



Suresite
Training

Competent Persons Training

(Updated July 2015)

Name: _____ Date: _____

Helping you manage your Business Risk

Suresite Limited 4A Millennium City Park Barnfield Way Ribbleson
Preston PR2 5DB

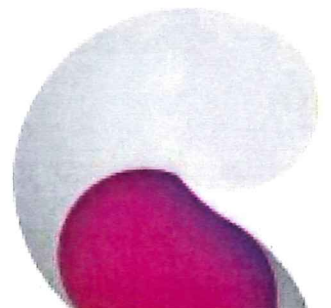
Welcome to your Competent Person Training workbook.

This workbook has been designed to support you through your training and for you to use as reference when you get back to your store.

Throughout this book you will see a  **MY SITE TASK** Action.

Where you see this you will need to locate an item or read a document when you get back to your own site and record this on page 38 of this workbook.

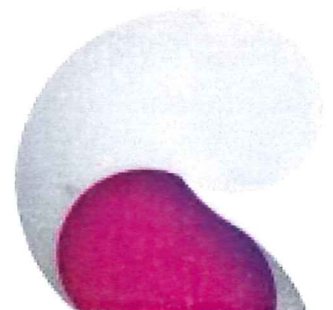
At the end of today workshop you will be required to complete a test, please make as many notes as you like in this workbook.



- This course is going to utilise YOUR current knowledge and common sense.
- It will give you any additional information that is required to help you fully understand the legal and safety requirements of being a competent person.
- It will, along with your practical experience, make you a **COMPETENT PERSON**, qualified to accept deliveries of Petroleum Spirit.

WE WILL LOOK AT THE FOLLOWING AREAS

- **BACKGROUND, BASIC PROPERTIES OF PETROL, DSEAR, ACOP AND THE LAW.**
- **PRE- DELIVERY**
- **ARRIVAL**
- **RECEIPT**
- **POST-DELIVERY**
- **And Later**
- **WHAT TO DO IF IT GOES WRONG**
- **UNATTENDED DELIVERY D.C.D**



Closing Dips	Closing Dips are taken at a designated time of day or after fuel deliveries to check the total amount of fuel in the storage tank. The dips are used in calculating daily sales and also to verify volumes of fuel delivered.
Flammable (Explosive) Atmosphere	A mixture of air and petrol vapour in specific proportions that will burn if a heat source is applied.
Competent Person	A person who has received sufficient theoretical training and practical experience to carry out the safe and effective acceptance of fuel deliveries.
Competent Sales Assistant	A person who has received theoretical and practical training in the safe control of the forecourt and emergency procedures.
Control Point	The position in the kiosk or shop where the pump controller is located. From here the sales assistant can view the forecourt clearly, or supervise via a CCTV monitor.
Diesel (DERV)	Road fuel used in diesel engine vehicles. Evaporates more slowly than petrol. The flash point of diesel is 50°C.
DSEAR	The Dangerous Substances & Explosive Atmosphere Regulations 2002
Unattended Delivery	A fuel delivery during which the tanker driver alone offloads fuel. There is no requirement for the presence a 'Competent Person'. This can only take place at sites approved by the Petroleum Officer. Also known as a D.C.D. "Driver controlled delivery"
Flammable	Liable to catch fire.
Flash Point	The lowest temperature, at which a product gives off vapours which when mixed with air, will produce a flash of flame if a heat source is applied.
Fire Point	The location for Fire Extinguishers

HAC Hazardous Area Classification	The area around the petroleum installation such as a pumps, vent stack, manhole chambers etc where petrol vapour is at the highest concentration. This also includes 4.0 mtrs around the tanker, when on site.
Ignition Source	Any item which could cause heat or a spark and which could cause a fire in a flammable atmosphere.
Interceptor	A system for preventing spilt fuels from entering the public drains
Attended Delivery	A fuel delivery, which is controlled by a competent person. There must always be two people in attendance. The tanker driver plus competent person
Liquefied Petroleum Gas (LPG)	Hydrocarbon gases maintained in liquid form and under high pressure used as a fuel for vehicles and as fuel to heat appliances, also sold in gas bottles.
LPG Hazard Zone	The hazard zone is an area of 4.25 meters surrounding the LPG Compound and dispenser.
Octane Rating	Measure of quality or type of petrol. The higher the octane rating the greater the vapour pressure.
Offset Fills	Tank fill points (O.S.F'S which are located at a position to enable the road tanker to be clear of the dispensing area during discharge without the need to change position during delivery, maybe above or below ground
Opening Dips	Opening Dips (Tank gauge readings) are taken at a designated time of day or before fuel deliveries to check there is sufficient Ullage to receive a delivery. The dips are used in calculating daily fuel sales and also to verify volumes of fuel delivered.
Petrol (Petroleum)	A volatile, flammable liquid used as fuel. Evaporates quickly and will float on water. Petrol will ignite at temperatures between 230°C and 480°C. Please also see Petrol Vapour.
Petroleum Fuels Delivery Certificate	A legal document required to be completed in duplicate for every delivery of petrol products to a service station. These certificates need to be kept on site for 12 months
Ullage	Space available in the tank.

What is a Competent Person?

What is a Competent Person?

A person with enough practical and theoretical knowledge, training and actual experience to carry out a particular task safely and effectively.

The petrol industry refers to 2 types of Competent person.

1. Competency to take deliveries of fuels (This training)
2. Competency in the use of equipment and forecourt safety.



To become competent you need to have an understanding of:

- The basic properties of petroleum
- The laws that control the delivery process
- Documents and controls used on site
- Emergency equipment use/checks
- What to do if things go wrong.

Basic Properties of Petrol

Petroleum is a very dangerous product being highly flammable and toxic.

Vapour

Highly flammable vapours are given off at normal temperatures. When mixed with the correct proportion of air it forms an explosive mixture. It is heavier than air and will gather in low lying areas of ground (especially manholes and drains).

Liquid

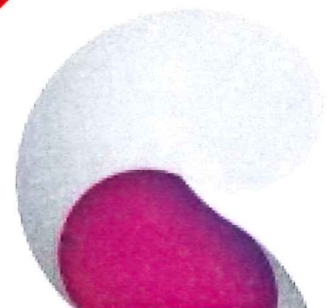
As a liquid Petrol floats on water and may therefore be carried considerable distances when spilled. It can also travel underground through porous ground and be carried on the water table. (Hence “old” spillages of petrol often rise to the surface during extremely wet weather and can still be an explosive hazard if it comes into contact with an ignition source.)

Health

Skin Dries skin on contact and should be washed off immediately. (Long-term or frequent contact can cause dermatitis).

Eyes Will cause intense irritation and should be flushed immediately with water (Consider medical attention also).

Mouth Can cause severe irritation to throat and stomach. If vomited can enter lungs with serious consequences. (Always seek medical advice).



DANGEROUS SUBSTANCES AND EXPLOSIVE ATMOSPHERES REGULATIONS 2002

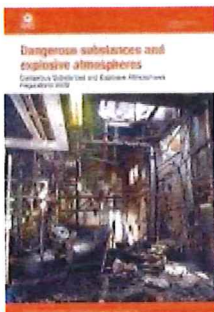


Figure 1

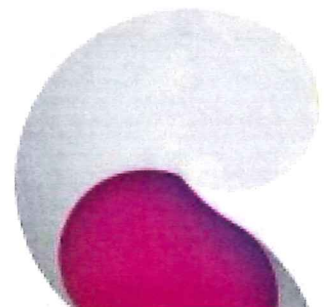


Figure 2

These Regulations (*fig1*) came into force in May 2003 and introduced a new code of practice called ACOP (L133), which now in its second edition (*fig 2*). This gives guidance for those people who are involved in the delivery and unloading of petrol.

The main features are as follows:

- The Petroleum Certificate must include tank ullage and the driver must be able to verify these ullages before delivery commences.
- Delivery records, including ullages, must be kept on site for a period of 6 months.
- Site operators must determine the (HAC) Hazardous Area Classification on site and around the tanker this could be in the form of a Hazard Zone Plan (See example on Page 10)
- The site operator must inform the driver of the extent of the hazardous areas and any control measures identified in the Risk Assessment (i.e. any pumps or equipment that should be closed while the delivery takes place, or if the site should be closed for fuel sales while the tanker is on site.
- Site operator must carry out a risk assessment covering all work activities involving a fire and explosion risk. (See example on Page 11).



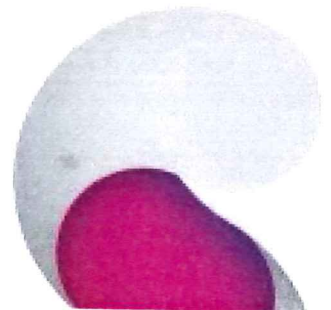
- **These documents should be kept in a Site Register.**
- Petrol may not be unloaded when another dangerous substance such as LPG is also being unloaded.
- All filling points **must** be kept closed and locked when not in use.
- Housekeeping is very important on site, litter and other materials should be removed as these can provide a potential source of fuel for a fire.
- Diesel deliveries are not included in the regulations, but it is recommended that the same procedures (best practice) are adopted when unloading diesel fuel.
- **It is vital to follow the correct procedures when taking petrol deliveries not only to comply with the law, but to maintain the safety of staff, customers and the environment.**

N.B Sites operating unattended deliveries (DCD) must be fitted with OPD (Overfill Prevention Device) and/or high level alarms. The driver must also be able to verify ullage prior to commencing delivery and have an emergency phone available - these items would normally be in a separate DCD box (See 13 and 14).

