



ENVIRONMENT
AGENCY

Variation Notice with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

Pont-y-Felin Insulation

Knauf Insulation Ltd
Pont y Felin
Cwmbran
Torfaen
NP44 2YQ

Variation Notice Number
MP3038MP

Permit number
BR8212

Knauf Insulation Ltd

Permit Number MP3038MP

Introductory note

This introductory note does not form a part of the permit

The following notice is issued under regulation 17 of The Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No. 1973 (as amended) (the Regulations) to vary the conditions of a permit issued under the Regulations to operate an installation. The notice comprises schedule 1 containing conditions to be deleted, schedule 2 conditions to be amended and schedule 3 conditions to be added.

This permit variation is required as the installation will undergo a project involving the construction of a new process line and in addition, improvements to other areas of the existing process.

The installation at Pont y Felin near Cwmbran is operated by Knauf Insulation Ltd – an UK business that is a wholly owned subsidiary of Knauf, with its UK head office in St Helens.

The process involves the manufacture of glass fibre, which falls under Section 3.3 Part A(1)(a) of The Pollution Prevention and Control (England and Wales) Regulations 2000.

At Pont y Felin, light density glass mineral wool rolls are produced for use as an insulation material. The product range varies from rolls of 80mm to 200mm nominal thickness. The site also produces loose fibre products and is capable of producing a variety of thermal insulation products on a single main production line. The main product is a low density roll. The process produces glass mineral wool (MMVF) product in a two stage process. First the glass fibre is produced by melting glass in a furnace and processing it into fibres. The fibres are then bound together in a forming process to give a glass mineral wool mat. Following the changes to the process, the process will also produce an unbound product known as “white wool” for use as a cavity wall insulator.

The installation runs parallel to the Afon Lwyd, which is close to the site boundary and there is a discharge of site surface water into this river. In addition there is an effluent discharge to sewer. The emissions points to air will increase to include A0, A21 and A22 following the changes to the process.

The changes to the existing process brought about by this variation are to be completed in two phases:

1. Phase 1 – The completion of a new “white wool” production facility.
2. Phase 2 – The refurbishment and/or renewal of the furnace, curing and cold process equipment.

Overall, the two phases will result in changes to a number of process areas.

- Binder plant upgrade

The plant will become automated for efficiency. Binder materials will now be pumped to weighing vessels before dropping by gravity into a mix tank. Evacuated air from the process will be released to atmosphere through abatement in the form of an acid scrubber. The scrubber liquid, containing ammonium sulphate will be recycled within the wash water system.

- Furnace modifications

The furnace is to be refurbished and enlarged to around 25% increased production capacity. An uninterrupted gas supply has been agreed and the current LPG gas back-up tanks will be removed. The electrical heating component will remain. Abatement from the furnace will continue to be via an electrostatic precipitator (EP). The bypass stack will remain as a separate stack.

- Installation of white wool line

Three additional wool spinners will be installed to allow glass wool to be diverted towards the new white wool line. The new line will involve a new building, attached to the existing process and will produce an unbound wool product for use as cavity wall insulation. Wool from the spinners may be sprayed with a silicone based emulsion to improve its properties, before being blown via ductwork into the new building. The wool is then formed into a mat and chopped into shorter fibres, which may be sprayed with a silicone based emulsion to improve its properties. Air extracted from the forming section will be passed through a water pre scrubber and scrubber for particulate removal and mist eliminator before passing through a new 50m stack. The product is then blown to a packing area, where the extracted air is abated through bag filters. Mineral oil may be used in this section to improve the properties of the wool.

- Curing oven extension and refurbishment

The curing oven will be refurbished and extended to assist with product curing times.

- Cooling zone enlargement

The cooling line will be extended to improve product cooling.

- Production line extension

The line processing will be extended and wrapping equipment upgraded as necessary.

- Wash water system improvements.

The capacity of the wash water system will increase. This system stores process water, including rain run-off and abatement system water, which is then screened and recycled for reuse.

- Decommissioning and replacement of small gas fired boilers with a single new boiler (348Kw) with gas oil backup.

There are four main emission points to air with emission limits imposed. There is one emission to surface water (Afon Lwyd) and one emission to the sewer operated by Welsh Water (Dwr Cymru). There is one SAC (River Usk) approximately 8km east of the installation boundary.

