



## **Permit with introductory note**

NORTH EAST LINCOLNSHIRE COUNCIL

**POLLUTION PREVENTION AND CONTROL ACT 1999  
Environmental Permitting Regulations 2010 (as amended)**

### **Installation address**

**Dunlop Oil and Marine Ltd  
Moody Lane  
Pyewipe  
Grimsby  
DN31 2SP**

**Permit Ref. No: EP/200200004/V1**

Contact Details:

Environment Team  
North East Lincolnshire Council  
Acorn Business Park, Unit 5  
Moss Road  
Grimsby  
North East Lincolnshire  
DN32 0LT

Tel: 01472 313131

[www.nelincs.gov.uk](http://www.nelincs.gov.uk)

## 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 utilises carbon black provided in bulk bags for direct discharge to a Banbury type mixer with other batch materials weighed, batched and milled at LEV equipped weigh/milling stations vented to abatement plant. Fittings for hose construction are shot blasted in a Vacublast (model No AXT 200p0 shotblaster using aluminium oxide shot which is arrested by a Farr Europe Mk IV Tenkey cartridge filter with automatic reverse air jet cleaning . Degreasing tank with 2mx2m open area which is heated by site process steam. All site steam is raised by a gas fired boiler.

### Superseded Licences/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
Dunlop oil and Marine Ltd	PF/DLP/EPA/V1	13/05/1994

## **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 (as amended)

**Permit**

Permit Number  
EP/200200004/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.

**Dunlop Oil and Marine Ltd** ("the operator"),

Whose registered office is


**Dunlop Oil and Marine Ltd**  
**Moody Lane**  
**Pyewipe**  
**Grimsby**  
**DN31 2SY**

To operate an installation at

**Dunlop Oil and Marine Ltd**  
**Moody Lane**  
**Pyewipe**  
**Grimsby**  
**DN31 2SY**

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

Signed



Nathan Vear  
Service Manager - Environment  
Authorised to sign on behalf of  
North East Lincolnshire Council

Dated

31 JANUARY 2014

## Conditions

### A Variation Notification Procedure

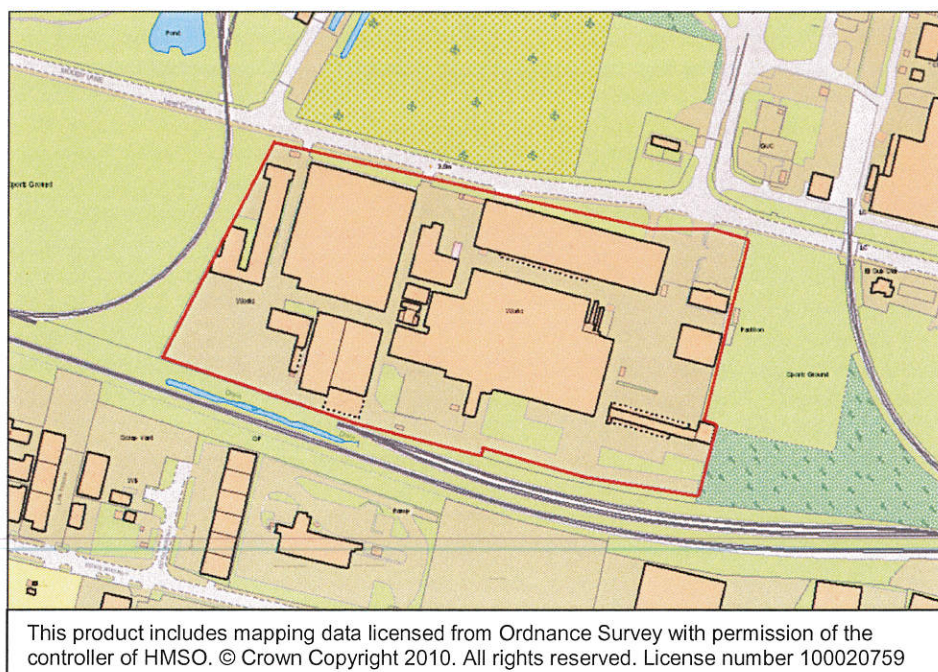
If the operator proposes to make a change in operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application 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 Extent and limit of the installation