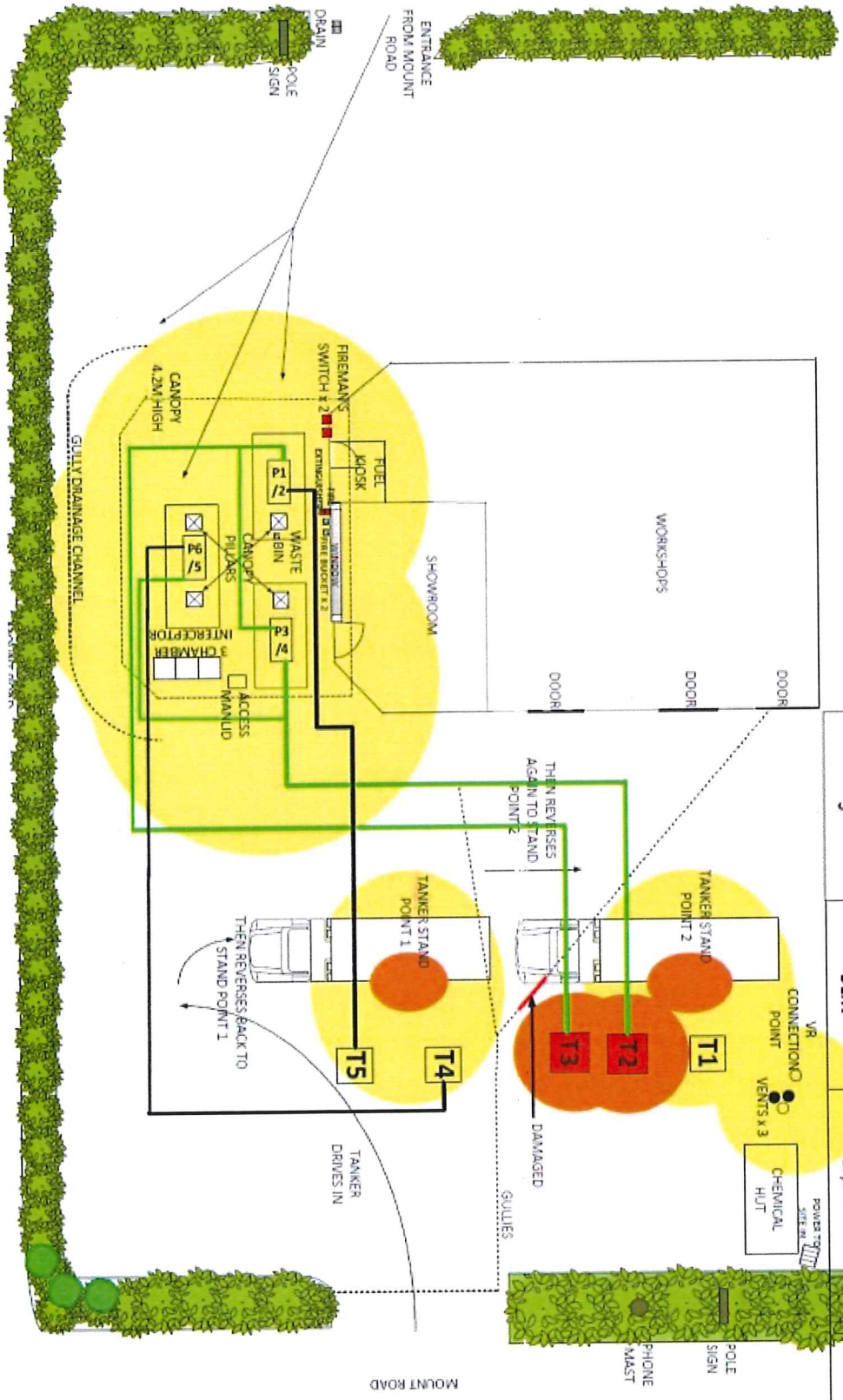


MY SITE TASK 1

Find your site register, Risk Assessment and Hazard Zone Plan back at your site. The site register should be available to access at all times (not locked away).



10 – Hazard Zone Plan



SITE NAME	SITE REFERENCE

HAZARD ZONE COLOUR CODE	HAZARD ZONE
Red	ZONE 0
Orange	ZONE 1
Yellow	ZONE 2

TANK	GRADE	CAPACITY LITRES	PUMP NUMBER
1	NOT	IN	USE
2	ULP	13,677	4,5
3	ULP	13,677	1,3
4	DERV	17,848	6
5	DERV	17,848	2

This drawing has been prepared from information supplied by site. Suresite Ltd accepts no responsibility for the accuracy of this information.

Risk Assessment
for
Test Two Services



Suresite Group
Test Two Services
Group Avenue
Preston
Lancashire
PR2 2CD

Customer No 00992
Inspection No 4380609
Inspection Date 11-July-2014
Consultant Rob Hughes
Accompanied By Fred Dove



Disclaimer

This risk assessment has been produced from information supplied by the site and unless directly observed and reported upon, Suresite Limited accepts no responsibility for the accuracy of this information. The responsibility, for compliance with any recommendations lies with the site owner. Suresite Limited can accept no responsibilities for site operations.

Throughout this assessment due consideration is taken of the properties of Petroleum products as defined under Regulation 2 of the Dangerous Substance and Explosive Atmosphere Regulations of 2002, namely the nature of petroleum, which is a dangerous substance which is highly explosive when mixed with air. It has a low flash point and a vapour that sinks to lowest levels. It can be carried off site for many miles on underground water if it leaks into the ground.

Action Point Summary

Action By Date	Risk Level		
	High	Medium	Low
Immediate	28	5	3
1 Month	4	6	
3 Months	1	4	
On Development	1		

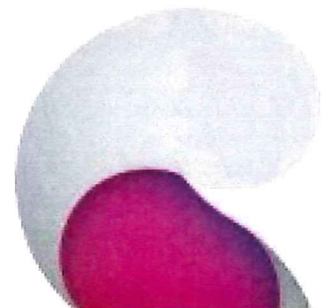
Unattended delivery procedures

PROCEDURES

- Delivery placed with Fuel Delivery terminal in the usual manner.
- Ullage checked prior to delivery and a completed Petroleum Delivery Form put in the DCD Cabinet to tell driver into which compartment he must deliver each product. (Ullage readings to be taken as near to delivery as possible)
- Keys for relevant tanks only to be left in DCD Cabinet. (All keys of unaffected tanks to be removed)
- After delivery, Delivery Note to be checked against tank contents to verify.



A typical DCD box.



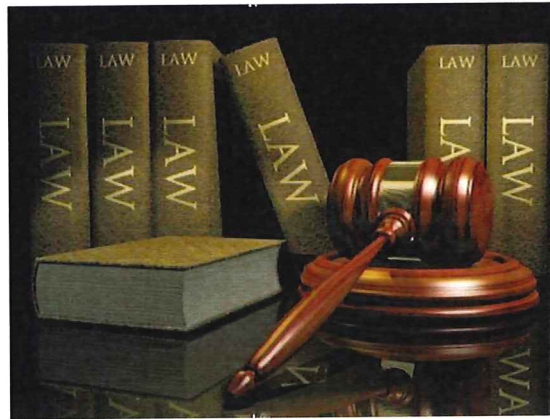
Daily Checks Required

Driver Controlled Delivery

- The presence of a Competent Person is not required for Unattended Deliveries (DCD). The D.C.D box should therefore be checked daily and be in working order or the driver may refuse to deliver.

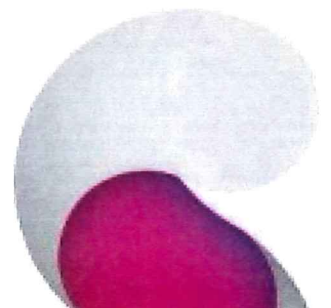
The 7 Daily Checks for the DCD unit are...

1. Check floodlights are working.
 2. Check Site plan in display is correct and shows correct tank grade/qty details.
 3. Check enough paper within printer.
 4. Perform test procedure prompted by D.C.D.machine - checking overfill warning alarm, dial tone, print out.
 5. Confirm and Check tank ullage print out is readable.
 6. Confirm and check telephone dial tone.
 7. Check Fire/spillage equipment - I.E. Extinguisher is charged/within test date and that the sand bucket has enough sand and a plastic trowel is available.
- For the Unattended Delivery tanks **must** be fitted with overfill prevention devices and/or high level alarms and driver must be able to verify Ullage.
 - Locks on petrol tank fill pipes **MUST** be captive



Who enforces the laws at petrol stations?

- The Petroleum Enforcement Authorities (PEAs) from October 2014 or the Petroleum Licensing Authorities (PLAs) before this.
- In Metropolitan areas of England and Wales this will be the Fire and Rescue Authorities, and County councils or unitary authorities elsewhere.
- In Scotland - the Councils, Islands and Isles councils.
- In England - The Environment Agency, in Wales the Natural Resources Body and in Scotland the Scottish Environment Protection Agency (SEPA) also have powers.



