



Hereby Permit

Delta GBN Limited

To Operate A Part B Installation At

Lodgefield Road, Halesowen, West Midlands, B62 8AX

Under The Provisions of

THE POLLUTION PREVENTION AND CONTROL ACT 1999

THE POLLUTION PREVENTION AND CONTROL (ENGLAND AND WALES)
REGULATIONS 2000 (AS AMENDED)

SOLVENTS EMISSIONS (ENGLAND AND WALES) REGULATIONS 2004

Permit Reference Number

PB/42

Date Initial Permit Issued

31st October 2007

A handwritten signature in black ink, appearing to read "Tim Glews", is written over a dotted line.

Tim Glews

Environmental Protection Manager

(Authorised to sign on behalf of Dudley Metropolitan Borough Council)

Dated: 31st October 2007

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INTRODUCTORY NOTE TO PERMIT

The Permit is issued by Dudley Metropolitan Borough Council (the Council) under Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I. 2000 No.1973), as amended, ("the PPC Regulations") to operate an Installation carrying out activities covered by the description in Part 1 of Schedule 1 of the PPC Regulations, to the extent authorised by the Permit.

Aspects of the Installation not regulated by specific Permit conditions are subject to a general condition implied by Regulation 12(10) of the PPC Regulations i.e. the operator must use the best available techniques for preventing or, where that is not practicable, reducing emissions from the Installation. Techniques include both the technology used and the way in which the Installation is designed, built, maintained, operated and decommissioned.

The requirements of this Permit shall be effective from the date of service unless otherwise specified within the Permit. Where a Variation Notice has been served the conditions contained within that Variation Notice shall be effective from the date that the Notice is served, unless a specific implementation date is allocated to specific conditions.

For the purpose of this permit the legal operator of the Installation is Delta GBN Limited, Lodgefield Road, Halesowen, West Midlands, B62 8AX.

DESCRIPTION OF INSTALLATION

The activity at the Installation includes an anti-corrosion coating process for small industrial components which utilises approximately 10 tonnes of solvent per annum.

An enclosed vapour degreasing machine using below 1 tonne per annum of Perchloroethylene is used to clean components at the Installation. The degreasing machine has an integrated carbon solvent recovery unit and is ventilated directly to atmosphere via one chimney stack.

The raw materials used for coating purposes are delivered to the Installation in sealed containers and are stored within the process building until required for use.

A Tilghman and a Blastcom shot blast units are used to shot blast components. The shot blast units exhaust to the external air via a bag filter unit which discharges into a vertical stack.

Components are coated either by dip spin coating or on a drip drain plant.

The dip drain plant includes a dipping tank, one dry back spray booth for drip removal (by air gun), one dry back spray booth for occasional spray application (Electrostatic or HVLP), and

two overhead track tunnel ovens. The spray booths are vented directly to atmosphere via two chimney stacks. The two track tunnel ovens are vented directly to atmosphere via two chimney stacks.

A dipping machine and associated air spinner is used for dip spin coating. The dipping machine is not vented to atmosphere. A small self-enclosed dip spin plant which is used occasionally for sampling, is vented directly to atmosphere via a single chimney stack. Dipped components are spun dry and cured on a belt oven. The belt oven is vented directly to atmosphere via a single chimney stack.

Waste material arising from the process consists of a dry flake and waste containers.

This Installation falls within the definition of Part 1 Section 6.4, Part B (a) (iv) of Schedule 1 of the Pollution Prevention And Control (England and Wales) Regulations 2000 (as amended). The attached location plan "Appendix 1 – Site Plan PB/42" shows the designated site.

STATUS LOG

| Detail | Reference | Date |
|-------------------------|-----------|-------------------------------|
| Deemed Application Made | PB/42 | 1 st April 2004 |
| Permit Issued | PB/42 | 31 st October 2007 |

CONDITIONS

1.0 THE PERMITTED INSTALLATION

- 1.1 The permitted Installation shall be comprised of the activities and associated activities specified in Table 1.1

| Table 1.1 | |
|---|--|
| Activity listed in Schedule 1 of PPC Regulations or Associated Activity | Description of specified activity |
| Directly Associated Activity - Preparation of metal components. | The shot blasting of metal components. Degreasing of metal components. |
| Section 6.4 – Coating Activities, Part B (a) (iv) Section 7 – SED Activities, Part B | The application of paint involving the use of 5-15 tonnes of organic solvent in any 12 month period. |
| Directly Associated Activity – Handling of waste materials | Collection and storage of waste including collected dust, used thinners and paint tins. |