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 utilises carbon black provided in bulk bags for direct discharge to a Banbury type mixer with other batch materials weighed, batched and milled at LEV equipped with weigh/milling stations vented to abatement plant. Fittings for hose construction are shot blasted in a Vacublast shotblaster using aluminium oxide shot which is arrested by a Farr Europe Mk IV Tenkey cartridge filter with automatic reverse air jet cleaning .

## Emission limits, monitoring and other provisions

### Non VOC Provisions

- 1 All activities shall comply with the emission limits and provisions with regard to non-VOC releases in Table 4.
- 2 The reference conditions for limits in Table 4 shall be 273.15K, 101.3kPa, without correction for water vapour content, unless stated otherwise.

**Table 4: Emission limits, monitoring and other provisions for non-VOC releases**

Row	Substance	Source	Emission limits / provisions	Type of monitoring	Monitoring frequency
1	Carbon Monoxide	From turbines, reciprocating engines or boilers used as VOC abatement equipment	500 mg/Nm <sup>3</sup> at 5% oxygen dry gas, as 30 minute mean for contained sources	Manual extractive testing	Annual
2	Particulate matter	All processes / activities		Manual extractive testing	Annual
		Total particulate matter from the storage, handling or mixing of carbon black	10 mg/Nm <sup>3</sup> as 30 minute mean for contained sources		
		Total particulate matter from any other source	50 mg/Nm <sup>3</sup> as 30 minute mean for contained sources		
3	Oxides of Nitrogen (measured as nitrogen dioxide)	From turbines, reciprocating engines or boilers used as VOC abatement equipment	500 mg/Nm <sup>3</sup> as 30 minute mean for contained sources	Manual extractive testing	Annual
4	Sulphur dioxide	All activities using heavy fuel oil	1% wt/wt sulphur in fuel	Sulphur content in fuel is regulated by other arms of government.	
		All processes using gas oil	0.1% wt/wt sulphur in fuel		
5	Other non-VOC pollutants	All processes / activities where the rubber curing system includes substances which may lead to the generation of carbon disulphide, hydrogen sulphide or isocyanates	<b>Isocyanates limit:</b> 0.1mg/nM3 as a 15 minute mean for contained sources excluding particulates expressed as NCO	Manual extractive testing.	Annual



VOC Emission Limits

- 3 Fugitive releases shall be reduced by 50% of the fugitive releases for the period 12 months from 1 April 1999

where fugitive releases are determined by:  $Fugitive = I1 - O8 - O5 - O1$

As determined by the Solvent Management Plan (SMP) shown in Appendix 2 of this permit.

Solvent Reduction Scheme

- 4 Compliance with the Reduction Scheme is achieved if the annual actual solvent emission determined from the Solvent Management Plan is less or equal to the Target Emission.

Where the annual actual solvent emission is:

Annual actual solvent emission =  $I1 - O8 - O7 - O6 - O5$  (if abatement has been used) Definitions are provided in Appendix 1

- 5 The Solvent Reduction Scheme shown in Appendix 2 (Solvent Management Plan) shall be implemented. A copy of the emission reduction plan shall be made available for inspection by an Authorised Officer of the Authority.

The emission reduction scheme shall include in particular:

- mechanisms to decrease in the average solvent content of the total input; and/or
- Systems to increase efficiency in the use of solids to achieve a reduction of the total emissions from the installation.