Anyone can order fuel, it does not need to be a competent person

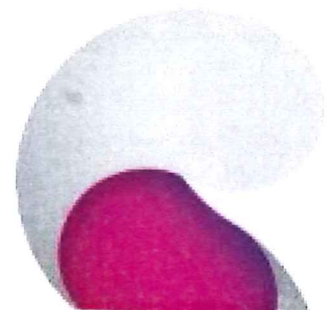


- TANKS CHECKED
- ESTIMATE OF CONSUMPTION MADE (Tank ullage must be checked again before delivery)
- Quantities calculated by grade to fit into site tanks for the day of delivery.



MY SITE TASK 2

On return to your site, find out who orders the fuel.



Safe working note: Make sure you wear a **high visibility jacket or vest** when on the forecourt (**BE SEEN**).

- **CLEAR OBSTRUCTIONS**

- Ensure entry and exit clear. (Tanker should be able to drive off directly in an emergency)
- Remove any parked / sales or staff cars from the fill area (tanker stand point)

- **CHECK FILL AREA**

- Tank grade tags correct and visible.
- Manhole lifter is available if site has below ground fill points.
- Tank keys available.
- Get your cones ready - A minimum of six is recommended with reflective sleeves.

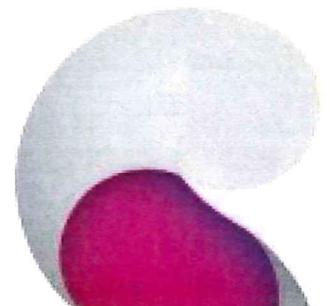
- **CHECK ULLAGE**

- Make sure there is enough room in each tank to accept the ordered quantities of fuel.
- Be prepared to re-plan allocation of delivery between tanks.



MY SITE TASK 3

Do we have enough cones for the task at my site? (6 minimum)



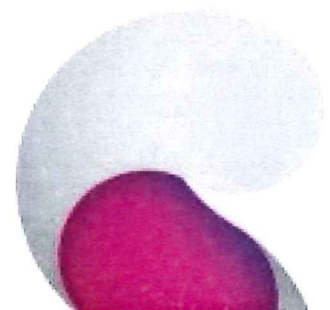
- **FIRE / SPILLAGE PRECAUTIONS**

- Ensure Fire Extinguisher(s) available to stand up-wind of delivery point. (Check they are charged and have tamper tag in place)
- Ensure lidded fire buckets are available containing dry sand (for absorbing any minor spills / drips)
- If you have a mobile spill kit on site deploy as required.



MY SITE TASK 4

Do we have lids on all of our sand buckets?



Arrival of Tanker

MANOEUVRING

- Be prepared to advise the tanker driver if he has to manoeuvre into position, especially reversing.

WARNING SIGNS

- Place warning signs / cones to protect tanker and delivery personnel and no means of ignition within 4.0 metres of tanker.
- Now place your fire extinguisher up wind of the delivery point, and keep the lidded sand bucket next to delivery point to use on any spills/drips.

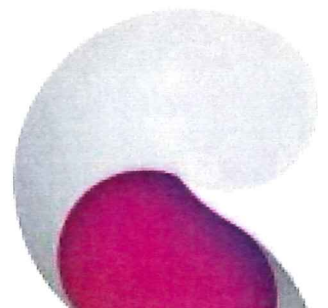
EXIT ROUTE

- Ensure tanker has a clear exit route to enable the driver to drive off site in an emergency if route blocked, stop delivery, move vehicle then restart delivery.



MY SITE TASK 5

Pace out 4 meters in all directions at the fill points to get an idea of the size of the hazard zone for the tanker at your site - refer to your hazard zone plan

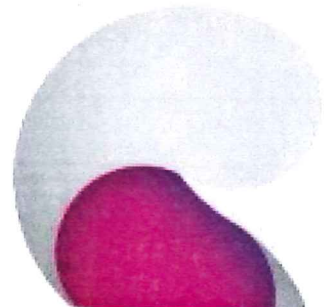


DOCUMENTATION

Usually carried out inside the site premises

- **CHECK DRIVER'S DELIVERY NOTE**

- Is he at the correct site? (It is not unknown for drivers to make deliveries at the wrong site)
- You can stop all manner of problems before they happen by confirming the driver is at the correct site.
- Is the delivery what you expected? Will it fit into your tanks? (Check your dips / printout to ensure there is sufficient space for the delivered fuel)
- In the circumstance that the product will not fit into your tanks, the product will need to be returned - liaise with the driver.
- **COMPLETE 2 COPIES OF THE PETROLEUM DELIVERY CERTIFICATE.**
- **Please double check the details you fill in on the certificate.**
- **An example is shown on the next page.**





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Receipt of the Delivery

Documentation continued

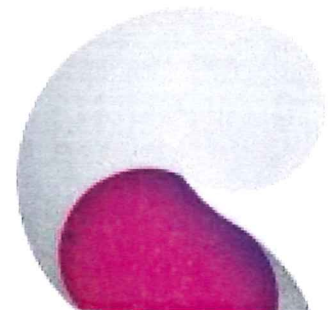
PETROLEUM DELIVERY CERTIFICATE				PART ONE			
<p>SITE OPERATOR AND FULL ADDRESS OF</p> <p>Date: _____ Order No. _____</p> <p>Grade names to be used on certificate: Unleaded - Diesel - Super - Four Star - Ultimate - Dmate</p>				<p>THIS IS A LEGAL DOCUMENT ALL RELEVANT AREAS OF THE CERTIFICATE MUST BE COMPLETED FULLY</p>			
TANKER		DELIVERY SITE		TANKER COMPS.		TOTAL	
Veh. Comp. Number	Grade	Quantity to be Delivered	Storage Tank Ullage	Storage Tank Number	Grade	DEL VOL	VOL
1							
2							
3							
4							
5							
6							
<p>Competent Person (Full name Block Capitals)</p>				<p>Driver Signature</p>			
<p>Ullage Print Attached (tick box)</p> <p>ASSISTED <input type="checkbox"/> UNASSISTED <input type="checkbox"/></p>				<p>Time of Connection</p>			
<p>Competent Person Signature</p>				<p>Driver (Full name block capitals)</p>			

The Competent Person (you) should complete sections Part One and Part Three.

The Delivery Driver should complete sections Part Two and Part Four.

Receipt of the delivery

- Provide driver with details of the (HAC) “Hazardous area classification”. This will be from your Hazard zone plan and risk assessment findings and include any special control measures required.
- Make sure you are wearing your **High visibility jacket or vest** and suitable non slip footwear without metal studs or exposed steel toe caps.
- Check you are not carrying any source of ignition, lighters, matches, mobile phones etc.
- Take the tank keys and manhole lifter you got ready earlier with you.
- Check that no dangerous practices are taking place near the delivery point (neighbours burning rubbish etc.) and that no parked cars have blocked the exit route since you deployed the cones on arrival.
- Ensure members of the public stay out of the 4 meter hazard zone around the tanker.
- It is a legal requirement that you and the driver must be present at all times during the delivery. If either have to move away at any time **THE DELIVERY MUST STOP.**
- Check the tanker compartments are full by checking the faucet sight glass or gauge.



Receiving the Delivery

- Tell the driver which tank is to receive which grade of fuel and the quantity to be delivered (**Your responsibility**).
- ENSURE DRIVER CONNECTS VAPOUR RECOVERY HOSE FIRST BEFORE CONNECTING DELIVERY HOSES AND AFTER DISCONNECTS THE VAPOUR RECOVERY HOST LAST.
- At this point the fill pipes can now be unlocked before delivery commences into the tank.
- If you are not happy about safety at any time, ask the driver to stop the delivery immediately.



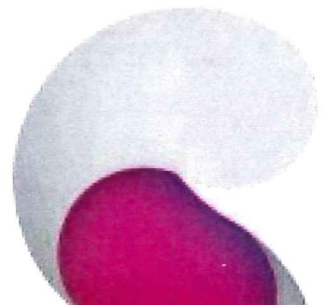
REMEMBER!

If you or the driver have to leave for any reason during the delivery it **MUST** be stopped.



MY SITE TASK 6

Locate the vapour connection point at my site

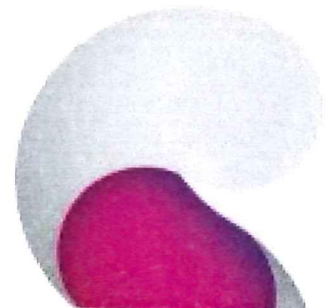


Receiving the Delivery



Spot the mistakes in the bottom picture

.....
.....

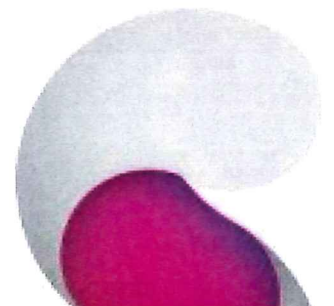


The delivery now takes place

- Remember the maximum number of hoses to be connected, Petrol and Diesel, is restricted to two - 3 including the vapour recovery hose.



- Unless the site has had a separate Risk assessment for the VR systems capacity carried out (recorded) to the satisfaction of the local PE Authority.



Receiving the Delivery

Remember!

The 4 metre Hazard Zone around the tanker.

