

9 Outline PPC Part B application form

The following is a specimen application form which has been the subject of consultation with industry representatives and members of the former IPLA (Her Majesty's Inspectorate of Pollution/Local Authority Enforcement Liaison) Committee and since adapted for PPC Part B and to take into account requirements for recovery of vapours during filling of vehicle petrol tanks ("Stage II" controls). Given the consistent nature of service station operations, it is likely to be more efficient for both industry and regulators to make use of this form in all cases.

Use this form if you are applying for a permit to a Local Authority to operate a service station where petrol is unloaded with a throughput of petrol over 500m³ a year.

For existing petrol stations with a throughput greater than 3500m³ in any 12 month period and for new petrol stations with a throughput likely to exceed 500m³ in any 12 month period, a "Stage II" petrol vapour recovery system is required for recovery of vapours during filling of vehicle petrol tanks. If the petrol station is not required to have "Stage II" controls in place, those sections of this form that relate to Stage II controls do not need to be completed.

References to the term "activity" are references to the unloading into storage of petrol and dispensing of petrol into vehicle fuel tanks. The operator of the activity under the terms of the Regulations is most likely to be the person with management responsibility for the procedures on site. This does not, however, absolve other people of their responsibilities (for instance of drivers in the case of following unloading procedures or of the equipment owners in the case of installation of equipment) since action can be taken directly under regulation 32(6) of the Regulations.

Further advice on transfer of permits and on permit variations may be found in the General Guidance Manual (See Ref. (a))

Application for a permit

Pollution Prevention and Control Part B, "LAPPC" in England and Wales

Pollution Prevention and Control Act, 1999

Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended)

For local authority use		
Application reference	Officer reference	Date received

A1.1 Name of the installation *Eurogarages Ltd T/A S STRATFORD SERVICE STATION*

A1.2 Please give the address of the site of the installation

54 STRATFORD RD, WARWICK

Postcode *CV43 6AT*

Telephone *01926 491 228*

Ordnance Survey national grid reference 8 characters, *★*

for example, SJ 123 456

A1.3 Existing authorisations:

Please give details of any existing LAPC or IPC authorisation or LAPPC permit for the installation, including reference number(s):

Please provide the information requested below about the "Operator", which means the person who it is proposed will have control over the installation in accordance with the permit (if granted)

A2.1 The Operator - Please provide the full name of company or corporate body

Trading/business name (if different) *Eurogarages Ltd T/A S STRATFORD S/SN*

Registered Office address *End House, Bankway Rd, Davon Lanes*

Postcode: *B33 1QS*

Principal Office address (if different) *N/A*

YEAR	VOLUME OF PETROL/m ³				
	<100	100-500	501-1000	>1000	>3500
	<100	100-500	501-1000	>1000	>3500
	<100	100-500	501-1000	>1000	>3500

B2.5 Are deliveries "Driver Controlled" / "Driver Unassisted"

No	Yes ☒
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B2.6 At a maximum, how many tanker compartments discharge into storage tanks at any one time, or will do so once a vapour collection system is in place. If the latter information is not known, a statement of what assessment will be made to determine this information and within what timescale. The information supplied under item 11 should be supplemented by a site specific assessment. (See Section 6 of PG1/14(06)).

2 tanker compartments Discharge
@ Any one Time

B2.7 Are diesel storage tanks connected to the vapour balance system?

No	Yes ☒
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B2.8 Measures taken or to be taken for vapour emission control, both during unloading and in Storage.

All Hoses are connected to
Vapour Recovery Before Unloading.

B2.9 Please attach process diagrams and plans of vapour collection equipment (including height and location of tank vent pipes). This should include equipment for recovery of vapours during filling of underground storage tanks and for installations that are required to have a "Stage II" vapour recovery system in place, for filling of vehicle petrol tanks.

B2.10 Unloading procedure and instructions (please attach)

B2.11 Details of Supervision, Training and Qualifications of Operating Staff [Details should be specific to on-site staff and include general statements concerning delivery drivers]

B2.12 Schedule of maintenance of vapour collection control (Including the system for vapour recovery during filling of vehicle petrol tanks for installations that are required to have a "Stage II" vapour recovery system in place). [please attach]

N/A

B2.13 Schedule of examination and testing for vapour collection controls (Including the system for vapour recovery during filling of vehicle petrol tanks for installations that are required to have a "Stage II" vapour recovery system in place) [please attach]

N/A

£. Cheques should be made payable to :

We will confirm receipt of this fee when we write to you acknowledging your application.

