

# Notice of variation and consolidation with introductory note

## The Environmental Permitting (England & Wales) Regulations 2016

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Huntsman Polyurethanes (UK) Limited  
Huntsman Polyurethanes (UK) Limited  
PO Box 99  
Wilton Redcar  
Middlesbrough  
TS10 4YA

**Variation application number**

EPR/BS8656IX/V009

**Permit number**

EPR/BS8656IX

# Huntsman Polyurethanes (UK) Limited Permit number EPR/BS8656IX

## Introductory note

### **This introductory note does not form a part of the notice**

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

#### **Changes introduced by this variation notice/statutory review**

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for the production of large volume organic chemicals. The opportunity has also been taken to consolidate the original permit and subsequent variations.

The Industrial Emissions Directive (IED) came into force on 7th January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) conclusions as described in the Commission Implementing Decision. The BAT conclusions for production of large volume organic chemicals were published on 07 December 2017 in the Official Journal of the European Union (L323) following a European Union wide review of BAT, implementing decision 2017/2117/EU of 21 November 2017.

Where appropriate, we also considered other relevant BAT Conclusions published prior to this date but not previously included in a permit review for the Installation:-

Common wastewater and waste gas treatment/management systems in the chemical sector.  
Published 09 June 2016

The BAT Conclusions for this installation which apply from 7<sup>th</sup> December 2021 are: Production of Large Volume Organic Chemicals:

- LVOC BAT 2, 8-10, 12-19

Common wastewater and waste gas treatment/management systems in the chemical sector:

- CWW 1-5, 7-13, 15-16, 19, 22 & 23

The site is permitted a direct discharge of process effluent to the River Tees via emission point to water S1. The operator must meet BAT associated emission levels (BAT-AELs) in the Common wastewater and waste gas treatment/management systems in the chemical sector (CWW) BAT Conclusions by 07/12/2021 unless a derogation is granted. These are included as emission limit values in Table S3.2 and are applicable from 07/12/2021. There are improvement conditions (IC17 & IC18) in Table S1.3 which address these issues.

The schedules specify the changes made to the permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

## Brief Description of the process

The installation covers the manufacture of two products, aniline and mononitrobenzene (MNB). The installation boundary was agreed as the isolation valves on all of the link- lines entering and leaving the installation.

The relevant listed activities are two production lines under:

- Section 4.1A(1)(a)(iii) – “Producing organic chemicals such as organic compounds containing nitrogen, such as amines, amides, nitrous-, nitro- or azo-compounds, nitrates, nitriles, nitrogen heterocyclics, cyanates, isocyanates, di-isocyanates and di-isocyanate prepolymers.”

The main raw materials for the manufacture of mononitrobenzene are nitric acid, imported by road tanker, and benzene, imported by pipeline. The mononitrobenzene product is transported by pipeline to the adjacent aniline plant, which uses hydrogen, also imported by pipeline, to manufacture the aniline product. Aniline is exported by pipeline to a bulk storage installation for subsequent use in MDI (methylene diphenyl diisocyanate) manufacture.

A more detailed description of the manufacturing processes is given below.

### Mononitrobenzene

MNB is produced by the nitration of benzene with nitric acid, in the presence of a sulphuric acid catalyst. The reaction to produce MNB is exothermic, and the sulphuric acid acts as a “heat sink”. Upon completion of nitration, the sulphuric acid is re-concentrated, using steam generated from the heat of reaction, and recycled into the process. The main by-product is dinitrophenol.

Crude MNB is water washed. Steam stripping of the washed MNB in a two-bed packed tower, removes benzene from the stream. The overheads from the stripper, mainly benzene and water, are condensed and separated in a Product Stripper Overhead Decanter. The Decanter is a gravity separation vessel that allows the MNB and water to separate; the water is returned to the washing section and the MNB is pumped to the Bulk Storage Tank on the Aniline Plant.

The Strong Effluent Storage Tank allows separation of entrained MNB. The separated MNB is pumped back to the Washer 2 Decanter. The strong effluent is pumped to the Dilute Strong Effluent

Storage Tank on flow control at a maximum rate of 10 m<sup>3</sup>/hr. Amine Water Stripper Effluent from the Aniline

plant is added to the tank at a maximum rate of 20m<sup>3</sup>/hr. The Amine Water Effluent addition is flow controlled to maintain the dilution of the effluent in the range 1 to 2:1 water: effluent ratio. This dilution is mainly required to ensure the nitrobenzene levels in the effluent are kept below the solubility limit. The diluted strong effluent is pumped from the Dilute Strong Effluent Storage Tank to the Northumbrian Water Bran Sands facility via a pipeline for biological treatment.

### Aniline

Aniline is produced by the liquid phase hydrogenation of MNB, using aniline as a solvent, in the presence of a nickel on kieselguhr catalyst. The reaction is exothermic and 40% of the heat is removed by generating low pressure steam. The main by-products are ammonia, benzene, cyclohexanone, cyclohexylamine, phenol and heavies (tars and toluidines).

Reactor overheads are condensed using air-cooled finned tubed condensers. Condensate from the second stage separates in a binary separator into an aqueous layer and a cold crude aniline layer. Part of the aniline layer is recycled back into the reactor as reflux, with the remainder going to the Cold Crude Storage Tanks. The aqueous layer, called the amine water stream, is exported to the Amine Water Storage Tank.

Purge gases from the reactors are vented to another operator (Equans, permit number MP3131RW) to be thermally treated in order to raise steam rather than treated on-site via a thermal oxidiser. the MNB thermal oxidiser.

