



epa

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil
National Waste Prevention Programme

Dry Cleaning Records Sheets for Solvents Regulations¹ Requirements.

¹ Statutory Instrument number 543 of 2002.



Background.

Under the Solvents Regulations dry cleaners need to keep records to show how they perform against the emission limit value of 20 g solvent emitted per kg of product dry-cleaned. These record sheets aim to assist dry cleaners with such record keeping.

There is an Excel spreadsheet available for download at www.epa.ie for electronic recording of these records which will perform many of the required calculations automatically.

(For more information on the Solvents Regulations see the EPA's Best Practice Guidelines for Dry Cleaning at www.epa.ie).

IMPORTANT NOTE:

The sheets "3a(1) and 3a(2). Weekly Record" should be printed off on a weekly basis, and kept next to each dry cleaning machine, to be filled in daily.

WHEN TO START RECORD KEEPING?

For the first inspection only, a minimum of at least 3 consecutive months of records must be available. For subsequent inspections, 12 months of records must be available. It does not have to be a calendar year. For existing installations, a compliant AIC report was needed to be submitted before 31 October 2007 in order to get a Certificate of Compliance from your local authority. It is recommended to start record keeping as soon as possible.

WHAT YOU HAVE TO DO DURING THE 12-MONTH PERIOD

First Day of the 12-month Period

Record the following (see sheet "2. Stocks" for more information on each of these):

- the litres of solvent in your machine tanks.
- the litres of fresh solvent in any containers.
- the weight of solvent waste in kg in waste drums.

and where a carbon adsorber is present which is regenerated in-situ:

- the number of cycles since the carbon adsorber was last regenerated.

Put this information into the sheet "2. Stocks".

Throughout the 12-month Period

- Every week, print off a copy of the sheets "3a(1) and 3a(2). *Weekly Record*" for each machine. Write down on this sheet on an ongoing basis the litres of solvent in the machine tanks at the start of the week, the weight of each load of clothes cleaned during the week and the litres of solvent added to the machine(s).

- Get a sample of your solvent waste analysed for the amount of solvent it contains. See sheet "5. Waste" for more information.

- Get a sample of your separator water analysed for the amount of solvent it contains. See sheet "6. Sep. Water" for more information.

- Retain documentation from your waste contractor and compile the summary sheet "5. Waste" based on this documentation.

- Retain invoices for solvent purchases and compile the summary "4. Purchases" sheet based on this documentation.

- Retain invoices for purchases of spotting agents that contain VOCs and compile the summary "8. Spotting chemicals" sheet based on this documentation.

Last Day of the 12-month Period

Record the following (see sheet "2. Stocks" for more info on each of these):

- the litres of solvent in your machine tanks
- the litres of solvent in any fresh containers.
- the weight in kg of solvent in waste drums.

and where a carbon adsorber is present which is regenerated in-situ:

- the number of cycles since the carbon adsorber was last regenerated.

Put this information into the sheet "2. Stocks".

DESCRIPTION OF THE RECORD SHEETS

Apart from this "Instructions" sheet, the record sheets comprise of the following sheets or tables. These are briefly described here, with more detailed guidance given via footnotes at the bottom of each record sheet.

Sheet: "1. The Premises"

You enter basic details here about your dry cleaning premises. Enter data in the appropriate cells.

Sheet: "3a(1) and 3a(2). Weekly Record"

These record sheets must be completed on a weekly basis, and kept next to each dry cleaning machine. The weight of every load dry cleaned and the litres of solvent added to the machine must be recorded and retain for inspection. **Each load must be weighed - it is not sufficient to take the value of a typical load.** The completed sheets are used to fill in the *Summary of Weekly Records* sheet.

If you have any spills or incidents, these should also be noted on the sheet, and if possible an estimate of the quantity of solvent involved.

Sheet: "4. Purchases"

Summary data of each purchase of solvent made during the 12-month period under examination is entered in this section from invoice documentation. Enter data in the appropriate cells.

Sheet: "5. Waste"

Summary data of each collection of solvent-containing waste during the 12-month period under examination is entered on this sheet. You will also have to get a sample of solvent-containing waste analysed for solvent content. This may have to be repeated, for example in the event of a change in dry cleaning machine, but otherwise does not need to be done annually. Enter data in the appropriate cells.

Sheet: "6. Separator Water"

Information on separator water generated during the 12-month period under examination is entered in this sheet. A trial to determine litres generated and analysis for solvent content will be required. You will also have to get a sample of separator water analysed for solvent content. This may have to be repeated, for example in the event of a change in dry cleaning machine, but otherwise does not need to be done annually. Enter data in the appropriate cells.



Sheet: "7. Carbon Adsorber"

This sheet only needs to be completed if the carbon in your recouper/carbon adsorber is replaced during a service within the 12-month period under examination. Enter data in the appropriate cells.

Sheet: "8. Spotting Chemicals"

If there are spotting agents in use during the period under examination which contain VOCs, this sheet needs to be completed. Enter data in the appropriate cells.