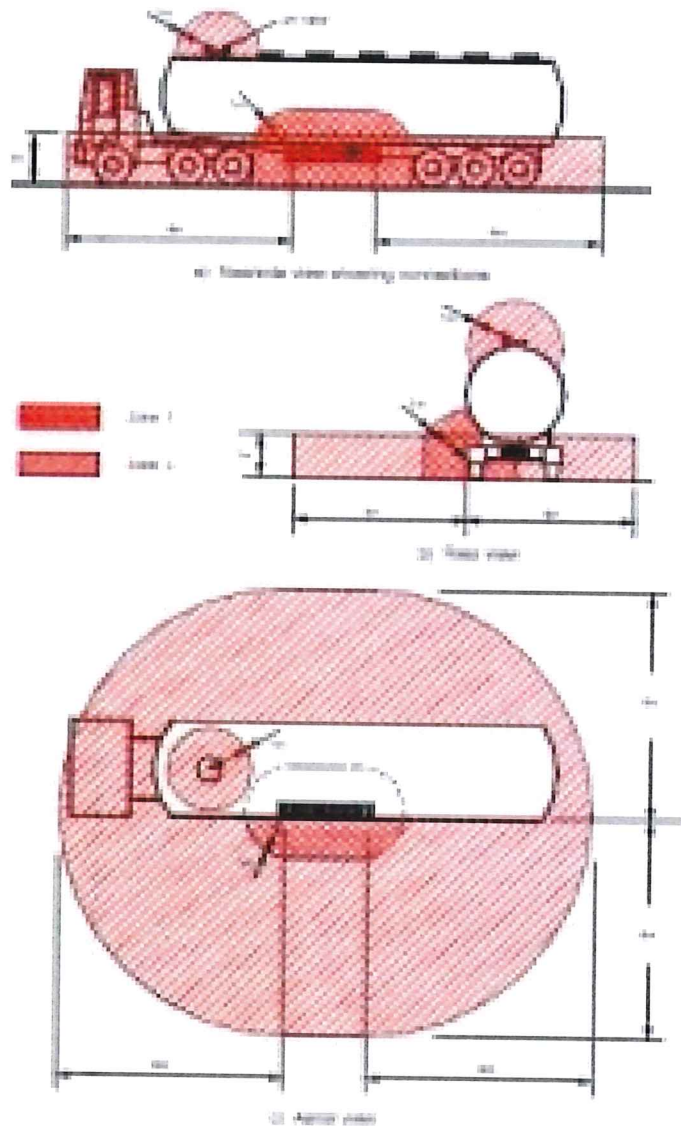
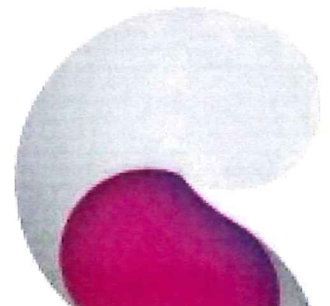
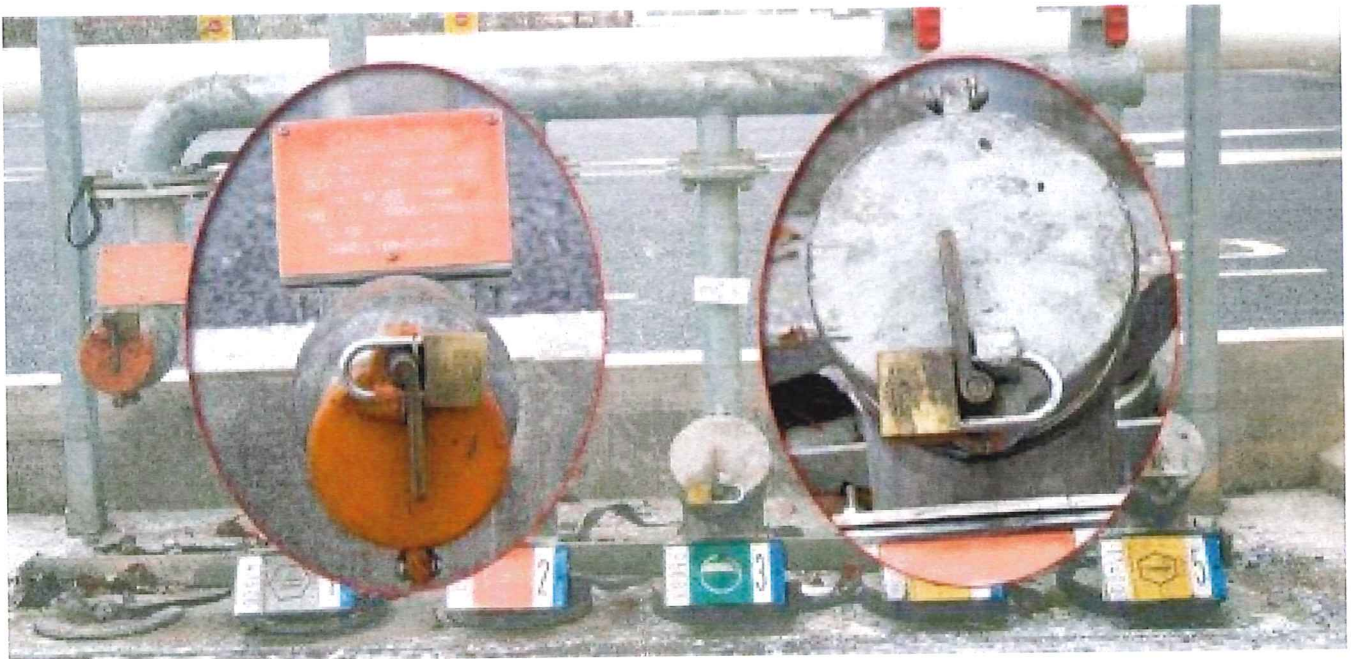


Figure 6 - Typical hazardous areas for a road tanker parked for unloading with various recovery facilities

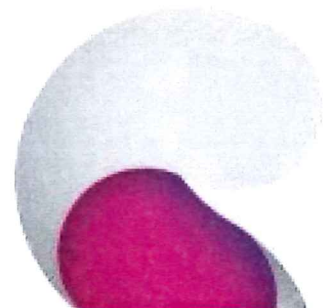
- **END OF DELIVERY** (Driver says compartment empty).
 - Confirm by checking tanker gauges with the driver.
- **SUPERVISE UNCOUPLING OF HOSES**
 - REMEMBER THAT THE VAPOUR RECOVERY HOSE SHOULD BE THE LAST TO BE UNCOUPLED (Your VR point first).
- **REPLACE FILL CAPS AND LOCK IMMEDIATELY** (See picture below).
- **ENSURE FIRE EXTINGUISHER AND SAND BUCKET ARE PUT AWAY** and any Control Cones removed and stored.



After Delivery Complete

YOU AND THE DRIVER SHOULD...

- **Secure the delivery point** and clean up any residual drips.
- **SIGN OIL COMPANY DELIVERY NOTE.**
- **RETAIN ONE COPY OF PETROLEUM DELIVERY FORM** - driver to be given second copy.
- **DIP TANKS / PRINT OUT TANK GAUGE REPORT** (To verify quantities delivered).
- **CHECK SITE LEFT IN SAFE CONDITION.**
- **SUPERVISE DEPARTURE OF TANKER** making sure you do NOT stand directly behind the tanker or on the public highway - you are not a policeman.
- **Ensure good housekeeping in place** - clear up where necessary.



What to do if it goes wrong

In the H.S.E. ACOP Document L133 Unloading petrol from road tankers
Petrol spills are be separated into the following categories.

1. Residual

- (a) Expected as part of the normal delivery process
- (b) Negligible spills/drips.

2. Manageable

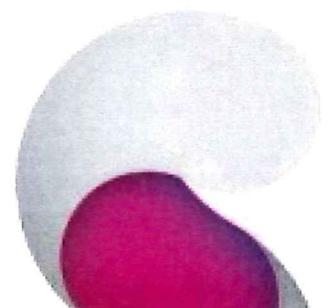
- (a) Small/medium spill retained on site and easily dealt with by site staff.
- (b) There may be a requirement to close and/or evacuate part of the site in order to manage the spill.
- (c) Spill goes to site drainage/separator.

3. Unmanageable

- (a) Large spill.
- (b) Will require full or partial closure and evacuation.
- (c) May require attendance of emergency services and/or specialist contractors.

N.B.

For ALL Ignited spills priority should be given to calling the emergency services 999, evacuating people from the premises to a safe distance from the incident (your Assembly point) and notifying neighbouring properties as appropriate.



What to do if it goes wrong

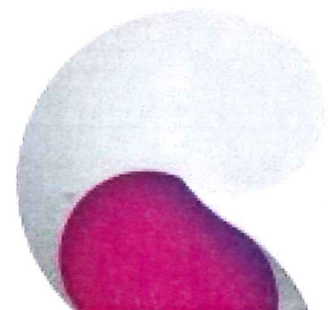
Unmanageable? (But you still have things to do)

- Driver stop delivery
- Switch off pump master switch (Firemans switch) (**Fig 1**) or Emergency switch at the till point.



