



# Permit with introductory note

**The Environmental Permitting (England & Wales) Regulations 2010**

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SABIC UK Petrochemicals Limited

North Tees Storage Installation

Seaton Road

Port Clarence

Middlesbrough

TS2 1TT

**Permit number**

EPR/LP3335RM

# North Tees Storage Installation

## Permit number EPR/LP3335RM

### Introductory note

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

The main features of the permit are as follows.

The North Tees Storage Installation is located on the north bank of the River Tees approximately 2km north of Middlesbrough and is part of a multi-operator installation. The installation includes combustion activities regulated under Section 1.1 Part A(1)(a) of the Environmental Permitting Regulations owing to the aggregated thermal input of 56.8 MW for three steam raising boilers associated with liquid ethane heating and the import (Kaldair) heater associated with liquid propane heating.

The North Tees Storage Installation comprises separate operations in separated areas:

- i. Ethane Storage including associated utilities (including grid location 453193, 523370). Storage up to 42 kt. Approximate throughput initially 250 ktpa rising to 600 maximum ktpa. Liquid ethane is imported from ships across jetty 3. It is stored before being heated using steam from the boilers for transfer by pipeline to the operator's Wilton Site.
- ii. Ethylene liquefaction and storage (including grid location 453150, 522848). Storage up to 5.6 kt. Throughput approximately 400 ktpa. Some of the ethylene from the Wilton to Grangemouth pipeline can be liquefied and stored before transfer to ships across jetty 1A.
- iii. Propane Import and Export (including grid location 453562, 523473). No storage within the installation boundary. Throughput maximum approximately 422 ktpa but expected to be significantly lower. Liquid propane can be imported and exported over jetty 3 and stored in the cavities as an alternative feed stock for operations on the operator's Wilton site.

The jetties are included within the boundary of the associated North Tees Aromatics Installation permit.

Expected emissions to air from off-gassing of the volatile process materials are all intermittent and via flares. Other point source emissions to air are from the boilers via three 15m stacks and from the 8.4m stack of the Kaldair heater. Point source emissions to water from the three parts of the installation are via drains to the Effluent Treatment Plant and from there to the River Tees. This is regulated under the associated North Tees Aromatics Installation permit. There are no process discharges to land or groundwater.

There are protected habitats and species (relating to discharges to water from the effluent treatment plant) within 500m of the installation as well as the Teesmouth and Cleveland Coast Special Protection Area and Ramsar site within 10km, and three Sites of Special Scientific Interest, three Local Wildlife sites and National Nature Reserve all within 2km.

The operator has an Environmental Management System which is certificated to Responsible Care ISO14001.

The status log of the 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 EPR/LP3335RM/A001	Duly made 05/04/16	Application for ethane, ethylene and propane ship transfer, storage and treatment (including additional information submitted to clarify modelling assumptions).
Additional information received	21/04/16	Additional modifications to existing operations regarding intermittent releases to air added to the application.
Schedule 5 notice dated 06/05/16	16/05/16 19/05/16	1 <sup>st</sup> part of response received Final part of response received
Permit determined EPR/LP3335RM (PAS Billing ref. LP3335RM)	21/07/16	Permit issued to SABIC UK Petrochemicals Limited.

<b>Other Part A installation permits relating to this installation</b>		
<b>Operator</b>	<b>Permit number</b>	<b>Date of issue</b>
SABIC UK Petrochemicals Limited	EPR/BU4503IW	23/02/04
Anglian Water Services	EPR/BU5771IB	28/11/03
BOC Group plc	EPR/BJ7522IJ	19/10/01

End of introductory note

# Permit

## The Environmental Permitting (England and Wales) Regulations 2010

### Permit number

**EPR/LP3335RM**

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

**SABIC UK Petrochemicals Limited** (“the operator”),

whose registered office is

**The Wilton Centre**

**Wilton**

**Redcar**

**Cleveland**

**TS10 4RF**

company registration number 03767075

to operate an installation at

**North Tees Storage Installation**

**Seaton Road**

**Port Clarence**

**Middlesbrough**

**TS2 1TT**

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

<b>Name</b>	<b>Date</b>
<b>Mark Jones</b>	<b>21/07/2016</b>

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.

