

## Standard rules SR3 (2016) – Dry cleaning

### Introductory note

This introductory note does not form part of these standard rules.

When referred to in a permit, these rules will allow the operator to operate an installation undertaking the specified activities, at the specified location, provided that the permitted activities are not carried out within:

- a European Site (a Special Area of Conservation or Special Protection Area as defined in the Conservation (Natural Habitats, &c.) Regulations 1994);
- a Ramsar Site (a wetland of international importance designated under the Ramsar Convention); or
- a Site of Special Scientific Interest (SSSI) (as defined in the Nature Conservation (Scotland) Act 2004).

Information on the location of these site sites can be found on the [Scottish Natural Heritage website](#).

These standard rules cover industrial or commercial dry cleaning using solvents (volatile organic compounds) in an enclosed machine to clean a variety of fabric items such as garments and soft furnishings.

The rules are primarily concerned with emissions of solvent to air. As such, permit holders are required to operate the process to no more than 20g of solvent released per kilogram of products cleaned and dried per annum.

The rules do not cover dry cleaning operations at which the solvent is stored in bulk containers (1000 litres / 1m<sup>3</sup> or more).

The rules have been developed with reference to Process Guidance Note 6/46(11) Dry cleaning. The rules must be read in conjunction with the latest version of this guidance note as it provides the full details of the operating requirements. The current version of these rules and latest version of the Process Guidance Note 6/46 may be found on the [SEPA website](#).

If the operator intends to change the dry cleaning machine(s) at the installation, we must be notified in writing at least 14 days prior to the change (see “explanatory notes for standard rules” paragraph 3). This notification must include the manufacturer, model, serial number, rated capacity and proposed date of installation

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**End of introductory note**

## Standard rules

### 1 PERMITTED ACTIVITIES

- 1.1 The operator is permitted to carry out the activities specified in Table 1 below ("the activities").
- 1.2 The operator is also permitted to carry out the directly associated activities specified in Table 2 below ("the directly associated activities").

**Table 1 – Activities**

<b>Description of Activities</b>
<p>The activities falling within Schedule 2, Part 1 of the regulations, namely:</p> <p>Dry cleaning.</p> <p>Where dry cleaning means any industrial or commercial activity using volatile organic compounds in an installation to clean garments, furnishing and similar consumer goods excluding the manual removal of stains in the textile and clothing industry.</p> <p>Note – The cleaning shall only take place in a machine(s) as listed in the permit application or subsequently formally notified to SEPA.</p>

**Table 2 – Directly associated activities**

<b>Description of directly associated activities</b>
<p>The storage of dry cleaning solvent and solvent wastes.</p>

## **2 THE SITE**

- 2.1 The activities shall not extend beyond the site, as specified in the permit.

## **3 PROCESS OPERATIONS**

- 3.1 The dry cleaning installation shall be operated in accordance with Process Guidance Note 6/46 - Defra's guidance for dry cleaning.
- 3.2 Dry cleaning of fabrics using risk phrase R40 and R68 solvents or hazard statement H341 and H351 solvents shall only take place in purpose built enclosed dry cleaning machines which prohibits fugitive solvent emissions. This requirement does not apply to manual spot-cleaning of fabrics.
- 3.3 All appropriate precautions shall be taken to minimise emissions during start-up and shut-down of operations.
- 3.4 Dry cleaning machine loading doors shall be kept closed when not in use. After loading, doors shall be closed before the start-up of the machine, and kept closed at all times through the drying and cleaning cycle.
- 3.5 Where an extract fan is fitted to maintain a negative pressure within the dry cleaning machine during uploading, the exhaust from this fan shall be directed to a carbon adsorption filter prior to discharge to atmosphere.
- 3.6 All machines installed after 19 May 2005 shall have interlocks to prevent start-up of the machine until the loading door is closed and to prevent opening of the loading door until the machine cycle has finished and the cage has stopped rotating.
- 3.7 All machines installed after 19 May 2005 shall have interlocks to automatically shut down the machine under any of the following conditions: cooling water shortage, failure of the cooling ability of the still condenser, failure of the cooling ability of the refrigeration system or failure in the machine heating system resulting in the inability to dry the load.
- 3.8 The still, button trap and lint filter doors shall be closed before starting up machines and kept closed at all times through the drying and cleaning cycle.
- 3.9 All machines installed after 19 May 2005 shall have interlocks to automatically shut down the machine if the still, button trap and lint filter doors are not properly closed.
- 3.10 Stills shall have a thermostatic control device or equivalent in order to control the maximum operational temperature, in accordance with the manufacturer's recommendations for the solvent used.
- 3.11 All new and substantially refurbished dry cleaning machines installed after 31 December 2015 shall have a spillage tray with a volume greater than 110% of the volume of the largest tank within the machine. Otherwise, all machines shall be positioned away from drains which may become contaminated as a result of spillage.
- 3.12 Solvent contaminated residues shall be removed from the dry cleaning machine still by powder filter rake out, ecological filter rake out or plumbed pump out systems.

