SEPA scottish environment protection agency

ENVIRONMENT AGENCY

ENVIRONMENT AND HERITAGE SERVICE

ENVIRONMENTAL ALLIANCE – WORKING TOGETHER

GARAGES AND VEHICLE SERVICE CENTRES: PPG19

POLLUTION PREVENTION GUIDELINES

These notes are intended to assist all who are involved in the management and maintenance of garages and similar vehicle servicing operations. Compliance with these guidelines should minimise the risk of pollution occurring. They have been produced by the Environment Agency for England & Wales, the Scottish Environment Protection Agency and the Environment and Heritage Service in Northern Ireland, which are referred to here as the Agency or Agencies. Each site should be considered according to individual circumstances and early consultation with your local Agency office is advisable, details of which appear at the end of these guidelines.

Note that in these guidelines the term 'oil separator' is used instead of 'oil interceptor'. The terms have the same meaning.

1. INTRODUCTION

These guidelines focus on environmental risks which are specific to vehicle preparation and maintenance activities. They supplement the general guidance provided in the Agencies' document "Preventing pollution on industrial sites" (PPG11 - Reference 1) and should, therefore, be read in conjunction with it. They do not provide specific guidance on fuel and petrol filling stations. These activities are the subject of a separate guidance note, PPG7 - Reference 2.

2. ENVIRONMENTAL ASPECTS OF VEHICLE MAINTENANCE ACTIVITIES

Garages and service centres carry out a number of operations and processes that have the potential to damage the environment. These include the dewaxing and cleaning of vehicles, the storage, use and disposal of polluting liquids such as oils, paints, solvents, antifreeze and other coolant additives, brake fluids and solid waste such as oil filters, exhaust systems, batteries and tyres. Unless the site drainage is correct, waste is properly managed and spillage control procedures are in place, environmental harm could occur.

3. SITE DRAINAGE

An accurate site drainage plan should be kept available. All garages should have an oil separator installed on the surface water drainage system. Separators must be regularly inspected and cleaned as required. Keep a log of inspections and cleaning. Guidance on oil separators is available from the Agencies (PPG3 - Reference 3).

Surface water gullies and manhole covers should be colour coded, using blue for surface water systems and red for foul. Clean, uncontaminated roof water should discharge directly to the surface water system downstream of any oil separators. Roof water downpipes should be connected directly to the surface water system using sealed top, side entry gullies, or direct drain points, rather than discharging into open grates.

All discharges of contaminated water from vehicle and component cleaning, wash basins, and compressors should be discharged to the foul sewer. They should not be connected to roof water down pipes. Such discharges will require authorisation by the appropriate sewerage undertaker and may be subject to the terms and conditions of a trade effluent consent. Where reference is made in this guidance to disposal to sewer, such approval must be sought.

A pollution incident response plan should be drawn up (see PPG21 - Reference 4 for guidance on this and a plan template) and staff should be informed of pollution risks and trained in how to deal with spillages on site. Suitable materials and equipment should be held to deal with spillages.

4. VEHICLE MAINTENANCE AREAS AND BODY SHOPS

Internal gullies or grids must not drain to the surface water system. If the workshop pit is subject to water infiltration, and is served by a gully and pump, then this should be directed to the foul sewer. Areas where maintenance or dismantling activities are carried out must have an impermeable surface and a raised edge with drainage to a sealed sump or via an oil separator to the foul sewer.

Care should be taken in handling waste materials such as antifreeze, batteries and battery acid, solvents and oil to avoid contamination of surface water drains (See Section 5).

5. WASTE MANAGEMENT

The correct handling, storage and disposal of waste materials and fluids is vital if pollution is to be avoided. Schemes which aim to minimise waste and increase recycling are encouraged. The Duty of Care (Reference 5) requires that waste producers and holders ensure that waste does not escape from their control and is passed only to an authorised person, accompanied by a transfer note with full written description.

Solvents, batteries, used oil, brake shoes containing asbestos and in some cases oil separator wastes are subject to the Special Waste Regulations and there are additional controls on their storage, movement and disposal. Care should be taken to identify those wastes which are "Special", to understand the requirements and ensure compliance (Reference 6).

a. Disposal of waste liquids

Used liquids, such as hydraulic fluid, coolant and solvents from degreasing activities, must not be disposed of into surface water systems. They should be collected separately in sealable containers for recycling or disposal. Several companies offer a collection service for hydraulic fluid, antifreeze and solvents and equipment for on-site coolant recycling is available. Alternatively, these may be collected for disposal by a licensed waste carrier or, with the exception of solvents, discharged to the foul sewer.

Used lubricating oil should be collected separately in a suitably bunded tank. This oil can be collected for recycling or under some circumstances may be used for heating. Detailed guidance on storage and disposal of used oils is available (PPG8 - Reference 7).

b. Batteries

Batteries containing acid should be stored intact and upright in an acid resistant bunded compound or purpose built bin. Both the lead and the plastic cases can be recycled, so they should be collected for sale to an authorised contractor.

Storage can be minimised by the use of one-for-one exchange schemes, whereby old batteries are collected when new ones are delivered.

c. Tyres and other discarded dry parts

Tyres must never be burnt on site. They can be treated as a dry material for storage, but if burnt, release compounds that are extremely polluting. Tyres should be disposed of by a suitably licensed tyre incinerating or recycling company.

Tyres, old exhausts and other discarded car parts should be stored securely to prevent theft, vandalism, or arson. Under Fire Regulations, where large quantities of tyres are stored, piles should not exceed 50 m^3 and should be 3 m from each other or a building.

d. Oil filters and other oil contaminated components.

