parameter(s) and emission point(s) set out in Table 6.1.3 shall not be exceeded.

- 6.1.3 The Operator shall carry out monitoring of the parameters listed in Table 6.1.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.1.3 : Emission limits into air

Parameters	Emission Point		
	A1	A3	A4
Particulate mg Nm⁻³			
Daily average	20		
Half hour maximum (a)	30		
Extractive sample (min 4 hour)	30	35	30
Frequency of monitoring	Continuous & Half Yearly (b)	Half Yearly (b)	Half Yearly (b)
Oxides of Nitrogen (as NO₂) mg Nm⁻³			
Daily average	300		
Half hour maximum (a)	450		
Extractive sample	300		
Frequency of monitoring	Continuous & Half yearly (b)		
Carbon monoxide mg Nm⁻³			
Daily average	200		
Frequency of monitoring	Half yearly (b)		
Oxides of Sulphur (as SO₂) mg Nm⁻³			
Daily average	50		
Frequency of monitoring	Half yearly (b)		
Gaseous Fluorides (as HF) mg Nm⁻³			
Daily average	5		
Frequency of monitoring	Half yearly (b)		
Gaseous Chlorides (as HCl) mg Nm⁻³			
Daily average	20		
Frequency of monitoring	Half yearly (b)		
Phenol mg Nm⁻³			
Daily average		10	
Frequency of monitoring		Half yearly (b)	
Formaldehyde mg Nm⁻³			
Daily average		5	
Frequency of monitoring		Half yearly (b)	
Ammonia mg Nm⁻³			
Daily average		50	
Frequency of monitoring		Half yearly (b)	
Volatile Organic Compounds (as Carbon) mg Nm⁻³			
Daily average		35	
Frequency of monitoring		Half yearly(b)	

(a) *not more than one half hour period during any rolling 24 hour period shall exceed the half hour maximum emission limit,*

(b) *minimum interval between monitoring shall be 4 months.*

6.1.4

Where an annual mass limit for a substance is stated in Table 6.1.4, the aggregate emission of such substance from the Permitted Installation into air from the emission point(s) specified in Table 6.1.2 shall not exceed that limit in any year.

Table 6.1.4 Annual mass limits

Substance	Limit – kg
-	-
-	-

6.2 Emissions to land

6.2.1 There shall be no emission to land from the Permitted Installation

6.2.2 The Operator shall notify the Agency, as soon as practicable, of any information concerning the state of the Site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.

6.3 Emissions to water [other than emissions to sewer]

6.3.1 Emissions to water from the emission point specified in Table 6.3.1 shall only arise from the source specified in that Table.

Table 6.3.1: Emission points into water

Emission Point Reference.	Source	Receiving Water
W1	Non-contaminated rainwater drainage from site via interceptor	Afon Lwyd at Grid Reference NGR 2985 9743

6.3.2 Limits for the emissions to water for the parameter(s) and emission point(s) set out in Table 6.3.3 shall not be exceeded.

6.3.3 The Operator shall carry out monitoring of the parameters listed in Table 6.3.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.3.3: Emission limits into water (Note a)

Parameter	Emission Point W1	Monitoring Frequency
COD mg l-1	120	Half yearly
Suspended Solids mg l-1	30	Half yearly
Total hydrocarbon Oil mg l-1	20	Half yearly
pH max	9	Half yearly
pH min	6	Half yearly

Note a: Release limits in Table 6.3.3 shall be reviewed following the completion of improvement item 9.1.

6.3.4 There shall be no emission into water from the Permitted Installation of any substance prescribed for water for which no limit is specified in Table 6.3.3 except in a concentration which is no greater than the background concentration.

6.3.5 Where an annual mass limit for a substance is stated in Table 6.3.5, the aggregate emissions of such substance from the Permitted Installation into water from the emission point(s) specified in Table 6.3.1 shall not exceed that limit in any year.

Table 6.3.5 Annual mass emission limits

Substance	Limit – kg
-	-
-	-

6.4 Emissions to sewer

6.4.1 Emissions into sewer from the emission point specified in Table 6.4.1 shall only arise from the source specified in that Table.

Table 6.4.1 Emission points into sewer

Emission point reference	Source	Sewer
S1	Effluent Pit Interceptor	Dwr Cymru

- 6.4.2 The limits for the emissions into sewer for the parameter(s) and emission point(s) set out in Table 6.4.2 shall not be exceeded.