- 1.2 The activities authorised under Condition 1.1 shall not extend beyond the site, being the area shown hatched on the Site Plan PB/42 in Appendix 1 to this Permit.
- 1.3 If there is any intention to change any aspect of the installation from the description of the installation at the beginning of this permit, or any other aspect which may affect the substances, or concentration or mass emission of substances being emitted to air, the operator shall notify the Council of the proposed changes at least 4 weeks before the changes take place.

2.0 EMISSION LIMITS AND CONTROL

- 2.1 All emissions to air shall be free from persistent fume, persistent mist and droplets.
- Emissions which comply with the provisions of Condition 2.3 and consist entirely of steam and/or condensed water vapour are permissible.
- 2.2 Emissions from combustion processes shall, in normal operation, be free from visible smoke and in any case shall not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS 2742:1969.
- 2.3 All emissions to air shall be free from offensive odour outside the Installation boundary as perceived by an authorised officer of the Council.
- 2.4 The introduction of dilution air to achieve emission concentration limits contained within this permit is not permitted. Exhaust flow rates shall be consistent with the efficient capture of emissions and good operating practices.
- 2.5 The limit for emissions to air from contained emission points set out in the Table 2.5 shall not be exceeded.

| Table 2.5 | | |
|--------------------|---------------------------------|--|
| Pollutant | Emission Source | Concentration Limit |
| Particulate Matter | Stacks serving shot blast units | 50 mg/Nm ³ as 30 minute mean for contained sources. |
| | Stacks serving spray booths | |
| | Sampling dip spin plant | |

The concentrations of substances measured in accordance with this condition shall be expressed at reference conditions 273.15K and 101.3 kPa, without correction for water vapour.

3.0 SOLVENT EMISSIONS DIRECTIVE

- 3.1 Compliance with the Solvent Emissions Directive shall be via the Contained and Fugitive Emission Limit Route. The operator shall by the 31st January 2008 calculate and submit to the Council a determination of the Fugitive Emission Value for the Installation. The calculation shall be carried out in accordance with the methodology detailed in the Solvent Management Plan attached to this Permit as Appendix 3 where the term Fugitive Emission Value is defined. This exercise shall be repeated within three months of any modification of equipment being carried if the modification is likely to affect the fugitive emission value of the Installation.
- 3.2 The Operator shall by the 31st January 2008 and annually thereafter, submit to the Council a calculation of the annual "consumption of organic solvent" (C). The calculation shall be carried out in accordance the "solvent management plan" attached to this Permit as Appendix 2.
- 3.3 Emissions to air of Volatile Organic Compounds from the stacks serving the spraybooths, sampling dip spin plant and ovens shall not exceed the limit set out in the Table 3.3 below.

| Table 3.3 | | | |
|---------------------------------|---|---|------------------------------|
| Solvent Consumption | Parameter | Source | Limit |
| Solvent Consumption 5-15 tonnes | VOC expressed as total mass of organic matter | Stacks serving spraybooths, sampling dip spin plant and ovens | 100mg Carbon/Nm ³ |

- 3.4 The Fugitive Emission Value for the Installation shall not exceed 25% of the Solvent Input determined in accordance with the Solvent Management Plan attached to this Permit as Appendix 3 where the terms Fugitive Emission Value and Solvent Input are defined.
- 3.5 At no time shall the operator use any halogenated volatile organic compounds carrying any of the risk phrases R45, R46, R49, R60, R61, within the installation without the prior approval of the Council. The term 'risk phrase' shall have the same meaning as in Directive 67/548/EEC.
- 3.6 The operator shall monitor and record the consumption of coatings/organic solvent against product produced. This information shall be used to implement a programme to minimise the amount of excess organic solvent/coating used at the Installation.

- 3.7 The Operator shall notify the Council immediately where the use of Perchloroethylene within the installation exceeds one tonne.