This semi-refined aniline is then fed to a Polishing Reactor which contains a fixed bed of Palladium catalyst. The purpose of the Polishing Reactor is to reduce the amount of MNB left unreacted after the main aniline reaction and thus reduce the need to remove it via distillation. The majority of the MNB remaining in the semi-refined aniline is removed by reacting it with a small flow of hydrogen as it passes over the fixed catalyst bed. The aniline is then further refined by removal of high boiling impurities via distillation in the Refining Stills to produce the product aniline. The product aniline is then pumped offsite to a bulk storage company.

The aqueous amine water streams from the aniline reactors are contacted with MNB to extract dissolved aniline in the NB Extractor. The aqueous effluent is then stripped with steam, in the Amine Water Column System, to remove impurities prior to discharge to drain.

The light and heavy ends from the dehydration and refining stills are treated in the batch purge still by fractional distillation to recover the aniline. Unwanted light and heavy fractions are sent off site for incineration.

#### Principal releases

Releases to air consist mainly of NO<sub>x</sub>, SO<sub>x</sub>, and VOC's (benzene, cyclohexylamine, aniline, MNB) and ammonia. Condensers minimise releases of VOC's. Scrubbing systems are in place to minimise the releases of ammonia and VOC's. The remaining emissions will now be routed to another operator (Equans, permit number MP3131RW) to be thermally treated in order to raise steam rather than treated on-site via a thermal oxidiser

Releases to water are via the Wilton Site Drainage System or to Bran Sands Sewage Treatment Plant, as detailed above.

Huntsman Polyurethanes are a Top Tier COMAH site, with a regime of inspections by the Competent Authority (HSE and Environment Agency).

There is an environmental management system in place, which is not formally accredited, but Huntsman Polyurethanes operate a Responsible Care Management System based upon the Chemical Industries Association guidelines.

#### Sensitive receptors

There are 7 designated habitats which have been considered as part of the habitats risk assessment:

- North York Moors: Special Protection Area (SPA) and Special Area of Conservation (SAC)
- Teesmouth and Cleveland Coast: Site of Special Scientific Interest (SSSI), SPA, Ramsar, proposed SPA and proposed Ramsar

#### Effluent discharge into the River Tees

The River Tees at the point of discharge is directly into the Teesmouth and Cleveland Coast SPA and as such detailed modelling to assess the risk is required. This applies to both discharge points S1 (direct via Sembcorp) and S2 (indirect via Bran Sands) and has been addressed as part of Improvement Condition IC18.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application BS8656IX received	15/08/03	
Response to telephone request for supplementary information, revised H1 assessment, dated 14/01/04	Received 06/02/04	Revised assessment provided.
Response to e-mail request for supplementary information, on the site report, dated 05/02/04	Received 03/03/04	Additional information provided.
Permit EPR/BS8656IX issued	15/04/04	Issued to Huntsman Polyurethanes (UK) Limited.
Application for variation ZP3836SG to amend some ELVs	Received 06/05/05	Variation issued 22/06/05
Application for WID variation XP3732SR	Received 31/03/05	Variation issued 07/10/05
Variation RP3035LJ to extend A7 ELV suspension		Variation issued 01/03/06.
Variation YP3735UM to undertake a range of projects	Received 27/02/07	Variation issued 11/05/07.
Variation LP3230XJ for closure of CHA plant and introduction of a new reactor	Received 05/11/07	Variation issued 07/01/08.
Application EPR/BS8656IX/V007 (SP3737ZG)	Duly made 14/02/13	Notified of change of company registered office address.
Variation issued EPR/BS8656IX/V007	04/03/13	Varied permit issued to Huntsman Polyurethanes (UK) Limited.
Part surrender application EPR/BS8656IX/S008	Duly made 19/08/16	Application to surrender an area of land within the installation boundary.
Part surrender determined EPR/BS8656IX (Billing ref. XP3338DK)	18/10/16	Part surrender complete.
Regulation 61 Notice dated 04/05/18 (Notice requiring information for statutory review of permit)	Response Received 26/04/19	Technical standards detailed in response to the information notice. 8.

EPR/BS8656IX/V009 (variation and consolidation)	Environment Agency Initiated Variation	Statutory review of permit occasioned by LVOC BAT Conclusions published 07 December 2017
Request for Information letter sent dated 13/07/20	Response received 08/12/20	Thermal Oxidiser Dispersion Modelling Presentation
	Response received 24/03/20	Answers (some partial) to questions from RFI letter with the exception of question 2.4 (Review of Operating Techniques)
	Response received 14/04/21	H1 emissions to air modelling data
	Response received 19/04/21	Pdf and excel data for H1 tool outcomes - emissions to water
	Response received 17/06/21	Response to clarification requests with regards to the emissions water risk assessment submission received
	Response received 20/08/21	Submission of 'abatement efficiencies of effluent stripping columns' (partial) data
	Response received 18/02/22	Update received from operator surrounding emissions to water assessment / data to ascertain relevant BAT-AELs.
	Received 17/03/22	Submission of 'abatement efficiencies of effluent stripping columns' (full 12 months) data
	Received 30/03/22	Response to 'Action 4. TrAC'
	Received 31/03/22	Actions and general updates from meeting
Variation determined EPR/BS8656IX (Billing Ref: DP3302LU)	06/12/22	Varied and consolidated permit issued

<b>Other Part A installation permits relating to this installation</b>		
<b>Operator</b>	<b>Permit number</b>	<b>Date of issue</b>
Equans Services Limited	MP3131RW	31/07/17

End of introductory note

# Notice of variation and consolidation

## The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

**Permit number**

**EPR/BS8656IX**

**Issued to**

**Huntsman Polyurethanes (UK) Limited** (“the operator”)

whose registered office is

**Concordia House  
Glenarm Road  
Wynyard Business Park  
Billingham  
TS22 5FB**

company registration number 03767067

to operate a regulated facility at

**Huntsman Polyurethanes (UK) Limited  
PO Box 99  
Wilton Redcar  
Middlesbrough  
TS10 4YA**

to the extent set out in the schedules.

