

Certification Europe

**AIC Dry Cleaning Report
under the
2002 Solvents Regulations**

AIC Insp no. 01-08 (DC-00182.08)P - Master Clean

IP03-05 Solvent Reg DC Report

Version: 2008

**Emissions of Volatile Organic Compounds from Organic Solvents Regulations
2002**

(S.I. No. 543 of 2002)

**Accredited Inspection Contractor (AIC)
Report for Dry Cleaning**

Name (legal entity) and address of the operator of the installation¹:

Caroline Kelly t/a Master Clean

1 Frances Street

Edenderry

County Offaly

Address of the installation (if different to operator address):

As above

RELEVANT ACTIVITY – DRY CLEANING

Scheduled Activity:	Solvent Consumption Threshold (t/yr):
Dry Cleaning	No Threshold

COMPLIANCE OR OTHERWISE OF THIS INSTALLATION WITH THE REGULATIONS

In accordance with article 24(1) of the Emissions of Volatile Organic Compounds from Organic Solvents Regulations 2002 (S.I. No. 543 of 2002), the undersigned Accredited Inspection Contractor inspector hereby declares that the above named installation is¹¹

- in compliance with the requirements of the Emissions of Volatile Organic Compounds from Organic Solvents Regulations 2002 (S.I. No. 543 of 2002).

MAJOR NON-COMPLIANCES, MINOR NON-COMPLIANCES, AND OBSERVATIONS

The undersigned Accredited Inspection Contractor inspector notes the following in relation to this installation:

Major Non-compliances (reason(s) for operation being non-compliant):	NONE <input type="checkbox"/>	
Minor Non-compliances (less serious issues which in time could become major non-compliances – inspection passed):		YES <input type="checkbox"/> See section 4 of the report
Observations (areas for improvement by the operator with a view to avoiding minor non-compliances in the future):		YES <input type="checkbox"/> See section 4 of the report

INSTALLATION DETAILS


Competent authorityⁱⁱⁱ: **Offaly County Council**

Type of installation:	new installation <input type="checkbox"/> (put into operation on or after 1 July 2003) <i>NB must be registered & obtain Certificate of Compliance before operating</i>
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Reason for reporting^{iv}: **new installation**

Register number^v: **To be assigned**

Solvent used in the period (I1) (kg)^{vi}: **112**

Inspector signature: 

Date: **18th August 2008**

Inspector name (print)^{vii}: **Alan Waddy**

Date of AIC inspection: **13th August 2008**

Accredited Inspection Contractor^{viii}: **Certification Europe Ltd.**

INAB reg. no^{ix}: **9005**

1 EMISSION LIMIT VALUE

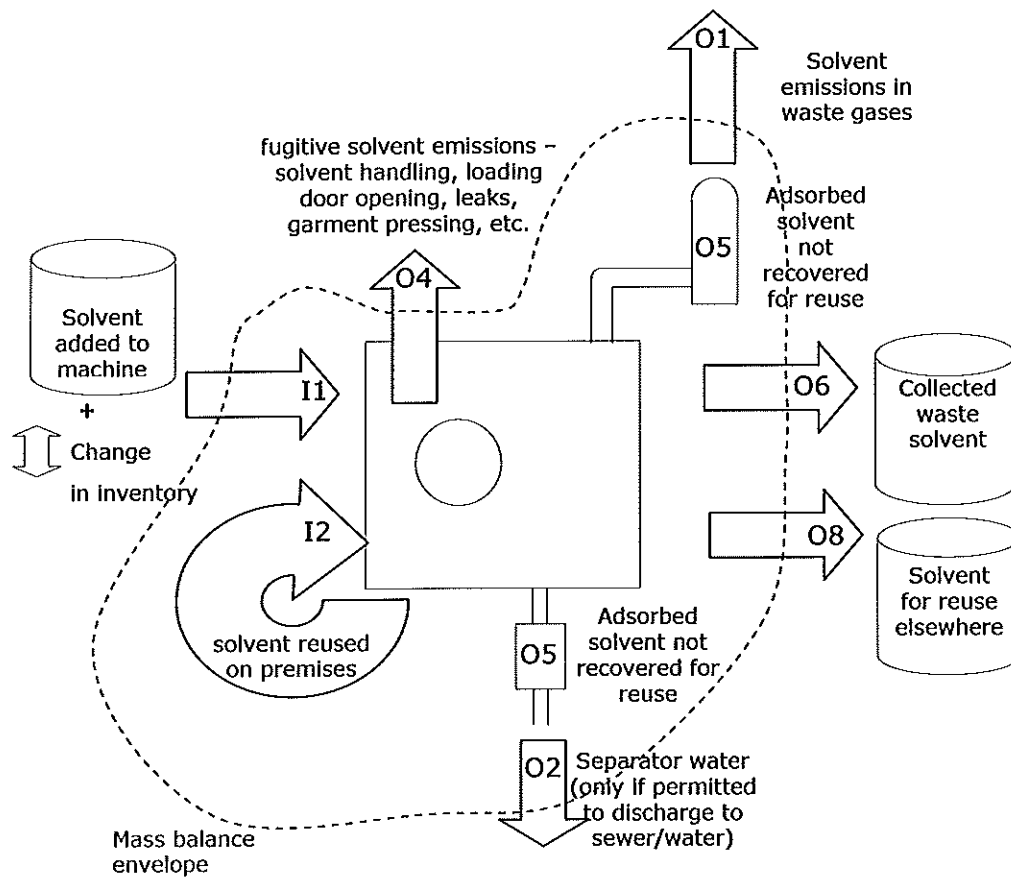
The Emission Limit Value (ELV) under the 2002 Regulations for dry cleaning is as follows:

Total Emission Limit Value (ELV) for Dry Cleaning Installations
20 g solvent emitted per kg of product cleaned and dried

2 SOLVENT MANAGEMENT PLAN

2.1 Relevant Mass Balance Terms & Values for the Installation

The mass balance terms for the solvent management plan in Schedule 6 to the 2002 Regulations that are relevant for dry cleaning are shown in the following illustration and subsequent table. The spreadsheet of records for dry cleaners also provides detail on how these terms are calculated.



Directive's Mass Balance Terms relevant to dry cleaning		Relevance to Dry Cleaning	Value for the Installation (kg) ^x
			12 month period: 02/02/08 to 04/08/08
Inputs of organic solvents (I):			
<i>I1</i>	<i>The quantity of organic solvents or their quantity in preparations purchased which are used as input into the process in the time frame over which the mass balance is being calculated</i>	Relevant. The amount of solvent put into the machine for the first time. The change of level of solvent in the machine between the start and end of the period is also added in. Use of spotting chemicals containing VOCs is also added.	112
Outputs of organic solvents (O):			
<i>O1</i>	<i>Emissions in waste gases</i>	Relevant. The amount of solvent emitted from the machine that isn't captured by the condensers or adsorbers.	WILL BE CALCULATED BY SOLVENT MANAGEMENT PLAN AS PART OF THE TOTAL EMISSION FIGURE
<i>O2</i>	<i>Organic solvents lost in water, if appropriate taking into account waste water treatment when calculating O5</i>	May be relevant for any solvent released to water/sewer in separator water, but only if sanitary authority allows discharge. ¹¹	WILL BE CALCULATED BY SOLVENT MANAGEMENT PLAN AS PART OF THE TOTAL EMISSION FIGURE
<i>O4</i>	<i>Uncaptured emissions of organic solvents to air.</i>	Relevant to dry cleaning. Includes leaks, emissions from opening doors, solvent handling, etc.	WILL BE CALCULATED BY SOLVENT MANAGEMENT PLAN AS PART OF THE TOTAL EMISSION FIGURE
<i>O5</i>	<i>Organic solvents and/or organic compounds lost due to chemical or physical reactions</i>	Only adsorption is relevant. May not be relevant for every facility. Applicable to solvent removal from air or separator water. Does not include adsorbed solvent that is regenerated and reused within the dry cleaning machine.	0
<i>O6</i>	<i>Organic solvents contained in collected waste</i>	Relevant - waste solvent itself plus solvent in carbon filters disposed. Also separator water if it is handled as hazardous waste.	53
<i>O8</i>	<i>Organic solvents contained in preparations recovered for reuse but not as input into the process</i>	Any waste sent away for recovery/recycling rather than disposal. May not be relevant to every dry cleaning facility.	0

Product Processed	
Product processed (kg)	Value for the Installation for the 12 month period 3,125

2.1 Solvent Management Plan Calculations

Taking the values for I1, O5, O6, and O8 as relevant from the table in section 2.1 and inserting them into the following mass balance equation:

$$\begin{aligned}\text{Actual total emissions: } (O1 + O2 + O4) &= I1 - (O5 + O6 + O8) \\ &= (112) - [(0) + (53) + (0)] \\ \text{Actual total emissions} &= 59\text{kg} \\ \text{(multiplying by 1000):} &= 59,000\text{g}\end{aligned}$$

3 DEMONSTRATION OF COMPLIANCE

$$\begin{aligned}\text{Total emission value} &= \text{Actual total emissions in g} / \text{Product processed in kg} \\ &= (59,000\text{g}) / (3,125\text{kg}) \\ &= 18.88\text{g/kg}\end{aligned}$$

As can be seen from the above, the installation:

- is in compliance
- with the total emission limit value of 20 g solvent emitted per kg of product cleaned and dried.

4 MAJOR AND MINOR NON-COMPLIANCES, & OBSERVATIONS¹²

4.1 Major Non-compliances

Major non-compliances: issues in relation to the Solvents Regulations which result in a failed inspection and must be rectified to ensure compliance is restored within the shortest time possible (if there is immediate danger to human health the operator must suspend operation until the competent authority allows restart of operations concerned).