- 6 For activities existing prior to 1992 using carbon black, the target value for an installation is calculated as follows:

$$\text{Target value} = \left\{ \frac{\text{solvent consumption in 1992}}{\text{Tonnes of rubber used}} \right\} \times 0.5$$

(or number of rubber products produced in 1992)

Target Value Calculations for Dunlop Oil and Marine Ltd for 1992:-

$$1.36 = \left\{ \frac{5716 \text{ gallons solvent consumption}}{2097 \text{ tonnes rubber processed}} \right\} \times 0.5$$

Target Value = 1.36

50% Reduction Target =  $1.36 \times 0.5$

Current Target Value = 0.68

- 7 The current solvent consumption per tonne of rubber used (or number of rubber products produced) shall be less or equal to the Target Value of 0.68
- 8 The flexibility inherent in this compliance route should not be taken to encourage
  - The replacement of a low or no organic solvent coating system with a conventional high organic solvent coating system, or
  - The introduction of such a conventional high organic solvent coating system into a process/activity or
  - The introduction of such a conventional high organic solvent coating system onto a product where it was not in use before, or
  - The introduction of high solids formulations which have no beneficial effect in the product but increase the solids used, except where a reduction in the overall VOC emissions can be demonstrated.

#### Determination of Solvent Consumption

- 9 A determination of the organic solvent consumption, the total mass of organic solvent inputs minus any solvents sent for reuse/recovery off-site, shall be made and submitted to the regulator annually, preferably to coincide with the operators stocktaking requirements in the form of a mass balance in order to determine the annual actual consumption of organic solvent (C):

Where:  $C = I_1, O_8$  (See Appendix 1)

#### Solvent Management Plan

- 10 The Solvent Management Plan (SMP) shown in Appendix 2 shall be used to demonstrate compliance with the VOC requirements in Process Guidance Note 6/28 (11). The use of the standard definitions and calculations also ensures consistency of VOC compliance across installations with an industrial sector.
- 11 The definitions provided in Appendix 1 must be used in all calculations relating to the Solvent Management Plan (SMP).
- 12 For process / activities using the reduction scheme, the SMP should be used to determine the actual emissions annually (SED Box 6)

Designated Risk Phrase Materials, Emission Limits and Conditions

13 Designated Materials used must be either replaced, or controlled and limited, as set out in SED Box 7 shown below.

<p><b>SED Box 7 –Industrial Emissions Directive requirements for designated materials.</b> (Article 58, 50, 80(7))</p> <p><b>All Activities using Designated Materials</b></p> <p>Designated Materials used in IED installations must be either replaced, or controlled and limited, as set out below.</p>	
<p><b>All Directive installations</b></p>	
<p><b>1. Materials Designated, because of their VOC content:</b></p> <ul style="list-style-type: none"> <li>• hazard statement H340, H350, H350i, H360D, or H360F</li> <li>• until 1 Jun 2015: risk phrases R45, R46, R49, R60, or R61</li> </ul>	
<p>Requirements:</p> <p>Replace as far as possible (Taking into account guidance under Article 64 of the industrial emissions Directive. See note 3 and Appendix 1) by less harmful substances or mixtures.</p>	<p>Timescale:</p> <p>Installations must comply within the shortest possible time</p>
<p><b>Control</b> under contained conditions as far as technically and economically feasible to safeguard public health and the environment, normally, in accordance with the guidance provided within Section 5 of the note.</p>	<p>Timescale:</p> <p>Immediately (and see note 1 below)</p>
<p><b>Limit</b> - where the sum of the mass flows of all the discharges of all the compounds causing the designated labelling is greater or equal to 10g/h, a limit value of 2mg/Nm<sup>3</sup> for the mass sum of the individual compounds must apply.</p>	<p>Monitoring:</p> <p>Manual extractive testing</p>
<p><b>2. Materials designated because of their halogenated VOC content:</b></p> <ul style="list-style-type: none"> <li>• hazard statements H341 or H351</li> <li>• until 1 Jun 2015 : risk phrases R40, or R68</li> </ul>	
<p>Requirements:</p> <p>Control under contained conditions as far as technically and economically feasible to safeguard public health and the environment, normally, in accordance with the guidance provided within Section 5 of the note.</p>	<p>Timescale: Immediately (and see note 1 below)</p>
<p><b>Limit</b> - where the sum of the mass flows of all the discharges of all the compounds causing the designated labelling is greater or equal to 100g/h, a limit value of 20mg/Nm<sup>3</sup> for the mass sum of the individual compounds must apply.</p>	<p>Monitoring:</p> <p>Manual extractive testing</p>
<p><b>Note 1</b> - substances or mixtures which are classified after the date of publication of this note as designated materials because of their VOC content, must apply the replace, control and limit requirements above within the shortest possible time from the date at which substances or mixtures became/become designated materials. In determining the „shortest possible time“, the operator will need to justify their timetables taking account of the guidance in the relevant chapter of the appropriate Guidance Manual.</p> <p><b>Note 2</b> - until 1 June 2015 „hazard statement“ materials will, broadly, also be known as „risk phrase“ materials. After 1st June 2015, only the term „hazard statement“ materials will apply; see Section 7 for further details.</p> <p><b>Note 3</b> - the European Commission have published information on substituting and containing designated solvents</p>	