Sheet: "9. 12-month Summary"

This sheet is used to determine if you are within the emission limit for the 12-month period, or if you exceed this limit. A brief description of the calculation used to determine the overall quantity, in grams, of solvent emitted per kg of fabrics processed is provided.

Dry Cleaning Records Sheet 1. The Premises.

THE DRY CLEANING PREMISES	
<i>This sheet records some basic details about your dry cleaning premises</i>	

Company/owner/sole trader Name:	
Address at which dry cleaning takes place:	
Start Date of 12-month period:²	
End Date of 12-month period:	

Dry Cleaning Machines:³

Machine 1	
Machine 2	
Machine 3	

<i>Solvent in Use⁴</i>	
<i>Specific Gravity/Density (kg/litre)</i>	

² For the first inspection only, a minimum of at least 3 consecutive months of records must be available. For subsequent inspections, 12 months of records must be available. It does not have to be a calendar year.

³ List each dry cleaning machine in your premises (e.g. Bowe 10 kg). If you only have one machine leave the other boxes blank. If more than 3 machines in operation during the 12-month period, print sheet 1a and enter data as required.

⁴The 'specific gravity' or 'density' of the solvent may be indicated on the material data sheet for the solvent (this is expressed in kg/litre). Insert this figure in the appropriate cell. If you operate several machines with different solvents, it is recommended that a separate record sheet is kept for each type of solvent.

Dry Cleaning Records Sheet 1a. The Premises.

THE DRY CLEANING PREMISES	
<i>This sheet records some basic details about your dry cleaning premises</i>	

Company/owner/sole trader Name:	
Address at which dry cleaning takes place:	
Start Date of 12-month period:	
End Date of 12-month period:	

*Dry Cleaning Machines:*⁵

Machine __	
Machine __	
Machine __	

<i>Solvent in Use</i>	
<i>Specific Gravity/Density (kg/litre)</i>	

⁵ Print and enter data as required. All instructions as per sheet 1.

Dry Cleaning Records Sheet 2. Stocks.

Start Date of 12-month period	
End Date of 12-month period	

STOCKS

Fill this information in on the first day and last day of the 12-month period

	At beginning of 12-month period	At end of 12-month period
Containers of Fresh Solvent		
Total fresh solvent in containers, if any (litres)		
Waste Solvent		
Weight of solvent waste drums in stock at time of reading (kg) ¹		
Solvent in the Dry Cleaning Machine(s)		
Time of reading ²		

Operator Signature

Name (Block Capitals): (Recording opening stock)	
Signature:	
Name (Block Capitals): (Recording closing stock)	
Signature:	

¹ Weigh the waste drum(s) that are on the premises on the day of the stock take. Ensure all waste from any collection containers at the back of the machine is included. A bathroom scales would be suitable for drums up to 60 litres in size. Take care when lifting and ensure drums are properly closed before weighing. Deduct the weight of the drum when first delivered, i.e. empty.

² Before taking the reading at the start of the 12-month period, add solvent to the machine so that the tank contents are brought up to pre-chosen levels marked on each tank. At the end of the 12-month period, again add solvent to the machine to bring the tank contents back up to the same levels. Take both of these tank readings when the machine is idle and has cooled down, such as first thing in the morning. Note the time the readings were taken.

Dry Cleaning Records Sheet 2. Stocks. (Continued)

Solvent in Machine 1:¹	
Total solvent in machine tanks (litres)²	
Does this machine have a carbon adsorber that is regenerated in-situ? Insert "Yes" or "No" into box.³	
Quantity of solvent in carbon bed when full [just before regeneration] (litres)⁴	
Number of cycles between regenerations of carbon adsorber⁵	
Number of cycles since last regeneration (at time of reading)⁶	
Total solvent in carbon adsorber (at time of reading) (litres)	

¹ If more than 1 machine in operation during the 12-month period, print sheet 2a and enter data as required.

² Get solvent volumes in the dry cleaning machine tanks by looking through the sight glasses at the levels in each of the tanks and adding them together. Manufacturers' manual may have some of this information.

³ A carbon adsorber is a carbon canister or bed which removes solvent from the air in the machine. An adsorber that is regenerated in-situ is one equipped with the facility to periodically regenerate by steam or electrical heat and reuse the recovered solvent in the machine. Such adsorbers are on latest generation dry cleaning machines. Some carbon adsorbers are not equipped to regenerate in-situ. In the case of such adsorbers, the carbon is replaced on an intermittent basis, e.g. every year, and the spent carbon is taken away. If an adsorber, which cannot be regenerated in-situ, is on the machine insert "No" here and fill in sheet 7 (Disposal of Carbon Absorbers).