Fig 1

- **Contact FIRE BRIGADE by dialling 999**
- Close Service Station and clear forecourt of members of the public.
- Prevent new members of the public from entering forecourt.
- Prevent owners of vehicles already on site from starting engines/ if they have to be moved push clear.
- Wait for Emergency services and then follow their instructions and only open the site when told to do so.
- Arrange for contaminated sand/absorbent to be stored safely (steel container with lid and labelled contaminated) arrange pick up by specialist contractor.
- Notify the local enforcement Authority officer (**PEA**)
- If spill has left the site notify the **Environment agency** England and Wales or **SEPA** in Scotland.
- Notify site owners/operator.
- If spill entered your interceptor arrange uplift by interceptor contractor (e.g. CSG, Aalto etc)
- Complete incident report.



What to do if it goes wrong

Manageable

- Driver stop delivery
- If required close part of the site affected and keep members of the public away.
- Try to contain spill with sand/absorbent or spill kit.
- Or let spill enter drainage/separator.
- Arrange for contaminated sand/absorbent to be safely stored and labelled “contaminated do not reuse”. Contact specialist contractor to pick up any contaminated items, and if spill entered interceptor arrange uplift by interceptor contractor.
- Inform site owner/operator.
- If required inform local petroleum officer (PEA).
- Complete incident report.

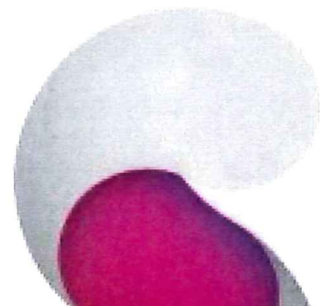
Residual

- If required driver stop delivery
- Clean up spill/drips with sand absorbent or spill kit.
- Store sand absorbent in steel container with a lid and label it “Contaminated do not reuse”



MY SITE TASK 7

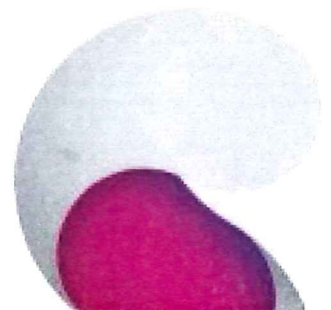
Locate the isolator (Firemans switch) at my site and also the emergency cut offs at the till points.



What to do if it goes wrong

OVER-FILL OF TANKS (Often discovered by fuel escaping from top of vents or pump breather valve).

- Clear all members of public from the delivery area
- Stop delivery.
- Contain / absorb any spilt product using dry sand or absorbent.
- Using pumps connected to over-filled tank, dispense fuel into vehicle tanks or authorised containers until fill-hose drained and able to be disconnected
- Amend Delivery Certificate to reflect true amount of fuel delivered into tank.
- Notify Petroleum Enforcement Officer / Dept. of the Environment (if any spillage), SEPA in Scotland.
- Notify Fuel Delivery Terminal
- Complete Incident Report
- Arrange for contaminated sand / absorbent to be stored safely (steel container with a lid) and labelled "contaminated do not reuse" and arrange disposal by specialist contractor.



CROSSOVER

Petrol into Diesel tank/Diesel into Petrol tank

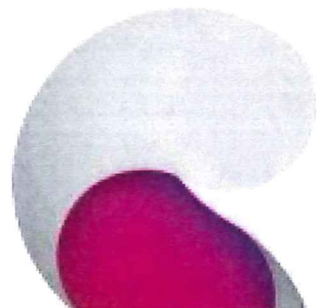
- Driver stop delivery.
- Stop sales from affected tank(s).
- Notify site owner operator.
- Notify Fuel Delivery Terminal (Arrange Uplift).
- Complete Incident Report.
- N.B. If crossover goes unnoticed and sales of contaminated fuel gets into customer vehicles the site could be liable to damage claims to vehicle engines.
- Report to local enforcement officer (PEA).

FAILURE OF VAPOUR RECOVERY SYSTEM

- Often noticed due to a vapour lock.
- Notify Environmental Health Dept.
- Suspend further deliveries until system rectified by specialist contractor.
- Complete Incident Report.
- Petroleum Enforcement Officer.

FAILURE OF D.C.D. SYSTEM

- Notify site owner/operator/manager.
- Contact specialist contractor to repair system.
- Revert to Controlled deliveries until system is repaired.





Correct tank labels must include:

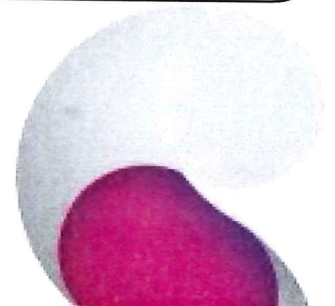
- Grade tag with energy institute guidance for colour and description.
- Tank number.
- Safe working capacity.
- And REMEMBER fill points must be locked between deliveries.

We will now go outside and look at the delivery setup at this site



MY SITE TASK 8

Are the tank grade labels correct, clean and readable at my site?



For Vapour Recovery and Connections

- Coloured tag (Orange) to identify Vapour Connection and cautionary notice to indicate how many hoses can be connected and discharged simultaneously (usually x 2 max) (1).
- Vent pipes numbered to show which tanks they are venting from (2).
- Hazard warning notices for vapour, ignition, and flammable petroleum (3).
- Above ground fill points and vents in safe location and/or protected by barriers if required (4).



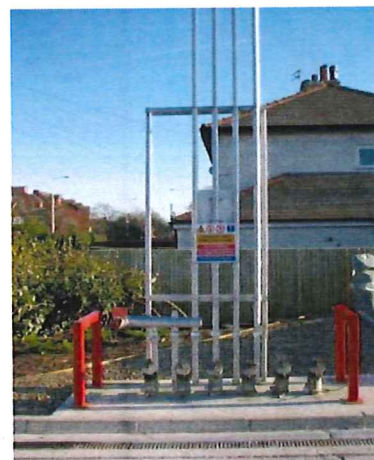
1.



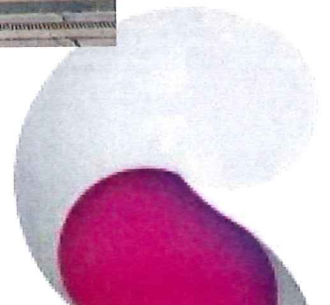
2.



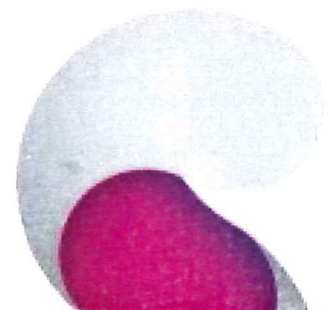
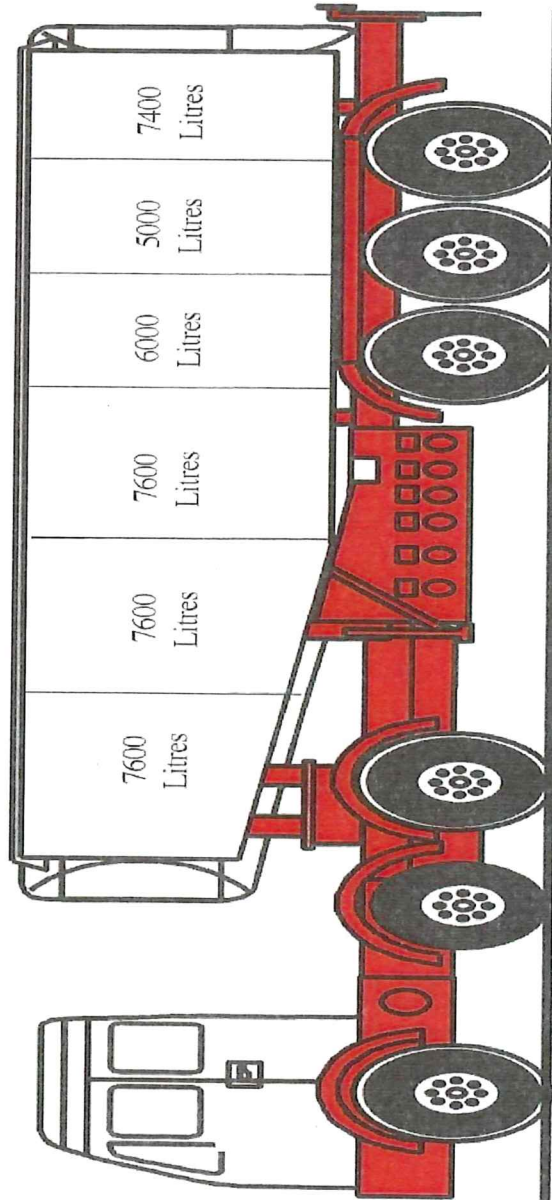
3.



4.