C1.2 Please give any company purchase order number or other reference you wish to be used in relation to this fee.

C2 Annual charges

If we grant you a permit, you will be required to pay an annual subsistence charge, failure to do so will result in revocation of your permit and you will not be able to operate your installation.

C2.1 Please provide details of the address for invoices to be sent to and details of someone we may contact about fees and charges within your finance section.

Postcode:

Telephone:

C3 Data Protection

The information you give will be used by the Local Authority to process your application. It will be placed on the relevant public register and used to monitor compliance with the permit conditions. We may also use and or disclose any of the information you give us in order to:

- consult with the public, public bodies and other organisations,
- carry out statistical analysis, research and development on environmental issues,
- provide public register information to enquirers,
- investigate possible breaches of environmental law and take any resulting action,
- prevent breaches of environmental law,
- assess customer service satisfaction and improve our service.

We may pass on the information to agents/ representatives who we ask to do any of these things on our behalf.

It is an offence under Regulation 32 of the PPC regulations, for the purpose of obtaining a permit (for yourself or anyone else) to:

- make a false statement which you know to be false or misleading in a material particular,
- recklessly make a statement which is false or misleading in a material particular.

If you make a false statement

- we may prosecute you, and
- if you are convicted, you are liable to a fine or imprisonment (or both).

C4 Declaration C4.1 Signature of current operator(s)*

I / We certify that the information in this application is correct. I / We apply for a permit in respect of the particulars described in this application (including supporting documentation) I / We have supplied.

Please note that each individual operator must sign the declaration themselves, even if an agent is acting on their behalf.

For the application from:

Installation name:

FORNAMES LTD T/AS STRATFORD S/STW

Signature

Name

Zoran LSSA

Position

MD

Date

16/06/08

Signature

Name

Position

STAGE 1B TESTING CERTIFICATE OF APPROVAL

CERTIFICATE NUMBER
CP/4397

ISSUED TO

Stratode Service Station, 54 Stratford Road, ,
Warwick, Warwickshire, CV53 6AT

**THIS CERTIFICATE HAS BEEN ISSUED BY PETROMAN ENVIRONMENTAL
SERVICES LIMITED OF UNIT 5 SNEYD GREEN BUSINESS PARK,
SNEYD STREET, SNEYD GREEN, STOKE ON TRENT, ST6 2NP**

Full Site Address: Stratode Service Station, 54 Stratford Road, , Warwick, Warwickshire,
CV53 6AT

Name of Licence Holder:	Euro Garages Ltd
Licensing Authority:	Warwickshire County Council
Authorised Testing Company:	Petroman Environmental Services LTD.
Authorised Test Engineer:	Jonathan Bollands
ID Number:	23
Test Date:	02/07/2008

The Stage 1B Vapour Recovery System installed at the above site has been tested by the authorised engineer named above using the Petroman Testing Procedure. The results confirm that this Stage 1B Vapour Recovery System has **PASSED**.

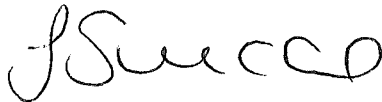
We confirm that the PV and VR valves have proven to be in good operational condition and meet the environmental standards required of this equipment.

Pressure/Vacuum Valves Fitted:	Release Pressure	+35 mbars
	Vacuum Setting	-4 mbars

