NORTH EAST LINCOLNSHIRE COUNCIL
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# Permit with introductory note

**Environmental Permitting (England and Wales) Regulations 2010**

**Installation address**

**Simon Storage Ltd**
**Immingham Storage Company Ltd**
**Immingham East Terminal**
**Immingham Dock**
**North East Lincolnshire**
**DN40 2QW**

**Permit Reference: EP/20020044/V1**

Contact Details:

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## Introductory note

*This introductory note does not form a part of the Permit*

**The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (S.I.2010 No. 675) ("the EP Regulations") to operate an installation carrying out one or more of the activities listed in Part 2 to Schedule 1 of those Regulations, to the extent authorised by the Permit.**

**The permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions shall be subject to best available techniques, used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any condition within the permit.**

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

## Brief description and installation regulated by this permit

The process consists of the receipt of acrylonitrile from ships berthed at the Immingham East Jetty, via bulk road tankers, or in drums. Re-delivery of the acryonitrile is via a dedicated pipeline to a local factory, road transport loaded at the loading yard or rail tanker at the rail loading location or returned to ship. Drums are unloaded, stored and then loaded at the drum storage area.

All bulk product is in cylindrical tanks with coned roofs of fully welded construction to BS2654 "low pressure" standards. Each tank has pressure/vacuum conservation valves to minimise emissions arising from tank breathing cycles.

Acrylonitrile is discharged from ships to storage tanks via a dedicated pipeline with displaced vapour returned to the ship through a parallel line. When loading road or rail tankers, or ships, vapour is back vented to the storage tanks. Flow monitoring, is used on dedicated export lines to detect for any leaks. Toluene Di-Isocyanate (TDI) is stored in 24 tonnes flat bed containers. The containers are parked in a designated area and connected to a warm water supply at 15°C to keep the TDI liquid. The containers are subsequently re-attached to tractor units for delivery to various UK customers.

| Superseded Licences/Consents/Authorisations relating to this installation | | |
|---|---|---|
| **Holder** | **Reference Number** | **Date of Issue** |
| **North East Lincolnshire Council** | **020044** | **27th February 2004** |

## Confidentiality

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

## Variations to the permit

Your Attention is drawn to the Variation Notification Procedure condition in the permit. This Permit may be varied in the future. If at any time the activity or any aspect of the activity regulated by the following conditions changes such that the conditions no longer reflect the activity and require alteration, the Regulator should be contacted.

## Surrender of the permit

Where an Operator intends to cease the operation of an installation (in whole or in part) the regulator should be informed in writing, such notification must be made as specified in regulation 24(3) of the EP regulations.

## Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 21 of the EP Regulations. A transfer will be allowed unless the Authority considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit.

## Responsibility under workplace health and safety legislation

This Permit is given in relation to the requirements of the EP regulations. It must not be taken to replace any responsibilities you may have under Workplace Health and Safety legislation.

## Appeal against permit conditions

Anyone who is aggrieved by the conditions attached to a Permit can appeal to the Secretary of State for the Environment, Food and Rural Affairs. Appeals must be made in accordance with the requirements of Regulation 31 and Schedule 6 of the EP Regulations.

Appeals should be received by the Secretary of State for Environment, Food and Rural Affairs. The address is as follows:

The Planning Inspectorate
Environmental Team, Major & Specialist Casework
Room 4/04 – Kite Wing
Temple Quay House
2 The Square, Temple Quay
BRISTOL
BS1 6PN
Tel: 0117 372 8726
Fax: 0117 372 8139

**Please Note**

An appeal brought under Regulation 31 (1) (b) and Schedule 6, in relation to the conditions in a permit will not suspend the effect of the conditions appealed against; the conditions must still be complied with.
In determining an appeal against one or more conditions, the Act allows the Secretary of State in addition to quash any of the conditions not subject to the appeal and to direct the local authority either to vary any of these other conditions.

**End of introductory note**

**Permit** issued under the Environmental Permitting (England & Wales) Regulations 2010

**Permit**

Permit Number EP/20020044/V1

North East Lincolnshire Council (the Regulator) in exercise of its powers under Regulation 13(1) of the Environmental Permitting Regulations 2010 (S.I. 2010 No. 675) hereby permits.