The notice shall take effect from 06/12/2022

<b>Name</b>	<b>Date</b>
<b>Daniel Timney</b>	<b>06/12/2022</b>

Authorised on behalf of the Environment Agency

**Schedule 1**

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

**Schedule 2 – consolidated permit**

Consolidated permit issued as a separate document.



# Permit

## The Environmental Permitting (England and Wales) Regulations 2016

### Permit number

**EPR/BS8656IX**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BS8656IX/V009 authorising,

**Huntsman Polyurethanes (UK) Limited** (“the operator”)

whose registered office is

**Huntsman Polyurethanes (UK) Limited  
Concordia House  
Glenarm Road  
Wynyard Business Park  
Billingham  
TS22 5FB**

company registration number 03767067

to operate an installation at

**Huntsman Polyurethanes (UK) Limited  
PO Box 99  
Wilton Redcar  
Middlesbrough  
TS10 4YA**

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

Name	Date
Daniel Timney	06/12/2022

Authorised on behalf of the Environment Agency

# Conditions

## 1 Management

### 1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

### 1.2 Energy efficiency

1.2.1 The operator shall:

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

### 1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

### 1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
  - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

## **2 Operations**

### **2.1 Permitted activities**

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

### **2.2 The site**

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in blue on the site plan at schedule 7 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 Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
  - (b) the composition of the waste;
  - (c) the handling requirements of the waste;
  - (d) the hazardous property associated with the waste, if applicable; and
  - (e) the waste code of the waste.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

### **2.4 Improvement programme**

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

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

### **3 Emissions and monitoring**

#### **3.1 Emissions to water, air or land**

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

#### **3.2 Emissions of substances not controlled by emission limits**

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

#### **3.3 Odour**

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### **3.4 Noise and vibration**

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### **3.5 Monitoring**

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
  - (a) point source emissions specified in tables S3.1, S3.2 and S3.3;
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2, S3.3 unless otherwise agreed in writing by the Environment Agency.

## **4 Information**

### **4.1 Records**

- 4.1.1 All records required to be made by this permit shall:
  - (a) be legible;
  - (b) be made as soon as reasonably practicable;
  - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
  - (i) off-site environmental effects; and
  - (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

## 4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

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

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production /treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

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

## 4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
  - (i) inform the Environment Agency,
  - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

- (iii) take the measures necessary to prevent further possible incidents or accidents;
  - (b) of a breach of any permit condition the operator must immediately—
    - (i) inform the Environment Agency, and
    - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
  - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment 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 Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and
  - (b) any steps taken with a view to the dissolution of the operator.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified at least 14 days before making the change; and
  - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment 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 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications,

except where reference is made to notification being made “immediately”, in which case it may be provided by telephone.



# Schedule 1 – Operations

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
AR1	Section 4.1A(1)(a)(iv) – producing organic chemicals containing Nitrogen	Producing mononitrobenzene	Receipt of raw materials to despatch/use of finished product
AR2	Section 4.1A(1)(a)(iv) – producing organic chemicals containing Nitrogen	Producing aniline	
<b>Directly Associated Activity</b>			
AR4	Storage and handling of raw materials	Storage of solid and liquid materials in bulk storage tanks, drums, IBC's, bags and other containers	Receipt and storage of raw materials to transfer to processing areas
AR5	Storage, handling and despatch of finished products, wastes and other materials	Storage of finished products. Process waste segregation and storage	Internal and external storage of finished products, storage of waste in designated areas and loading for transit off site
AR6	Control and abatement systems for emissions to air	Abatement of releases to air	Extraction and collection of waste gases and treatment via thermal destruction, scrubbers, condensers and coolers, and dust filters
AR7	Cooling water system	Cooling water supply, treatment and recirculation	Cooling water towers and reservoir
AR8	Utilities and Services	Operation of systems for the supply of utilities and services such as process heating, nitrogen, compressed air, electricity and effluent treatment	Site utility and services systems as far as the installation boundary. (Services supplied to installation by Wilton Site distribution system).