4.0 MONITORING, SAMPLING AND MEASUREMENT OF EMISSIONS

- 4.1 Emissions from the stacks serving the shot blast units and spray booths, detailed in Table 2.5 shall be monitored for concentrations of total particulate matter once every 12 months to demonstrate compliance with the emission limit stipulated in Condition 2.5. Emissions from the stack serving the sampling dip spin plant shall be monitored for concentrations of total particulate matter to demonstrate compliance with the emission limit stipulated in Condition 2.5, when requested by the Council.
- 4.2 Emissions from the stacks serving the spraybooths and ovens shall be monitored for concentrations of volatile organic compounds once every 12 months to demonstrate compliance with the emission limit stipulated in Condition 3.3. Emissions from the stack serving the sampling dip spin plant shall be monitored for concentrations of volatile organic compounds to demonstrate compliance with the emission limit stipulated in Condition 3.3, when requested by the Council.
- 4.3 The Operator shall notify the Council in writing at least 21 days before the commencement of any monitoring exercise undertaken in accordance with Condition 4.1 and 4.2. The notification shall include the name and address and any other relevant details of the person(s) or company engaged to undertake the monitoring exercise; the time, and date, on which the monitoring exercises are scheduled to begin, together with a full specification of the monitoring programme including the proposed sampling and analysis techniques.
- 4.4 During monitoring exercises the process being monitored must be operated under normal conditions, at full capacity and unless otherwise instructed by Officers of the Council, the monitoring shall be undertaken over the whole production cycle.
- 4.5 All non-continuous emission monitoring of particulate matter shall be carried out according to the main procedural requirements of BS ISO 9096:2003 and/or BS EN 13284-1: 2002, with samples taken during periods of maximum emission.
- 4.6 The results of non-continuous emissions monitoring undertaken in accordance with Condition 4.1 and 4.2 including process conditions at the time of testing shall be forwarded to the Council within 28 days of the completion of the testing unless otherwise agreed. A record of these results shall be maintained in accordance with Condition 7.1 of this Permit.
- 4.7 Adequate and safe facilities to enable monitoring/sampling to be carried out in accordance with Condition 4.1 and 4.2 shall be provided at the emission points specified in that condition.

- 4.8 All stacks shall be observed for any visible emissions to air once per shift for a period of at least five minutes. The observations shall be made from a position providing an unobstructed view of the point of emission to air by a responsible person who has been instructed to carry out these duties. A record of all observations shall be maintained in accordance with Condition 7.1. The records shall include an assessment of the nature and severity of any emission observed, the source of emissions to air, details of any corrective action taken and the identity of the person making the record.

The Council shall be notified as soon as practicable if emissions to air are observed which may contravene any conditions of this authorisation immediate action shall be taken to determine the cause of the emission and to prevent or minimise further emissions.

- 4.9 The Installation shall be assessed for emissions of odour to air once per shift for a period of at least 5 minutes. The olfactory assessment shall be made from points on the Installation boundary where odour emissions are most likely to be detected taking into account the wind direction, wind speed, source of odour and location of receptors, by a responsible person who has been instructed to carry out these duties. A record of all olfactory observations shall be maintained in accordance with Condition 7.1.

The records shall include a subjective assessment of the nature and severity of any odour detected, the wind direction and strength, weather conditions, likely source of emissions to air, details of any corrective action taken and the identity of the person making the record.

The Council shall be notified as soon as practicable if odour emissions are detected which may contravene any condition of this Permit and immediate action shall be taken to determine the cause of the emission and to prevent or minimise further emissions.

5.0 PROCESS CONTROLS

- 5.1 The solvent cleaning of plant, equipment and materials shall be carried out in such a manner that emissions of volatile organic compounds are reduced to an absolute minimum.
- 5.2 Spray coatings shall only be applied using low pressure (conventional or HVLP) guns, high pressure (airless) systems or any electrostatic application system.
- 5.3 Paint spray guns and associated equipment shall be cleaned using a totally enclosed cleaning machine, which is provided with the minimal necessary extract ventilation. Where this is not practicable cleaning shall be carried out in

accordance with manufacturer's instructions within spray booths with the extract ventilation in operation.