**Simon Storage Ltd** ("the operator"),

Whose registered office is

**Immingham Storage Co Ltd**
**Priory House**
**60 Station Road**
**Redhill**
**RH1 1PE**

To operate an installation at

**Immingham Storage Co Ltd**
**Immingham East Terminal**
**Immingham docks**
**North East Lincolnshire**
**DN40 2QW**

to the extent authorised by and subject to the conditions of this Permit and within the boundary identified in Condition C

Signed

Nathan Vear
Acting Neighbourhood and Environmental Improvement Manager
Authorised to sign on behalf of
North East Lincolnshire Council

Dated

27 July 2011

## CONDITIONS
## Extent and limit of the installation

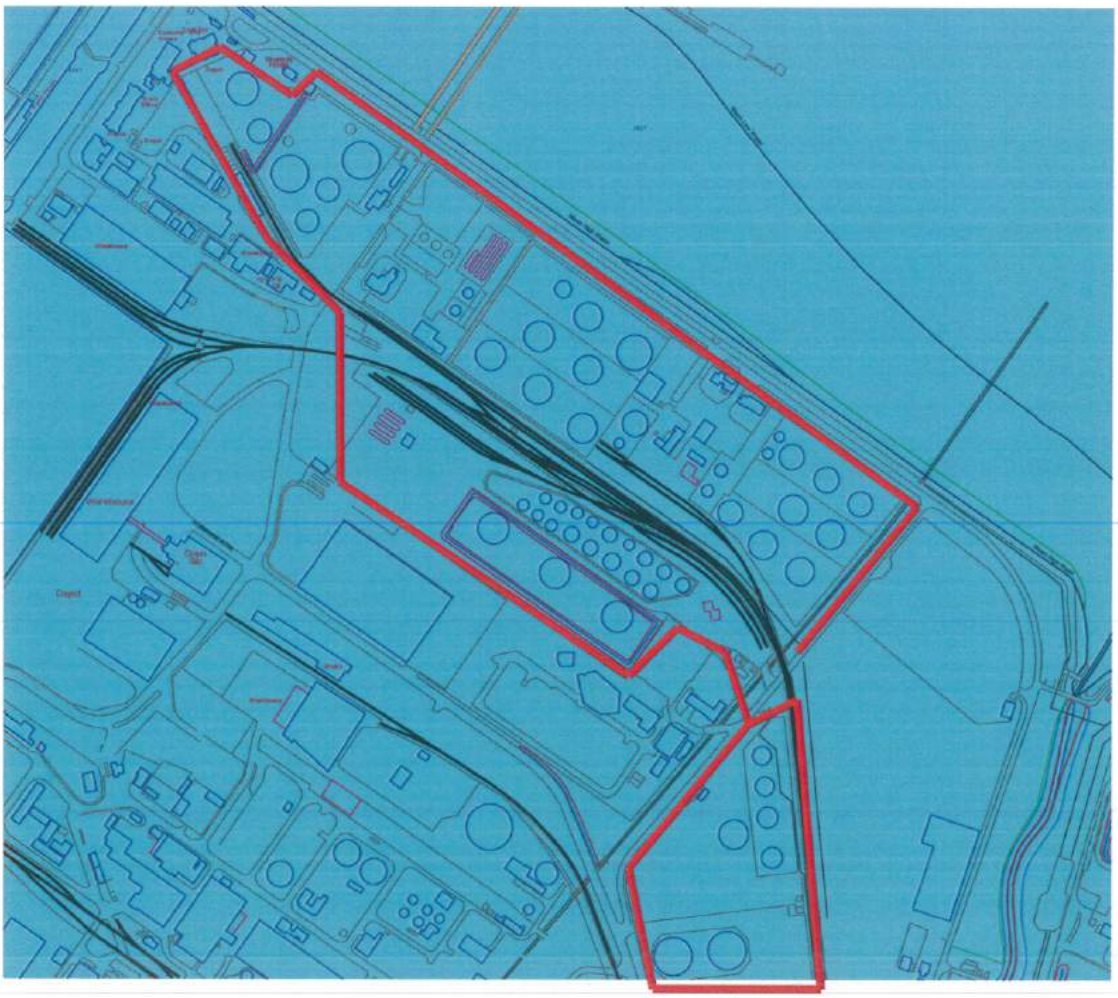
### A Variation Notification Procedure

If the operator proposes to make a change in operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change of operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

### B Best Available Technique

The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the installation which is not regulated by any other condition in this permit.

C The operator is authorised to carry out the activities and/or associated as specified and within the boundary shown in red on the plan below:-



## DESCRIPTION OF AUTHORISED PROCESS

The process consists of the receipt of acrylonitrile from ships berthed at the Immingham East Jetty, via bulk road tankers, or in drums. Re-delivery of the acryonitrile is via a dedicated pipeline to a local factory, road transport loaded at the loading yard or rail tanker at the rail loading location or returned to ship. Drums are unloaded, stored and then loaded at the drum storage area.

