

**Presentation at 2010 APEA Conference**  
**by Ray Blake and Brian Humm**  
**of the Petroleum Group of the**  
**London Fire and Emergency Planning Authority**

MODES OF PETROL FORECOURT OPERATION  
NEW GUIDANCE

We chose to talk about this subject because the guidance is hot off the press, has been years in the making and is an excellent example of one of the main APEA aims i.e. "Industry and Regulators working together". The guidance was compiled by the Petroleum Enforcement Liaison Group (PELG). PELG's aim is to facilitate appropriate and consistent enforcement by Petroleum Licensing Authorities through the dissemination of advice, guidance and good practice.

Representation on PELG comes from:

- Health and Safety Executive
- Chief Fire Officers Association
- Regional Enforcement Groups
- Environment Agency
- UK Petroleum Industry Association
- Retail Motor Industry Petrol (formerly PRA)
- Downstream Fuel Association (formerly AUKOI)

In recent weeks the Chief Fire Officers Association has taken over the facilitating of PELG, and has undertaken to publish the advice and guidance produced by PELG via their website: [http://www.cfoa.org.uk/10038?not\\_logged\\_in=true](http://www.cfoa.org.uk/10038?not_logged_in=true)

The guidance we are introducing has been incorporated into Section 8 of the Red Guide which you can access via the link above.

We should like to mention that the person who carried out a vast amount of work for PELG, and who is the author of the Red Guide is Roger Marris of West Yorkshire Fire Service, he retired in mid October, his contribution to PELG and hence safety on petrol forecourts in general over the past 15 years cannot be underestimated.

The process that led to the new guidance

The need to review the guidance was first raised at the PELG meeting held in December 2006. The two main issues were that it had been realised that underage sales could no longer be controlled at sites operating in unattended self service (USS) mode by limiting transactions to credit and debit card sales only, and that one operator had exceeded the number of dispensers that the existing guidance (Blue Book and PETEL 65/59a) allowed to be operated in unattended self service mode.

There was also a conflict between the nationally recommended model Petroleum Licence Conditions and the risk assessing approach of the Dangerous Substances Explosive Atmospheres Regulations 2002. Legal advice had been sought by PELG from HSE's solicitors and from legal counsel by the Petroleum Group of the London Fire Brigade. The conclusion being that Petroleum Licence Conditions, are 'absolute' i.e. there is no defence to a prosecution based on 'what is reasonable practicable'. Therefore the duty is with the licensee to ensure that they have measures in place to control both underage sales and container filling even on sites where there is no immediate supervision of the forecourt.

## Intelligence gathering actions 2007 until 2009

Members of PELG both enforcers and industry reps were tasked with investigating whether debit and credit transactions could be age determined. The outcome was that whilst they could be, currently and for the foreseeable future, the financial institutions were not under sufficient pressure to fund the implementation.

The Petroleum Group of the London Fire Brigade agreed to explore the existing arrangements on sites operating in USS mode. This action evolved into the overseeing of a national inspection exercise and this was proposed by the CFOA Pet/Ex Working Group.

The operators with sites operating USS were approached, and all agreed to co-operate in the exercise. They provided a list of their USS sites and were forewarned of how, and over which period, the exercise was to be carried out. The exercise was aimed at ensuring that the 'approved arrangements' were in place at the sites, and that the control measures identified in the operators DSEAR risk assessments and emergency plans for USS mode of operation were also in place and effective.

The National Inspection of USS sites exercise.

Over a 6 month period extending to mid 2009, 25 PLA's spread from the highlands of Scotland to the extremities of Cornwall inspected 110 of the 304 sites identified as operating USS. Sites operated by 4 companies were inspected. For continuity, an inspection check list was devised to be used and returned for all inspections by all PLA's.

The inspections were carried out in two parts, the initial inspection was during the day, and was carried out with forecourt staff. The purpose of this inspection was:-

- Familiarise the staff as to the requirements
- Check that the two part USS DSEAR risk assessment had been carried out
- Identify the control measures
- Ensure that the control measures were in place
- Check on staff training
- Inform site staff of the second (overnight) inspection. (Particularly that the emergency phone and stop switch would be tested, and that staff must be available to react to a test of their emergency procedures)

The second inspection was carried out when all of the sites were operating in USS mode normally overnight. This involved a risk assessment being carried out to ensure the safety of the personnel carrying out the inspections. In London, we used a minimum of two Inspectors, and a liveried Brigade vehicle to block the area of the forecourt in which we were working, and we activated the blue flashing lights on the vehicle. The second inspection involved:-

- Checking the lighting of the dispensing area
- Checking the three minute dispensing limiter
- Ascertaining the number of dispensers available
- Emergency stop actuation
- Summoning a responsible person to attend the forecourt within 'a reasonable time' via the emergency phone

The results of the 110 inspections were collated, and we discovered that:-

- At approximately 60% of the sites inspected contraventions were discovered
- Different levels of enforcement action followed ranging from informal action through to the issuing of Prohibition Notices on the USS mode of operation

The conclusion was that many of the control measures that both the site operators and enforcers thought were in place were either not functioning, or did not achieve their aims. Also, that the level of competency of the staff on duty at the time of the inspections was in many cases not at an acceptable level.

### PELG WORKING GROUP

A working group was set up to review PETEL 65/59a, the inaugural meeting was held on 8<sup>th</sup> July 2009. All interested parties were invited to the meeting, this included companies and consultants with an interest in USS even if they did not have representation on PELG. The meeting established the aims and objectives of the group:-

The Group would start with defining the operating arrangements for unmanned and unattended self service mode and then cascade this down to the other types of forecourt operations.