⁴ When measuring the amount of solvent in the machine at the start and end of the year, an estimate of the amount of solvent that is contained within the recouper or carbon adsorber must be made as it will vary. These carbon beds are regularly regenerated, i.e. the solvent is driven off from the carbon bed using steam/electricity and collected in the tanks. To find out how much solvent is in the carbon bed at the time of the stock take, first of all the maximum amount of solvent that is held by the bed just before regeneration must be determined. This can be done as follows any time during the 12-month period:

- just before the recouper is regenerated, note the tank levels.
- then once the regeneration is complete note the tank levels again.
- The difference between the two levels is the quantity of solvent contained by the carbon bed at its fullest just before regeneration. This value is entered here.

Alternatively, the machine manual may give information on the amount of solvent contained in the carbon bed when full. If you do not have any carbon bed, or your carbon bed does not regenerate itself in-situ, leave this blank.

⁵ The carbon bed is regenerated at regular intervals, usually measured as the number of dry cleaning cycles or loads between regenerations. Enter this figure for your machine. If you do not have any carbon bed, or your carbon bed does not regenerate itself in-situ, leave this blank.

⁶ On the day of the stock take, enter the number of dry cleaning cycles or loads that have taken place since the last regeneration of the carbon. This can usually be obtained from the control panel of the machine. If you do not have any carbon bed, or your carbon bed does not regenerate itself in-situ, leave this blank.

Dry Cleaning Records Sheet 2a. Stocks. (Continued)

Solvent in Machine _: ⁷	
Total solvent in machine tanks (litres)	
Does this machine have a carbon adsorber that is regenerated in-situ? Insert "Yes" or "No" into box.	
Quantity of solvent in carbon bed when full [just before regeneration] (litres)	
Number of cycles between regenerations of carbon adsorber	
Number of cycles since last regeneration (at time of reading)	
Total solvent in carbon adsorber (at time of reading) (litres)	

⁷ Print sheet as required and enter machine number and details for each machine operating during period under examination; details required and instructions as per sheet 2; if only one machine operated in period under examination, leave blank.



Dry Cleaning Records Sheet 3a(1). Weekly Record Sheet – Product Processed Recording Sheet.

Instructions:

1. Print a copy of this sheet every week for each machine in operation. Keep a copy next to each machine, record weights and initial.
2. Record the litres of solvent in the machine tanks at the start of the week, the weight of every load, and the litres of solvent added. Sum all sets of figures and enter total in appropriate cell.
3. Operator should identify every figure entered by using initials. Replace the sheet weekly and file the completed sheets.

WEEKLY RECORD SHEET - PRODUCT PROCESSED														
Week Starting Monday (insert date):				Machine Number:										
PRODUCT PROCESSED during the week (kg) and initials of operator														
Load	Mon		Tues		Wed		Thu		Fri		Sat		Sun	
	Kg	Initials	Kg	Initials	Kg	Initials	Kg	Initials	Kg	Initials	Kg	Initials	Kg	Initials
1														
2														
3														
4														
5														
6														
7														
8														
Total for Week (kg)														



Dry Cleaning Records Sheet 3a(2). Weekly Record Sheet – Solvent Usage Recording Sheet.

Instructions:

- 1. Print a copy of this sheet every week for each machine in operation. Keep a copy next to each machine.
- 2. Record the litres of solvent in the machine tanks at the start of the week and the quantities (in litres) of solvent added.
- 3. Operator should identify every figure entered by using initials. Replace the sheet weekly and file the completed sheets.

WEEKLY RECORD SHEET - SOLVENT USAGE			
Week Starting Monday (insert date):		Machine Number:	
Solvent LEVELS in machine tanks at start of week (litres)			Any Incidents (e.g. spill of solvent; vapour release due to equipment failure, etc.) [If possible, estimate quantity involved in any release to air, ground, water, sewer, or in collected waste]
Tank	Operator Initials	Quantity (litres)	
Tank 1			
Tank 2			
Tank 3			
Solvent ADDITIONS to machine during week (if any) (litres)			Signed (supervisor):
Day/Date	Operator Initials	Quantity (litres)	
Total during week (litres)			Date: _____
Operator Initials:			Name(s) in full:

Dry Cleaning Records Sheet 3b(1). Weekly Record Summary.

Start Date of 12-month Period	
End Date of 12-month Period	

SOLVENT USED AND PRODUCT PROCESSED¹					
Summary of Weekly Records					
<i>Fill in required values on a weekly basis. Keep the weekly record sheets on file for cross checks during inspection.</i>					
Machine 1:					
Week Number	Total quantity of solvent added (litres)	Total weight of product processed (kg)	Week Number	Total quantity of solvent added (litres)	Total weight of product processed (kg)
Week 1			Week 27		
Week 2			Week 28		
Week 3			Week 29		
Week 4			Week 30		
Week 5			Week 31		
Week 6			Week 32		
Week 7			Week 33		
Week 8			Week 34		
Week 9			Week 35		
Week 10			Week 36		
Week 11			Week 37		
Week 12			Week 38		
Week 13			Week 39		
Week 14			Week 40		
Week 15			Week 41		
Week 16			Week 42		
Week 17			Week 43		
Week 18			Week 44		
Week 19			Week 45		
Week 20			Week 46		
Week 21			Week 47		
Week 22			Week 48		
Week 23			Week 49		
Week 24			Week 50		
Week 25			Week 51		
Week 26			Week 52		
Six-monthly Totals:			Six-monthly Totals:		
12-monthly Totals:	Total quantity of solvent added (litres)		Total weight of product processed (kg)		

¹ Where more than one machine operating during period under examination, print and complete sheet 3b(2) as required.