An Environmental Management System accredited to ISO14001:2004 is in place at the site.

Status Log of the permit

Detail	Date	Response Date
Application BR8212	Received 16/07/02	
Additional Information received	Request dated 23/08/02	Response dated 20/09/02
Additional Information received	Request dated 08/10/02	Response dated 21/11/02
Additional Information received	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	
Application MP3038MP received	19/10/06	
Application MP3038MP	Duly made 19/10/06	
Additional Information received	Request dated 06/12/06	19/12/06
Additional Information received	Request dated 29/12/06	12/01/07
Additional Information received	Request dated 16/01/07	18/01/07
Variation notice MP3038MP issued	20/02/07	

Other PPC permits relating to this installation

	Permit Number	Date of Issue
Knauf Insulation Ltd	BR8218	30/05/03

Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation

		Date of Issue	Fully or Partially Superseded
KnaufAlcopor Ltd	AL0535/BS8265	06/09/02	Fully superseded

End of Introductory Note

Pollution Prevention and Control
(England and Wales) Regulations 2000

Variation Notice

Permit number

BR8212

Variation number

MP3038MP

The Environment Agency (the Agency) in exercise of its powers under Regulation 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) hereby varies the permit held by you Knauf Insulation Ltd ("the operator"),

whose registered office (or principal 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 set out in schedules 1 to 3 of this variation notice .

The notice shall take effect from 20/02/2007

Signed

Date

	20/02/07
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Tony Leahey

Authorised to sign on behalf of the Agency

SCHEDULE 1 – CONDITIONS TO BE DELETED

1. All conditions and schedules are deleted previously in permit BR8212.

SCHEDULE 2 – CONDITIONS TO BE AMENDED

2. None

SCHEDULE 3 – CONDITIONS TO BE ADDED

3. The following conditions are added to the permit

Conditions

1 Management

1.1 General management

- 1.1.1 The activities shall be managed and operated:
 - (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the operator as a result of complaints; and
 - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accidents that may cause pollution

- 1.2.1 The operator shall:
 - (a) maintain and implement an accident management plan;
 - (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
 - (c) make any appropriate changes to the plan identified by a review.

1.3 Energy efficiency

- 1.3.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures by a review.

1.4 Efficient use of raw materials

1.4.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every 4 years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any appropriate further measures identified by a review.

1.5 Avoidance, recovery and disposal of wastes produced by the activities

1.5.1. The operator shall:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every 4 years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

1.6 Site security

- 1.6.1. Site security measures shall prevent unauthorised access to the site, as far as practicable.

2. Operations

2.1 Permitted activities

- 2.1.1 The operator is authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 2 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1 table S1.2, unless otherwise agreed in writing by the Agency.
- 2.3.2 No raw materials or fuels listed in schedule 3 table S3.1 shall be used unless they comply with the specifications set out in that table.

2.4 Off-site conditions

There are no off-site conditions under this section.

2.5 Improvement programme

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

2.6 Pre-operational conditions

There are no pre-operational conditions in this permit.

2.7 Closure and decommissioning

- 2.7.1 The operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.
- 2.7.2 The operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site to a satisfactory state.
- 2.7.3 The operator shall carry out and record a review of the site closure plan at least every 4 years.
- 2.7.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

2.8 Site protection and monitoring programme

- 2.8.1 The operator shall, within 2 months of the issue of this permit, submit a site protection and monitoring programme.
- 2.8.2 The operator shall implement and maintain the site protection and monitoring programme and shall carry out and record a review of it at least every 4 years.

3. Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.1, S4.2 and S4.3.
- 3.1.2 The limits given in schedule 4 shall not be exceeded.

3.2 Transfers off-site

- 3.2.1 Records of all the wastes sent off site from the activities, for either disposal or recovery, shall be maintained.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including those specified in schedule 1 table S1.4, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.4 Odour

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

- 3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including those specified in schedule 1 table S1.5, to prevent or where that is not practicable to minimise the noise and vibration.