### Monitoring, Investigation and Recording

14 The operator shall keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments.

The records should be:

- kept on site
- kept by the operator for at least two years; and
- made available for the regulator to examine

If any records are kept off-site they should be made available for inspection within one working week of any request by the regulator.

### Information required by the regulator

15 The operator shall notify the regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The operator should state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.

The results of non-continuous emission testing shall be forwarded to the regulator within 8 weeks of the completion of the sampling.

Adverse results from **any** monitoring activity (both continuous and non-continuous) should be investigated by the operator as soon as the monitoring data has been obtained. The operator should:

- identify the cause and take corrective action
- clearly record as much detail as possible regarding the cause and extent of the problem, and the remedial action taken.
- re-test to demonstrate compliance as soon as possible; and inform the regulator of the steps taken and the re-test results.

### Visible and Odorous Emissions

16 Emissions from combustion processes shall in normal operation be free from visible smoke. During start up and shut down the emissions should not exceed the equivalent of Ringelmann Shade 1 as described In British Standard BS 2742:2009.

- All other releases to air, other than condensed water vapour shall be free from persistent visible emissions.
- All emissions to air shall be free from droplets.
- There should be no offensive odour beyond the site boundary, as perceived by the regulator.

### Emissions from Silos

17 Where it is proposed to install and use a silo at the Dunlop Oil and Marine Ltd, Moody Lane site notification shall be made to the regulator in writing for approval prior to instalment.

Inspection of Filtration Plant

18 All arrestment plant serving process operations shall be inspected at the frequency specified below:

Table 1. Filtration plant inspection frequency

Filter Cleaning Method	Frequency of Visual Inspection
Fitted with reverse jets	At least once a month

19 Reduced inspection frequency of bag filter (or cartridge) arrestment plant may be appropriate, as follows:-

- (a) where pressure drop sensors or other continuous monitors are used to monitor the arrestment plant, such monitors should be inspected according to manufacturers' recommendations to ensure their proper operation
- (b) where continuous camera operation enables observation of all emissions points from the arrestment plant and pressure relief valves.
- (c) For filters fitted with reverse jets or with mechanical shakers where operating experience has demonstrated satisfactory operation of the arrestment plant.
- (d) Where the process operation is infrequent.

Abnormal Events

20 The operator shall respond to problems which may have an adverse effect on emissions to air.

- In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions the operator must:
  - Investigate immediately and undertake corrective action
  - Adjust the process or activity to minimise those emissions; and
  - Promptly record the events and actions taken
- The regulator must be informed without delay:
  - If there is an emission that is likely to have an effect on the local community
  - In the event of the failure of key abatement plant, for example, bag filtration PI extraction unit.