Appendix 1: Typical Compartments



Appendix 2: Tanker Compartments

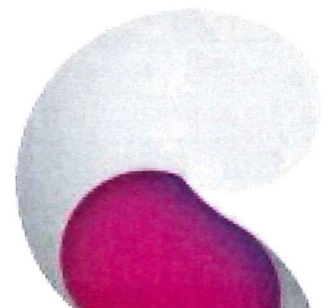
44 Tonne (F Type) All UK Depots

Figures in yellow & peach denote full 38000 litre loads

Updated 31/10/2006

DERV	SPIRIT	DERV	SPIRIT	DERV	SPIRIT	DERV	SPIRIT
0	40600	11800	27400	18800	19600	25800	11800
5000	35000	12000	27200	19000	19400	26000	11600
5200	34800	12200	27000	19200	19200	26200	11200
5400	34600	12400	26800	19400	18800	26400	11000
5600	34400	12600	26400	19600	18600	26600	10800
5800	34000	12800	26200	19800	18400	26800	10600
6000	33800	13000	26000	20000	18200	27000	10400
6200	33600	13200	25800	20200	18000	27200	10200
6400	33400	13400	25600	20400	17800	27400	10000
6600	33200	13600	25400	20600	17600	27600	9800
6800	33000	13800	25200	20800	17400	27800	9600
7000	32800	14000	25000	21000	17200	28000	9200
7200	32600	14200	24800	21200	16800	28200	9000
7400	32400	14400	24400	21400	16600	28400	8800
7600	32000	14600	24200	21600	16400	28600	8600
7800	30200	14800	24000	21800	16200	28800	8400
8000	30200	15000	23800	22000	16000	29000	8200
8200	30200	15200	23600	22200	15800	29200	8000
8400	30200	15400	22800	22400	15600	29400	7800
8600	30200	15600	22800	22600	15400	29600	7400
8800	30200	15800	22800	22800	15000	29800	7200
9000	30200	16000	22600	23000	14800	30000	7000
9200	30200	16200	22400	23200	14600	30200	6800
9400	30000	16400	22200	23400	14400	30400	6600
9600	29800	16600	22000	23600	14200	30600	6400
9800	29600	16800	21800	23800	14000	30800	6200
10000	29400	17000	21600	24000	13800	31000	6000
10200	29200	17200	21400	24200	13600	31200	5800
10400	29000	17400	21200	24400	13400	31400	5400
10600	28800	17600	21000	24600	13000	31600	5200
10800	28600	17800	20600	24800	12800	31800	5000
11000	28200	18000	20400	25000	12600	36000	0
11200	28000	18200	20200	25200	12400		
11400	27800	18400	20000	25400	12200		
11600	27600	18600	19800	25600	12000		

11/2/09 15:41:32



My Site Tasks



MY SITE TASKS

1. Find you site's site register, Risk assessment, and Hazard zone plan and read them.

2. Who orders the fuels at my site?

.....

3. Do we have enough cones for the task at my site? (6 minimum)

.....

4. Do we have lids on all of our sand buckets?

.....

5. Pace out 4 meters in all directions at the fill points to get an idea of the size of the hazard zone for the tanker at my site (also refer to your hazard zone plan).

6. Locate the vapour connection point at my site.

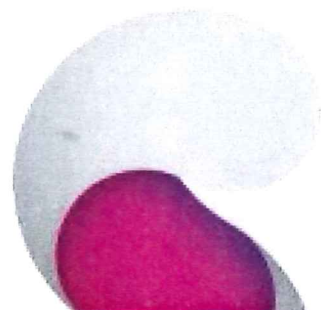
.....

7. Locate the isolator (Firemans switch) at my site, also the emergency cut offs at the till points.

.....

8. Are the tank grade labels correct at my site, clean and readable?

.....



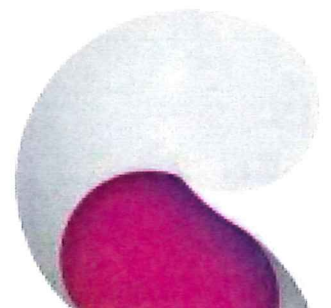


Practical Delivery Experience

PRACTICAL DELIVERY EXPERIENCE

- | | |
|---------------|--------------------|
| 1. Date | Manager sign |
| 2. Date..... | Manager sign..... |
| 3. Date..... | Manager sign..... |

Please record the date and get your manager to sign above to confirm your first three deliveries.





Suresite
Training

Wetstock Management

(Updated July 2015)

Helping you manage your Business Risk

Suresite Limited 4A Millennium City Park Barnfield Way Ribbleton
Preston PR2 5DB

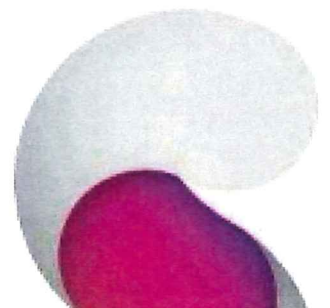


Welcome

Welcome to your Wetstock Training workbook.

This workbook has been designed to support you through your training and for you to use as reference when you get back to your store.

At the end of this workshop you will be required to complete an examination, please therefore make as many notes as you need in the workbook to help you revise in preparation for your exam.

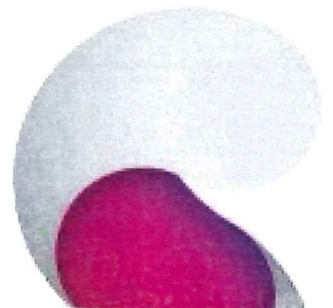


Agenda

- This session is going to utilise YOUR knowledge and common sense.
- It will give you any additional information that is required to help you fully understand the legal and safety requirements.

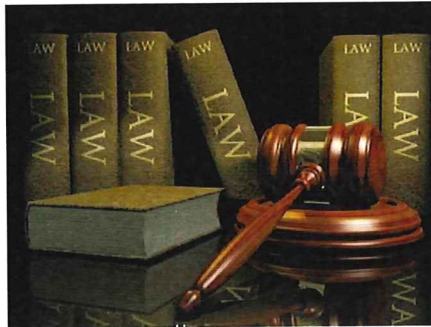
WE WILL LOOK AT THE FOLLOWING AREAS

- Wetstock Management.
- Wetstock Records.
- Identify potential discrepancies and know the correct action to take.



Closing Dips	Closing Dips are taken at a designated time of day or after fuel deliveries to check the total amount of fuel in the storage tank. The dips are used in calculating daily sales and also to verify volumes of fuel delivered.
Combustible Atmosphere	A mixture of air and petrol vapour in specific proportions that will burn if a heat source is applied.
Competent Person	A person who has received sufficient theoretical training and practical experience to carry out the safe and effective acceptance of fuel deliveries.
Competent Sales Assistant	A person who has received theoretical and practical training in the safe control of the forecourt and emergency procedures.
Control Point	The position in the kiosk or shop where the pump controller is located. From here the sales assistant can view the forecourt clearly.
Diesel (DERV)	Road fuel used in diesel engine vehicles. Evaporates more slowly than petrol. The flash point of diesel is 50°C.
DSEAR	The Dangerous Substances & Explosive Atmosphere Regulations 2002
Unattended Delivery	A fuel delivery during which the tanker driver alone offloads fuel. There is no requirement for the presence of a 'Competent Person'. This can only take place at sites approved by the Petroleum Officer.
Flammable	Liable to catch fire.
Flash Point	The lowest temperature, at which a product gives off vapours which when mixed with air, will produce a flash of flame if a heat source is applied.
Fire Point	The location for Fire Extinguishers

Hazard Zones	The area around the petroleum installation such as a pump, vent pipe, manhole chamber etc where petrol vapour is at the highest concentration. As a rough guide - within 4.25 metres of any petroleum installation.
Ignition Source	Any item which could cause heat or a spark and which could cause a fire in a combustible atmosphere.
Interceptor	A system for preventing spilt fuels from entering the public drains
Attended Delivery	A fuel delivery, which is controlled by a competent person. There must always be two people in attendance. The tanker driver plus competent person
Liquefied Petroleum Gas (LPG)	Hydrocarbon gases used as a fuel for vehicles and as fuel to heat appliances.
LPG Hazard Zone	The hazard zone is an area of 4.25 metres surrounding the LPG Compound and dispenser.
Octane Rating	Measure of quality or type of petrol.
Offset Fills	Tank fill points which are located at a position to enable the road tanker to be clear of the dispensing area during discharge without the need to change position during delivery
Opening Dips	Opening Dips are taken at a designated time of day or before fuel deliveries to check there is sufficient Ullage to receive a delivery. The dips are used in calculating daily fuel sales and also to verify volumes of fuel delivered.
Petrol (Petroleum)	A volatile, flammable liquid used as fuel. Evaporates quickly and will float on water. Petrol will ignite at temperatures between 230°C and 480°C. Please also see Petrol Vapour.
Petroleum Fuels Delivery Certificate	A legal document required to be completed in duplicate for every delivery of petrol products to a service station. These certificates need to be kept on site for 12 months



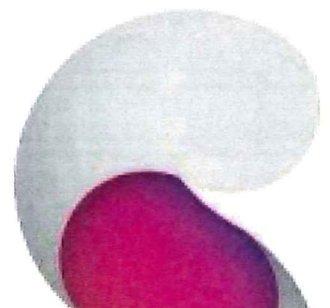
A key licence condition aimed at reducing the risks associated with petroleum spirit storage is the requirement to consistently and accurately monitor the Wetstock.

There are many laws by which the owners and operators of service stations must abide. The most important ones in relation to Petroleum products are summarized below.

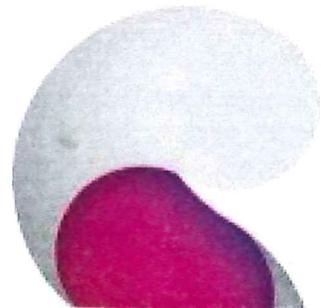
**Environmental Legislation England and Wales The Environment Agency.
Scotland SEPA.**

It is a criminal offence under the Water Resources Act 1991 to cause pollution of controlled waters, including streams and groundwater.