There are collection schemes available for used oil filters. These entail the supply and collection of drums into which the filters are placed. Alternatively, discarded oil filters can be crushed on site and the oil and metal recovered. Intact or crushed filters and other oil contaminated parts such as engines, gearboxes and axles should be stored either in a sealed container or within an impermeable bunded area, preferably roofed to prevent the entry of rain.

e. Other wastes

Skips should have a designated use and be clearly marked to indicate what materials they may be used for. Material stored in skips should be drained or dry and the skips covered to prevent the entry of rainwater and watertight to prevent leakage. If any contaminated liquid does accumulate, it should be removed and suitably disposed of. Note that scrap metal is a waste and as such the Duty of Care applies and transfer notes will be required.

6. OIL, FUEL & CHEMICAL STORAGE

a. Above ground storage tanks

Detailed guidance covering above ground storage tanks is available from the Agencies (PPG2 - Reference 8). All oil storage tanks and drums, including waste oil, should be sited on an impermeable base within an oil-tight bund wall. No damp course should be provided in the bund wall structure and there should be no drainage outlet. The volume of the bunded area should be calculated in accordance with the guidance in Reference 8. Any fill and draw pipes, valves and sight gauges should be enclosed within its curtilage and tank vent pipes should be directed downwards into the bund, so that in the event of overfilling the discharge is contained. Bunds should be examined on a regular basis and any rainfall that accumulates removed by bailing or by pumping under a manually controlled system. This water may be contaminated and should be disposed of with care. In England, regulations setting minimum standards for the storage of oil at industrial and commercial premises were introduced in 2001 (Reference 9).

Internal storage tanks should also be bunded as above and, if served by a remote fill point, the drainage from the area should pass through a suitably sized oil separator. A high level alarm, which provides an additional safeguard against overfilling, is recommended for all storage tanks.

b. Underground storage tanks

Underground tanks and pipelines are susceptible to damage and corrosion, and above ground facilities are preferred. In areas of high groundwater vulnerability (Reference 10 and 11) the Agency may object to the installation of underground storage tanks. Where underground storage is necessary, a number of protective measures, such as double skinned tanks and piping and leak detection may be required. Regular inspection, stock reconciliation and pressure testing are essential, especially where groundwater pollution could occur. The location of underground piping should be identified and clearly marked in order to avoid damage through excessive surface loading.

c. Chemical storage

Where chemicals such as antifreeze, paints, detergents, degreasers, solvents and hydraulic fluids are stored, arrangements similar to those described in Section (6a) and (6b) may be used. Alternatively, or in addition, secure bunded storage cabinets could be considered. They are available in a variety of sizes, according to the capacity required. Particular care should be taken to ensure that containers and bunds are resistant to attack from the stored substance. Storage vessels should be labelled to show their contents and should be kept as close to the point of use and as far from surface water drains as possible.

d. Refuelling facilities

The risk of pollution from refuelling areas is especially high. Such areas should be isolated from general yard drainage, (for example by using a raised kerb or roll-over bund). Particular care should be taken in the cleaning of such areas (See Section 7b). Separate guidance on fuelling areas is available on request. (PPG7 - Reference 2)

7. DEGREASING AND CLEANING

a. Vehicle dewaxing and cleaning

The dewaxing, cleaning and degreasing of vehicles and components must be carried out in a designated washbay and not on unmade ground or in areas which discharge to surface water drains, watercourses or soakaway. A wash water recycling system will reduce water use and associated costs. The washbay should be impermeable and isolated from the surrounding area by a raised kerb or roll-over bund, with the effluent directed to foul sewer. If there is no foul sewer available, the effluent should be drained to a sealed sump. Effluent from high pressure water and steam cleaners can cause problems and these should only be used in designated washbays. Separate guidance on these is available (PPG13 - Reference 12).

NB. Particular care should be taken when using hydrocarbons such as paraffin and white spirit as degreasers, as these substances are toxic to river life. In no circumstances should these substances be discharged to surface water drains. Disposal to foul sewer may also be unacceptable and the sewerage undertaker must be contacted.

b. Cleaning of yard and forecourt areas

Never use degreasers or steam cleaners to clean such areas unless the area drains to foul sewer. For areas that drain to surface water there are two options:

i. Any liquid is soaked up using absorbent material which should be safely disposed of off-site. Sealing of gullies may be appropriate to prevent liquid or absorbent entering the drainage system.

or

ii. A valve is fitted at the oil separator outlet to close it off during the cleaning operation and all accumulated washings removed for disposal off-site. An alarm should be installed to indicate that the closure valve is in the shut position.

8. REFERENCES

1. PPG11: Preventing pollution on industrial sites
2. PPG7 : Fuelling Stations: Construction & Operation
3. PPG3 : The use and design of oil separators in surface water drainage systems
4. PPG21: Pollution incident response planning
5. Waste Management - The Duty of Care - a code of practice (Revised 1996): ISBN 0-11-753210-X
6. A Guide to the Special Waste Regulations 1996: Environment Agency
   A Guide to the Special Waste Regulations 1996: SEPA
   A Guide to the Special Waste Regulations (Northern Ireland) 1998: Environment and Heritage Service
7. PPG8 : Safe storage and disposal of used oils
8. PPG2 : Above ground oil storage tanks
9. Oil Storage Regulations leaflet: Environment Agency
10. Policy and Practice for the Protection of Groundwater in England and Wales: ISBN 1 873160 37 2
11. The Groundwater Protection Strategy for Scotland: SEPA
12. PPG13 : High pressure water and steam cleaners

References 5 and 10 are available from the Stationery Office, Tel: 08706 005522
References 1-4, 6-8, 11 and 12 are available free from the Agencies

All the Agencies' pollution prevention guidance notes are available on the web sites listed below.

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