3.6 Monitoring

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake monitoring for the parameters, at the locations and at not less than the frequencies specified in the following tables in schedule 4 to this permit:
 - (a) point source emissions specified in tables S4.1, S4.2 and S4.3;

- 3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Agency.
- 3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 4 tables S4.1, S4.2 and S4.3 unless otherwise specified in that schedule.

4. Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the site protection and monitoring programme.
- 4.1.2 Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.
- 4.1.3 All records required to be held by this permit shall be held on the site and shall be available for inspection by the Agency at any reasonable time.

4.2 Reporting

- 4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the assessment of the impact of the emissions submitted with the application;
 - (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
 - (c) the annual production /treatment data set out in schedule 5 table S5.2;
 - (d) the performance parameters set out in schedule 5 table S5.3 using the forms specified in table S5.4 of that schedule; and
 - (e) details of any contamination or decontamination of the site which has occurred.
- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 5 table S5.1;
 - (b) for the reporting periods specified in schedule 5 table S5.1 and using the forms specified in schedule 5 table S5.4 ; and
- giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.4 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency
- 4.2.5 The results of reviews and any changes made to the site protection and monitoring programme shall be reported to the Agency, within 1 month of the review or change.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit;
 - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3 Prior written notification shall be given to the Agency of the following events and in the specified timescales:
- (a) as soon as practicable prior to the permanent cessation of any of the activities;

- (b) cessation of operation of part or all of the activities for a period likely to exceed 1 year; and
 - (c) resumption of the operation of part or all of the activities after a cessation notified under (b) above.
- 4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.5 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
 - (a) any change in the operator's trading name, registered name or registered office address;
 - (b) any change to particulars of the operator's ultimate holding company (including details of an ultimate holding company where an operator has become a subsidiary); andany steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Agency shall be notified within one month of:
 - (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

Schedule 1 - Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity	Limits of specified activity
S3.3 A1(a)	Manufacture of glass fibre	From receipt of raw materials, storage and materials handling to processing of product and packaging.
Directly Associated Activity		
Boiler plant	0.35MW gas fired boiler	Providing steam for use in space heating and storage tank heating.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application for permit BR8212	The response to sections 2.1, 2.2 and 2.3 of the application	16/07/02
1 st Schedule 4 Part 1 notice	The response to question 8.	20/09/02
2 nd Schedule 4 Part 1 notice	The response to questions 1,-4, 7, 8, 11, 13, 14, 17-20.	21/11/02
Application for variation MP3038MP	The response to sections 4.1.3, 4.1.4, 4.1.9 - 4.1.17	19/10/06

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC1	<p>A written proposal shall be submitted to the Agency detailing the methodology to be used for the characterisation of emissions from A0 and A21. In particular, this should include monitoring of phenol, formaldehyde, amines, ammonia and VOCs. The effect of the use of recycled water on emissions shall be considered.</p> <p>The proposal shall implemented by the Operator from the date of approval in writing by the Agency. A full report detailing the characterisation shall be submitted to the Agency. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p>	<p>01/08/07 for the submission of the proposals.</p> <p>01/01/08, or as agreed by the Agency, for the submission of the report.</p>
IC2	<p>A written report shall be submitted to the Agency detailing a review of the sources of sulphur dioxide emissions from release point A1. This report shall include the following:</p> <ul style="list-style-type: none"> • Details of the mass balance technique and a comparison with emissions monitoring data, including data collected using the BS EN14791:2005 standard. This should include data on the upper and lower range of sulphur dioxide emissions. • Details of high frequency monitoring. • Details of investigations into the sulphur dioxide content of raw materials, including the effects of using increased cullet. <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p>	01/06/07
IC3	<p>A written procedure shall be submitted to the agency detailing the measures to be used at emission point A0, so that monitoring equipment, personnel and organisations employed for the emissions monitoring programme shall have either MCERTS certification or accreditation in accordance with condition 3.6.3. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure. The procedure shall be implemented by the operator from the date of approval in writing by the Agency.</p>	01/07/07
IC4	<p>A written procedure shall be submitted to the Agency, detailing the measures to be used to operate, control and maintain the abatement systems at emission points A21 and A22. This shall include proposals for malfunction warning systems. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p>	01/08/07
IC5	<p>A written report shall be submitted to the Agency characterising amine emissions from release point A3. This shall be conducted following the completion of the rebuild project. This should include an assessment of the typical amine emissions and whether routine monitoring will be required for such species. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p>	01/12/07
IC6	<p>Using the information collected under condition IC2, a written report shall be submitted to the Agency detailing a BAT review of operations relating to the prevention and control of sulphur dioxide emissions from release point A1. The review shall have regard to Sector Guidance Note S3.03. The review shall include the following:</p> <ul style="list-style-type: none"> • Consideration of the effects of raw materials and furnace operation. • A cost benefit analysis exercise of suitable techniques for abatement if deemed appropriate during the review. <p>Where deficiencies are identified, a programme of improvements shall be submitted to the Agency for approval. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the review.</p>	01/01/08
IC7	<p>A written report shall be submitted to the Agency characterising for all typical processes and weather conditions, the aqueous emissions from release point W1 for the parameters listed in Table S4.2. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p>	01/02/08
IC8	<p>A written proposal shall be submitted to the Agency. This shall contain the methodology of a revised plume visibility assessment for release points A0 and A3 following the completion of the rebuild project. This should consider the following:</p> <ul style="list-style-type: none"> • The characterisation of visible stack emissions. • The use of on-site or other local weather data. • Options for reducing plume visibility if appropriate. <p>The proposal shall implemented by the Operator from the date of approval in writing by the Agency. A full report detailing the assessment shall be submitted to the Agency. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the assessment.</p>	<p>01/03/08 for the submission of the proposals.</p> <p>01/09/08, or as agreed by the Agency, for the submission of the review report.</p>