## **1.5 Multiple operator installations**

- 1.5.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

## **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 green on the site plan at schedule 7 to this permit, which is within the area edged in red on the site plan that represents the extent of the installation covered by this permit and those of other operators of the installation.

### **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 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 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.
- 2.3.5 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 and S3.2.
- 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 and S3.2;

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 and S3.2 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.

## 4.3 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 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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
  - (b) 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 "without delay", in which case it may be provided by telephone.

# Schedule 1 – Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
S1.1 A1 (a)	Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts. (Aggregated total of three ethane terminal boilers and the propane plant heater)	Burning of gas: i) In boilers to raise steam for heating liquid ethane and other uses within the multi-operator installation. ii) In the Kaldair heater to heat water for heating liquid propane.
Directly Associated Activity		
Storage of raw materials		Storage of raw materials associated with the combustion activities

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Supporting Information Document excluding appendices	Duly Made 05/04/16
Additional information	Update to section 2.2 of Supporting Information Document concerning ethylene liquefaction plant vents, ethylene storage tanks and ethylene compressors	21/04/16
Response to Schedule 5 Notice dated 06/05/16	Response to question 5 detailing gas supply to the ethane terminal boilers and question 10 confirming no propane storage within the installation.  Response to question 2 detailing certification by an accredited body to Responsible Care 14001	16/05/16  19/05/16
Additional Information	Updated site drainage schematic and Site Plan location details for effluent sampling	27/06/16

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The operator shall submit to the Environment Agency for approval, a report detailing monitoring of emission points W1, W2 and W3 to the site effluent treatment plant for estimated flow rates, Total Organic Carbon (target <100ppm) and pH (target 6-8). This will include, but not be limited to, evidence that the relevant part of the installation is operating at the time of sampling under typical operating conditions.	31/03/17
IC2	The operator shall submit to the Environment Agency for approval, a report detailing monitoring of ethane plant boiler stack emissions during commissioning to establish a typical baseline level and variability for all fuels that the boilers can use. This will include, but not be limited to, a comparison with the values modelled in the bespoke permit application EPR/LP3335RM/A001.	Within 1 year of the start of ethane plant boiler commissioning.

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC3	The operator shall submit to the Environment Agency for approval, a report detailing energy usage data for all parts of the North Tees Storage installation. This will include, but not be limited to, the development of an energy usage baseline and an energy efficiency plan.	Within 1 year of the start of ethane plant boiler commissioning.
IC4	The operator shall submit to the Environment Agency for approval, a report detailing monitoring of emission points A1, A2, A3 and A4 as hourly averages over a minimum period of 6 hours for oxides of nitrogen using test method BS EN 14792 or otherwise as agreed with the Environment Agency. The purpose of this monitoring is to provide evidence to assess variability in the oxides of nitrogen emission concentration in order to set a representative minimum monitoring period.	31/03/17

## Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

## 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
A1 [Point A1 on site plan in Schedule 7]	Ethane Terminal Boiler 1 burning natural gas or fuel gas	Oxides of Nitrogen (as NO <sub>2</sub> )	100 mg/m <sup>3</sup> [Note 1]	Hourly average [Note 3]	6 monthly	BS EN 14792 [Note 2]
A1 [Point A1 on site plan in Schedule 7]	Ethane Terminal Boiler 1 burning back up ethane	Oxides of Nitrogen (as NO <sub>2</sub> )	200 mg/m <sup>3</sup> [Note 1]	Hourly average	[Note 4]	BS EN 14792 [Note 2]
A2 [Point A2 on site plan in Schedule 7]	Ethane Terminal Boiler 2 burning natural gas or fuel gas	Oxides of Nitrogen (as NO <sub>2</sub> )	100 mg/m <sup>3</sup> [Note 1]	Hourly average [Note 3]	6 monthly	BS EN 14792 [Note 2]
A2 [Point A2 on site plan in Schedule 7]	Ethane Terminal Boiler 2 burning back up ethane	Oxides of Nitrogen (as NO <sub>2</sub> )	200 mg/m <sup>3</sup> [Note 1]	Hourly average	[Note 4]	BS EN 14792 [Note 2]
A3 [A3 on site plan in Schedule 7]	Ethane Terminal Boiler 3 burning natural gas or fuel gas	Oxides of Nitrogen (as NO <sub>2</sub> )	100 mg/m <sup>3</sup> [Note 1]	Hourly average [Note 3]	6 monthly	BS EN 14792 [Note 2]
A3 [Point A3 on site plan in Schedule 7]	Ethane Terminal Boiler 3 burning back up ethane	Oxides of Nitrogen (as NO <sub>2</sub> )	200 mg/m <sup>3</sup> [Note 1]	Hourly average	[Note 4]	BS EN 14792 [Note 2]
A4 [Point A4 on site plan in schedule 7]	Kaldair Propane Import Heater	Oxides of Nitrogen (as NO <sub>2</sub> )	100 mg/m <sup>3</sup>	Hourly average [Note 3]	6 monthly	BS EN 14792 [Note 2]

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A5 [Point A5 on site plan in schedule 7]	Ethane plant flare	-	-	-	--	-
A6 [Point A6 on site plan in schedule 7]	Ethylene plant flare (inc 2A&2B plants, Tank N602F)	-	-	-	-	-
A7 [Point A7 on site plan in schedule 7]	Ethylene plant flare (inc 3&4 plants, Tank N675F) - DRY	-	-	-	-	-
A8 [Point A8 on site plan in schedule 7]	Ethylene plant flare(inc 3&4 plants, Tank N675F) - WET	-	-	-	-	-
A9 [Point A9 on site plan in schedule 7]	Propane plant flare	-	-	-	-	-

Note 1: 100mg/m<sup>3</sup> when using Site Fuel gas or natural gas. Emission limit value to be 200mg/m<sup>3</sup> when using back up ethane from the boil off gas system during emergency situations or planned link line maintenance.

Note 2: Or alternative method as agreed in writing with the Environment Agency.

Note 3: Minimum monitoring period to be agreed in writing with the Environment Agency after approval of the report submitted in response to Improvement Condition IC4.

Note 4: Monitoring to be performed at least once if burning back up ethane as a result of planned maintenance in any six month period.

<b>Table S3.2 Point Source emissions to site ETP - emission limits and monitoring requirements</b>						
<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>
W1 [Point W3 on site plan N/EF/C 19275 Rev20]	Ethane Storage and Utilities Plant	Total Organic Carbon [Note 1]	100 mg/l	Spot sample	Annual	SABIC UK Petrochemicals North Tees Site Standard Analytical Method NT/070
		pH [Note 1]	Range Minimum 6 Maximum 8	Spot sample	Annual	SABIC UK Petrochemicals North Tees Site Standard Analytical Method NT/055
W2 [Note 2]	Ethylene liquefaction Plant	Total Organic Carbon [Note 1]	100 mg/l	Spot sample	Annual	SABIC UK Petrochemicals North Tees Site Standard Analytical Method NT/070
		pH [Note 1]	Range Minimum 6 Maximum 8	Spot sample	Annual	SABIC UK Petrochemicals North Tees Site Standard Analytical Method NT/055
W3 [Bund pump suction point W3 on site plan N/EF/C 19275 Rev20]	Propane Import/ Export Plant	Total Organic Carbon [Note 1]	100 mg/l	Spot sample	Annual	SABIC UK Petrochemicals North Tees Site Standard Analytical Method NT/070
		pH [Note 1]	Range Minimum 6 Maximum 8	Spot sample	Annual	SABIC UK Petrochemicals North Tees Site Standard Analytical Method NT/055

Note 1: Monitoring may be discontinued by written agreement from the Environment Agency after approval of the report submitted in response to Improvement Condition IC1.

Note 2: The discharge to site drains from the ethylene liquefaction plant (W2) occurs at several points between D267 and D271 on site plan N/EF/C 19275 Rev20 and composition is determined by difference.