21 In cases of non-compliance causing immediate danger to human health, operation of the activity must be suspended. All of the following criteria should be taken into account:

- the toxicity of the substances being released
- the amount released
- the location of the installation; and
- the sensitivity of the receptors

- 22 The operator shall provide a list of key arrestment plant and must have a written procedure for dealing with its failure, in order to minimise any adverse effects

#### Calibration and compliance Monitoring Test Methods

- 23 For extractive testing the sampling shall meet the following requirements:
- For batch processes, where the production operation is complete within, say, 2 hours, then the extractive sampling should take place over a complete cycle of the activity.
- 24 Should the activity either be continuous, or have a batch cycle that is not compatible with the time available for sampling, then the data required should be obtained over a minimum period of 2 hours in total.
- For demonstration of compliance where a CEM is used no daily mean of all 15-minute mean emission concentrations should exceed the specified emission concentration limits during normal operation (excluding start-up and shut-down); and
  - No 15-minute mean emission concentration should exceed twice the specified emission concentration limits during normal operation (excluding start-up and shut-down).
  - For extractive testing, no result of monitoring should exceed the emission limit concentrations specified.
- 25 For extractive testing, no result shall exceed the emission limit concentrations specified in table 4 of this permit.
- 26 Exhaust flow rates should be consistent with efficient capture of emissions, good operating practice and meeting requirements of the legislation relating to the workplace environment.
- The introduction of dilution air to achieve emission concentration shall not be permitted.

#### Sampling Provisions

- 27 Care is needed in the design and location of sampling in order to obtain representative samples.
- Sampling points on new plant should be designed to comply with the British or equivalent standards.
  - The operator should ensure that relevant stacks or ducts are fitted with facilities for sampling which allow compliance with the sampling standards.
- 28 Higher emissions may occur during start-up and shut-down of a process. These emissions can be reduced by minimising, where possible, the number of start-ups and shut-downs and having adequate procedures in place for start-up, shut-downs and emergency shutdowns.
- The number of start-ups and shut-downs should be kept to the minimum that is reasonably practicable.

## Non VOC Releases Control Techniques

### Particulate Matter

29 Emissions of particulate matter should be abated if necessary to meet the emission limit.

### Sulphur Dioxide

30 In combustion processes the most significant release of sulphur dioxide occurs as a result of the sulphur content of the fuel burnt and should be addressed by using low sulphur fuel.

### Nitrogen Oxides

31 In combustion processes nitrogen oxides can be formed as a result of the combustion of nitrogen in the fuel or the formation of thermal nitrogen oxides from nitrogen in the air used for combustion.

- Where necessary, the nitrogen content of the fuel and other material being burnt should be controlled.
- Where necessary, Low NO<sub>x</sub> burners should be installed.

### VOC and Odour Control Storage

32 Odour may arise from the receipt, handling and storage of organic solvents and organic solvent containing liquids. Careful siting of storage and mixing tanks, particularly in relation to new and replacement tanks, and controlled handling of odorous liquids may help prevent offensive emissions off-site. In addition:

- Bulk storage tanks for organic solvents and organic solvent-containing liquids should wherever practicable be back vented to the delivery tank during filling. Where this is impracticable, displaced air vents should be sited in such a way as to prevent the arising of offensive odour beyond the site boundary.
- All potentially odorous waste materials should be stored in suitable closed containers or bulk storage vessels, where appropriate vented to suitable abatement plant.

### Bulk Storage Tanks

33 The exterior of bulk storage tanks for organic solvent storage shall normally be light coloured. All new static bulk organic solvent storage tanks containing organic solvent with a composite vapour pressure that is likely to exceed 0.4kPa at 20°C (293K) should be fitted with pressure vacuum relief valves. Pressure vacuum relief valves should be examined at regular intervals for signs of contamination, incorrect seating and be cleaned and/or corrected as required. The normal minimum examination frequency should be once every six months, but less frequent examination

may be justified having regard for the tank contents and the potential emissions as a result of valve failure.