<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application EPR/BS86561X/A001	The response to questions 2.1 and 2.2 given in pages 7 – 35 of the application	15/08/03
Application EPR/BS86561X/V002 WID PPC Application	Information given in pages 14 to 50	31/03/05
Variation EPR/BS86561X/V009 Regulation 61 Notice – request for further information dated 04/05/18	Technical standards in relation to Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for Production of Large Volume Organic Chemicals BAT Conclusions Numbers 2, 8, 9, 10, 12, 13, 14, 15, 16, 17 & 18 Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 16, 19, 22, 23	Received 26/04/19
Variation EPR/BS86561X/V003 Response to Request for Information Letter dated 13/07/20	Response to Questions about LVOC BAT 2 & 10 and CWW BAT 3, 4 & 7.	Received 24/03/20

<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC1 – 16	-	Complete
IC17	<p><u>Derogation for Chromium and Nickel</u></p> <p>The operator shall submit, for approval by the Environment Agency, reports setting out progress to achieving the BAT conclusion AELs or justification, including a detailed cost benefit assessment, of why the costs of treatment outweigh the environmental benefits, where a derogation has been applied for. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> <li>1) Current performance against the BATc AELs.</li> <li>2) Methodology for reaching the AELs or justification, including a detailed <u>cost benefit analysis</u> (<a href="http://www.gov.uk/government/publications/indust">www.gov.uk/government/publications/indust</a></li> </ol>	<p>Progress report by 07/01/2023 then at monthly intervals until the derogation submission is complete, which shall be no later than 07/06/2023.</p> <p>Final report by 07/07/2023 unless otherwise agreed in writing with the Environment Agency.</p>

	<p><a href="#">rial-emissions-directive-derogation-cost-benefit-analysis-tool</a>)</p> <p>3) Why the costs of treatment outweigh the environmental benefits.</p> <p>4) Associated targets / timelines for reaching compliance of the BAT-AELs by <b>07/12/2023</b> (or otherwise agreed in writing with the Environment Agency) or justification, including a detailed <u>cost benefit analysis</u>, of why the costs of treatment outweigh the environmental benefits, for discharges from the MNB and Aniline Plant to emission point S1.</p> <p>The report shall address the following BAT Conclusion:</p> <ul style="list-style-type: none"> <li>• <i>Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector BAT Conclusions Document</i> (<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1579188127132&amp;uri=CELEX%3A32016D0902">https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1579188127132&amp;uri=CELEX%3A32016D0902</a>) section 3.4, Table 1 (compliance with BAT-AEL for Cr and Ni, emission point S1) under <b>BAT 12</b> (waste water treatment).</li> </ul> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p> <p><i>Approval of reports under this Improvement Condition does not preclude the need for permit variation application(s) to operate the developed strategy and/or include any necessary ELVs.</i></p>	
IC18	<p><u>Surface water pollution risk assessment</u></p> <p>The operator shall submit a written report to the Environment Agency for approval that includes: The results of an assessment of the impact (using detailed modelling: <a href="https://assets.publishing.service.gov.uk/government/uploads/attachment_data/file/509313/LIT_10419.pdf">https://assets.publishing.service.gov.uk/government/uploads/attachment_data/file/509313/LIT_10419.pdf</a>) of the emissions to Transitional and Coastal surface waters from emission points S1 and S2 on the site. The report shall:</p> <p>(a) be based on representative emissions data for any relevant hazardous chemicals and elements and any other relevant substances (i.e. that the effluent is 'liable to contain') that are discharged at concentrations (ensuring the application of Sewage Treatment Reduction Factors,</p>	<p>Progress report by 07/01/2023 then at monthly intervals until the risk assessment is complete and compliance with the narrative BAT (points 10-12) is reached, which shall be no later than 07/06/2023.</p> <p>Final report by 07/07/2023 unless otherwise agreed in writing with the Environment Agency.</p>

	<p>STRF, for discharges to emission point S2) above their relevant EQSs (Environmental Quality Standards) or PNECs (predicted no effect concentrations), Total Suspended Solids and Ammoniacal Nitrogen;</p> <p>(b) include the raw data used in the impact assessment;</p> <p>(c) include proposals for a waste water management and treatment strategy in line with <i>Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector BAT Conclusions Document</i> (<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1579188127132&amp;uri=CELEX%3A32016D0902">https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1579188127132&amp;uri=CELEX%3A32016D0902</a>, <b>BAT points 10-12</b>, to mitigate the impact of any emissions where the assessment determines they are liable to cause pollution, including timescales for implementation of individual measures; and</p> <p>(d) include proposals for ELVs and a monitoring plan to mitigate the impact of any emissions where the assessment determines they are liable to cause pollution. Ensure to include the parameters to be monitored, frequencies of monitoring and methods to be used.</p> <p><i>Approval of reports under this Improvement Condition does not preclude the need for permit variation application(s) to operate the developed strategy and/or include any necessary ELVs.</i></p>	
IC19	<p><u>Re-routing of process vent gases from the on-site Thermal Oxidiser to Equans Services Limited.</u></p> <p>The operator shall submit, for approval by the Environment Agency, a report confirming achievement of the re-routing of process vent gases to Equans Services Limited. The report shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• confirmation that the process vent gases are no longer routed to the on-site thermal oxidiser and the thermal oxidiser is permanently isolated from receiving the process vent gases</li> <li>• Date that the vent gases were routed to Equans Services Limited</li> <li>• An updated site plan which includes the pipework to Equans Services Limited</li> </ul> <p>A plan including dates of implementation for the</p>	6 months from permit issue.