# 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.	A1, A2, A3, A4	Every 12 months	1 January 2018
Emissions to water Parameters as required by condition 3.5.1	W1, W2, W3 [Note 1]	Every 12 months	1 January 2018

Note 1: Reporting may be discontinued by written agreement from the Environment Agency after approval of the report submitted in response to Improvement Condition IC1.

Parameter	Units
Annual production/handling and incoming material data not required to be reported, but data to be made available for inspection on request by the Environment Agency	

Parameter	Frequency of assessment	Units
Treated Water usage	Annually	m <sup>3</sup>
Total Water usage	Annually	M <sup>3</sup>
Energy usage	Annually	MWh and tonnes
Number of hours using ethane boil off gas back up supply for ethane terminal boilers	Annually	hours

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	01/06/16
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/06/16
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	01/06/16
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	01/06/16



# 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	

<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>	
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 detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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.

“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.

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 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 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.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste

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.



**Permit Number: LP3335RM Operator: SABIC UK Petrochemicals Limited**

**Facility: North Tees Storage Installation Form Number: Air1 / 01/06/16**

**Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY**

Emission Point	Substance / Parameter	Emission Limit Value <sup>[6]</sup>	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
A1	Oxides of nitrogen (as NO <sub>2</sub> )	100mg/m <sup>3</sup> <sup>[5]</sup>	Hourly average				
A2	Oxides of nitrogen (as NO <sub>2</sub> )	100mg/m <sup>3</sup> <sup>[5]</sup>	Hourly average				
A3	Oxides of nitrogen (as NO <sub>2</sub> )	100mg/m <sup>3</sup> <sup>[5]</sup>	Hourly average				
A4	Oxides of nitrogen (as NO <sub>2</sub> )	100mg/m <sup>3</sup>	Hourly average				

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.
5. ELV 200mg/m<sup>3</sup> when using back up ethane from the boil off gas system during emergency situations or planned link maintenance.
6. The emission limit values for nitrogen dioxide are expressed as an hourly average corrected to 273K, 101.3kPa, 3% oxygen, dry

Signed .....

Date.....

(Authorised to sign as representative of Operator)

**Permit Number: LP3335RM Operator: SABIC UK Petrochemicals Limited**

**Facility: North Tees Storage installation Form Number: Water1 / 01/06/16**

**Reporting of emissions to site ETP for the period from DD/MM/YYYY to DD/MM/YYYY**

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
W1	Total Organic Carbon	100mg/l	Spot sample				
W1	pH	Min 6 Max 8	Spot sample				
W2	Total Organic Carbon	100mg/l	Spot sample				
W2	pH	Min 6 Max 8	Spot sample				
W3	Total Organic Carbon	100mg/l	Spot sample				
W3	pH	Min 6 Max 8	Spot sample				

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....

Date.....

(Authorised to sign as representative of Operator)

**Permit Number: LP3335RM**

**Operator: SABIC UK Petrochemicals Limited**

**Facility: North Tees Storage  
installation**

**Form Number: Energy1 / 01/06/16**

**Reporting of Energy Usage for the year *yyyy***

Energy Source	Energy Usage		CO <sub>2</sub> produced (tonnes)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
Natural Gas	Tonnes		
Fuel Gas	Tonnes		
Ethane Boil Off Gas	Tonnes		
<b>TOTAL</b>	-		

\* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:
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Signed .....

Date.....

(Authorised to sign as representative of Operator)



**Permit Number: LP3335RM**

**Operator: SABIC UK Petrochemicals Limited**

**Facility: North Tees Storage  
Installation**

**Form Number: Performance1 / 01/06/16**

**Reporting of Performance Indicators for the year *yyyy***

	<b>Usage (m<sup>3</sup>/year)</b>
Treated Water use	m <sup>3</sup> /year
Total Water usage	m <sup>3</sup> /year
Number of hours using ethane boil off gas back up supply for ethane terminal boilers	hours/year

Operator's comments:

Signed .....

Date.....

(authorised to sign as representative of Operator)