Dry Cleaning Records Sheet 3b(2). Weekly Record Summary (Continued).

Start Date of 12-month Period	
End Date of 12-month Period	

SOLVENT USED AND PRODUCT PROCESSED¹
Summary of Weekly Records

*Print this sheet and fill in Machine number for each machine in operation during period.
 Fill in required solvent and clothes values on a weekly basis.
 Keep the weekly record sheets on file for cross checks during inspection.*

Machine ___:

Week Number	Total quantity of solvent added (litres)	Total weight of product processed (kg)	Week Number	Total quantity of solvent added (litres)	Total weight of product processed (kg)
Week 1			Week 27		
Week 2			Week 28		
Week 3			Week 29		
Week 4			Week 30		
Week 5			Week 31		
Week 6			Week 32		
Week 7			Week 33		
Week 8			Week 34		
Week 9			Week 35		
Week 10			Week 36		
Week 11			Week 37		
Week 12			Week 38		
Week 13			Week 39		
Week 14			Week 40		
Week 15			Week 41		
Week 16			Week 42		
Week 17			Week 43		
Week 18			Week 44		
Week 19			Week 45		
Week 20			Week 46		
Week 21			Week 47		
Week 22			Week 48		
Week 23			Week 49		
Week 24			Week 50		
Week 25			Week 51		
Week 26			Week 52		
Six-monthly Totals:			Six-monthly Totals:		
12-monthly Totals:	Total quantity of solvent added (litres)		Total weight of product processed (kg)		

¹ Print and complete sheet as required. If only one machine operating during period under examination leave blank.

Dry Cleaning Records Sheet 3c(1). Total Solvent/Fabrics Processed Record.

Start Date of 12-month Period	
End Date of 12-month Period	

TOTAL SOLVENT USED AND PRODUCT PROCESSED¹				
Machine Number	Total quantity of solvent added (litres)	Specific Gravity (Density) of Solvent used (grams/ml or kg/litre)	Total quantity of solvent added (kg)	Total weight of product processed (kg)
Machine 1				
Machine 2				
Machine 3				
Machine 4				
Machine 5				
Machine 6				
Machine 7				
Machine 8				
Machine 9				
Machine 10				
Machine 11				
Machine 12				
Machine 13				
Machine 14				
Machine 15				
Machine 16				
Machine 17				
Machine 18				
Machine 19				
Machine 20				
Total:				

Calculation of Total quantity of solvent added (kg):

$$\begin{aligned}
 & \text{Total quantity of solvent added (kg)} \\
 & \quad = \\
 & \text{Total quantity of solvent added (litres) X Specific Gravity (Density) of Solvent used}
 \end{aligned}$$

¹ If more than 20 machines operating during the period under examination, print sheet 3c(2) as required and fill in details as required.

Dry Cleaning Records Sheet 3c(2).¹ Total Solvent/Fabrics Processed Record.

Start Date of 12-month Period	
End Date of 12-month Period	

TOTAL SOLVENT USED AND PRODUCT PROCESSED				
Machine Number	Total quantity of solvent added (litres)	Specific Gravity (Density) of Solvent used (grams/ml or kg/litre)	Total quantity of solvent added (kg)	Total weight of product processed (kg)
Total for Machines ___ to ___:				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Machine ___				
Total:				

Calculation of Total quantity of solvent added (kg):

$$\begin{aligned}
 & \text{Total quantity of solvent added (kg)} \\
 & \quad = \\
 & \text{Total quantity of solvent added (litres) X Specific Gravity (Density) of Solvent used}
 \end{aligned}$$

¹ Required only if more than 20 machine operating during period under examination. Print and enter records as required.

Dry Cleaning Records Sheet 4. Purchases.

Start Date of 12-month Period	
End Date of 12-month Period	

PURCHASES OF SOLVENT¹			
Fill in based on purchase records on an on-going basis			
Delivery Date	Invoice Number	Supplier Name	Total Quantity Purchased (litres)
Total solvent Purchased (12-month period) in litres			
Total solvent Purchased (12-month period) in kg²			

¹ Print sheet and enter details as required.

² Total Solvent Purchased (12-month period) kg = Total Solvent Purchased (12-month period) in litres multiplied by the Solvent Specific Gravity (Density) (see sheet 3c(1)).



Dry Cleaning Records Sheet 5a. Waste Summary.

Start Date of 12-month Period	
End Date of 12-month Period	

WASTE SUMMARY¹

Use the documentation you receive from your waste contractor to fill in this sheet on an on-going basis. You will need to get at least a once-off sample of your waste analysed for solvent content. Keep all back-up documentation on file for cross checks during inspection.