IC9	<p>A written report shall be submitted to the Agency detailing a review of the emissions to air assessment as carried out as part of the variation application. This shall be conducted following the completion of the rebuild project and have regard to the horizontal guidance IPPC H1, or an equivalent appropriate assessment. 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. This review shall utilise the results of the programme of emissions monitoring including an additional suite of appropriate metals and boron, carbon monoxide and carbon dioxide. The information collected under conditions IC1 and IC5 shall also be used. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the review.</p>	01/10/08
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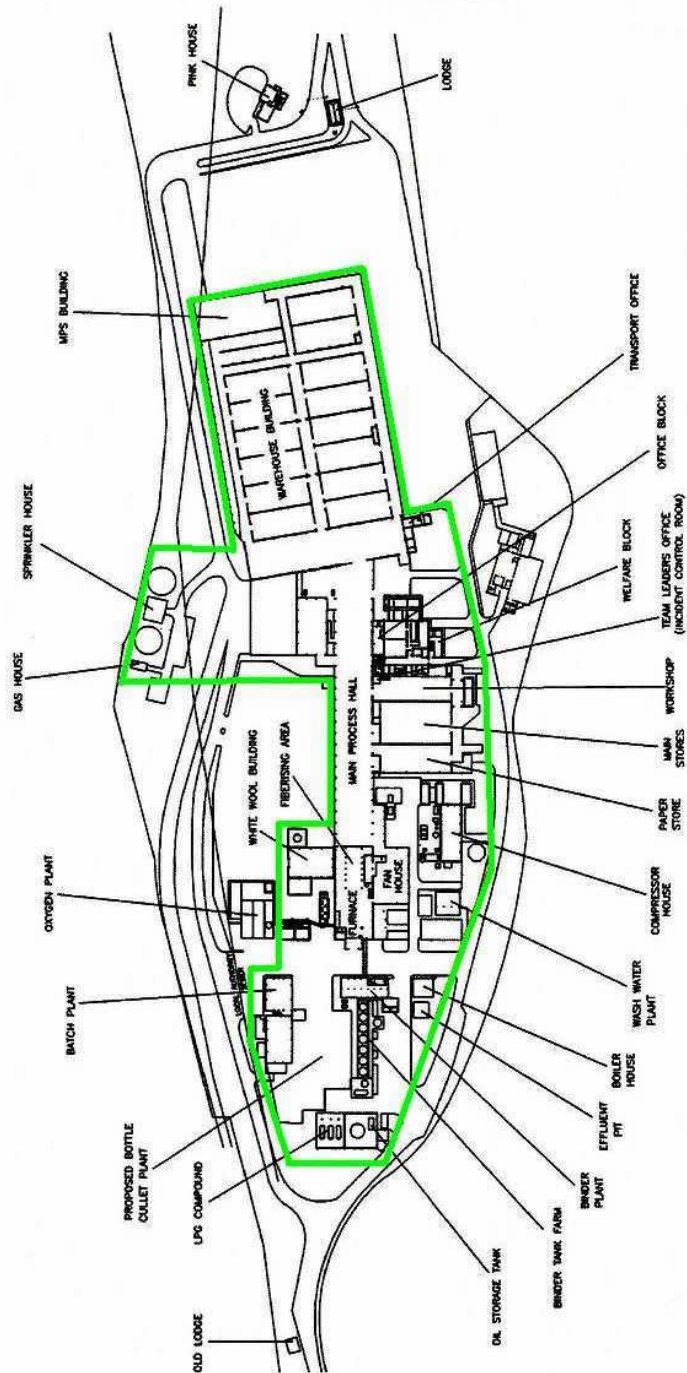
Table S1.4 Appropriate measures for fugitive emissions