- 5.4 The paint spraying process and any other process which may give rise to emissions of particulate matter into the air shall be carried out within enclosed buildings, thereby minimising fugitive emissions of particulate matter and odour.
- 5.5 Prior to disposal used wipes and other items contaminated with organic solvent should be placed into labelled metal containers fitted with self closing lids.
- 5.6 All waste substances containing solvents shall be stored in closed containers while awaiting removal from site for disposal or re-processing.
- 5.7 An adequate supply of suitable absorbent material shall be kept on site for use in the case of liquid spillages.
- 5.8 Spillages of liquids and finely divided materials shall be cleaned up immediately. Liquid spillages shall be contained and cleaned up by the use of a suitable absorbent material. Spillages of finely divided materials shall be removed by means of vacuum cleaning using an industrial grade vacuum cleaner or by wet cleaning methods, dry sweeping shall not be permitted. Any used absorbent material contaminated with substances containing solvents shall be stored in a closed container pending removal from site.
- 5.9 Accumulations of waste particulate matter arising from the shot blast units and any other particulate matter including filter material shall be collected and transported around the site in covered containers or sealed bags and stored whilst awaiting removal for disposal in covered containers or sealed bags within a waste materials skip or inside an enclosed building.
- 5.10 Drums and containers containing liquid materials, whether full, partly full or empty, shall be kept tightly closed to prevent any emissions to air.
- 5.11 The raw materials used in the prescribed process and all waste materials produced from the prescribed process shall be handled with care to prevent or reduce to an absolute minimum any emissions of particulate matter and volatile organic compounds to air.
- 5.12 Chimneys and vents from which it is necessary to achieve dispersion of the residual pollutants shall not be fitted with any restrictive plates, caps or cowls at the final opening.
- 5.13 Adequate insulation shall be provided to stacks to minimise the cooling of waste gases and prevent liquid condensation by keeping the temperature of the exhaust gases above the dew point.