34 Both major and minor spillage of organic solvent from bulk storage tanks can arise as a result of a number of scenarios such as: overfilling of tanks, incorrect draining of filling lines, operator error or vandalism.

- Delivery connections to bulk storage tanks should be located within a bunded area.
- Where the operator can not demonstrate to the satisfaction of the regulation that suitable management controls and training with regard to bulk storage deliveries of organic solvents and organic solvent containing materials are in place, along with adequate on-site security, then connections to bulk storage tanks should be fixed and locked when not in use.
- All fixed storage tanks should be fitted with high-level alarms or volume indicators to warn of overfilling. Where practicable the filling systems should be interlocked to the alarm system to prevent overfilling.
- Bunding should
  - Completely surround the bulk liquid storage tanks
  - Be impervious and resistant to the liquids in storage; and
  - Be capable of holding 110% of the capacity of the largest storage tank

#### VOC Control Handling

35 The receipt, handling, use and storage of organic solvents and organic solvent containing liquids will give rise to fugitive releases of VOC.

- Raw materials containing VOC should be stored in closed storage containers.
- All measures should be taken to minimise VOC emissions during mixing i.e. the use of covered or closed mixing vessels.
- Emissions from the emptying of mixing vessels and transfer of materials should be adequately contained, preferably by the use of closed transfer systems. This may be achieved by the use of closed mobile containers, containers with close-fitting lids, or, preferably closed containers with pipeline delivery.

#### VOC Control Cleaning

36 Cleaning operations will give rise to further releases of VOC.

- Cleaning operations involving organic solvents should be periodically reviewed, normally at least once every two years, to identify opportunities for reducing VOC emissions (e.g. cleaning steps that can be eliminated or alternative cleaning methods). The regulator should be provided with a report on the conclusions of the review.



- Dispensing of cleaning solvents should be:
  - In the case of fixed manufacturing equipment from a contained device or automatic system when applied directly;
  - Dispensed by piston type dispenser or similar contained device, when used on wipes
- When organic solvent is used on wipes:
  - Pre-impregnated wipes should be held within an enclosed container prior to use
  - Where practicable no organic solvent cleaning fluids or significantly less volatile organic solvents cleaning fluids should be used (with or without the addition of mechanical, chemical or thermal enhancements)
- Where equipment is cleaned off-line, cleaning should be carried out using enclosed cleaning systems, wherever possible. Enclosed cleaning systems should be sealed to prevent emissions whilst in operation, except during purging at the end of the cleaning cycle. If this is not practicable emissions should be contained and vented to abatement plant where necessary.

#### VOC Control Operational

37 Organic solvent losses can be identified and minimised by operational controls and good operational practise.

- A programme to monitor and record the consumption of organic solvent and organic solvent containing materials against product produced should be used to minimise the amount of excess solvent used.
- Where practicable in relation to the technical characteristics of the process low volatility process or extended oils should be used.

#### VOC Control Waste

38 Waste contaminated with VOC may give rise to both odorous and fugitive emissions.

- All reasonably practicable efforts should be made to minimise the amount of residual organic solvent bearing material left in drums and other containers after use. All organic solvent contaminated waste should be stored in closed containers.
- Prior to disposal, empty drums and containers contaminated with organic solvent should be closed to minimise emissions from residues during storage prior to disposal and labelled, so that all that handle them are aware of their contents and hazardous properties.

- Nominally empty drums or drums containing waste contaminated with VOC awaiting disposal should be stored in accordance with the requirements for full or new containers.
- Prior to disposal used wipes and other items contaminated with organic solvent should be placed in a suitably labelled metal bin fitted with a self-closing lid.

**Note:** from a health and safety point of view it is advised that bins should be emptied at least daily, as they not only present a fire hazard, they may also undergo spontaneous combustion.