Solvent Analysis (mg/kg)²

Date of Collection	Waste Transfer No. ³	Waste Collection Company	Permit no. ⁴	Location of Waste Recovery/ Disposal ⁵	Weight of Empty Drum(s) (kg) ⁶	Weight of Full Waste Drum(s) (kg) ⁷	Weight of Waste (kg)	Solvent Waste (kg) ⁸
Total Waste Solvent sent off-site in the 12-month period (kg)								

¹ Print and complete as required

² When sampling Solvent-containing waste ensure all appropriate health & safety measures and proper sampling techniques are employed (e.g. personal protection clothing worn etc.). For correct sampling techniques, please refer to Appendix 1-4 of Best Practice Guidelines for Dry Cleaning (see www.epa.ie).

³ Note the waste transfer number from the documentation received from your waste contractor so that an inspector can use this number to spot check the original documents. File all documentation relating to waste.

⁴ Available from waste contractor.

⁵ Available on documentation from waste contractor. If no back-up documentation is available to show the recovery or disposal of the waste by an authorised facility, then the AIC inspector will not allow credit.

⁶ Weight of empty drum when first delivered.

⁷ When each drum is full, weigh it before it is collected by the contractor and record this here. If the shipment contains more than one drum, add the weight of all the drums in the shipment.

⁸ Calculation: Weight of Full Waste Drum – Weight of Empty Drum = Weight of Waste. Solvent Waste (kg) = Weight of Waste X Solvent Analysis Result ÷ 1000000.



Dry Cleaning Records Sheet 5b. Waste Stocks.

Start Date of 12-month Period	
End Date of 12-month Period	

Solvent Analysis (mg/kg) ⁹	
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WASTE OPENING AND CLOSING STOCKS				
	At beginning of 12-month period	At end of 12-month period	Change in Stock (kg waste)	Change in Stock of Solvent in waste (kg)
Weight of waste drums (kg)				
Therefore, Total Waste collected in 12-month period (kg)				

Calculation of Change in Stock of solvent in waste (kg):

$$\text{Waste Stock at beginning of 12-month period} - \text{Waste Stock at end of 12-month period} = \text{Change in Stock (kg)}$$

$$\frac{\text{Change in Stock} \times \text{Solvent Analysis Result}}{1000000} = \text{Change in Stock of Solvent in Waste (kg)}$$

$$\text{Total Waste Solvent sent off-site in the 12-month period (kg)} - \text{Change in Stock of Solvent in Waste (kg)} = \text{Total Waste collected in 12-month period (kg)}$$

⁹ When sampling Solvent-containing waste ensure all appropriate health & safety measures and proper sampling techniques are employed (e.g. personal protection clothing worn etc.). For correct sampling techniques, please refer to Appendix 1-4 of Best Practice Guidelines for Dry Cleaning (see www.epa.ie).

Dry Cleaning Records Sheet 6. Separator Water¹.

Start Date of 12-month Period	
End Date of 12-month Period	

SEPARATOR WATER		
<i>You will need to make an estimate of the litres of separator water generated in the 12-month period. You will also need to get a sample of separator water from each machine analysed for solvent content.</i>		
	Machine 1	Machine 2
Collected separator water during trial (litres)		
Weight of product processed during trial (kg)		

QUANTITY OF SOLVENT IN SEPARATOR WATER
--

	Machine 1	Machine 2
Solvent concentration in separator water from analysis of each machine (mg/litre)		
Typical litres of separator water generated per kg clothes cleaned from trial (litre/kg)		
Total weight of clothes cleaned in 12-month period (kg per machine)		
Quantity of separator water generated in 12-month period (litres per machine)		
Solvent in separator water generated in 12-month period (kg per machine)		
Indicate if the water separator automatically or manually discharges water	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge
Indicate if machine has a single water separator or a second water separator	<input type="checkbox"/> Single Water Separator <input type="checkbox"/> Double Water Separator	<input type="checkbox"/> Single Water Separator <input type="checkbox"/> Double Water Separator
If there is a second water separator, indicate whether it automatically or manually discharges water	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge

¹ For additional machine records print Sheet 6a as required.

Dry Cleaning Records Sheet 6a. Separator Water¹.

Start Date of 12-month Period	
End Date of 12-month Period	

SEPARATOR WATER		
<i>You will need to make an estimate of the litres of separator water generated in the 12-month period. You will also need to get a sample of separator water from each machine analysed for solvent content.</i>		
	Machine __	Machine __
Collected separator water during trial (litres)		
Weight of product processed during trial (kg)		

QUANTITY OF SOLVENT IN SEPARATOR WATER
--

	Machine __	Machine __
Solvent concentration in separator water from analysis of each machine (mg/litre)		
Typical litres of separator water generated per kg clothes cleaned from trial (litre/kg)		
Total weight of clothes cleaned in 12-month period (kg per machine)		
Quantity of separator water generated in 12-month period (litres per machine)		
Solvent in separator water generated in 12-month period (kg per machine)		
Indicate if the water separator automatically or manually discharges water	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge
Indicate if machine has a single water separator or a second water separator	<input type="checkbox"/> Single Water Separator <input type="checkbox"/> Double Water Separator	<input type="checkbox"/> Single Water Separator <input type="checkbox"/> Double Water Separator
If there is a second water separator, indicate whether it automatically or manually discharges water	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge	<input type="checkbox"/> Automatic water discharge <input type="checkbox"/> Manual water discharge

¹ Print Sheet 6a and complete as required.