Measure	Dates
A fugitive emission management plan shall be submitted to the Agency, detailing the measures to be used to control fugitive emissions and shall be in accordance with Sector Guidance Note S3.03 sections 2.3.8 and 2.3.9 or Box 5 of H7 (Guidance on protection of land). The plan shall be implemented by the operator from the date of approval in writing by the Agency.	The plan shall be submitted by 01/02/08

Table S1.5 Appropriate measures for noise

Measure	Dates
A revised noise management plan shall be submitted to the Agency, detailing the measures to be used to control emissions of noise and shall be in accordance with Appendix 4 (noise management plan) of Horizontal Guidance Note H3 check (Horizontal Noise Guidance) Part 2. The plan shall be implemented by the operator from the date of approval in writing by the Agency. The noise management plan shall include a day and night boundary noise survey to BS4142:1997 within three months of start up following the rebuild project. The results of the survey shall be used to investigate options for acoustic abatement as necessary.	The plan shall be submitted by 01/02/08

Schedule 2 - Site plan



Schedule 3 - Waste types, raw materials and fuels

Table S3.1 Raw materials and fuels

Raw materials and fuel description	Specification
Gas oil	Not more than 0.2% sulphur content until 31/12/07
Gas oil	Not more than 0.1% sulphur content after 01/01/08

Schedule 4 – Emissions and monitoring

Table S4.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A0 [Point A0 on drawing no. H16015, revision D]	Particulate matter	White wool stack, post abatement.	35 mg/m3	Extractive sample	6 monthly	BS EN 13284-1
A1 [Point A1 on drawing no. H16015, revision D]	Particulate matter	Release from furnace, post electrostatic precipitator	20 mg/m3	Continuous	Daily average	BS EN 13284-1
A1 [Point A1 on drawing no. H16015, revision D]	Particulate matter	Release from furnace, post electrostatic precipitator	30 mg/m3	Continuous	Half hour maximum	BS EN 13284-1
A1 [Point A1 on drawing no. H16015, revision D]	Particulate matter	Release from furnace, post electrostatic precipitator	30 mg/m3	Extractive sample	6 monthly	BS EN 13284-1
A1 [Point A1 on drawing no. H16015, revision D]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Release from furnace, post electrostatic precipitator	300 mg/m3	Daily average	Continuous & 6 monthly	ISO10849
A1 [Point A1 on drawing no. H16015, revision D]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Release from furnace, post electrostatic precipitator	450 mg/m3	Half hour maximum	Continuous & 6 monthly	ISO10849
A1 [Point A1 on drawing no. H16015, revision D]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Release from furnace, post electrostatic precipitator	300 mg/m3	Extractive sample	Continuous & 6 monthly	ISO10849
A1 [Point A1 on drawing no. H16015, revision D]	Carbon monoxide	Release from furnace, post electrostatic precipitator	200 mg/m3	Extractive sample	6 monthly	US EPA 10/ ISO12039
A1 [Point A1 on drawing no. H16015, revision D]	Oxides of sulphur (as SO ₂)	Release from furnace, post electrostatic precipitator	100 mg/m3	Extractive sample	6 monthly	BS EN14791
A1 [Point A1 on drawing no. H16015, revision D]	Gaseous fluorides (as HF)	Release from furnace, post electrostatic precipitator	5 mg/m3	Extractive sample	6 monthly	US EPA26/26A
A1 [Point A1 on drawing no. H16015, revision D]	Gaseous Chlorides (as HCl)	Release from furnace, post electrostatic precipitator	20 mg/m3	Extractive sample	6 monthly	BS EN1911
A2 [Point A2 on drawing no. H16015, revision D]	-	Release from bypass stack	-	-	-	-