	<p>decommissioning and/or demolition of the Thermal Oxidiser.</p> <p>Should the vent gases not be routed to Equans, for any reason, the operator shall submit a report that:</p> <ul style="list-style-type: none"> <li>assesses emissions of Carbon Monoxide, Sulphur Dioxide (and any other relevant acid gas emissions, e.g. HCl) from the Thermal Oxidiser, and</li> <li>include proposals for ELVs and a monitoring plan to mitigate the impact (using wet scrubbing as required by LVOC BAT conclusion 12 or a combination of the described techniques in LVOC BAT conclusion 13) of any emissions where the assessment determines they are liable to cause pollution. Ensure to include the parameters to be monitored, frequencies of monitoring and methods to be used.</li> </ul>	
IC20	<p>The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the 'Narrative' BAT where BAT is currently not achieved. The report shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>Methodology for achieving BAT or justification as to why this is deemed unnecessary</li> <li>Associated targets / timelines for reaching compliance (where relevant)</li> <li>Any alterations to the initial plan (in progress reports)..</li> </ul> <p>The report shall address the following BAT Conclusion:</p> <ul style="list-style-type: none"> <li>Common waste water and waste gas treatment/management systems in the chemical sector <b>BAT 8</b> segregation of uncontaminated waste water and reduction of emissions to water from S1 &amp; S2).</li> </ul> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p> <p>You must implement the report as agreed, and from the date stipulated by the Environment Agency.</p>	6 months from permit issue, unless otherwise agreed in writing with the Environment Agency.
IC21	<p>Submit a written plan to the Environment Agency for technical assessment and agreement. The plan must contain details of additional soil and groundwater monitoring programme to focus on areas where there is an increased risk of contamination from the site, as described in condition</p>	6 months from permit issue.

	<p>3.1.3. permanent groundwater monitoring wells will be installed to permit future groundwater monitoring.</p> <p>The plan must contain dates for the implementation of individual measures.</p> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the plan.</p> <p>You must implement the plan as agreed, and from the date stipulated by the Environment Agency.</p>	
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# Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
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## Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
V1 [Point V1 on emission point plan in Schedule 7]	MNB Thermal Oxidiser Vent	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	700 mg/m <sup>3</sup> (2,4)	Hourly average	Continuous	ISO 10849
		Carbon Monoxide	100 mg/m <sup>3</sup> -3	Hourly average	Continuous	ISO 12039
V2 [Point V2 on site plan in Schedule 7]		No parameters set	No limit set	--	--	Permanent sampling access not required
V3 [Point V3 on site plan in schedule 7]	Caustic Storage Tank Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
V4 [Point V4 on site plan in schedule 7]	Effluent Neutraliser Tank Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
V5 [Point V5 on site plan in schedule 7]	Caustic Head Tank	No parameters set	No limit set	--	--	Permanent sampling access not required
V6 [Point V6 on site plan in schedule 7] <sup>(1)</sup>	NO <sub>x</sub> Scrubber Vent - Note 1	No parameters set	No limit set	--	--	Permanent sampling access not required
V7 [Point V7 on site plan in schedule 7] <sup>(1)</sup>	Strong Effluent Tank Vent - Note 1	No parameters set	No limit set	--	--	Permanent sampling access not required
A1 [Point A1 on site plan in schedule 7] <sup>(1)</sup>	D-3001 Aniline Reactor Vent - Note 1	No parameters set	No limit set	--	--	Permanent sampling access not required



A2a [Point A2a on site plan in schedule 7] (1)	D-3002 Aniline Reactor Vent - Note 1	No parameters set	No limit set	--	--	Permanent sampling access not required
A2b [Point A2b on site plan in schedule 7] (1)	D-3003 Aniline Reactor Vent - Note 1	No parameters set	No limit set	--	--	Permanent sampling access not required
A2c [Point A2c on site plan in schedule 7] (1)	D-3004 Aniline Reactor Vent - Note 1	No parameters set	No limit set	--	--	Permanent sampling access not required
A4 [Point A4 on site plan in schedule 7]	Phase 1 Tank Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A5 [Point A5 on site plan in schedule 7]	Purge Still Tanks System	No parameters set	No limit set	--	--	Permanent sampling access not required
A6 [Point A6 on site plan in schedule 7]	Vacuum Pumps	Benzene	2500 mg/m <sup>3</sup>	Average over sampling period	Quarterly	UNE CEN/TS 13649:2014
A7 [Point A7 on site plan in schedule 7]	Amine Water Column Vent Stack	VOC Total Class A (expressed as individual VOCs)	100 g/hr	Average over sampling period	Quarterly	UNE CEN-TS 13649:2014 (Test for Benzene, Nitrobenzene, Aniline and Cyclohexylami ne.
A8 [Point A8 on site plan in schedule 7] (1)	Purge Still Separator Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A10 [Point A10 on site plan in schedule 7] (1)	Refined Aniline Tanks Common Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A11 [Point A11 on site plan in schedule 7] (1)	MNB Storage Tanks Vent	No parameters set	No limit set	--	--	Permanent sampling access not required

A13 [Point A13 on site plan in schedule 7] (1)	Amine Water Diluent Tank	No parameters set	No limit set	--	--	Permanent sampling access not required
A18 [Point A18 on site plan in schedule 7] (1)	No 5 Bay Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A20 [Point A20 on site plan in schedule 7] (1)	Aniline Catalyst Slurry Vessel Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A21 [Point A21 on site plan in schedule 7] (1)	Aniline Catalyst Drum Charging System Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A24 [Point A24 on site plan in schedule 7] (1)	Aniline Catalyst Charging System Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A25 [Point A25 on site plan in schedule 7] (1)	No 2 D/H Still Overheads Separator Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A26 (1) [Point A26 (1) on site plan in schedule 7] (1)	No 5 Aniline Reactor Purge Gas Vent	No parameters set	No limit set	--	--	Permanent sampling access not required
A26 (2) [Point A26 (2) on site plan in schedule 7] (1)	Aniline Reactors (1-5) Purge Gas Vent (5)	No parameters set	No limit set	--	--	Permanent sampling access not required

(1) These vents are normally directed to the Thermal Oxidiser

(2) Limits are applicable until IC19 is satisfied, the Thermal Oxidiser has been decommissioned and demolished, and the vent gases from the emission points that are currently being channelled to the Thermal Oxidiser are diverted to the separately permitted energy centre (operated by Engie) to be used for raising steam.