Dry Cleaning Records Sheet 6b. Separator Water – Separator Water Disposal.

Start Date of 12-month Period	
End Date of 12-month Period	

DISPOSAL OF SEPARATOR WATER¹

Choose one of the following 4 options that is applicable to your premises:

Insert "yes" in one box only, and leave the other boxes blank

If separator water is <u>not treated</u> and is <u>discharged to drain</u>, insert "yes" into this box:		and complete section A only.
If separator water is <u>treated in a unit on the premises</u> and <u>discharged to drain</u>, insert "yes" into this box:		and complete section B only.
If separator water is <u>treated in a unit on the premises</u> and <u>evaporated</u>, insert "yes" into this box:		and complete section C only.
If separator water is <u>shipped as waste</u>, insert "yes" into this box:		and complete section D only.

¹ Separator water will either be sent to drain or shipped as waste. If separator water is discharged to sewer the sanitary authority must be notified (see Footnote 1 of Sheet 6c and Best Practice Guidelines for Dry Cleaning, Section 1.9.2). Separator water can also be treated further in a treatment unit after it is discharged from the machine. A treatment unit is a unit that removes solvent from the water. It usually consists of carbon filters, and may have air stripping as well. It does not include the single or double water separators on the dry cleaning machine itself. The resulting water is either sent to drain or evaporated/atomised.

Dry Cleaning Records Sheet 6c. Separator Water – Separator Water Disposal.

Start Date of 12-month Period	
End Date of 12-month Period	

A IF UNTREATED AND SENT TO DRAIN	
Have you notified the sanitary authority with details on separator water? ¹	<input type="checkbox"/> No <input type="checkbox"/> Yes
Water pollution licence number (if applicable): ²	
Solvent sent to drain in 12-month period (kg)	

B IF TREATED AND SENT TO DRAIN	
Have you notified the sanitary authority with details on separator water? ¹	<input type="checkbox"/> No <input type="checkbox"/> Yes
Water pollution licence number (if applicable): ²	
Name and model of the treatment unit	
Expected solvent concentration in water leaving treatment unit (mg/litre) ³	
Are used treatment unit filters disposed with solvent waste? Insert "Yes" or "No" ⁴	
How often are treatment unit filters replaced? (every..... weeks (average figure)) ⁵	
Solvent sent to drain in 12-month period (kg)	
Solvent adsorbed by treatment unit in 12-month period (kg)	

C IF TREATED AND EVAPORATED	
Have you notified the sanitary authority with details on separator water? ¹	<input type="checkbox"/> No <input type="checkbox"/> Yes
Water pollution licence number (if applicable): ²	
Name and model of the treatment unit	
Expected solvent concentration in water leaving treatment unit before evaporation (mg/litre) ³	
Are the used treatment unit filters disposed of with solvent waste? Insert "Yes" or "No" ⁴	
How often are treatment unit filters replaced? (every..... weeks (average figure)) ⁵	
Solvent evaporated in 12-month period (kg)	
Solvent adsorbed by treatment unit in 12-month period (kg)	

¹ If separator water is discharged to sewer, the sanitary authority must be notified in writing concerning 1. Results of solvent analysis of separator water sample from each machine, 2. Litres of separator water typically generated (e.g. data from week-long trial) and 3. Whether a treatment unit is used or not, and the expected concentration of solvents in the outlet from such a unit where used. This notification and any response from the sanitary authority should be filed for inspection.

² If granted a water pollution licence, insert the licence number here. A copy of the licence should be kept on file and all conditions within the water pollution licence adhered to. If no water pollution licence granted, then insert "no licence". If unsure as to whether water pollution licence is required, contact the sanitary authority and keep any correspondence on file for inspection.

³ Should be available in literature provided with unit.

⁴ Used carbon filters contain solvent and should be considered as hazardous and handled and treated (disposed) as hazardous waste.

⁵ Carbon filters should be replaced as per schedule recommended by manufacturer.



Dry Cleaning Records Sheet 6d. Separator Water – Separator Water Disposal (Continued).

Start Date of 12-month Period	
End Date of 12-month Period	

D IF SHIPPED AS WASTE⁶					
Solvent analysis in separator water (mg/litre):					
Date of Collection	Waste Transfer No.	Waste Collection Company	Location of Waste Recovery/ Disposal	Sep. water shipped as waste (litres)	Solvent in sep. water shipped as waste (kg)
Total solvent in separator water shipped as waste (kg)					

⁶ This sheet is for separator water handled as waste and collected by a waste contractor. Other solvent-containing waste must be recorded in Sheet 5a.

