Shell U.K. Oil Products Limited
PO BOX 403,
Staines,
Middlesex
TW18 3ZB
Tel: +44 (0)845 309 3091
Fax: +44 (0)1784 897845
Email: kerry.toms@shell.com
Internet http://www.shell.com/uk

Environmental Services
Ipswich Borough Council
Civic Centre
Ipswich
IP1 2EE

28 JUL 2009

27th July 2009

Vapour Recovery Stage II Application

Dear Sir / Madam

Please find enclosed the completed application form regarding Vapour Recovery Stage II for Site:

1) Shell Bourne Bridge

Could you please send all correspondence to:

Kerry Toms
Shell U.K Oil Products Ltd
P.O. Box 403
Staines
TW18 3ZB

Full responsibility for forwarding the Vapour Recovery Permit 0to the sites will be undertaken by the administrator of Shell U.K Limited.

Yours faithfully

Kerry Toms
Retailer Contracting Assistant

Part B Application form

Application to vary a permit for a Part B service station to add PVR Stage II

Local Authority Pollution Prevention and Control
Pollution Prevention and Control Act, 1999
Environmental Permitting (England and Wales) Regulations 2007

Introduction

When to use this form
Use this form if you are applying for a variation to an existing service station permit in order to extend it to cover the operation of PVR Stage II.

A fee is only required to be enclosed if the variation involves a 'substantial change'. A substantial change is defined as "a change in operation which, in the opinion of the competent authority [the regulator] may have significant **negative** effects on human beings or the environment". (Closure of an existing service station and the building of a new replacement station at another location is likely to require a full fresh application, ie not constitute a variation.)

When complete, send the form and the fee and any additional information to:

Insert local authority address

If you need help and advice
We have made the application form as straightforward as possible, but please get in touch with us at the local authority address given above if you need any advice on how to set out the information we need.

LAPPC application form: to be completed by the operator		
For Local Authority use		
Application reference	**Officer reference**	**Date received**

A1.1. **Name of the premises**

Shell Bourne Bridge

A1.2. Please give the address of the premises

551 Wherstead Road, Ipswich, Suffolk

Postcode: **IP2 8LR** Telephone: **01473 685 135**

A1.3. Reference number of existing PVR Stage I permit for the installation

1.2/RJD/15/05

A2.1. **The applicant** - Please provide the full name of company or corporate body or the name of the sole trader or the names of the partners

SHELL UK LIMITED

Trading/business name (if different)

.....

Registered Office address

Shell Centre,
York Road,
London

Postcode: **SE1 7NA** Telephone: **0207 934 1234**

A2.2. **Holding companies**

Is the operator a subsidiary of a holding company within the meaning of section 1159 of the Companies Act 2006?

☐ No

X Yes

If yes? Name of ultimate holding company: **SHELL TRANSPORT AND TRADING COMPANY PLC**

Ultimate holding company registered office address

SHELL CENTRE
YORK ROAD
LONDON

Postcode: .**SE1 7NA** Telephone: **0207 934 1234**

A3 **Who can we contact about your application?**

It will help to have someone who we can contact directly with any questions about your application. The person you name should have the authority to act on behalf of the operator - This can be an agent or consultant.

Name: **Kerry Toms**

Position: **Retailer Contracting Assistant**

Address:

P O Box 403
Staines
Middlesex

Postcode: **TW18 3ZB** Telephone: **0845 309 3091**

Fax number: **01784 897 845** email address: **kerry.toms@shell.com**

B. **About the installation**

B1.1 Is PVR Stage II equipment already fitted:

☐ No

X Yes

B1.2 If the answer to B1.1 is "no",

a) when do you intend to fit it .....

b) what arrangements are in place (eg contract with installers) to fit it

.....

B2.1 What systems have been installed or is it intended to install to comply with PVR Stage II?

See Attached

Doc Reference See attached

B2.2 What is or will be the vapour/petrol ratio?

See Attached

B2.3 Please attach process diagrams and plans of VPR Stage II system, including pipework layout.

Doc Reference: **See Attached**

B2.4 What arrangements will be/have been made for preventative maintenance of the PVR Stage II equipment.

.....

.....

.....

Doc Reference: **See Attached**

B2.5 What arrangements will be/have been made to ensure relevant staff are adequately familiar with and trained in the use of the PVR Stage II equipment.

.....

.....

.....

Doc Reference: **See Attached**

B2.6 Please attach procedures and contingency measures in the event of vapour containment equipment failure (including the system for vapour recovery during filling of vehicle petrol tanks).