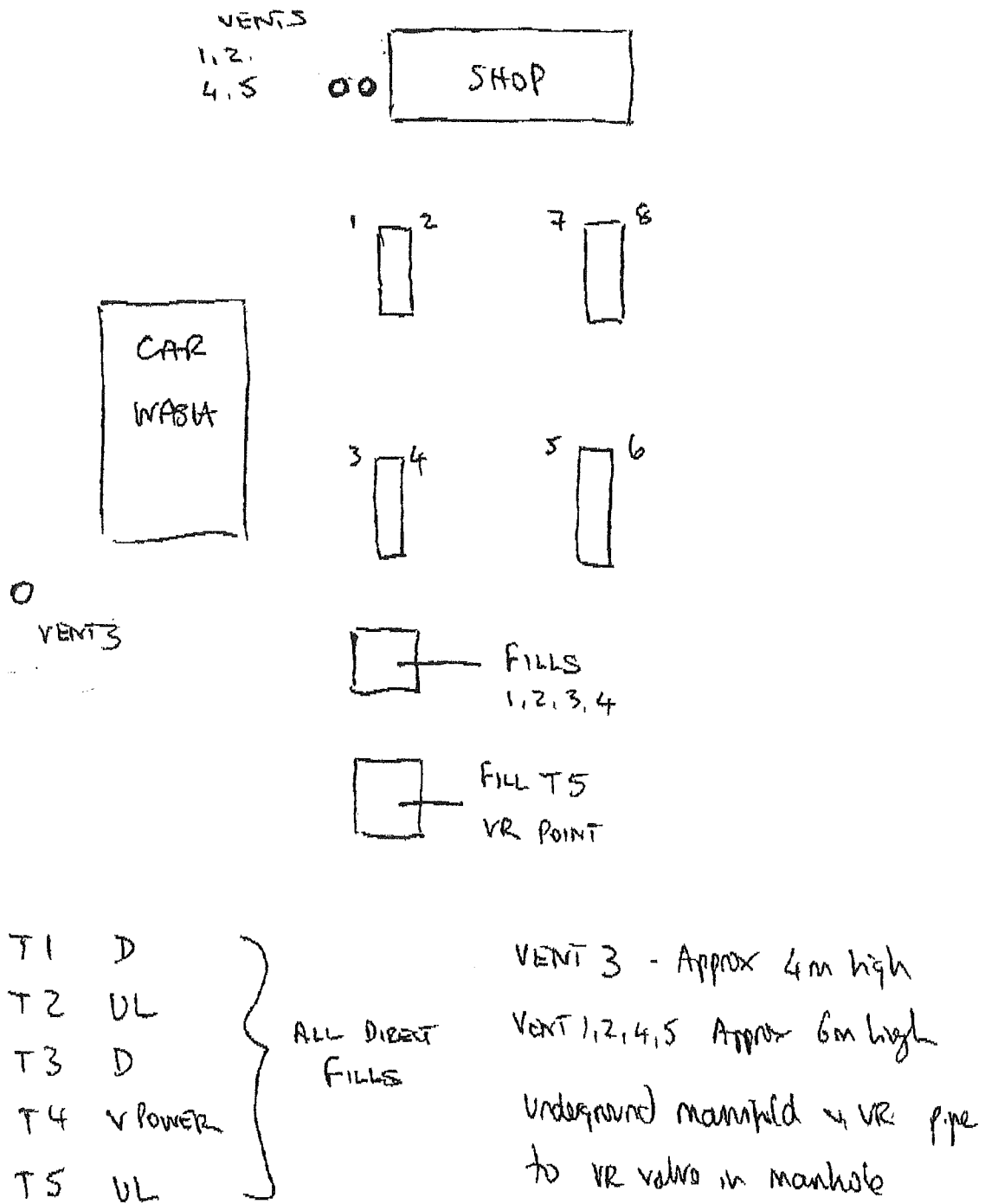
Vapour Recovery Connection Point **PASSED** for condition and sealing capacity.

This certificate is valid for a period of 1 year and expires on 01/07/2009

SIGNED



For and on behalf of Petroman Environmental Services Limited



An Introduction to Petroman Environmental Services Limited

Petroman Environmental Services Limited was a company originally formed to develop a software programme to assist petrol filling station operators to manage their wet stock losses. This progressed to a product ordering system, as it was found that when the software was used correctly, it had a positive effect on losses as well as managing cash flow, this was invaluable due to increasing rise in the cost of petroleum product.

Petroman pioneered vapour retention systems to enable petrol retailers to reduce losses associated with modern vapour recovery systems. We addressed the need to produce a system that is environmentally safer, protecting against pollution as well as offering a higher and safer operational standard.

The company's innovative ideas led us to working on petrol filling stations with our interactive equipment in order to test a standard vapour recovery system.