Table 6.4.2 Emission limits into sewer

Parameter	Emission point S1	Monitoring Frequency
COD mg l-1	6500	Half yearly
Monohydric Phenols (as phenol) mg l-1	20	Half yearly
Suspended Solids mg l-1	900	Half yearly
Sulphates mg l-1	900	Half yearly
Total hydrocarbon Oil mg l-1	650	Half yearly
pH max	12	Half yearly
pH min	6	Half yearly

- 6.4.3 There shall be no emission into sewer from the Permitted Installation of any substance prescribed for water for which no limit is specified in Table 6.4.2 except in a concentration which is no greater than the background concentration.

- 6.4.4 Where an annual mass limit for a substance is stated in Table 6.4.4, the aggregate emission of such substance from the Permitted Installation into sewer from the emission points specified in Table 6.4.1 shall not exceed that limit in any year.

Table 6.4.4 Annual mass emission limit

Substance	Annual limit – kg
-	-
-	-

6.5 Emissions of heat

6.5.1 There are no specific conditions in relation to emissions of heat.

6.6 Emissions of noise and vibration

6.6.1 There are no specific conditions relating to emissions of noise and vibration

7 **Transfer to effluent treatment plant**

- 7.1.1 No transfers to effluent treatment plant are controlled under this part of this Permit. Emissions to water are controlled under 6.3 and/or 6.4

8 Off site conditions

8.1.1 There are no off site conditions.

9 Improvement programme

- 9.1.1 The Operator shall complete the requirements specified in Table 9.1.1 by the date specified in that Table, and shall send written notification of the date of completion of each requirement to the Agency, at the Reporting Address, within 14 days of the completion of each such requirement.

Table 9.1.1: Improvement programme requirements

Reference	Requirement	Date
9.1	The Operator shall characterise, for all typical process and weather conditions, the aqueous emissions from the installation through release point W1 for the determinands contained in Table 6.3.3. The Operator shall submit a report enabling the release limits therein to be revised as appropriate.	30 November 2003
9.2	The operator shall develop and implement an odour management plan for the installation having regard to section 2.2.6 of the relevant IPPC Technical Guidance and the IPPC Horizontal Guidance for Odour.	30 November 2003
9.3	The operator shall review the options to replace the use of mains water to top up the closed loop wash water system. Options for increasing the volume of water able to be stored on-site within the redundant gas oil storage tank shall be presented. The reviews shall include costs and timescales to implement if justified as BAT.	30 November 2003
9.4	The operator shall submit a proposal, for approval by the Agency, to prevent the emission of ammonia to ground from the vent pipe of the ammonia header tank of the binder plant. The operator shall carry out the proposal and submit confirmation of the work completed to the Agency within six months of the issue of the permit.	30 November 2003
9.5	The operator shall submit a review of the monitoring methods, detailed in the application, used to measure emissions to air from the process. The review shall include all extractive and CEM methods used (with the exclusion of the CEM for TOC) and shall be compared to those standards at the top of the hierarchy as defined within M2 Guidance. Where current methods are at variance with those said standards, proposals shall be presented for adopting them.	31 December 2003
9.6	The operator shall carryout a detailed appraisal of the availability of recycled or recovered batch raw materials including cullet, having regard to BAT. The appraisal shall consider, but not be limited to, the availability of potential sources in the current and future marketplace, the potential impact upon production, and the potential impact upon the environment. A summary of the appraisal shall be submitted to the Agency.	31 January 2004
9.7	The operator shall develop a decommissioning plan for the installation having regard to section 2.11 of the relevant IPPC Technical Guidance.	31 January 2004
9.8	The Operator to carry out and report to the Agency an environmental impact assessment of emissions from the process using 25% external glass cullet. This impact shall encompass both emissions to air and sewer and include metals (BREF group 1 and 2). If appropriate the assessment shall cover BAT with regard to BPEO considerations.	31 January 2004