- For materials that may undergo spontaneous combustion special bins that allow air to circulate beneath and around them to aid cooling are advised or other bins specifically designed for this purpose.

### Dust and Spillage Control

39 Adequate provision to contain liquid and solid spillage is needed. Closed containers can prevent wind whipping of dusty, dry waste materials such as materials collected during combustion chamber cleaning or arising from particulate abatement plant:

- Dusty wastes should be stored in closed containers and handled in a manner that avoids emissions
- Dry sweeping of dusty materials should not normally be permitted unless there are environmental or health and safety risks in using alternative techniques
- Suitable organic solvent containment and spillage equipment should be readily available in all organic solvent handling area
- A high standard of housekeeping should be maintained.

## **Air Quality**

### Dispersion and Dilution from Stack

40 Pollutants that are emitted via a stack require sufficient dispersion and dilution in the atmosphere to ensure that they ground at concentrations that are harmless. This is the basis upon which stack heights are calculated using HMIP Technical Guidance Note D1 (D1). The stack height so obtained is adjusted to take into account local meteorological data, local topography, nearby emissions and the influence of plant structure.

The calculation procedure of D1 is usually used to calculate the required stack height but alternative dispersion models may be used in agreement with the regulator. An operator may choose to meet tighter emission limits in order to reduce the required stack height.

### Stacks, Vents and Process Exhausts

41 Liquid condensation on internal surfaces of stack flues and exhaust ducts might lead to corrosion and ductwork failure or to droplet emission.

Adequate insulation should be provided to minimise the cooling of waste gases and prevent liquid condensation by keeping the temperature of the exhaust gases above the dewpoint.

42 Flues and ductwork should be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.

### Management Techniques

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

### Training

44 All staff whose functions could impact on air emissions from the activity shall receive appropriate training on those functions. This shall include:

- awareness of their responsibilities under the permit
- Steps that are necessary to minimise emissions during start up and shut down.
- actions to take when there are abnormal conditions, or accidents or spillages that could, if not controlled, result in emissions.

45 The operator shall 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

46 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 operator shall have the following available for inspection by the regulator

- A written maintenance programme for all pollution control equipment; and
- A record of such maintenance should be made available for inspection by the regulator.

**End of Permit**

## Appendix 1 Definitions

The definitions in Annex III of the SED are as follows and are shown diagrammatically in **Figure 4.1**.

**Inputs of Organic Solvent** in the time frame over which the mass balance is being calculated (**I**)

**I1** The quantity of organic solvents or their quantity in mixtures purchased which are used as input into the process/activity (including organic solvents used in the cleaning of equipment, but not those used for the cleaning of the products).

**I2**

The quantity of organic solvents or their quantity in mixtures recovered and reused as solvent input into the process/activity. (The recycled solvent is counted every time it is used to carry out the activity.)

**Outputs of Organic Solvents** in the time frame over which the mass balance is being calculated (**O**)

**O1** Emissions in waste gases.

**O2** Organic solvents lost in water, if appropriate taking into account waste water treatment when calculating O5.

**O3** The quantity of organic solvents which remains as contamination or residue in products output from the process/activity.

**O4** Uncaptured emissions of organic solvents to air. This includes the general ventilation of rooms, where air is released to the outside environment via windows, doors, vents and similar openings.

**O5** Organic solvents and/or organic compounds lost due to chemical or physical reactions (including for example those which are destroyed, e.g. by thermal oxidation or other waste gas or waste water treatments, or captured, e.g. by adsorption, as long as they are not counted under O6, O7 or O8).

**O6** Organic solvents contained in collected waste.

**O7** Organic solvents, or organic solvents contained in mixtures, which are sold or are intended to be sold as a commercially valuable product.

**O8** Organic solvents contained in mixtures recovered for reuse but not as input into the process/activity, as long as not counted under O7.