Doc Reference: **See Attached**

B2.7 Please provide a certificate to confirm conformity of the PVR Stage II equipment with approval for use under the regulatory regimes of at least one European Union or European Free Trade Association country and to confirm that the hydrocarbon capture efficiency of the equipment is not less than 85% (ie that at least 85% of the displaced vapours are recovered, according to the relevant 'type approval' test (see Section 5.16 of PG1/14(06)), expressed as the ratio of the volume of hydrocarbon vapours displaced to the volume of petrol discharged.

Doc Reference: **See Attached**

B2.8 What arrangements will be put in place to test delivery systems and vapour recovery systems, including the testing of the vapour/petrol ratio? Please provide details of testing of the vapour containment integrity in accordance with the manufacturer's specifications (to be undertaken prior to commissioning and periodically at least once every 3 years thereafter and always following substantial changes or significant events that lead to the removal or replacement of any of the components required to ensure the integrity of the containment system).

Doc Reference: **See Attached**

B2.9 Is an "automatic monitoring system" installed, or will it be installed, to automatically detect faults in the proper functioning of the petrol vapour recovery system including the automatic monitoring system; to indicate faults to the operator; and to automatically cut off the flow of fuel on the faulty delivery system if the fault is not rectified within 1 week?

☐ No

X Yes

B3 Additional Information

Please supply any additional information, which you would like us to take account of in considering this application.

Doc Reference: **See Attached**

C1. **Fees and Charges**

C1.1. Please enclose the relevant sum if this variation involves a substantial change, and state the amount enclosed.

£.....

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. If you don't pay, your permit can be revoked and you will not be able to operate your installation.

C2.1.If different to details provided in relation to your current PVR Stage I permit, please provide details of the address you wish invoices to be sent to and details of someone we may contact about fees and charges.

Shell Shared Service Centre Glasgow Ltd
P O Box 25071
72 Gordon Street
Glasgow

Postcode G1 3WR Telephone.

C3. Commercial confidentiality

C3.1. Is there any information in the application that you wish to justify being kept from the public register on the grounds of commercial or industrial confidentiality?

If **Yes**, please provide full justification, considering the definition of commercial confidentiality within the EP Regulations (See the General Guidance Manual).

C4. 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,
- make sure you keep to the conditions of your permit and deal with any matters relating to your permit
- investigate possible breaches of environmental law and take any resulting action,
- prevent breaches of environmental law,
- offer you documents or services relating to environmental matters,
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows)
- 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 38 of the EP 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).

C5 Declaration: previous offences (delete whichever is inapplicable)

I/ certify

EITHER

No offences have been committed in the previous five years which are relevant to my/our competence to operate this installation in accordance with the EP Regulations.

OR

The following offences have been committed in the previous five years which may be relevant to my/our competence to operating this installation in accordance with the Regulations:

.....

.....

Signature .....

Name: **Kerry Toms**

Position: **Retailer Contracting Assistant**

Date: **27th July 2009**

6 Declaration

C6.1 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:

Premises name: **Shell Bourne Bridge**

Signature .....

Name: **Kerry Toms**

Position: **Retailer Contracting Assistant**

Date: **27th July 2009**

Signature .....

Name .....

Position.....

Date .....

** Where more than one person is defined as the operator, all should sign. Where a company or other body corporate – an authorised person should sign and provide evidence of authority from the board of the company or body corporate.*

FEF Stage II Vapour Recovery Test Certificate

Completed certificate to be kept on site with site records and a copy retained by the contractor.

Part A. Work and Equipment Record

Date 5/2/09

Engineer Name: A. BARRINGER

Station Name / Operator: SHELL BOURNE BRIDGE

Address of station: WHERSTEAD ROAD IPSWICH SUFFOLK IP2 8LR

Dispenser/Pump Make & Model Q500T

Vapour Recovery system type fitted SCG

Vapour Recovery monitoring system type fitted _____

Tick all boxes that apply:

- ☐ Work on Vapour Recovery System
- ☐ Work on Automatic Monitoring System
- ☑ New Installation
- ☐ Ordered by customer or other agency
- ☐ Annual periodic test
- ☐ 3 yearly periodic test
- ☐ Test after modification or repair

Remarks: _____

Annex A. Work and Equipment Record – Extension

- ☐ Work on Point of Sale System (complete Test Certificate part D)

Remarks: _____

TOKHEIM

FEF Stage II Vapour Recovery Test Certificate

Part B. VR Efficiency Test Record

The Manufacturer's documentation, including approval certificate, contains data required for efficiency tests.