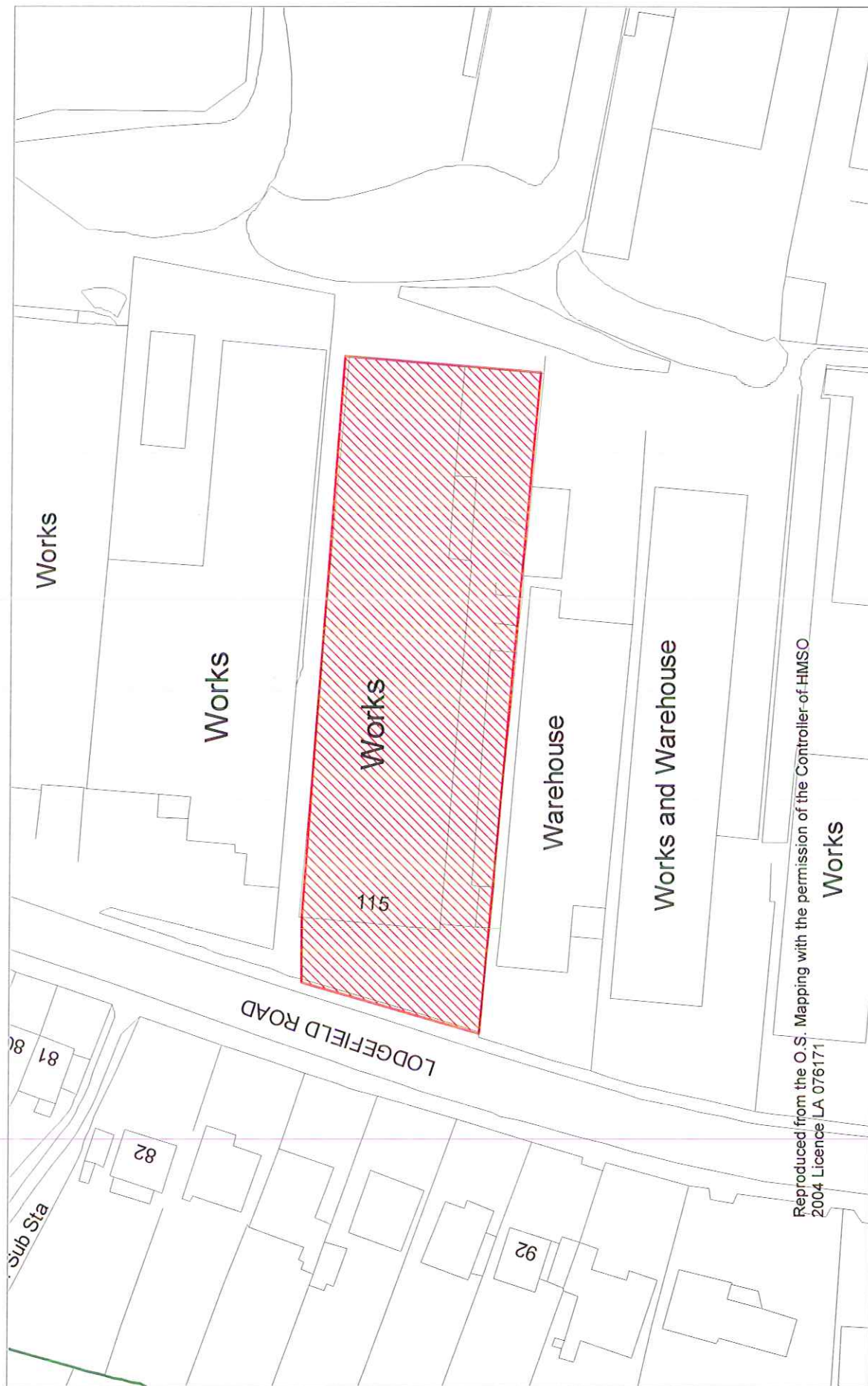
6.0 GENERAL CONDITIONS

- 6.1 The Operator shall maintain and implement written procedures to ensure that regular cleaning and effective preventative maintenance in accordance with the manufacturer's instructions is employed on all plant, equipment and technical means concerned with the production, capture, transport, control and exhaust of emissions which could lead to an adverse impact on the environment. A record of relevant maintenance shall be maintained in accordance with Condition 7.1.
- 6.2 Essential spares and consumables shall be held on site or shall be available from a guaranteed supplier at short notice so that plant breakdown can be rectified rapidly.
- 6.3 Staff at all levels shall receive the necessary formal training and instruction in their duties relating to control of the process and emissions to air. Particular emphasis shall be given to training for start-up and shut-down and action required to minimise emissions during abnormal conditions.
- 6.4 The Operator shall maintain a record in accordance with Condition 7.1 of the skills and training requirements for all staff whose tasks in relation to the Installation may have an impact on the environment and shall keep records of all relevant training.
- 6.5 In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions the operator shall investigate immediately and take corrective action, adjust the process or activity to minimise the emissions and promptly record the events and actions taken. Any malfunction or breakdown which results in emissions to atmosphere which are likely to cause an adverse effect on the local community shall be reported to the Council immediately, and a record of the incident shall be maintained in accordance with Condition 7.1.

7.0 RECORDS

- 7.1 The Operator shall ensure that all records required to be made by this Permit and other records made by it in relation to the operation of the Installation shall:
- (a) be made available for inspection by the Council at any reasonable time;
 - (b) be supplied to the Council on demand and without charge;
 - (c) be legible;
 - (d) be made as soon as reasonably practicable;
 - (e) indicate any amendments which have been made and shall include the original record wherever possible; and
 - (f) be retained at the Installation, or other location agreed by the Council in writing, for a minimum period of 4 years from the date when the records were made, unless otherwise agreed in writing.

APPENDIX 1 – SITE PLAN PB/42
Delta GBN Limited



APPENDIX 2 – SOLVENT MANAGEMENT PLAN CALCULATION OF ANNUAL CONSUMPTION OF ORGANIC SOLVENT

The Solvent Management Plan provides a methodology to calculate the “Annual Consumption of Organic Solvent” (C). The information detailed below shall be compiled for each accounting period and submitted to the Council in accordance with the relevant Permit condition.

The steps to be followed for this calculation are shown in 1 to 4 in the box below. The information contained in the box has been extracted from the relevant process guidance note. In order to ensure consistency the various “I” and “O” parameters listed in the box have been assigned the same numbers as those assigned to the same parameters in the “Secretary of State’s Process Guidance Note”.