- Several different types of site, from small rural to large scale urban would be considered and appropriate controls recommended.
- Response times in an emergency would be listed.
- A “goal setting” approach would be used to ensure technical innovation was not discouraged

The Working Group met a number of times and liaised via email during 2009 and into 2010. During the course of the Working Group a decision was made that rather than issuing the finalised guidance as a PETEL, it would be incorporated straight into a rewrite of Section 8 of the CFOA Red Guide. This has now been completed and can be accessed via:-

[http://www.cfoa.org.uk/11542?not\\_logged\\_in=true](http://www.cfoa.org.uk/11542?not_logged_in=true)

The engineered control measures will also be reflected in the revised Blue Book due for publication early in 2011.

The guidance works through the various modes of operation, the main changes for each are as follows:-

#### ATTENDED SERVICE

Attendant dispensing fuel into customer's vehicles

- No changes to previous guidance
- The safest and easiest mode of operation to control. Because the public do not carry out the fuelling operation, the control of underage sales and dispensing only into approved containers is easy to achieve. All subject to the training/competency of the attendant. The latching of nozzles is permitted.



#### ATTENDED SELF SERVICE

Attendant with vision of forecourt operations. Authorising dispensing into vehicles or approved containers.

- Only change to previous guidance is the reintroduction of the 8 pump limit which was 'lost' from the previous guidance.



#### ATTENDED SELF SERVICE WITH PRE-AUTHORISATION

Either some or all dispensers using the Pay@Pump system which does not require the attendant to authorise the transactions.

- Same as ASS but the attendant only has to be available to stop any unlawful dispensing, and to deal with emergencies.
- Existing additional control measures: 3 minute time limit.
- Change to guidance states that only 10 transactions or 10 minutes shall pass before the system needs to be reset by the authorisation of a transaction.

#### UNATTENDED SELF SERVICE

(LOW NUMBER OF TRANSACTIONS)

No attendant immediately available (usually a trained person is available in a nearby supermarket).

- Change: guidance now defines 'low number of transactions' as less than 120 transactions per hour, instead of limiting the number of dispensing positions to 4.
- Change / Clarification: live CCTV monitoring from adjacent premises (if no direct vision of forecourt). Immediate direct communication with customer. Alarm to sound at the monitoring point when an emergency stop is activated

UNATTENDED SELF SERVICE / AUTOMATED SITE (exceeding 120 TRANSACTIONS PER HOUR)

#### Change / Clarification

- Remote live CCTV vision of the forecourt
- Direct communication with customer
- Ability to stop transaction from remote location
- Limit of 8 transactions at any one time per controller
- Controller to alert trained person to respond to any incident within 5 minutes



### ENHANCED (ENGINEERED) CONTROL MEASURES

There are remote surveillance systems available that include a 'prompt' feature to highlight activities on site which could lead to intervention by trained control centre staff. The 'prompts' would/could include:

- failure of CCTV camera(s), which would result in closure to be instigated by the control centre;
- a discriminating movement/mass/action system which would for example prompt should there not be a vehicle present adjacent to the dispenser when a fuelling transaction is initialised. Or that people are moving about on the forecourt, but making no effort to operate a dispenser;
- a variable pre-set frequency prompt i.e. this could be a prompt for every tenth transaction, used to ensure that control centre staff monitor the general site conditions from time to time;
- abnormal dispenser running time / If the dispensing is stopped by the 100 litre / 3 minute limiter;
- repeated rapid nozzle removal and replacement;
- repeated authorisation attempts at payment system;
- opening of emergency cabinet / operation of emergency switch;
- operation of customer communication system; and
- a fire / smoke / vapour detection system.

Enhanced control measures have been identified with the aim of indicating that technology exists that could be employed as an addition to, or as an alternative to control measures which cannot be achieved. Two examples would be where automated sites exceed 120 transactions per hour, or where the eight dispenser limit on remote monitoring is not feasible. The enhanced control measures would have to be identified within the DSEAR RA for USS or automated self service and be accepted by the PLA.



PHOTO SHOWS WHAT COULD BE THE CONTROLLING OF CONTAINER FILLING BY ENHANCED CONTROL MEASURES

#### New managed control measure

Each time a site is changing from ASS to USS a check list is to be completed by 2 members of staff, the person handing over control of the forecourt, and the person taking over control of the forecourt, they must sign to verify that control measures are in place.

This control measure is aimed at overcoming one of the main issues discovered during the national inspection exercise. This being that on sites which alternate between ASS and USS, the outgoing daytime staff close the site leaving the pay@pump dispensers operating, on the assumption that the control measures for USS are working, and that there is a competent person available overnight. The use of a check list would address this issue, and ensure that the control measures have regular checks.

---

Representations were made to the PELG Working Group from enforcers and operators who were concerned about the cost of providing control measures in remote geographical areas of the UK where the existence of a petrol filling station is essential to the community and often not viable from a commercial point of view. The operation of petrol filling stations under these circumstances has been included within the guidance. This is summarised below.

## SITES LOCATED IN RURAL LOCATIONS

### STAND ALONE RURAL USS SITES (NON COMMERCIAL)

#### NEW GUIDANCE

##### CONTROL MEASURES:

- Site monitored by trained person(s) living or working near to site who may not be employees
- Emergency stop switch and telephone provided.
- Attendance within 5 minutes
- Instructions to customers must be displayed

### STAND ALONE ISOLATED USS SITES (COMMERCIAL)

#### NEW GUIDANCE

##### CONTROL MEASURES:

- Remotely located control centre with live CCTV monitoring of the forecourt
- Direct communication with customers
- Ability to stop dispensers remotely
- Control centre to be able to alert local emergency services

A great deal of work has gone into the compiling of this new guidance with input from right across the UK and from enforcers and industry representatives. We all believe that it is of great value and hope that it helps to continue the fantastic record the UK has for the safe operation of its petrol forecourts.