The vapour recovery testing programme has been adopted by one of the worlds leading petrol producers. Over the past two and a half years, their progressive approach to investing in managing and maintaining higher levels of safety and environmental protection on their sites, has resulted in reversing an 80% plus failure rate to over a 90% plus pass rates. This has resulted in zero delivery failures as well as dangerous incidents related to vapour problems. Our literature headed Why Test? explains the procedures used and exactly what is tested.

Over the last two years, we have developed systems to meet these rising standards and can offer a worldwide system that is affordable by all petrol operators. The systems absorb excess pressures caused by the petroleum product when off-loading into storage facilities.

Petroman have made it possible to offer dealers the advantages of a safer working site as well as being able to offer commercial benefits to offset the initial investment in this technology. Using our system we believe that it is possible to increase the working life of on-site equipment storage tanks and pipe work. Petroman believe that we can offer great benefits to Petrol companies, Petrol Station operators and the environment. The experience gained has enabled us to consider ourselves in the forefront of development and knowledge of vapour control and management.

The Petroman Accumulus Vapour Management System.

In recognition of increasing demands to improve the environment, the demise of pressure controlled vapour management systems is now even more pertinent. By virtue of their design and operation, these systems have always proved extremely difficult to achieve and maintain the very high standards of vapour and leak tightness that are desired; hence the need for an effective alternative.

Petroman has gained considerable experience of vapour recovery, through installing, testing, repairing and maintaining systems over many years and recognise the importance of sealing the weak points in the system, which allow vapour through. With the benefit of the experience gained, they have designed and installed their own vapour management systems, which not only provide a more effective alternative to existing systems, but more importantly, provide increased levels of safety and environmental protection for petrol filling stations.

The Challenge

The challenge was to radically improve the safety and performance of vapour recovery systems whilst also achieving higher levels of environmental control and to be able to provide this solution at a commercially acceptable price. They have now produced a product that has a worldwide use.

Not all vapour recovery systems are inefficient and there are some (including several vapour retention systems) that operate perfectly well (provided they are regularly tested and maintained) whilst offering high levels of safety and environmental protection. However the future of efficient vapour recovery systems lies in reducing the operational pressures.

Why reduce pressure?

Pressure within a vapour recovery system is the root cause of the following problems:

- Leaks with the system
- Those leaks increasing over time
- Wear and tear on all components
- Increased risks to personnel and the environment

Reducing pressure will:

- Reduce maintenance
- Reduce hazards
- Reduce wear and tear
- Reduce risks to site personnel
- Reduce risks to the environment.

How Is That Achieved?

To achieve this Petroman have introduced the Accumulus Vapour Management system that virtually eliminates the problems caused by positive pressure. This is a completely new, purpose-designed system for reducing pressure during the offloading process, which offers a new level of safety and environmental protection, with minimal maintenance requirement. The system works by reducing the vapour within the system during a delivery, whilst achieving a balanced negative pressure between the delivery tanker and the tank farm.

Balancing Negative Pressures

During the offloading process, the delivery tanker draws a negative pressure across the tank farm and this sucks vapour from the underground storage tanks, via the vapour recovery system, into the tanker. In addition to the negative pressure within the vapour recovery system, a positive pressure builds up within each storage tanks as it is being filled, forcing the vapour out.

Introducing the Accumulus Pressure Reducer, allows each storage tank to remain in negative pressure far longer, balancing with the delivery tanker's own negative pressure. This allows a much leaner mixture of vapour and air to be passed back to the delivery tanker.

For one reason or another and dependant upon how well they are maintained, not all tankers pull a negative pressure during the delivery. With such tankers delivering product to the underground storage tanks, the Accumulus Pressure Reducer, will reduce the risk of excessive positive pressure being built up within the vapour recovery system and minimise the risks of a blow back or spillage with all the consequential hazards to the driver, site and the environment.

Activation

The valve is activated by the flow of incoming product through the venturi and is assisted by spoilers attached to the outer skin of the venturi. It is designed to open just after the flow of product through the fill pipe commences and close just before the flow ceases. The valve seat, which is secured to the vacuum pipe within the body of the valve, has a nitrile sealing ring seated into it. Below the valve body sits a high performance stainless steel spring that controls the closure of the valve. The spring is the only moving component in the valve.