All bulk product is in cylindrical tanks with coned roofs of fully welded construction to BS2654 "low pressure" standards. Each tank has pressure/vacuum conservation valves to minimise emissions arising from tank breathing cycles.

Acrylonitrile is discharged from ships to storage tanks via a dedicated pipeline with displaced vapour returned to the ship through a parallel line. When loading road or rail tankers, or ships, vapour is back vented to the storage tanks. Flow monitoring, is used on dedicated export lines to detect for any leaks. Toluene Di-Isocyanate (TDI) is stored in 24 tonnes flat bed containers. The containers are parked in a designated area and connected to a warm water supply at 15°C to keep the TDI liquid. The containers are subsequently re-attached to tractor units for delivery to various UK customers.

## CONDITIONS

### 1. Releases to Air

1.1 During normal operation there shall be no emission of acrylonitrile to air other than from tank pressure vacuum valves and the disconnection of hoses.

1.2 Any release to air caused by anything other than the operation of the pressure relief system shall be regarded as an escape requiring investigation and notification as specified in Condition 4.1.

1.3 Offensive odours associated with the process shall not be noticeable beyond the process boundary.

1.4 The maximum estimated annual release of Acrylonitrile via the pressure vacuum valves shall be as follows:-

| SOURCE | MAXIMUM ANNUAL (KILOGRAMS) |
|---|---|
| 500 Series Tank Pressure Vacuum Valves | 76,000 |
| 700 Series Tank Pressure Vacuum Valves | 67,000 |

1.5 The maximum estimated instantaneous release rate of Acrylonitrile via the pressure vacuum valves shall be as follows:-

| Tank Number | Maximum Instantaneous Emission (Grams/Sec) |
|---|---|
| 502 | 49 |
| 503 | 49 |
| 506 | 49 |
| 507 | 49 |
| 711 | 28 |
| 713 | 38 |
| 715 | 46 |
| 717 | 46 |

## 2. Plant and Equipment

2.1 All storage of acrylonitrile shall be in the following tanks as shown on plan number IEM/1113/Z.

| TANK NO. | PRODUCT | HEIGHT X DIAM | CAPACITY |
|---|---|---|---|
| 502 | Acrylonitrile | 10.972m x 19.507m | 2541T |
| 503 | Acrylonitrile | 10.972m x 19.507m | 2542T |
| 506 | Acrylonitrile | 10.972m x 19.507m | 2568T |
| 507 | Acrylonitrile | 10.972m x 19.507m | 2575T |
| 711 | Acrylonitrile | 10.972m x 14.630m | 1429T |
| 713 | Acrylonitrile | 10.972m x 17.069m | 1941T |
| 715 | Acrylonitrile | 18.288m x 14.630m | 2382T |
| 717 | Acrylonitrile | 18.288m x 14.630m | 2382T |

2.2 All acrylonitrile storage installation shall be equipped with dedicated export pumps with mechanical seals and high temperature protection.

2.3 All acrylonitrile storage tanks shall be painted in a reflective colour to minimise breathing emissions.

2.4 All acrylonitrile storage tanks shall be equipped with:-

(a) roof mounted pressure relief valves.

(b) a flame detonation trap in the vapour lines to the ship/road facilities.

(c) level gauging and remote independent high level alarms.

(d) deluge facilities for cooling the tank.

2.5 The integrity of the bunding shown on plan number IEM/1113/Z shall be maintained at all times and have a capacity of at least 100% of the largest tank.

2.6 A dedicated vapour return pipeline shall be provided to exchange displaced vapour from/to the storage tanks to/from the ship during imports/exports.

2.7 The road transfer station serving the 700 series tanks shall be provided with:-

(a) A concrete surface with suitable drainage via an interceptor system.

(b) All road vehicles will be equipped with self sealing connections to match the existing connections on the terminal.

(c) A vapour return pipeline shall be provided to return displaced vapour from the road vehicle to the storage tank.

(d) Dedicated loading pumps shall be provided for the transfer of acrylonitrile.

2.8 The rail loading system shall include:-

(a) All rail wagons will be equipped with self sealing connections to match the existing connections on the terminal.

(b) A vapour return pipeline shall be provided to return displaced vapour from the rail wagons to the storage tank.

(c) Dedicated loading pumps shall be provided for the transfer of acrylonitrile.

2.9 The dedicated factory pipeline shall be equipped with:-

(a) A flow monitoring system to measure flow at each end of the line to detect any leaks.

(b) Expansion loops and pipe anchors to allow for line expansion.

(c) A fire detection system comprising of nylon compressed air line, capable of shutting down the transfer if severed.