- PPG7 Construction and Operation of Fuelling Stations
- PPG21 Pollution Prevention Guidance "Incident response planning"
- PPG27 Installation, Decommissioning of Underground Storage Tanks.
- (PPG = Pollution Prevention Guidance issued by Environment Agency)
- The Groundwater England and Wales Regulations 2009 prohibit the discharge of petrol, diesel and other fuel oils into groundwater.



- In Scotland the groundwater policy for Scotland V3 Nov 2009
- The Water Framework Directive England and Wales 2003.
- In Scotland the water environment and water services act 2003.



Petroleum is a very dangerous product being highly flammable and toxic.

➤ **The Petroleum Consolidation regulations 2014**

These regulations deal with the petroleum certificate (after Oct 2014) or Licence before this which is required for the keeping of petroleum products and the duties that the certificate/licence holder must fulfil to ensure the safe keeping of such products.

➤ **Dangerous Substances & Explosive Atmosphere Regs 2002 (DSEAR)**



The intention of the Regulation is to identify risks and reduce the likelihood of a fatality or serious injury resulting from a “dangerous substance” igniting and potentially exploding.

➤ **The Red Book “Petrol Filling Stations Guidance”
CFOA (Chief Fire Officers Association)**

Every site should prepare a Pollution Prevention Plan to ensure all operation staff are aware of risks and procedures.

With today's cost of motor fuel every dealer needs to ensure he is paid for all the fuel dispensed from his tanks.

By taking pump meter readings at the beginning/end of shift you can determine how many litres of fuel you have been paid for.

However to properly control Wetstock it is necessary to compare metered sales with the amount of fuel taken from your storage tanks.

To determine what fuel has gone from the tanks it is necessary to take a dip (manual or electronic) at the start of the shift, add delivered quantities to the end of shift dip. Subtracting closing dips from opening and deliveries it is possible to calculate fuel taken from tanks.

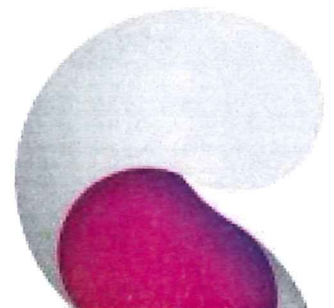
Pump reading and dips must be taken at the same time for comparison.

In an ideal world the volume dispensed should equal the volume from tanks.

Unfortunately this doesn't follow as sites will experience stock losses.

Stock losses are to be expected due to evaporation, shrinkage and the displacement of vapour during the road tanker unloading process. Typically, an average stock loss of some 0.2% to 0.3% can be expected. However, at some sites average stock losses can be as high as 0.5% or 0.6%. Although most sites tend to experience stock losses, occasional stock gains can occur.

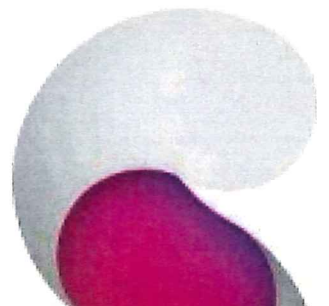
By monitoring stock losses/gains on a daily and cumulative basis it is possible to minimise stock losses and ensure early detection of possible leaks.



- Good business management
- Legal compliance
- Detect unacceptable loss
- Controlling H&S risk
- Minimise Environmental risk
- Reducing costs and saving money



Example of an Electronic tank gauge



There are many factors that can affect Wetstock variances. It is important that you are able to recognise the different causes of variance and account for them in your data.

$$\text{Variance} = \text{Closing Stock} - \text{Book Stock}$$

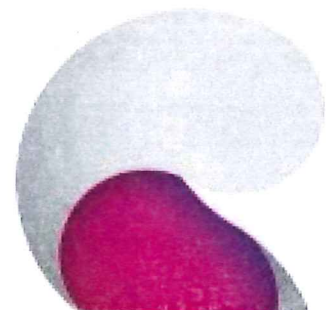
Where

$$\text{Book Stock} = \text{Opening Stock} + \text{Deliveries} - \text{Sales}$$

$$\text{Variance (\%)} = \frac{\text{Variance (litres)} \times 100}{\text{Sales (litres)}}$$

Cumulative Variance (%)

$$= \frac{\text{Cumulative Variance (litres)} \times 100}{\text{Cumulative Sales (litres)}}$$





Suresite
Training

Daily vs Cumulative Variance

Attachment 3

MONTHLY WET STOCK CONTROL

MONTH MAY YEAR .. 2012 PUMPS 1/2 : 3/4
 TANK NUMBER 2 GRADE ULP

DATE	A OPENING DIP	B DELIVERIES	C TOTAL STOCK (A + B)	D CLOSING DIP	E GONE FROM TANK (C - D)	F SALES BY PUMP (hrs)	G DAILY GAIN / (LOSS) (F - E)	CUMULATIVE PUMP SALES (hrs)	% GAIN / (LOSS) (100 x (Sales/Total))
1	11672			9850	1822	1841	19	1841	1.03
2	9950			7933	1917	1926	9	3767	0.74
3	7933			5730	2203	2192	(11)	5959	0.28
4	5730	5000	10730	8269	2461	2449	(12)	8408	0.06
5	8269			5814	2455	2460	5	10868	0.09
6	5814			4148	1666	1643	(23)	12511	(0.10)
7	4148	7000	11148	9467	1681	1661	(20)	14172	(0.23)
8	9467			7141	2326	2336	10	16508	(0.14)
9	7141			5429	1712	1695	(17)	18203	(0.22)
10	5429	5000	10429	8537	1892	1875	(17)	20098	(0.18)
11	8537			6148	2289	2397	3	22495	(0.13)
12	6148			3900	2248	2237	(8)	24732	(0.16)
13	3900	9000	12900	11379	1521	1430	(91)	26162	(0.50)
14	11379			9711	1668	1699	31	27861	(0.36)
15	9711	5000	14611	7615	2096	2105	9	29966	(0.30)
16	7615			9876	2439	2945	6	32971	(0.26)
17	9876			7761	1915	1938	(23)	34849	(0.18)
18	7761			6290	1471	1479	8	36328	(0.15)
19	6290			4334	1936	1905	(31)	38233	(0.22)
20	4334			2549	1805	1731	(74)	39964	(0.40)
21	2549	9000	10549	6232	4317	4439	122	39964	(0.40)
22	6232			4287	1965	1964	(1)	44403	(0.09)
23	4287			8563	2704	2690	(14)	44367	(0.08)
24	8563	7000	15563	6374	2189	2179	(10)	49057	(0.11)
25	6374			3936	2438	2457	19	51236	(0.12)
26	3936	9000	12936	11957	1179	1145	(34)	52693	(0.08)
27	11957			10905	852	865	13	52693	(0.14)
28	10905			9267	1638	1622	(16)	55703	(0.11)
29	9267			6943	2324	2328	4	57325	(0.14)
30	6943			4307	2636	2610	(26)	59653	(0.15)
31	4307							62268	(0.16)

Confirmed as a true record A. Roach Site Operator Date Examined SURESITE LTD.

Apparent Variance

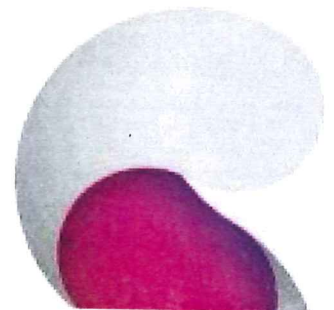
Administration Errors

- **Relating to Tanker deliveries**
 - Wrong delivery quantity
 - Inaccurate allocation of compartments
 - Delivery assigned to the wrong tank
 - Tank overfill – calculation of spillage/residual amount
 - Wrong transfer/uplift quantities
 - Allocating the delivery to the wrong day
- **Relating to pump sales**
 - Misreading of pump totalisers
 - Miscalculation of sales from totaliser readings
 - POS system problem 'loses' sales data
 - Incorrect treatment of pump tests
- **Relating to Tank dip readings**
 - Dipsticks
 - Inaccurate dipstick reading
 - Dipstick does not match the tank or is 'short'
 - Tank gauges
 - Poor calibration (tank and probe)
 - General
 - Readings not taken at the same time as pump totaliser readings (if process not automated)
 - Readings not being recorded each day

Tank Calibration

- Dipsticks or tank gauges
- Both can provide consistent readings

Keep good notes about excessive variances



Causes of Variance

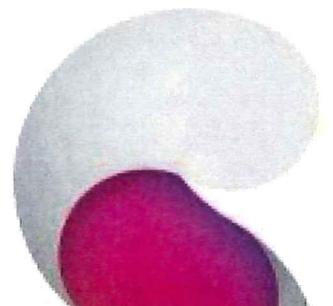
- Evaporation
- Time of year
- Volume change due to temperature
- Human intervention (Theft)
- Tank size and sales volume
- Equipment problems
- Pump meter accuracy
- Spillages
- Leaks