Major non-compliance(s) in relation to the installation are as follows:

None

4.2 Minor Non-compliances

Minor non-compliances: issues in relation to the solvents Regulations which do not result in a failed inspection but which should be addressed by the operator in the next 12 month period, perhaps to avoid major non-compliances arising in future.

Minor non-compliance(s) in relation to the installation are as follows:

01/08 Opening and closing stocks for the amount of solvent in the machine tanks and the weight of solvent in waste drums (kg) were based on an estimation as readings were not taken at the beginning and end of the period of record keeping. These are not accurate measurements.

02/08 The scales used to weigh the loads has not been calibrated. The scales used to weigh the loads should be calibrated in house periodically. If any discrepancy is noticed a full calibration will be required.

03/08 Residue from the lint trap are cleaned every two loads and disposed of as domestic waste. *The Best Practice Guidelines for Dry Cleaners* states that this should be treated as hazardous waste as it is likely it will have some perc content.

04/08 Waste products are currently stored in a lane at the rear of the premises. This storage area will have to be reviewed as there are a number of drains in the area which could be affected in the event of a spillage. Section 9.1

of *The Best Practice Guidelines for Dry Cleaners* gives details on storage requirements.

4.3 Observations

Observations(s): issues in relation to the Solvents Regulations which do not result in a failed inspection but which should be addressed by the operator in the next 12 month period, perhaps to avoid minor non-compliances arising in future.

Observations(s) in relation to the installation are as follows:

- 05/08 An open container is used to collect separator water this can lead to avoidable fugitive emissions and spillages. The *Best Practice Guidelines for Dry Cleaners* recommend that the opening of the vessel used to collect the water from the separator unit should be as small as possible in order to reduce emissions and spillages.**
- 06/08 There is no Maintenance Programme or records of any maintenance work performed on the machine. These should be formalised; an example of maintenance programme can be obtained from *Appendix 5 of the Best Practice Guidelines for Dry Cleaners*.**
- 07/08 Waste containers are not labelled as containing Hazardous/Perc Waste. The *Best Practice Guidelines for Dry Cleaners* state that all Perc Waste should be marked as Hazardous. Labels may be available from the waste contractor.**

ENDNOTES TO THE AIC REPORT FOR DRY CLEANING

- ⁱ This should be a legal entity, i.e. either sole trader, or body corporate, and not simply a trading name or trading company. The operator address can be different to the address where the installation is located or is to be located.
- ⁱⁱ Tick that which is applicable based on the evidence of the site visit and section 3 of the AIC report.
- ⁱⁱⁱ Indicate who the competent authority is. In the case of activities which are IPPC licensable, the competent authority is the EPA. For all other scheduled solvent activities, the competent authority is the county council or city council in whose functional area the installation is located.
- ^{iv} Tick whether the AIC report is being submitted to fulfil the annual reporting requirement, or because a substantial change is planned for the installation, or because the installation is a new installation which has not yet commenced operation.
For dry cleaning, a substantial change is where:
- There is a change in the nominal capacity (i.e. additional machines or a new larger machine) leading to an increase of more than 25% in **emissions** of VOCs, or where
 - The local authority decides a change is a substantial change if it considers it may have significant negative effects on human health or the environment.
- Note that a replacement machine, or even an additional machine, **may not** result in a 25% emissions increase, since new machines emit less than older models.
- ^v This is the register number assigned to the installation by the competent authority. If this is the first AIC report to be submitted for the installation, a register number will not yet have been assigned. In this case insert "to be assigned" in this section. If an installation has previously submitted an AIC report to the competent authority, a register number will have been assigned to the installation on the certificate of compliance. In this case insert this register number, if known.
- ^{vi} Insert value for I1 from the solvent management plan in section 2.
- ^{vii} The name of the person - the Accredited Inspection Contractor (AIC) inspector - who carried out the site visit and compiled the AIC report. Remote electronic submittal will require the approval of the competent authority e.g. subject to electronic signature.
- ^{viii} The name of the accredited inspection contractor organisation or company.
- ^{ix} This is the reference number assigned to the accredited inspection contractor by the Irish National Accreditation Board (INAB) in accordance with the list referred to in article 22 of S.I. No. 543 of 2002.
- ^x Insert here the values for I1, and as relevant O5, O6, and O8 that have been calculated for the installation.
- ¹¹ A waste containing perchloroethylene would be hazardous by carcinogenic (H7) at $\geq 1\%$ and by ecotoxic (H14) at $\geq 2.5\%$. (Source: Environment Agency (UK) *Hazardous Waste Interpretation of the definition and classification of hazardous waste (2nd edition v2.1)*).
- ¹² Look at previous AIC reports to see if previous minor non-compliances or observation have been addressed.