9.9	The operator shall develop and implement a water efficiency audit for the installation having regard to section 2.4.3 of the relevant IPPC Technical Guidance.	28 February 2004
9.10	The operator shall submit a proposal, for approval by the Agency, to measure and quantify the emission rate and concentration of metals (BREF group 1 and 2) from emission point A1. The operator shall carry out the proposal and submit the results to the Agency within six months of the Agency giving written approval of the proposal.	31 March 2004
9.11	The operator shall undertake further measurements (strictly in accordance with the relevant parts of BS 7445:1991) to establish the current broad-band and 1/3 octave contributions of significant noise sources within the permitted installation. The operator shall repeat the measurements at the noise sensitive receptors identified at the time of application, ensuring measurements are made in accordance with relevant parts of BS 4142 :1997. The operator is required to agree the detailed scope of these items with the Agency before monitoring is undertaken. Should the proposed on-site cullet plant not be installed within 13 months of the issue date of the permit, this improvement item shall lapse, and a new application for the cullet plant shall be made by the Operator.	Within 6 months of the commissioning of the on-site Cullet Plant.
9.12	Following the successful installation and commissioning of the on-site Cullet Plant, a report shall be made to the Agency reviewing the contract of operation with the Cullet Plant Operator. This review shall focus on the environmental impact of the Cullet Plant in terms of its emissions to air, water and land, odour and noise. It shall include any recommendations for modifications to the operation of the plant. Should the proposed on-site cullet plant not be installed within 13 months of the issue date of the permit, this improvement item shall lapse, and a new application for the cullet plant shall be made by the Operator.	6 months following the commissioning of the on-site Cullet Plant.
9.13	The Operator to carry out and report to the Agency monitoring of the emissions from release point A1. The analysis to include metals (BREF group 1 and 2), chloride, fluoride, oxides of sulphur, oxides of nitrogen, particulate matter, dioxins and furans. The report shall draw conclusions as to the impact of the cullet plant on operational aspects of the process. Should the proposed on-site cullet plant not be installed within 13 months of the issue date of the permit, this improvement item shall lapse, and a new application for the cullet plant shall be made by the Operator.	Within 6 months of the commissioning of the on-site Cullet Plant.

9.14	<p>The Operator to carry out and report to the Agency monitoring of the emissions from release point S1.</p> <p>The analysis shall include metals (BREF group 1 and 2) as well as the parameters in Table 6.4.2. The report shall draw conclusions as to the impact of the cullet plant on operational aspects of the process. Should the proposed on-site cullet plant not be installed within 13 months of the issue date of the permit, this improvement item shall lapse, and a new application for the cullet plant shall be made by the Operator.</p>	<p>Within 6 months of the commissioning of the on-site Cullet Plant.</p>
9.15	<p>The Operator to carry out and report to the Agency monitoring of the amine emissions from release point A3.</p> <p>The report shall draw conclusions as to the typical level of amines and the need for routine monitoring of the process for such species.</p>	31 May 2004
9.16	<p>The Operator shall carry out a review of the dispersion model for emissions to air carried out as part of the application. This review shall include, but not be limited to, consideration of the changes made to the process and the results of the program of emissions monitoring</p> <p>Should the review conclude that the dispersion model for the emissions to air is no longer valid then a revised dispersion model shall be undertaken. The Operator shall provide the Agency with the outcome of the review and any revised dispersion model.</p>	31 May 2004
9.17	<p>The Operator shall review and report to the Agency options available for reducing the COD and Hydrocarbon Oil content of emissions from release point S1.</p>	31 May 2005
9.18	<p>The Operator shall provide in writing to the Agency accurate survey data for location and elevation for all exploratory positions investigated during the site report investigations detailed in the April 2003 Further Site Investigation Report.</p>	30 November 2003

10 Interpretation

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

“Authorised Officer”

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

“Background concentration”

means the same as “background quantity” as defined in paragraph 11 to Part 2 to Schedule1 of the PPC Regulations.

“Fugitive emission”

means an emission from any point other than those specified in the Tables in part 6 of this Permit.

“LAeq”

means the A-weighted equivalent continuous equal energy level (dBA)

“Monitoring”

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

“Permitted Installation”

means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

“PPC Regulations”

means the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit.

“Staff”

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

“Substances prescribed for water”

means those substances mentioned in paragraph 13 of Part 2 of Schedule 1 to the PPC Regulations.

“Year”

means calendar year ending 31 December.

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

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

- a in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and no correction for oxygen; and/or
- b in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

11 Written agreement to changes

- 11.1.1 When the qualification “or as otherwise agreed in writing” is used in a condition of this Permit, the Operator shall seek such agreement in the following manner:
- a the Operator shall give the Agency written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and
 - b such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Permitted Installation.
- 11.1.2 Any change proposed according to condition 11.1.1 and agreed in writing by the Agency, shall not be implemented until the Operator has given the Agency prior written notice of the implementation date for the change. As from that date, the Operator shall operate the Permitted Installation in accordance with that change, and any relevant documentation referred to in this Permit shall be deemed to be amended.

Schedule 1

Confirmation of condition 5.1.1 notifications, in accordance with condition 5.1.2

This Schedule outlines the information that the Operator must provide to the Agency to satisfy condition 5.1.2 of this Permit.

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

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

Returns should contain:

Part A

- ☐ Name of Operator.
- ☐ Permit Number
- ☐ Location of Installation.
- ☐ Date information provided.
- ☐ Time, date and location of the emission.
- ☐ Identity and details of the substance[s] emitted to include:-
 - ☐ Best estimate of the quantity or the rate of emission, and the time during which the emission took place.
 - ☐ Environmental medium into which the emission took place.
 - ☐ Measures taken, or intended to be taken, to stop the emission.