(3) 10% confidence interval to be applied to the measured value to give the determined value.

(4) 20% confidence interval to be applied to the measured value to give the determined value.

(5) See Section 6 for reference conditions.

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. unit)</b>	<b>Reference Period</b>	<b>Monitoring frequency</b>	<b>Monitoring Standard or method</b>
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Discharge Flow	4,416 m <sup>3</sup> /day	24-hour total	Continuous	MCERTS self-monitoring of flow scheme
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Discharge Temperature	No limit set	24-hour total	Continuous	Resistance Temperature Detector
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Discharge pH	6 to 9	Instantaneous	Continuous	SCA Blue Book 14
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Total Organic Carbon	100 mg/l	Yearly average of flow-proportional, 24-hour composite samples	Daily Average	BS EN 1484
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Benzene	30 mg/l	Flow-proportional, 24-hour composite samples	Monthly Average	BS EN ISO 15680
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Ammoniacal Nitrogen (as N)	600 mg/l	Flow-proportional, 24-hour composite samples	Monthly Average	BS 6068 – 2.11 ISO 7150-1:1984
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Total Nitrogen	No limit set	Flow-proportional, 24-hour composite samples	Daily Average	EN 12260
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Total Suspended Solids	35 mg/l	Yearly average of flow-proportional, 24-hour composite samples	Daily Average	EN 872
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	AOX	1 mg/l	Yearly average of flow-proportional, 24-hour composite samples	Monthly Average	EN ISO 9562
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Chromium (Total)	25 ug/l	Yearly average of flow-proportional, 24-hour composite samples	Monthly Average	BS EN ISO 11885: 2007
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Copper (Total)	50 ug/l	Yearly average of flow-proportional, 24-hour composite samples	Monthly Average	BS EN ISO 11885: 2007
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Nickel (Total)	50 ug/l	Yearly average of flow-proportional, 24-hour composite samples	Monthly Average	BS EN ISO 11885: 2007
S1 - Sembcorp	Process effluent from the Aniline &	Zinc (Total)	30 ug/l	Yearly average of flow-proportional,	Monthly Average	BS EN ISO 11885: 2007

	Mononitrobenzene Plant			24-hour composite samples		
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Mercury and its compounds	1 ug/l	Flow-proportional, 24-hour composite samples	Quarterly Average	BS EN 12846
S1 - Sembcorp	Process effluent from the Aniline & Mononitrobenzene Plant	Cadmium and its compounds	1 ug/l	Flow-proportional, 24-hour composite samples	Quarterly Average	BS EN ISO 5961

**Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site—emission limits and monitoring requirements**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. Unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
S2 – Bran Sands	Strong Process Effluent Flow	Mercury	1 µg/l	Flow proportional 24-hour composite samples	Quarterly average	BS EN 12846
S2 – Bran Sands	Strong Process Effluent Flow	Cadmium	1 µg/l	Flow proportional 24-hour composite sample	Quarterly average	BS EN ISO 5961

## Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	V1(so long as thermal oxidiser is utilised), A6 & A7	Quarterly	1 January, 1 April, 1 July, 1 October
Emissions to water Parameters as required by condition 3.5.1	S1	Quarterly	1 January, 1 April, 1 July, 1 October
Emissions to sewer Parameters as required by condition 3.5.1	S2	Quarterly	1 January, 1 April, 1 July, 1 October

Parameter	Units
Total Mononitrobenzene production	Tonnes
Total Aniline production	Tonnes

Parameter	Frequency of assessment	Units
Water usage	Annually	Tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	Tonnes
Copper release to River Tees per tonne product	Annually	Cu kg/t
Zinc release to River Tees per tonne product	Annually	Zn kg/t
Nickel release to River Tees per tonne product	Annually	Ni kg/t
Chromium release to River Tees per tonne product	Annually	Cr kg/t
Effluent treatment at receiving Sewage Treatment Works	Annually	No change/Change Note 1

Note 1: Confirm whether there have been any significant changes at the installation or at the receiving sewage treatment works that may affect whether treatment off-site at the receiving sewage treatment works is BAT and provides an equivalent level of protection of the environment as if the effluent were treated on-site.

<b>Table S4.4 Reporting forms</b>		
<b>Media/parameter</b>	<b>Reporting format</b>	<b>Date of form</b>
Emissions to Air	Emissions to air reporting form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21
Emissions to Water and Land (other than sewer)	Emissions to water reporting form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21
Emissions to Sewer	Emissions to sewer reporting form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21
Surface water monitoring	Surface water monitoring form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21
Process monitoring	Process monitoring form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21
Water usage	Water usage reporting form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21
Energy usage	Energy usage reporting form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21
Other environmental performance indicators	Other performance parameters reporting form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/21



## Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

### Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

<b>(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution</b>
---

<b>To be notified within 24 hours of detection</b>
--

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>(b) Notification requirements for the breach of a limit</b>
--

<b>To be notified within 24 hours of detection unless otherwise specified below</b>
---

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	
---	--

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

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

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

## **Part B – to be submitted as soon as practicable**

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

Name*	
Post	
Signature	
Date	

\* authorised to sign on behalf of the operator

## Schedule 6 – Interpretation

“accident” means an accident that may result in pollution. “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 5 to the EP Regulations.