- 3.13 The quantities of solvent contaminated residues extracted from the dry cleaning machine stills in rule 3.12 above shall be recorded in litres.
- 3.14 The operator shall produce and implement a schedule of checking and maintenance procedures for each dry cleaning machine, the minimum requirement of which will be that listed in Appendix 1 (typical checks found in dry cleaning machine manufacturers manuals).
- 3.15 Each dry cleaning machine shall be serviced by a suitably qualified person at the manufacturers recommended intervals.
- 3.16 Details of all maintenance, testing and repair work carried out on each dry cleaning machine, and including the scales used to weigh the loads, shall be recorded in writing and made available for inspection by SEPA on request.
- 3.17 All operating staff shall be trained in the operation of each machine and the control and use of dry cleaning solvents. Details of the training received shall be recorded in writing and made available for inspection by SEPA on request.
- 3.18 Each machine shall be installed and operated in accordance with the manufacturers recommendations, as set out in the operational manual for that machine, in order to minimise the release of solvents to air, land and water.
- 3.19 Spares and consumables, in particular those subject to continual wear, shall be held on site, or should be available at short notice from guaranteed suppliers, in order that breakdowns can be rectified rapidly (see Appendix 1)
- 3.20 On decommissioning, all machines shall be drained of solvent and solvent contaminated residues, all of which shall be disposed of appropriately under the Duty of Care provisions of Section 34 of the Environmental Protection Act 1990 and also the Special Waste Regulations 1996.

#### **4 EMISSION LIMIT AND RECORDING/REPORTING REQUIREMENTS**

- 4.1 Emissions of solvent from the installation shall not exceed 20 grams of solvent per kilogram of products cleaned and dried per year.
- 4.2 The operator shall record in writing on a weekly basis, the:
  - weight of clothes/fabric cleaned in kilograms (kg),
  - volume of solvent added to the machines in litres (l)
  - volume of solvent contaminated residues pumped or raked out of the stills in litres (l). Water separator waste MUST NOT be included in this figure.

In addition to this the volume of solvent remaining in the machines at both the beginning and end of the 12 month period shall be recorded in litres (l). This data shall be kept for at least two years, and made available for inspection by SEPA on request.

Note: The weekly data sheet for dry cleaning installations in Appendix 2, and available on our website, may be used to record this data.

- 4.3 The operator shall demonstrate that the emission limit in Rule 4.1 has been met, or otherwise, by calculating the annual solvent emission figure for the installation, using the data referred to in Rule 4.2.

Note: The 'Calculating your annual solvent emission' sheet for dry cleaning installations in Appendix 3, and available on the SEPA website, may be used to record this calculation.

- 4.4 The annual solvent emission calculation described in Rule 4.3 shall be submitted to SEPA by 31 January each year in order to verify compliance, or otherwise, with the emission limit in Rule 4.1. This shall cover the period 1 January to 31 December of the previous year, or pro rata if the installation commenced operations during that year.

## **5 STORAGE OF SOLVENTS AND WASTES**

- 5.1 All solvents shall be stored:

- in the containers they were supplied in, with the lid securely fastened at all times other than when in use;
- within spillage collectors, of suitable impervious and corrosion proof materials and capable of containing 110% of the largest container;
- away from sources of heat and/or bright light.

- 5.2 On filling dry cleaning machines, solvent containers shall:

- have the lids removed only when the container is next to the dry cleaning machine ready for filling;
- be of a capacity which allows the entire contents of the container to be emptied into the dry cleaning machine at each filling;
- have the lid of the empty container replaced immediately once filling is completed.

- 5.3 Suitable absorbent materials shall be held at the installation to clean up spillages of solvent and/or solvent contaminated waste materials.

- 5.4 Solvent contaminated waste, for example still residues, shall be stored

- in suitable sealed containers with the lid securely fastened at all times other than when in use;
- on a suitable impervious floor;
- away from any drains which may become contaminated with residues as a result of spillage;
- away from sources of heat and/or bright light.

## **6 INCIDENT REPORTING**

- 6.1 In the event of any incident at the site, in particular any significant spillage of solvent, the operator shall notify us by telephone without delay on 0800 80 70 60 (24 hour service).

## **7 INTERPRETATION**

7.1 In these standard rules, the expressions listed below shall have the meaning given.

*“dry cleaning machine” or “machine” means a purpose built enclosed dry cleaning machine;*

*“incident” means any of the following situations:*

- where an accident occurs which has caused or may have the potential to cause pollution;
- where any malfunction, breakdown or failure of plant or techniques is detected which has caused or may have the potential to cause pollution;
- where an emission of any pollutant not authorised to be released under any condition of the permit is detected.