Part B

- ☐ Date and time of emission
- ☐ Any more accurate information on the matters notified under Part A.
- ☐ Measures taken, or intended to be taken, to prevent a recurrence of the incident.
- ☐ Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission.
- ☐ The dates of any Part A notifications within in the previous 24 months.

- | | |
|---|------------------------------------|
| <input type="checkbox"/> Name | <input type="checkbox"/> Post..... |
| <input type="checkbox"/> Signature | <input type="checkbox"/> Date |
| <input type="checkbox"/> Statement that signatory is authorised to sign on behalf of Knauf Insulation | |

Schedule 2

Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 of this Permit, are listed below.

Table S2: Reporting of monitoring data			
Parameter	Emission point	Reporting period	Period begins
Oxides of nitrogen mg m ⁻³	A1	Every 6 mths	01/07/03
Gaseous chlorides as HCl mg m ⁻³	A1	Every 6 mths	01/07/03
Gaseous fluorides as HF mg m ⁻³	A1	Every 6 mths	01/07/03
Carbon Monoxide mg m ⁻³	A1	Every 6 mths	01/07/03
Particulates mg m ⁻³	A1 A3, A4	Every 6 mths	01/07/03
VOCs mg m ⁻³	A3	Every 6 mths	01/07/03
Phenol mg m ⁻³	A3	Every 6 mths	01/07/03
Formaldehyde mg m ⁻³	A3	Every 6 mths	01/07/03
Ammonia mg m ⁻³	A3	Every 6 mths	01/07/03
Chemical oxygen demand mg l ⁻¹	W1, S1	Every 6 mths	01/07/03
Sulphates mg l ⁻¹	S1	Every 6 mths	01/07/03
Suspended solids mg l ⁻¹	W1, S1	Every 6 mths	01/07/03
Total Hydrocarbon Oil mg l ⁻¹	W1, S1	Every 6 mths	01/07/03
Monohydric Phenols (as Phenol) mg l ⁻¹	S1	Every 6 mths	01/07/03
pH	W1, S1	Every 6 mths	01/07/03

Schedule 3

Forms to be used

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

Table S3:Reporting Forms		
Media/parameter	Form Number	Date of Form
Air	A1	30/05/03
Air	A2	30/05/03
Water	W1	30/05/03
Waste Return	R1	30/05/03

END OF PERMIT

RELEASES INTO AIR

Release Summary for 6 months ending --/--200-

Operator: Knauf Insulation Ltd Permit Number BR8212

Location: Pont-y-felin Release Points A1- A4

Release Point	A1	A3	A4
Substance (mg/m ³)			
Carbon Monoxide			
Oxides of Nitrogen (as NO _x)			
Particulates			
Hydrogen Chloride			
Gaseous Fluorides (as HF)			
VOC's			
Formaldehyde			
Phenol			
Ammonia			

Signed

Dated Form A1 (Version date 30/05/03)

RELEASES INTO AIR

Release Summary for 6 months ending --/--200-

Operator: Knauf Insulation Ltd Permit Number BR8212

Location: Pont-y-felin Release Point A1

Release Point A1	Particulate (mg/m ³)	NOx (mg/m ³)
Annual Extractive Sample (with date)		
Mean of daily averages of CEM readings		
Maximum of daily averages of CEM readings		

Signed

Dated Form A2 (Version date 30/05/03)

RELEASES TO WATER**Release Summary for 6 months ending June / Dec 200_****Operator: Knauf Insulation Ltd Permit Number BR8212****Location: Pont-y-felin Release Point W1, S1**

Parameter (mg/l)						
	pH	Monohydric Phenols	Suspended Solids	Sulphates	Hydro carbon Oil (Total)	COD
W1						
Sample 1						
Date						
Sample 2						
Date						
S1						
Sample 1						
Date						
Sample 2						
Date						

Note in Table above

COD refers to the Total Chemical Oxygen Demand of the sample

Signed

Dated

Form W1 (Version date 30/05/03)

WASTE RETURN**Release Summary for 12 months ending Dec 200_****Operator: Knauf Insulation Ltd Permit Number BR8212****Location: Pont-y-felin**

Waste Streams				
Waste Type	Source	Quantity (tonnes)	Characteristics (controlled/special)	Fate
Waste Lubricant				
General Wastes				
Metal				
Batch waste				
Dust Extraction Systems				
Refractory linings				

Signed

Dated

Form R1 (Version date 30/05/03)