Determination of Solvent Consumption

the following steps should be followed:

- (1) Record the following details:
 - (a) the mass of solvent contained in raw materials and preparations in the initial stock (**IS**) at the start of the accounting period, plus;
 - (b) the mass of solvent contained in raw materials and preparations in the purchased stock (**PS**) during the accounting period;
 - (c) the mass of solvent contained in raw materials and preparations in the final stock (**FS**) at the end of the accounting period.

- (2) Calculate the total organic solvent input using the formula $I_1 = IS + PS - FS$

- (3) Calculate and state the annual consumption of organic solvent (C) using the following:

$$C = I_1 - O_8$$

where: I_1 = Total quantity of organic solvents or their quantity in preparations purchased which are used as input into the process/activity.

O_8 = Organic solvents contained in preparations recovered for reuse but not as input into the process/activity.

- (4) From the calculation of total organic solvent input in (2) above, determine whether any of the products, substances or preparations are designated assigned or needs to carry the risk phrases R40, R45, R46, R49, R60 or R61. If any such materials are identified their individual product description, risk phrase designation, quantity (kilograms) and product use shall be detailed.

APPENDIX 3 – SOLVENT MANAGEMENT PLAN

The Solvent Management Plan (SMP) provides definitions and calculations that are used if the Emission and Fugitive Limits route of compliance is chosen. Determination of Solvent Consumption detailed in Step 1 below shall be compiled for each accounting period and submitted to the Council within three months of the accounting period.

The SMP is also used to determine Fugitive Emission Values for an Installation using Steps 1 to 4. Once the determination has been completed it need not be done again unless modifications are carried out on equipment that is likely to affect the Fugitive Emission Value.

The steps required to carry out the above calculations contain information extracted from the relevant process guidance note.

For the purposes of consistency the various I and O parameters detailed below have been assigned numbers which correspond to those assigned to the same parameters in the "Secretary of State's Process Guidance Note".

Step 1: Determination of Solvent Consumption

The following steps should be followed:

- (1) Record the following details:
 - (a) the mass of solvent contained in raw materials and preparations in the initial stock (**IS**) at the start of the accounting period, plus;
 - (b) the mass of solvent contained in raw materials and preparations in the purchased stock (**PS**) during the accounting period;
 - (c) the mass of solvent contained in raw materials and preparations in the final stock (**FS**) at the end of the accounting period.
- (2) Calculate the total organic solvent input using the formula $I_1 = IS + PS - FS$
- (3) Calculate and state the annual consumption of organic solvent (C) using the following:

$$C = I_1 - O_8$$

Where: I_1 = Total quantity of organic solvents or their quantity in preparations purchased which are used as input into the process/activity.

O_8 = Organic solvents contained in preparations recovered for reuse but not as input into the process/activity.

Step 2: Determination of Solvent Input (I)

Using the total Organic Solvent Input (I_1) calculated in Step 1 above calculate the Solvent Input (I)* using the formula $I = I_1 + I_2$

Where I_2 = The quantity of organic solvents or their quantity in preparations 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.)

*NB. Total Organic Solvent Input (I_1) should not be confused with Solvent Input (I)

Step 3: Determination of Fugitive Emissions

Determine Fugitive Emissions (F) from the Installation using either of the following calculations:

$$F = I_1 - O_1 - O_5 - O_6 - O_7 - O_8$$

or alternatively

$$F = O_2 + O_3 + O_4 + O_9$$

Definitions

I_1 = The quantity of organic solvents, or their quantity in preparations 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).

O_1 = Emissions in waste gases.

O_5 = 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 O_6 , O_7 or O_8).

O_6 = Organic solvents contained in collected waste.

O_7 = Organic solvents, or organic solvents contained in preparations, which are sold or are intended to be sold as a commercially valuable product.

O_8 = Organic solvents contained in preparations recovered for reuse but not as input into the process/activity, as long as not counted under O_7 .

O_2 = Organic solvents lost in water, if appropriate taking into account waste water treatment when calculating O_5 .

O_3 = The quantity of organic solvents which remains as contamination or residue in products output from the process/activity.

O_4 = 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.

O_9 = Organic solvents released in other ways.

Step 4: Determination the Fugitive Emission Value

Determine the Fugitive Emissions Value as a percentage of the Solvent Input (I) using the following calculation:

$$\text{Fugitive Emission Value} = 100 \times F/I$$