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

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

“Common waste water and waste gas treatment/management systems in the chemical sector BAT Conclusions or CWW” means Commission Implementing Decision (EU) 2016/902 of 30 May 2016 establishing Best Available Techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for Common Waste Water And Waste Gas Treatment/Management Systems in the Chemical Sector as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

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

“Hazardous property” has the meaning in Annex III of the Waste Framework Directive as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016

“Large Volume Organic Chemicals BAT Conclusions or LVOC” means The Commission Implementing Decision (EU) 2017/2117 of 21 November 2017 establishing Best Available Techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the Production of Large Volume Organic Chemicals as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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

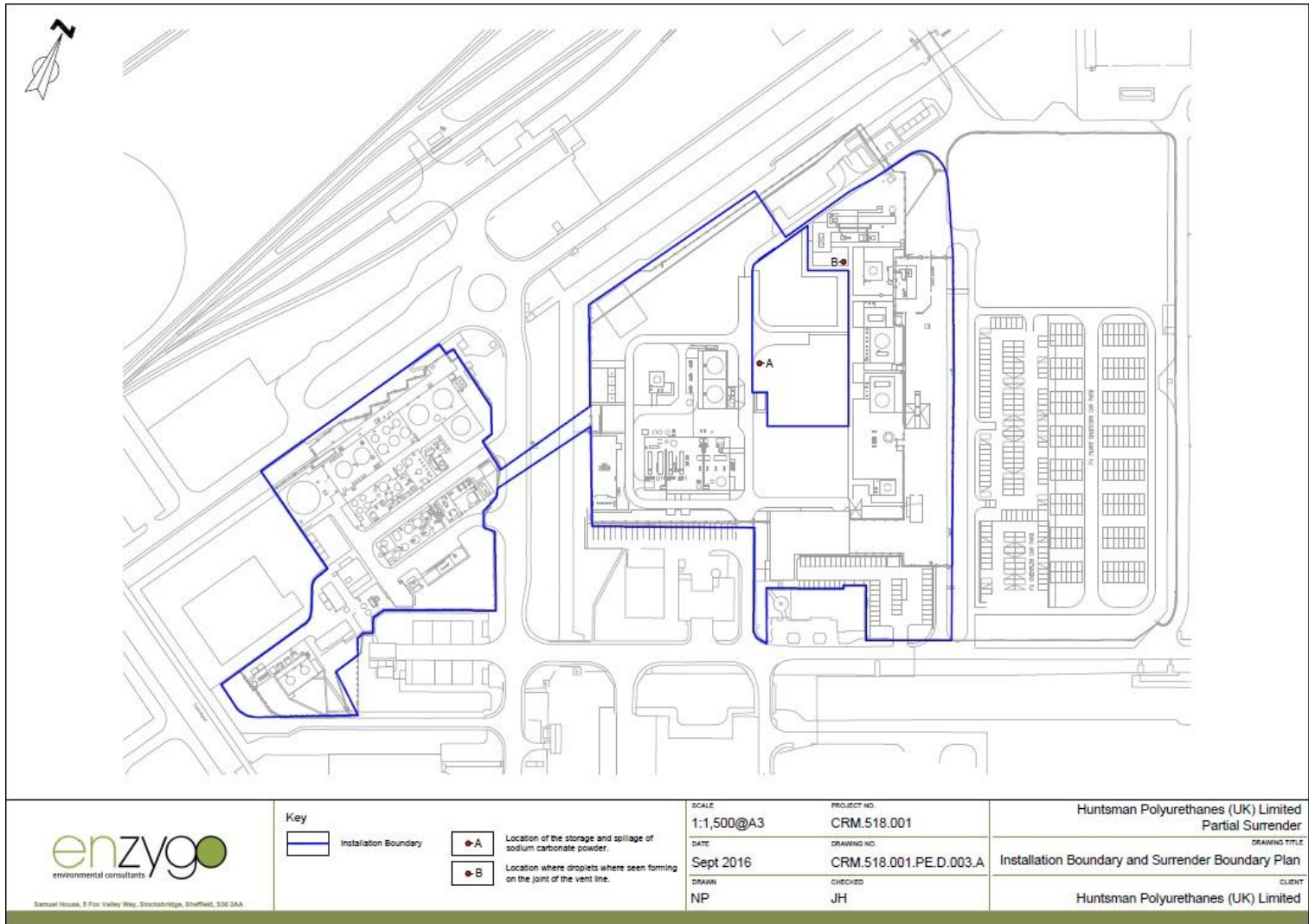
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