Hot Diesel Deliveries – Problems & Solutions

What is Hot Diesel?

This is Diesel delivered at a higher than ambient temperature and is invariably supplied directly from a refinery, whereas Diesel supplied from storage and delivery terminals has had standing time to cool down and is closer to ambient temperature.

"Hot Diesel" (as it is known) can be as much as 18°C higher than product that has been held in stock. These temperatures can have seasonal variations as well as those attributed to the production cycle of the refinery.

The problem?

Loss of volume due to shrinkage, when the product is transferred from the delivery tanker to the storage tank. This will be caused by the temperature difference of the existing product in the storage tank in relation to the incoming product.

The shrinkage rate is:

0.08% shrinkage for every 1°C lost or 0.8% shrinkage for every 10°C lost.

Example:

15,000 litres at 23°C = 14,880 litres at 13°C (i.e. a loss in volume of 0.8% or 120 litres).

How does this problem affect the site owner?

This shrinkage is a direct product loss that has to be supported by the site.

In real terms this means that the lost Diesel cannot be sold to the customer and is a direct volume and revenue loss to your company.

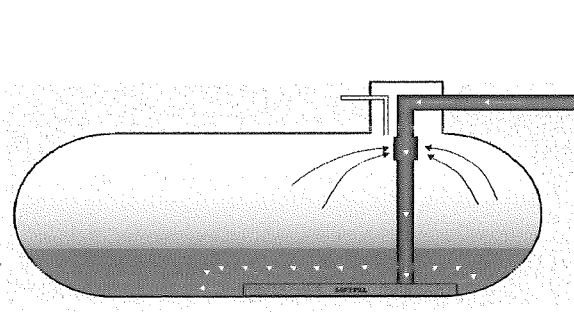
The effects of Hot Diesel

1. The product being lighter in density than the cold diesel in your tank means that when the new product is delivered, the bulk of the Hot Diesel rapidly rises to the surface.
2. The Hot product is then in direct contact with the ullage space and will lose most of its heat to the air which vents directly to atmosphere. During this process the product reduces in volume until the balance storage temperature is met. Some temperature is lost to the existing product during this process.

Hot Diesel deliveries to your storage tanks will mean real stock losses due to shrinkage every time you have a delivery – the higher the differential temperature of the delivery, the higher the rate of shrinkage and the greater the loss!

The Solution - SOFTFILL

Petroman have developed a very effective solution that will considerably reduce these diesel losses.



- Easy to retrofit into existing storage tanks
- No moving parts
- No maintenance
- Does not affect the delivery process
- Return on investment within 2 years

How is this achieved?

Softfill is a device that is fitted to the fill pipe and sits on the tank floor. This allows the delivery of the Hot product to flow out along the bottom of the tank allowing the bulk of the heat to be absorbed by the existing Diesel in the tank. With the warmer Diesel remaining around the suction lines, this will be drawn up by the pumps and sold first, whilst the overall effect will be to raise the core temperature over the total volume of stored Diesel.

With successive deliveries relative to the volume of sales, the Hot Product will cause and retain an overall rise in the temperature of the total stored volume reducing the difference in temperature between the incoming product and the stored product.

Example:

1. First delivery
2. Tank temperature (Cold Diesel): 16°C
3. 15,000 litres Hot Diesel delivered at 26°C
4. Shrinkage (loss): 120 litres
5. After a number of deliveries
6. Tank temperature (Warmer Diesel): 21°C
7. 15,000 litres Hot Diesel delivered at 26°C
8. Shrinkage (loss): 60 litres

There will also be variances in the tank and product temperature due to seasonal fluctuations and as sales rise or fall.

All sites receiving Hot Diesel will experience real losses in stock due to shrinkage, but they will be significantly and permanently reduced by fitting Softfill.

The Petroman System VMC

System VMC is the latest vapour management system from Petroman aimed squarely at low volume retailers to offer a prospective saving.

Whilst our Accumulus system has been designed to suit high volume retailers, System VMC will show a return on investment for the smaller retailer with lower sale volumes and tighter margins.

With low maintenance requirements and no running costs, System VMC is a very cost effective system.