A3 [Point A3 on drawing no. H16015, revision D]	Particulate matter	Release from forming & curing ovens and cooling zone	35 mg/m3	Extractive sample	6 monthly	BS EN 13284-1
A3 [Point A3 on drawing no. H16015, revision D]	Phenol	Release from forming & curing ovens and cooling zone	10 mg/m3	Extractive sample	6 monthly	BS EN 13649
A3 [Point A3 on drawing no. H16015, revision D]	Formaldehyde	Release from forming & curing ovens and cooling zone	5 mg/m3	Extractive sample	6 monthly	US EPA 316
A3 [Point A3 on drawing no. H16015, revision D]	Ammonia	Release from forming & curing ovens and cooling zone	50 mg/m3	Extractive sample	6 monthly	US EPA 26
A3 [Point A3 on drawing no. H16015, revision D]	Volatile organic compounds	Release from forming & curing ovens and cooling zone	35 mg/m3	Extractive sample	6 monthly	BS EN 12619
A4 [Point A4 on drawing no. H16015, revision D]	Particulate matter	Release from batch plant	30 mg/m3	Extractive sample	6 monthly	BS EN 13284-1
A5 [Point A5 on drawing no. H16015, revision D]	-	Wash water plant roof vent	-	-	-	-
A6 [Point A6 on drawing no. H16015, revision D]	-	Production hall roof vent	-	-	-	-
A7 [Point A7 on drawing no. H16015, revision D]	-	Fan house roof vent	-	-	-	-
A8 [Point A8 on drawing no. H16015, revision D]	-	Ammonia header tank vent	-	-	-	-
A9 [Point A9 on drawing no. H16015, revision D]	-	Binder tank vent	-	-	-	-
A10 [Point A10 on drawing no. H16015, revision D]	-	Boiler plant exhaust	-	-	-	-
A11 [Point A11 on drawing no. H16015, revision D]	-	LPG storage area	-	-	-	-
A12 [Point A12 on drawing no. H16015, revision D]	-	Gas metering area	-	-	-	-
A13 [Point A13 on drawing no. H16015, revision D]	-	Gas oil storage	-	-	-	-
A17 [Point A17 on drawing no. H16015, revision D]	-	Emergency generator	-	-	-	-
A18 [Point A18 on drawing no. H16015, revision D]	-	Furnace cooling water pump	-	-	-	-

A19 [Point A19 on drawing no. H16015, revision D]	-	Diesel compressor	-	-	-	-
A20 [Point A20 on drawing no. H16015, revision D]	-	Standby diesel pump (cullet cooling)	-	-	-	-
A21 [Point A21 on drawing no. H16015, revision D]	-	Binder plant vent	-	-	-	-
A22 [Point A22 on drawing no. H16015, revision D]	-	Vent from packaging area via bag filters	-	-	-	-

Table S4.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point W1 on drawing no. H16015, revision D] or as approved by the Agency.	COD	Surface water via site interceptor	120 mg/l	Spot sample	6 monthly	BS ISO 15705:2002, BS 6068-2.80:2002 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
W1 [Point W1 on drawing no. H16015, revision D] or as approved by the Agency.	Total suspended solids	Surface water via site interceptor	30 mg/l	Spot sample	6 monthly	BS EN 872:1996, BS 6068-2.54:1996 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
W1 [Point W1 on drawing no. H16015, revision D] or as approved by the Agency.	Total hydrocarbon oil	Surface water via site interceptor	20 mg/l	Spot sample	6 monthly	SCA blue book 77 ISBN 0117517283 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
W1 [Point W1 on drawing no. H16015, revision D] or as approved by the Agency.	pH max	Surface water via site interceptor	9	Spot sample	6 monthly	BS 6068-2.50:1995, ISO 10523:1994 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
W1 [Point W1 on drawing no. H16015, revision D] or as approved by the Agency.	pH min	Surface water via site interceptor	6	Spot sample	6 monthly	BS 6068-2.50:1995, ISO 10523:1994 or other ISO, BS or SCA blue book method as approved by the Environment Agency.