Dry Cleaning Records Sheet 7. Disposal of Carbon Absorbers.

Start Date of 12-month Period	
End Date of 12-month Period	

DISPOSAL OF CARBON FROM ADSORBERS ¹			
<i>This sheet accounts for any solvent contained in any carbon disposed during the 12-month period.</i>			
	Machine 1	Machine 2	Machine 3
The machine has a carbon adsorber? Insert "Yes" or "No" into box.			

If no adsorber on any machine, the remainder of this sheet can be ignored.

If there is(are) adsorber(s), fill in the following for the relevant machine(s).

If more than 3 machines in operation during the period under examination, please print Sheet 7a and fill in as required.

		Machine 1	Machine 2	Machine 3
Insert "yes" in one box only for each relevant machine²	The carbon adsorber is regenerated in-situ?			
	Or The carbon in the adsorber is not regenerated in-situ but replaced periodically by fresh carbon?			
Within the 12-month period has the carbon in the carbon adsorber in any machine been disposed and replaced?³		Machine 1	Machine 2	Machine 3
		<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes

If no to the above, Sheet 7b can be ignored.

If yes to any of the above, fill in Sheet 7b.

¹ A carbon absorber is used to remove solvent from air in the machine, from separator water or colour from liquid solvent.

² An adsorber that is regenerated in-situ is one equipped with the facility to periodically regenerate by steam or electrical heat and reuse the recovered solvent in the machine. Some carbon adsorbers are not equipped to regenerate in-situ. In the case of such adsorbers, the carbon is replaced on an intermittent basis, e.g. every year, and the spent carbon is taken away. Separator water adsorbers are usually the latter type. Carbon adsorber for removal of solvent from air can be of either type.

³ For carbon adsorbers which do not have the facility to regenerate in-situ, disposal of the spent carbon and replacement with fresh carbon occurs on a regular basis, typically once a year. The machine service company usually carries out replacement. This is relevant to carbon adsorbers for removal of solvent from air as well as carbon adsorbers for removal of solvent from separator water. For adsorbers which are regenerated on-site, the carbon will eventually lose its effectiveness after a period of time and require replacement. This may also be applicable to carbon adsorbers used to remove colour from the liquid solvent, where such carbon is replaced.

Dry Cleaning Records Sheet 7a. Disposal of Carbon Absorbers.

Start Date of 12-month Period	
End Date of 12-month Period	

DISPOSAL OF CARBON FROM ADSORBERS ¹			
<i>This sheet accounts for any solvent contained in any carbon disposed during the 12-month period.</i>			
The machine has a carbon adsorber? Insert "Yes" or "No" into box.	Machine ___	Machine ___	Machine ___

If no adsorber on any machine, the remainder of this sheet can be ignored.

If there is(are) adsorber(s), fill in the following for the relevant machine(s).

		Machine	Machine	Machine
Insert "yes" in one box only for each relevant machine	The carbon adsorber is regenerated in-situ? Or			
	The carbon in the adsorber is not regenerated in-situ but replaced periodically by fresh carbon?			
Within the 12-month period has the carbon in the carbon adsorber in any machine been disposed and replaced?		Machine ___ <input type="checkbox"/> No <input type="checkbox"/> Yes	Machine ___ <input type="checkbox"/> No <input type="checkbox"/> Yes	Machine ___ <input type="checkbox"/> No <input type="checkbox"/> Yes

If no to the above, Sheet 7b can be ignored.
If yes to any of the above, fill in Sheet 7b.

¹ Print sheet 7a and enter details as required. All instructions as per sheet 7.



Dry Cleaning Records Sheet 7b. Disposal of Carbon Absorbers.

Start Date of 12-month Period	
End Date of 12-month Period	

Insert "yes" in one box only, and leave the other boxes blank.

How was the waste carbon disposed?	Disposed with other solvent waste:		Specify, if "Other":
	Taken away by service company:		
	Other:		
Weight of Carbon disposed (kg)			
Solvent contained in the carbon ¹ (% weight/weight)			
Solvent disposed with carbon (kg)			

¹ An estimate will have to be made of the amount of solvent in the disposed cartridge.



Dry Cleaning Records Sheet 8. Spotting Chemicals.

Start Date of 12-month Period	
End Date of 12-month Period	

SPOTTING CHEMICALS CONTAINING VOCs								
<i>Some spotting chemicals contain volatile organic compounds (VOCs) and must be included in total solvent use.</i>								
PURCHASES OF SPOTTING CHEMICALS THAT CONTAIN VOCs								
Spotting Chemical Name ¹	Supplier Name	Contain VOCs?	VOC name(s) (if supplied) ²	VOC content (g/litre) ³	Invoice Number	Delivery Date	Quantity Purchased (litres)	Total Quantity VOCs (kg)
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
		<input type="checkbox"/> No <input type="checkbox"/> Yes						
Total solvent in spotting chemicals purchased (12-month period) in kg								

¹ Spotting chemicals are chemicals used to manually remove stains. Not all spotting chemicals contain VOCs. Check material safety data sheets (MSDS) to see if the chemicals used contain VOCs. If no spotting chemical used contains VOCs then the rest of the table can be ignored.