The concept

System VMC is a very safe, efficient and effective method of controlling vapour during all deliveries, significantly reducing the amount vapour lost to the delivery tanker and thereby saving the retailer money.

How is that achieved?

System VMC is a vapour management system.

Offloading Diesel and still save Vapour

It is not widely recognised that offloading Diesel does significantly impact on the operation of stage 1B. As long as the delivery tanker vapour recovery hose is connected to the site, then whichever product is being offloaded (Diesel and / or spirit), then vapour from the site will be drawn into the tanker.

System VMC virtually eliminates this loss by controlling how much vapour is retained in the site and how much is allowed to be drawn back to the delivery tanker.

The Equipment

System VMC comprises of two specially designed valves that are located between the site vapour recovery manifold and the vapour recovery valve (which the tanker hose connects to).

Both valves, being balanced to manage the vapour during the offloading process, handle the differing ranges of operational pressures.

When Diesel is being offloaded, the suction or negative pressure created with the delivery tanker is less than the weight of the valves, which remain closed.

Therefore instead of drawing vapour from the site, air is drawn in from the tankers via the P/V valves to allow it to balance.

When spirit is offloaded, the valve will remain closed for most of the delivery, allowing vapour to be retained in the storage tanks until the vapour management system starts to control.

When the valves open, only the excess vapour is allowed back to the tanker, whilst the retained vapour begins to condense back to the site storage tanks.

The valves close again when the tanker has finished its delivery.

Additional Equipment

This system can also be obtained with a Low Level PV valve as part of the management system.

Maintenance

The system is maintained on an annual basis which involves the removal of the valves for inspection and would normally include a vapour recovery test on the Stage 1B system to ensure

Warranty

We offer a 3 year warranty with the VMC system.

Petroman Interactive Vapour Recovery Testing

Why Test

A thorough understanding of how safe and efficient a system is will help to minimise risks during deliveries to the site operator, the delivery driver, site personnel and the general public, as well as helping to protect the environment.

Knowledge of the safety and efficiency of a system through testing will allow an operator to set up a programme of planned and preventative maintenance, promoting the reduction of long term operating costs by reducing the risks of deliveries and reducing the high costs of reactive maintenance work.

The Principle of Interactive Testing

The Petroman Interactive Testing procedure is very comprehensive and thorough and has been designed to test all the components of Stage 1B during a delivery of product to the site.

As the delivery tanker is one of the most significant components of any vapour recovery system, so the principle behind our test is to quantify the efficiency of the system in relation to the efficiency of the tanker.

Our live and dynamic test carried out during authentic delivery conditions allows us to see exactly how a system copes with actual flow rates of product and vapour.

Other "passive" testing systems cannot recreate the pressures and flow rates that occur within a system and so our active testing system is the only really effective way to accurately assess the true efficiency and integrity of each system.

During a test our equipment is connected up to both the site and the delivery tanker and so becomes an integral part of the vapour recovery system. Throughout the test, as product is being offloaded into the underground storage tanks, it is constantly monitoring the efficiency of each component and the efficiency of the equipment on the tanker, and so any faults within the system during the delivery can be easily identified.

Once the test has been completed and the results interpreted, we then provide a risk assessment of each system, with recommendations to the site owner. If a system has failed the test, we will issue our recommendations for essential repairs to be carried out. Once a system has passed the test, a certificate will then be issued.

Our certificates are recognized by all UK local authorities including the LFCDA and SEPA, along with the APEA, the PRA and the Institute of Energy.

What is tested

- The condition and correct operation of the pressure/vacuum valve.
- The condition and correct operation of the vapour connection valve.

- The efficiency of vapour flow rates through each individual vent pipe.
- The efficiency of vapour flow rates through the vapour recovery manifold.
- The presence of a vapour recovery manifold drain point.
- The vapour tightness of each internal tank fill pipe.
- The vapour tightness of any overfill prevention devices.
- The vapour tightness of each fill point cap.
- The liquid sealing of each fill point.
- The condition and integrity of the vapour recovery hose.
- The correct operation and efficiency of the delivery tanker's vapour recovery equipment.