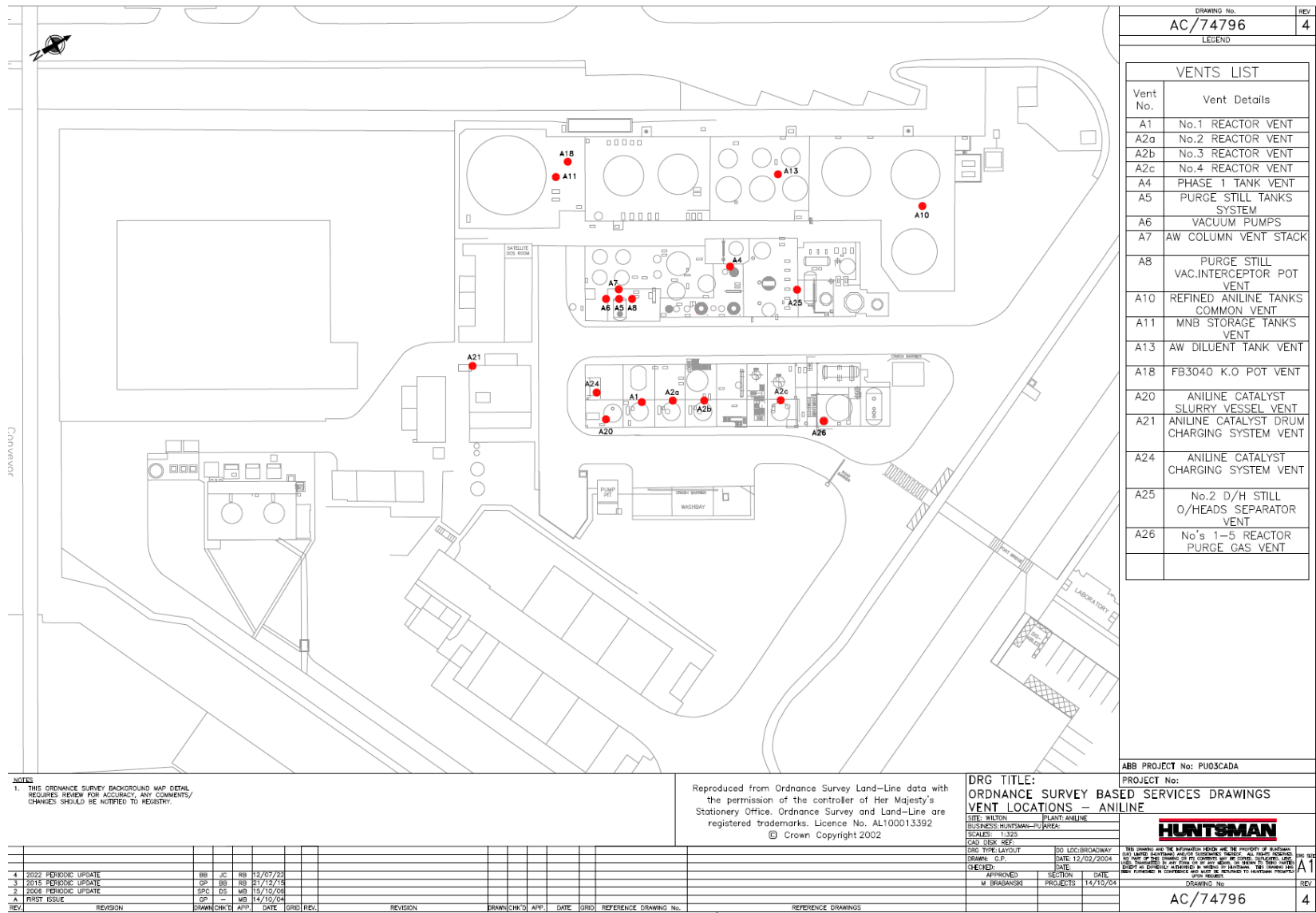
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or

- 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.
- “year” means calendar year ending 31 December.  
“yearly average” means the average over a period of one year of validated hourly averages obtained by continuous measurements.

# Schedule 7 – Site Plan



Emissions point to air plan – A



# Emissions to air – V



DRAWING No.	REV.
NB/74797	3

VENTS LIST	
Vent No.	Vent Details
V1	MNB THERMAL OXIDISER VENT
V2	SULPHURIC ACID TANK VENT
V3	CAUSTIC STORAGE TANK VENT
V4	EFFLUENT NEUTRALISER TANK VENT
V5	CAUSTIC HEAD TANK
V6	NOx SCRUBBER VENT
V7	STRONG EFFLUENT TANK VENT

COM-REGULATIONS / SAFETY NOTES

ABB PROJECT No: PUJSCADA

PROJECT No:

DRG TITLE:  
ORDNANCE SURVEY BASED SERVICES DRAWINGS  
VENT LOCATIONS – MNB

DRG TITLE:  
ORDNANCE SURVEY BASED SERVICES DRAWINGS  
VENT LOCATIONS – MNB

DRG TITLE:  
ORDNANCE SURVEY BASED SERVICES DRAWINGS  
VENT LOCATIONS – MNB

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DRG TITLE:  
ORDNANCE SURVEY BASED SERVICES DRAWINGS  
VENT LOCATIONS – MNB

NOTES  
1. THIS ORDNANCE SURVEY BACKGROUND MAP DETAIL REQUIRES REVIEW FOR ACCURACY. ANY COMMENTS/ CHANGES SHOULD BE NOTIFIED TO REGISTRY.

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REV	REVISION	DRAWN	CHK'D	APP'D	DATE	CRS	REV.	REVISION	DRAWN	CHK'D	APP'D	DATE	CRS	REFERENCE DRAWING No.	REFERENCE DRAWINGS
3	2022 PERIODIC UPDATE	BB	JC	RS	12/07/22										
2	2006 PERIODIC UPDATE	SBC	DS	MB	13/10/04										
A	FIRST ISSUE	GP		MB	02/10/04										

DRG TITLE LAYOUT	00 LOC BROADWAY
DRAWN: G.P.	DATE: 12/02/2004
CHECKED:	DATE:
APPROVED	SECTION
M BRADSHAW	PROJECTS
	DATE: 14/10/04

DRAWING No.  
NB/74797

REV.  
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DRAWING No.  
NB/74797

REV.  
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DRAWING No.  
NB/74797

REV.  
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End of Permit