(d) Cathodic protection or sleeved sections of pipeline where underground.

The pipeline shall be inspected and tested in accordance with the procedure approved by the pipeline inspectorate and attached as appendix 2 of this document.

2.10 The drum storage area shall be equipped with a paved surface with a closed drainage system, kerbed and intercepted.

## 3. Operations

### 3.1 Ship Imports and Exports

(a) All ship imports shall be via the dedicated piggable line, using the ships pumps with vapour return to the ship via the dedicated vapour return pipeline. Ship exports will be carried out using terminal pumps, but using the same liquid and vapour pipelines in reverse flow.

(b) All connection hoses shall be blown clear before disconnecting and blanking.

## 3.2 Road Imports

(a) All road imports shall be via the road tanker loading/unloading (returns only) yard transfer station, using the on site import pumps.

(b) All connection hoses shall be blown clear before disconnection.

(c) Road tankers shall be earthed before commencement of discharge.

(d) All lids and openings on the vehicle shall remain closed at all times.

## 3.3 Drum Imports

(a) All drum imports shall be in sealed drums at the dedicated drum storage areas.

(b) All drums shall be unloaded by fork lift truck.

## 3.4 Road Exports

(a) All road exports shall be via the 700 series road tanker loading/ unloading yard.

(b) All displaced vapour shall be returned to the storage tanks via the vapour return pipeline.

(c) All road tankers shall be earthed before loading commences.

(d) All lids and openings on the vehicle shall remain closed at all times.

(e) The loading process shall be monitored with flow meters.

## 3.5 Rail Export

(a) All rail exports shall be via the 700 series rail loading facility yard.

(b) All displaced vapour shall be returned to the storage tanks via the vapour return pipeline.

(f) All lids and openings on the vehicle shall remain closed at all times.

(g) The loading process shall be monitored with flow meters.

3.6 **Pipeline export**

(a) All pipeline exports shall be via the dedicated pipeline detailed in application document 790/CTN/pkt 12.94.

(b) All pipeline exports shall be monitored with the flow monitoring system.

3.7 **Drum Exports**

All drum exports shall be sealed in drums from the dedicated drum storage area.

All drums shall be loaded by forklift truck.

## 4. Monitoring

4.1 When any unanticipated alarm relating to the acrylonitrile storage system is activated, an escape of acrylonitrile is detected or when any malfunction or breakdown likely to lead to an escape of acrylonitrile is found then:-

(a) an immediate investigation shall be carried out;

(b) instant corrective action shall be taken or the plant shut down until the matter is resolved;

(c) the observations, findings, results of the investigation and actions taken under headings (b) and (d) of this condition shall be entered in the log required by condition 3.9; and

(d) if the corrective action is not immediately effective then action to mitigate any effect shall be taken. A report shall be produced indicating the actions taken and held on site for inspection by the Local Authority Officer;

(e) a written notification in the form described in annex 1 to this Authorisation shall be forwarded to North East Lincolnshire Council within 7 days.

4.2 A site log shall be kept available for examination by Local Authority Officer at any time. Entries must include:-

(a) any intentional or unintentional emissions of acrylonitrile from the site;

(b) the control measures taken to prevent or minimise (a) above;

(c) any observations made by Local Authority Officers;

(d) the results of any monitoring required by conditions 1.2, 5.1 and 4.1.

4.3 All records shall be kept for a minimum of 2 years.

4.4 An emergency telephone number shall be supplied to the Local Authority for 24 hour coverage should any incident arise.

4.5 The company shall supply upon demand and without charge a copy of all or part of the records kept in accordance with this Authorisation as the Local Authority may require.

4.6 The flame detonation trap pressure/vacuum valves shall be checked by a competent person every 6 months and a record kept of the findings.

4.7 Storage tank filling shall be monitored via the level gauges and the risk of overfilling reduced by the use of high level alarms. Road tanker loading shall be monitored continually by a flow meter.

4.8 Assessments of emissions shall be made frequently and in any case:-

(a) Daily at the road loading location
(b) Weekly of the bund walls at the 500 and 700 tank locations

The results of all monitoring shall be recorded in the log book required by condition 4.2.

4.9 The dedicated customer export pipeline shall be examined once a month in accordance with procedures agreed with North East Lincolnshire Council and thereafter as prescribed by the pipeline inspectorate and the Health & Safety Executive.

4.10 Should the process suffer any breakdown or malfunction with affects or may affect releases to air, the company shall inform the Local Authority at the address below.