² VOC name should be available from MSDS. If not available state "not available".

³ State VOC content in grams/litre. Data should be available from the MSDS. If unsure of VOC definition, see Best Practice Guidelines for Dry Cleaning at www.epa.ie.

Dry Cleaning Records Sheet 9. 12-month Summary.

Start Date of 12-month Period	
End Date of 12-month Period	

12-MONTH SUMMARY

Solvent Stocks		
	At beginning of 12-month period	At end of 12-month period
Total solvent in stock in machine(s) (kg)		
Total solvent in stock in fresh containers (kg)		

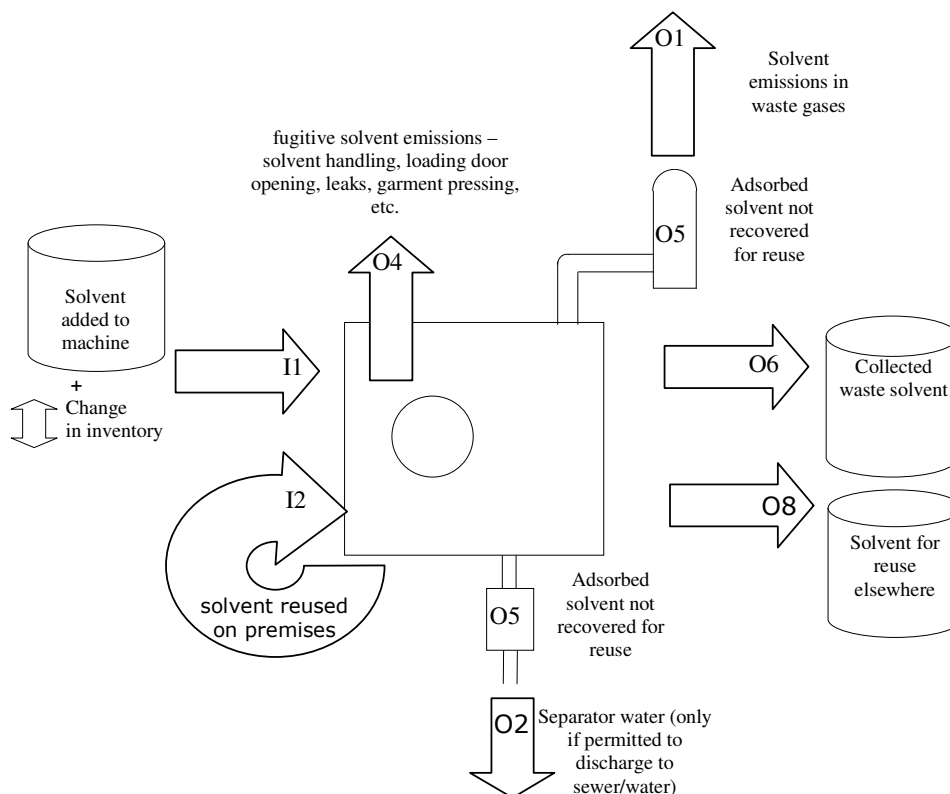
Solvent Usage		
Solvent usage (kg) (based on solvent added to the dry cleaning machine(s) & spotting chemical usage)		Solvent usage (kg) (based on purchases and change in stock) (for comparison with I1)
I1	compare with:	

Product Processed	
Product processed during 12-month period (kg)	

Solvent Output			
Any solvent released to water/sewer in separator water (kg) O2		Solvent waste for recovery or disposal (kg) O6a	Any solvent in separator water handled as waste for recovery or disposal (kg) O6b
Total Solvent Recovered/Disposed (O6a + O6b):			

Dry Cleaning Records Sheet 9. 12-month Summary – Emission Calculation.

Start Date of 12-month Period	
End Date of 12-month Period	



ACTUAL EMISSION

Calculation for emissions (O1 + O4 + O2):

Emissions = $([I1 - (O6 + \text{machine level change})] \times 1000 \text{ g/kg}) / \text{weight of work processed during year}$

Result: _____ g solvent emitted / kg clothes processed for the premises

Emission limit value = 20g solvent emitted / kg clothes processed.

If the emission limit value is greater than 20g solvent emitted /kg product processed, then the emission limit value is exceeded. Contact your local authority. The emission limit will need to be reduced. See Best Practice Guidelines for Dry Cleaning Part 2 for ways to reduce emissions.

Also, if operating emissions are close to the emissions limit value, emissions may need to be reduced to maintain compliance with the Regulations. See Best Practice Guidelines for Dry Cleaning Part 2 for ways to reduce emissions.