Table S4.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 [Point S1 on drawing no. H16015, revision D]	COD	Effluent pit	6500 mg/l	Spot sample	6 monthly	BS ISO 15705:2002, BS 6068-2.80:2002 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
S1 [Point S1 on drawing no. H16015, revision D]	Monohydric Phenols (as phenol)	Effluent pit	20 mg/l	Spot sample	6 monthly	SCA blue book 50. ISBN 0117516171 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
S1 [Point S1 on drawing no. H16015, revision D]	Total suspended solids	Effluent pit	900 mg/l	Spot sample	6 monthly	BS EN 872:1996, BS 6068-2.54:1996 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
S1 [Point S1 on drawing no. H16015, revision D]	Total sulphates	Effluent pit	900 mg/l	Spot sample	6 monthly	SCA blue book 136 ISBN 0117522406 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
S1 [Point S1 on drawing no. H16015, revision D]	Total hydrocarbon oil	Effluent pit	650 mg/l	Spot sample	6 monthly	SCA blue book 77 ISBN 0117517283 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
S1 [Point S1 on drawing no. H16015, revision D]	pH max	Effluent pit	12	Spot sample	6 monthly	BS 6068-2.50:1995, ISO 10523:1994 or other ISO, BS or SCA blue book method as approved by the Environment Agency.
S1 [Point S1 on drawing no. H16015, revision D]	pH min	Effluent pit	6	Spot sample	6 monthly	BS 6068-2.50:1995, ISO 10523:1994 or other ISO, BS or SCA blue book method as approved by the Environment Agency.

Schedule 5 - Reporting

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

Table S5.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.6.1.	A0, A1, A3, A4,	Every 6 months	01/07/07
Emissions to water Parameters as required by condition 3.6.1	W1	Every 6 months	01/01/07
Emissions to sewer Parameters as required by condition 3.6.1	S1	Every 6 months	01/01/07

Table S5.2: Annual production/treatment

Parameter	Units
-	-

Table S5.3 Performance parameters

Parameter	Frequency of assessment	Units
Mass release of oxides of sulphur	Annually	Kg SO ₂
Electricity	Annually	MWh
Natural gas usage	Annually	MWh
Gas oil	Annually	Tonnes
Bypass stack usage	Annually	Hrs per year
Waste	Annually	Tonnes
Water usage	Annually	Tonnes

Table S5.4 Reporting forms

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Agency	20/02/07
Water	Form water 1 or other form as agreed in writing by the Agency	20/02/07
Waste	Form waste 1 or other form as agreed in writing by the Agency	20/02/07
Sewer	Form sewer 1 or other form as agreed in writing by the Agency	20/02/07
Energy usage	Form energy 1 or other form as agreed in writing by the Agency	20/02/07
Other performance indicators	Form performance 1 or other form as agreed in writing by the Agency	20/02/07

Schedule 6 - Notification

These pages outline the information that the operator must provide.

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

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

Part A

Permit Number	MP3038MP
Name of operator	Knauf Insulation Ltd
Location of Installation	Pont y Felin
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

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

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Knauf Insulation Limited

Schedule 7 - Interpretation

"*accident*" means an accident that may result in pollution.

"*annually*" means once every year.

"*application*" means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 4 to the PPC Regulations.

"*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, any power specified in section 108(4) of that Act.

"*emissions to land*", includes emissions to groundwater.

"*fugitive emission*" means an emission to air, water or land from the activities which is not controlled by an emission limit.

"*groundwater*" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"*land protection guidance*", means Agency guidance "H7 - Guidance on the protection of land under the PPC Regime: application site report and site protection monitoring programme".

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

"*notify without delay*" and "*notified without delay*" means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

"*PPC Regulations*" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"*quarter*" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

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

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

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

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

END OF PERMIT