**O9** Organic solvents released in other ways

## Appendix 2 – Dunlop Oil & Marine Ltd Solvent Management Plan



### Emission Reduction Plan

#### Scope

This Emission reduction plan has been drawn up in relation to the manufacturing operations conducted at its Grimsby site. It does not take in account any emissions which may be produced at any of its other sites as they would be subject to conditions laid down by the local authority that they are accountable to.

#### Company Background

Dunlop Oil and Marine Ltd was founded in 1955. It has become recognised as the world leading manufacturer for offshore hoses. Safety and Environmental protection being paramount throughout our product design and manufacture.

Within the Grimsby site, there is a rubber mixing plant, fitting preparation department and a hose production facility.

Within these areas a variety of chemical compounds, natural and synthetic rubbers, materials, textiles and reinforcing wires are used.

Solvent based products are also used during the fitting preparation process and throughout the hose building process. Although there is currently no viable alternative to the use solvent based products, Dunlop Oil and Marine conduct reviews on all of the products used to determine whether less hazardous materials are available.

#### The Solvent Reduction Scheme.

Since 1992 we have employed a solvent reduction scheme. We have successfully achieved the required fifty percent reductions in the use of solvents and we are continuing to aim for further reductions.

Therefore the following scheme, as required by the Process Guidance Note 6/28 shall operate for this Company for which a constant solid content of product can be assumed and used to define the reference point for emission reductions.

This reduction plan includes figures to prove;

- Decreases in the average solvent content of the total input; and/or
- Increased efficiency in the use of solids;

This will aim to achieve a reduction of the total emissions from the installation.



The solvents emissions directive requires that if an operator chooses to use the solvent reduction scheme for an installation to achieve emission reductions to a "Target Emission" equivalent to those, which would have been achieved if the concentration emission limits had been applied.

**Dunlop Oil and Marine Ltd – Target values**

As this Company has existed prior to 1992 using carbon black the target value for this installation is as follows;

$$\text{Target Value} = \left\{ \frac{\text{Solvent consumption in 1992}}{\text{Tonnes of rubber used}} \right\} \times 0.5$$

**Target Values for 1992**

$$1.36 = \left\{ \frac{5716 \text{ gallons Solvent consumption in 1992}}{2097 \text{ Tonnes of rubber used}} \right\} \times 0.5$$

**Target Value for year 2014**

$$1.36 - 50\% \text{ (Reduction Target)} = 1.36 \times 0.5 = 0.68$$

Target value for year 2014 onwards = 0.68

Compliance is achieved if the current solvent consumption per tonne of rubber used, (i.e. calendared) is less than or equal to the Target Value.



### Solvent Management Plan

The use of solvents within our production process is strictly monitored and controlled. All solvents issued for use are recorded and monitored on a month by month basis. This then allows us to accurately record the annual usage of solvents against rubber produced for the year.

Solvent management has to be recorded in this way, as we do not have a continuous production process that uses a consistent amount of solvent.

Dunlop continuously strives to reduce the usage of solvents in an aim to reduce the risk of environmental contamination and furthermore the reduction of solvents reduces any occupational health risks and also has the added benefit of improving safety.

The Management system that we currently employ is listed below.

1. Recording the usage and stock levels on site on a monthly spreadsheet, this is generated by the stores and purchasing department.
2. Recording the annual solvent usage versus the rubber calendared.
3. Dispensing solvents from large bunded containers, via a tap system, into the smallest lidded containers, using piston operated self sealing delivery system and sealed metal containers.
4. Employing strict housekeeping measures on the use and storage and transportation of solvents.
5. Disposing of unused solvent and empty solvent tins into a dedicated hazardous waste disposal area. This is then measured and recorded to give an accurate and consistent record of the solvent that is collected for waste disposal. This is then recorded onto the Environmental Agency Consignee notes.
6. Using licensed hazardous waste disposal agents to dispose of solvent waste off site.