*“the regulations” means the Pollution Prevention and Control (Scotland) Regulations 2012 SSI 2012/360, and any words and expressions used in this permit which are also used in the Regulations have the same meanings as in those regulations. These regulations have been brought into force to transpose the requirements of the European Commission’s Directive 2010/75/EU on industrial emissions.*

*“R40” means limited evidence of a carcinogenic effect*

*“R68” means possible risk of irreversible effects*

*“H341” means suspected of causing genetic defects*

*“H351” means suspected of causing cancer*

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**End of standard rules**

## APPENDIX 1

### Typical checks for dry cleaning machines

1. Daily leak checks → vapour leaks are best detected during the early stages of the drying cycle		
- air duct inspection hatch	- filter seals	- solvent pipe flanges
- button trap lid	- heating coil battery	- solvent tank sight glasses
- cage door gasket	- lint filter	- solvent valves
- cooling coil battery	- main bearing seal	- still doors
- fan housing inspection hatch	- recovery head	- vapour line

2. Routine maintenance checks		Daily	Twice daily	Weekly	Yearly	Special instructions
Button trap (manual)	- Clean sieve		✓			And after lint loads
	- Is it functioning correctly?			✓		
	- Can debris pass the trap?			✓		
Door seals	- Wipe clean	✓				
	- Replace the seals				✓	
Drum	- Check the draining line			✓		
Cartridge type filters	- Drain spent cartridges in the machine					Overnight
	- Check for leaks					After replacement
Lint filter (manual)	- Clean filter		✓			
	- Check for any bypassing, which may lead to blocking of the drying circuit.			✓		
Recovery condensers	- Clean accessible condenser fins on air cooled refrigeration systems				✓	On a six - twelve monthly basis by a competent person
Solvent pump	- Check for leaks					After repair or maintenance
Still	- Empty the still			✓		Or at manufacturers' recommended time interval
Water separator	- Drain excess water	✓				Note – Do not include this figure with your solvent contaminated residue volume
	- Drain and clean					At least once every two weeks or to manufacturers' guidelines

3. Operating efficiency checks		Daily	Twice daily	Weekly	Yearly	Special instructions
Temperature settings	- Check all drying and still temperature control settings	✓				

## APPENDIX 2



### Weekly data sheet

Machine ref no \_\_\_\_\_

Week no \_\_\_\_\_ Week covered \_\_\_\_\_ to \_\_\_\_\_

#### Notes:

- You should use a **separate weekly sheet for each dry cleaning machine** in use at your site.
  - Any solvent spillage **must not** be included in the volume of solvent used.
  - The weekly totals should be added up at the year end to produce the annual totals for your whole site and used in your annual solvent emission calculation.
  - Contact Peter Semple on 01738 627989 for assistance.
1. **At the start of Week 1, record the volume of solvent already in the machine. And at the end of Week 52, you need to record the volume of solvent left in the machine.**

At Start of Week 1	Solvent already in the machine in litres	
At End of Week 52	Solvent left in the machine in litres	

#### 2. Record the total weight of clothes and/or fabric cleaned in kilograms (kg)

Date	Weight of clothes or fabric cleaned each day (kg)						
	Load 1	Load 2	Load 3	Load 4	Load 5	Load 6	Daily total
Mon							
Tues							
Wed							
Thurs							
Fri							
Sat							
Sun							
<b>Weekly total</b>							

#### 3. Record any solvent added to the machine in litres and any solvent contaminated residues pumped or raked out of the machine in litres (water separator waste **MUST NOT** be included in this volume).

	Date	Solvent added to the machine (litres)	Solvent contaminated residues pumped or raked out of the machine (litres)
Mon			
Tues			
Wed			
Thurs			
Fri			
Sat			
Sun			
<b>Weekly total</b>			



## APPENDIX 3

### Calculating your annual solvent emission

PPC permit number \_\_\_\_\_

Site name \_\_\_\_\_

12 month period covered (month & year) \_\_\_\_\_ to \_\_\_\_\_

#### Notes:

- You must keep weekly records to provide the data required in this calculation.
- The calculation is for the whole dry cleaning site rather than individual machines. A lower performing machine may be balanced out by a better performing one.
- Any solvent spillage must **not** be included in the volume of solvent used (Step 3)
- Contact Peter Semple on 01738 627 989 for assistance.

#### Step 1 – Solvent disposed of as waste (solvent contaminated residues)

This is known as 'A' and is the volume of solvent contaminated residues pumped or raked out of the still in litres BUT NOT any water separator waste which must not be included in this figure.

Solvent becomes dirty as fabrics are cleaned. This dirty solvent is pumped to the still where it is heated to turn it into a vapour. The vapour leaves the dirt behind and is cooled back into a solvent/water mixture. This mixture then moves to the separator where clean solvent is sent back to the solvent tank and the separated water is drained off, usually to sewer.