1°C causes a volume change in motor spirit of approximately 0.11%

- Tanker loads 38,000 litres of Unleaded
- Tanker Loading temperature = 24 °C
- Fuel delivered into petrol station tanks
- In tank temperature recorded as = 16 °C
- Fuel loss = $8 \times 0.11/100 \times 38,000 = 334\text{Its}$

Measure Checks

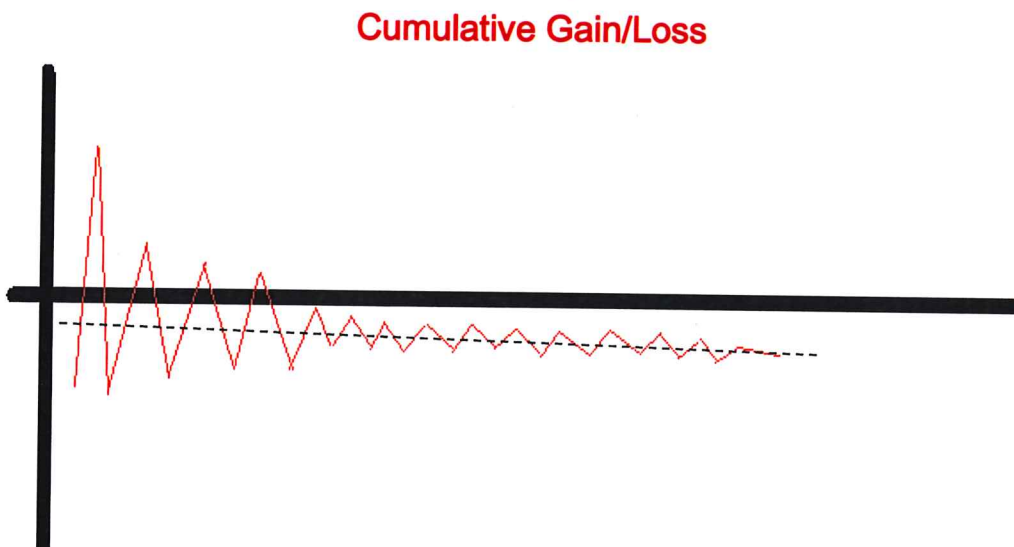
- Have weights and measures checked and passed all your pumps?
- Pumps' can legally **over** dispense by up to 1% and they can legally **under** dispense by up to 0.5%



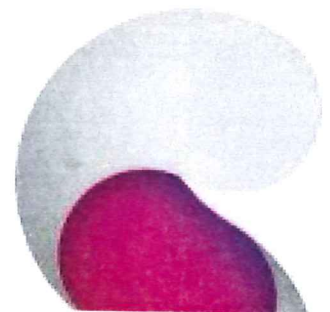
Daily vs Cumulative Variance



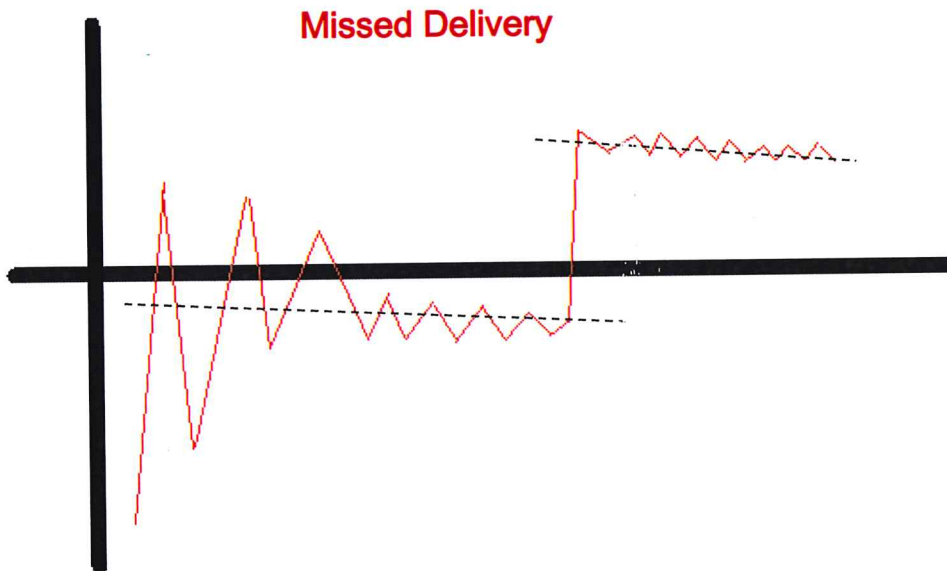
This only shows Daily Gain and Loss but all this shows is that levels in the tank vary as product slops about following deliveries.



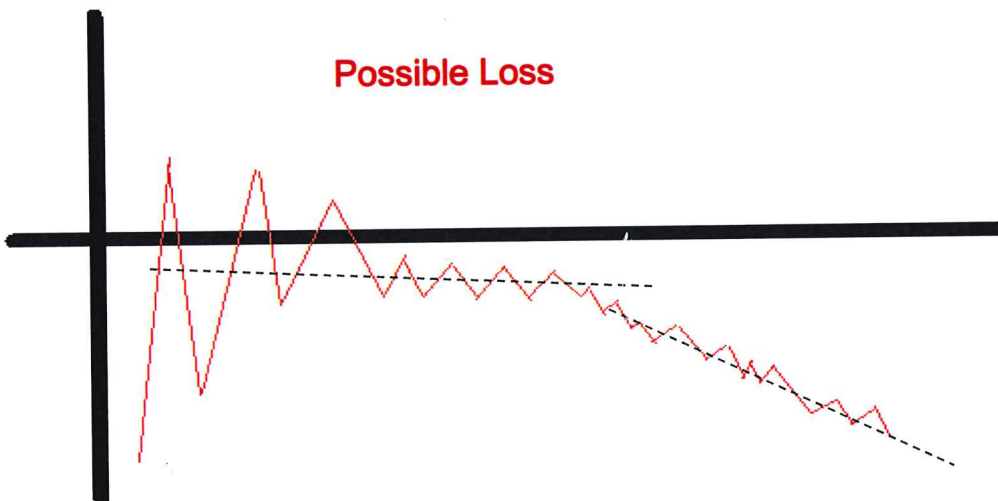
By taking loss figures over a period (typically 30 days) the effect of daily variation is "ironed out" and the true picture of trends in Loss/Gain can be seen.



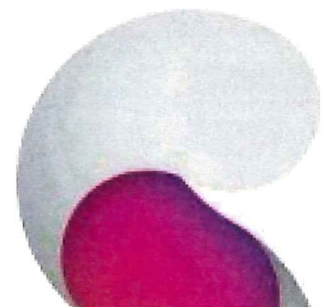
Daily vs Cumulative Variance



A clear visual indication showing an apparent major gain, but note that the rate of Loss (shown by dotted trend line) remains constant.



In this Case note how the rate of loss suddenly increases as sure indication something has changed drastically!!!



What Can It Cost?

Pumps over dispensing by 60 millilitres on a 20 litres measure (0.3%) would cost

A 6 million litre per year site

=

18,000 litres per Year !!!

A 3 million litre per year site

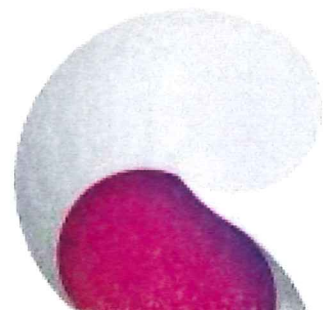
=

9,000 litres per Year !!!

A 1.5 million litre per year site

=

4,500 litres per Year !!!



Investigation procedures – 1

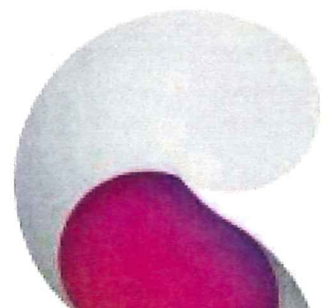
- Check for errors in calculations (monthly check)
- Check pump totalisers (monthly check)
- Re-dip tanks
- Re check delivery notes
- Are all readings being taken at the same time?
- Find out if there has been a spillage

Investigation procedures - 2

- Check pump measures
 - Is there a fault on one meter?
 - Are meters over – dispensing?
- Arrange to adjust or repair meters
- See if there is an improvement

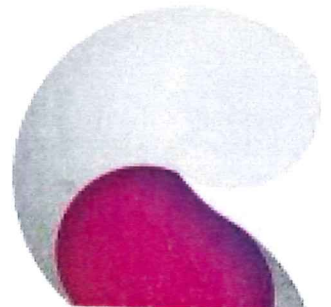
Investigation procedures – 3

- Visual inspection for signs of a leak:
 - In the tank manholes
 - Inside the pumps
 - Around the site
- Suction system
 - Check for 'drain-back' on suction line
 - Air being dispensed
- Pressure system
 - Are mechanical leak detectors fitted?
 - Check for 'slow flow'?



Investigation procedure – 4

- Carry out static tank test
 - Automatic test on tank gauge
 - Close tank over night and take dips
- Isolation of pumps
- Close off one pump at a time for 2 days and look for a change in variance
- Carry out pressure testing of tank and pipe work



- Accurate data recording.
- Use of cumulative variance.
- Capability to detect small leaks.
- Determine 'normal operating pattern'.
- Establish escalation procedures.
- Ensure adequate staff training.