In addition to the specific items tested above, we always carry out a general site survey prior to the actual test itself. This will many checks that may not be directly related to the vapour recovery system, but are relevant to the correct and safe operation of the site. These include the following:

- Check site register and history of any maintenance work carried out on the vapour recovery system and tank farm.
- Checking the tanker offloading position.
- Checking the location of the vapour recovery point relative to the tanker offloading position.
- Checking the existence and clarity of all relevant signage.
- Checking the condition of the forecourt drainage grills.
- Checking the location and accessibility of PV valves.
- Checking the existence of weather caps on diesel vents.
- Checking the condition and location of the vent stack and other vapour recovery pipework.
- Checking the size and location of fill points relative to the delivery tanker faucets.
- Checking the condition of fill cap locks, seals and straps.
- Checking the condition and contents of all tank manholes.
- General observations made about the equipment on site – pumps, nozzles and hoses, gauges, overfill prevention, Stage 2 vapour recovery.
- Observations about the general "housekeeping" of the site.

Our test offers immediate results and if a system fails our test, in addition to providing recommendations to the site owner, we are able to provide a reliable and cost effective repair service.

Minor maintenance works can of course be carried out cost effectively at the time of the test, whilst our engineer is on site, such as replacing faulty P/V valves and VR valves, fill cap straps, seals, site signage. However where we come across a system with more serious problems, we can provide a comprehensive and reliable repair service and we guarantee our work for leak tightness for 3 years.

We can also provide a "Blue Print" testing service for

Petroman Vapour Recovery Testing - Static

Why Test

A thorough understanding of how safe and efficient a system is will help to minimise risks during deliveries to the site operator, the delivery driver, site personnel and the general public, as well as helping to protect the environment.

Knowledge of the safety and efficiency of a system through testing will allow an operator to set up a programme of planned and preventative maintenance, promoting the reduction of long term operating costs by reducing the risks of deliveries and reducing the high costs of reactive maintenance work.

The Principle of Testing

The Petroman Testing procedure is very comprehensive and thorough and has been designed to test all the components of Stage 1B.

Once the test has been completed and the results interpreted, we then provide a risk assessment of each system, with recommendations to the site owner. If a system has failed the test, we will issue our recommendations for essential repairs to be carried out. Once a system has passed the test, a certificate will then be issued.

Our certificates are recognized by all UK local authorities including the LFCDA and SEPA, along with the APEA, the PRA and the Institute of Energy.

What is tested

- The condition and correct operation of the pressure/vacuum valve.
- The condition and correct operation of the vapour connection valve.
- The presence of a vapour recovery manifold drain point.
- The vapour tightness of each internal tank fill pipe.
- The vapour tightness of any overfill prevention devices.
- The vapour tightness of each fill point cap.
- The liquid sealing of each fill point.

In addition to the specific items tested above, we always carry out a general site survey prior to the actual test itself. This will many checks that may not be directly related to the vapour recovery system, but are relevant to the correct and safe operation of the site. These include the following:

- Check site register and history of any maintenance work carried out on the vapour recovery system and tank farm.
- Checking the tanker offloading position.
- Checking the location of the vapour recovery point relative to the tanker offloading position.
- Checking the existence and clarity of all relevant signage.
- Checking the condition of the forecourt drainage grills.
- Checking the location and accessibility of PV valves.
- Checking the existence of weather caps on diesel vents.
- Checking the condition and location of the vent stack and other vapour recovery pipework.
- Checking the size and location of fill points relative to the delivery tanker faucets.
- Checking the condition of fill cap locks, seals and straps.
- Checking the condition and contents of all tank manholes.
- General observations made about the equipment on site – pumps, nozzles and hoses, gauges, overfill prevention, Stage 2 vapour recovery.
- Observations about the general “housekeeping” of the site.

Our test offers immediate results and if a system fails our test, in addition to providing recommendations to the site owner, we are able to provide a reliable and cost effective repair service.

Minor maintenance works can of course be carried out cost effectively at the time of the test, whilst our engineer is on site, such as replacing VR valves, fill cap straps, seals, site signage. However where we come across a system with more serious problems, we can provide a comprehensive and reliable repair service and we guarantee our work for leak tightness for 3 years.

We can also provide a “Blue Print” testing service for brand new and refurbished sites.