## 5. Inspection and Testing

5.1 All storage tanks, pipeline, hoses and abatement equipment shall be tested and inspected in accordance with the regime specified in application document 790/CTN/pkt 12.94. Records of all tests and inspections shall be kept for 2 years.

## 6. Toluene Di-Isocyanate Storage

6.1 A maximum of 28 24 tonnes TDI containers can be stored in the designated areas indicated in Appendix 3.

6.2 Other than heating to 15°C by use of a warm water supply no other processing is allowed.

6.3 No releases to air are permitted.

6.4 All faults or incidents to be recorded in the site log 4.2.

## Air Quality

Ambient Air Quality Management

7.1 In areas where air quality standards or objectives are being breached or are in serious risk of breach and it is clean from the detailed review and assessment work under Local Air Quality Management that the Part B process itself is a significant contributor to the problem, it may be necessary to impose tighter emission limits. If the air quality standard that is in danger of being exceeded is not an EC Directive requirement, then industry is not expected to go beyond BAT to meet it. Decisions should be taken in the context of a local authority's Local Air Quality Management action plan. For example. Where a Part B process is only responsible to a very small extent for an air quality problem, the authority should not unduly penalise the operator of the process by requiring disproportionate emissions reductions. More guidance on this is provided in paragraph 360 of the Air Quality Strategy which gives the following advice:

"The approach from local authorities to tackling air quality should be an integrated one, involving all strands of local authority activity which impact in air quality and underpinned by a series of principles in which local authorities should aim to secure improvements in the most cost effective manner, with regard to local environmental needs while avoiding unnecessary regulation. Their approach should seek an appropriate sources and draw in a combination and interaction of public, private and voluntary effort".

Benzeze – air Quality Objective and EU Limit Value

7.2 The EU has set a limit value for benzene levels in ambient air of 5 $mg/m^3$ as an annual mean to be achieved by 2010 (Council Directive 2000/69/EC of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air).

Air quality objectives for benzene in Wales are the same as those for England which are contained in The Air Quality (England) Regulations 2000 S1928 and in the Air Quality (England)(Amendment) Regulations 2002 SI 3043.

- 16 mg/m³ as a running annual mean to be achieved by 31 December 2003
- 5g/m³ as a running annual mean to be achieved by 31 December 2010

Air quality targets for benzene in Scotland are contained in The Air Quality (Scotland) Regulations 2000 as amended by the Air Quality (Scotland) amendment Regulations 2002 SSI 2002/297

- 16.25 mg/m³ as a running annual mean to be achieved by 31 December 2003
- 3.25 mg/m³ as a running annual mean to be achieved by 31 December 2010

**Management**

Management Techniques

7.3 Important elements for effective control of emissions include:

- Proper management, supervision and training for process operations;
- Proper use of equipment
- Effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air, and
- It is good practice to ensure that spares and consumables are available at short notice in order to rectify breakdowns rapidly. This is important with respect to arrestment plant and other necessary environmental controls. It is useful to have an audited list of essential items

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

Appropriate Management Systems

7.4 Effective management is central to environmental performance; it is an important component of BAT and of achieving compliance with permit conditions. It required a commitment to establishing objectives, setting targets, measuring progress and revising the objectives according to results. This includes managing risks under normal operating conditions and in accidents and emergencies. It is therefore desirable that processes put in place some form of structured environmental management approach, whether by adopting published standards (ISO 14001 or the EU Eco Management and Audit Scheme (EMAS)) or by setting up an environmental management system (EMS) tailored to the nature and size of the particular process. Operators may also find that an EMS will help identify business savings.

Regulators should use their discretion, in consultation with individual operators, in agreeing the appropriate level of environmental management. Simple systems which ensure that LAPC considerations are taken account of in the day-to-day running of a process may well suffice especially for small and medium-sized enterprises. While authorities may wish to encourage wider adoption of EMS, it is outside the legal scope of an LAPC authorisation / LA-PPC permit to require an EMS for purposes other than LAPC/LA-PPC compliance. For further information / advice on EMS refer to EMS Additional Information in Section 8 (PG 1/13 04).

Training

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

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

- Training of all staff with responsibility for operating the process should include:-
    - Awareness of their responsibilities under the permit
    - Action to minimise emissions during abnormal conditions
- The operator should maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose action may have an impact on the environment.

These documents should be made available to the regulator on request.

Maintenance

7.6 Effective preventative maintenance should be employed on all aspects of the process including all plant, buildings and the equipment concerned with the control of emissions to air. In particular:

- The regulator should be notified 7 days in advance of any planned maintenance of the vapour recovery unit.
- A record of such maintenance should be made available for inspection.

End of Permit