However, if you collect the water separator waste instead and put it into the same waste container as the solvent contaminated residues, you must subtract this volume from the amount of solvent contaminated residues disposed of.

A =
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#### Step 2 – Removal factor

The volume of solvent contaminated residues is multiplied by the appropriate removal factor to account for the efficiency of the removal method.

Removal method	Factor
Powder filter rake-out	0.15
Ecological filter rake-out	0.35
Plumbed in pump-out	0.5

<b>B = A x factor</b>
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B =
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#### Step 3 – Total solvent used in litres

Volume of solvent in the machine at the start of the year

Total volume of solvent added to the machine during the year

Volume of solvent in the machine at the end of the year

Total solvent used throughout the year

C =
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D =
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E =
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<b>F = C + D - E</b>
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F =
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**Step 4 – Overall solvent used in litres**

Total volume of solvent used throughout the year as calculated in Step 3 minus the solvent contaminated residues as calculated in Step 2.

$$G = F - B$$

Overall solvent used in litres

$$G =$$

**Step 5 – Convert volume to weight**

To convert overall solvent used from litres to grams, multiply **G** by the following factor depending on the solvent you use.

Solvent type	Factor
Perchloroethylene	1600
Siloxane	970
HCS	970

$$H = G \times \text{factor}$$

$$H =$$

**Step 6 – Total weight of material cleaned**

Total of all the clothes and/or fabric cleaned over the year in kilograms (kg)

$$I =$$

**Step 7 – Annual solvent emission**

Your annual solvent emission (g/kg) is calculated by dividing the weight of solvent used in grams (g) as calculated in Step 5, by the total weight of material cleaned in kilograms (kg) as calculated in Step 6.

$$J = H \div I$$

Annual solvent emission (g/kg)

$$J =$$

**Step 8 – Have you met the permitted emission limit?**

Permit limit = 20g of solvent per kg of clothes/fabric cleaned

If **J** exceeds 20 then you are NOT in compliance.

Yes / No

**If you are not compliant, please explain why:**

Signature \_\_\_\_\_

Date \_\_\_\_\_

## Explanatory notes for standard rules

These notes are intended to help you understand the key regulatory requirements and criteria that support the use of standard rules to regulate your dry cleaning activity and may be found on our [website](#). We have provided regulation references to show you where the requirement appears in the Pollution Prevention & Control (Scotland) Regulations 2012 (the Regulations).

### 1. Subsistence charges

You will have to pay an annual subsistence charge for your permit. Further details can be obtained from our [website](#).

### 2. Review of standard rules

The standard rules of this permit will be periodically reviewed by us. If the standard rules are to be altered, we will formally consult with you before the changes are implemented.

### 3. Proposed change in operation of the installation

If you propose to make a change in the operation of the installation, you must notify us at least 14 days beforehand, unless you have already made an application for a variation of the permit conditions. This includes whenever you change the dry cleaning machine(s) at the installation. Regulation 45

“*A change in operation*” is defined in Regulation 2 of the regulations but in essence this means a change to the installation which may have consequences for the environment, e.g. larger volume of emissions.

You may also apply for a variation of the permit in respect of proposed changes or substantial variation in operation. You would apply for a variation if you wished to vary the actual conditions attached to that permit. Regulation 46 and Schedule 7.

### 4. Offences and enforcement

It is an offence to:

- operate an installation covered by the regulations without a permit;
- operate in breach of the permit conditions;
- intentionally make a false entry in any record required to be kept under a permit condition;
- fail to comply with an enforcement or suspension notice.

### Regulation 67

If we believe you have contravened, are contravening or are likely to contravene a condition of the permit, we may serve an enforcement notice on you. This will require you to remedy the situation and detail the steps to be taken within a specified timeframe. Regulation 55.

If we think the breach poses a significant risk of serious pollution, we may serve a Suspension Notice which will prevent you carrying out some or all of your permitted activities. Regulation 56.

It is important to note that directors, managers and other individuals within a company may be held personally liable for offences under the regulations.

#### **5. Surrender of permit**

You must notify us when you no longer carry out the permitted activities using the surrender notification forms on our [website](#). Regulation 49.

#### **6. Transfer of permit**

You and the proposed transferee must jointly apply for a transfer of permit when a new operator takes over the activities. Regulation 47.

#### **7. Environmental management requirements**

We consider the management of your activities to be crucial in protecting the environment. Appropriate and effective management systems must be in place to ensure the activities are operated efficiently and effectively.

#### **8. Contact details**

If this explanatory note does not help you to answer any query you may have, please contact your SEPA local office. Their contact details can be found on our [website](#). Alternatively you can use our 24 hour emergency phone line on 0800 80 70 60.