Correction factor for air (in manufacturer's documentation) : _____

Maximum fuel flow rate: _____ Outdoor Temperature : _____°C

Tolerance range for V/P ratio: ___ % to ___ %

Pulsing rate (factor) located on Gas meter : _____

Pump side	Pump Number	Grade name	V/P ratio and fuel flow rate			
			Before adjustment		After adjustment (if applicable)	
			[%]	[l/min]	[%]	[l/min]
1	1	G1 U/L G2 VP U/L	100.5 100.0	40.2 40.0		
2	2	G1 U/L G2 VP U/L	100.5 100.1	40.2 40.0		
1	3	G1 U/L G2 VP U/L	100.8 100.4	40.3 40.2		
2	4	G1 U/L G2 VP U/L	100.5 100.3	40.2 40.1		
1	5	G1 U/L G2 VP U/L	100.2 100.2	40.1 40.1		
2	6	G1 U/L G2 VP U/L	100.4 100.2	40.2 40.1		
1		G1 G2				
2		G1 G2				

Note: If the Vapour Recovery monitoring device is equipped with a regulation or correction function then this has to be disabled during the measurements.

If an Automatic Monitoring system is fitted is this operating correctly – indication for normal operation, alarm condition and stop condition. Y or N ☐

Date of this inspection: 5/2/09

Date next inspection due: _____

Signed (Engineer): A J Bam

FEF Stage II Vapour Recovery Test Certificate

Part C. Initial Installation Inspection and Test

Leak test executed and passed on Vapour Recovery pipes & components:

☑ Inside of dispenser (retrofit kits) ☐ Between dispenser and tank

Pump Number : 1 – 6

Test step	Details – PASS/FAIL or Values
Conforms with installation instructions.	PASS
Visual inspection of Vapour Recovery system for security of fittings.	PASS
Visual inspection of Vapour Recovery monitoring device - if fitted.	–
Leak test to internal dispenser pipes and components. (Retrofit kits).	PASS
Leak test to pipes connecting dispenser to tanks or other external systems.	–
Running of Vapour Recovery pump – no loose or vibrating pipes.	PASS
Confirm operation of Vapour Recovery monitoring device and alarm test. Note 1	–
Dry measurement at each nozzle.	PASS

Note1: The alarm signal and the switch-off function has to be tested for every nozzle if the switch-off function is nozzle specific.

Date of this inspection: 5/2/09

Signed (Engineer): A J Barnes

Part D. POS EVR Monitoring Display Device Verification

Monitoring Device ☐ Standalone ☐ Integrated into POS display

Point of Sale: Manufacturer / Model S/w Vers: _____

Pump Numbers: 1 – 6

EVR - Normal Operation

- ☐ Pump Icon shows Normal for correct Pump
- ☐ No alarm message or warnings displayed

EVR - Alarm (Timer started)

- ☐ Pump Icon shows Timer started – amber rectangle – flashing for 2 minutes above normal pump icon display
- ☐ Alarm message says VRn: Warning – VR issue detected (or equivalent) (Where n is correct fuelling point number)

EVR - Stop (Timer expired)

- ☐ Pump Icon shows Timer expired – red rectangle – solid filled above normal pump icon display
- ☐ Alarm message says VRn: Nozzles Disabled (or equivalent) (Where n is correct fuelling point number)

EVR - Defect (EVR Monitoring system defect)

- ☐ Pump Icon shows Timer expired – red rectangle – solid filled above normal pump icon display.
- ☐ Alarm message says VRn: Device Fault (or equivalent) (Where n is correct fuelling point number)

EVR – Reset (When a running or expired timer is reset, or a defect VRMS control unit is repaired the monitoring device displays)

- ☐ Pump Icon shows EVR box removed from display
- ☐ Alarm message says VRn: VR Issue cleared. (or equivalent) (Where n is correct fuelling point number)

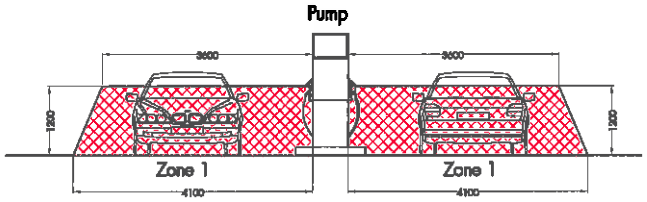
FEF Stage II Vapour Recovery Test Certificate

Part E Final Check of Pipework Connection To Manhole Chamber

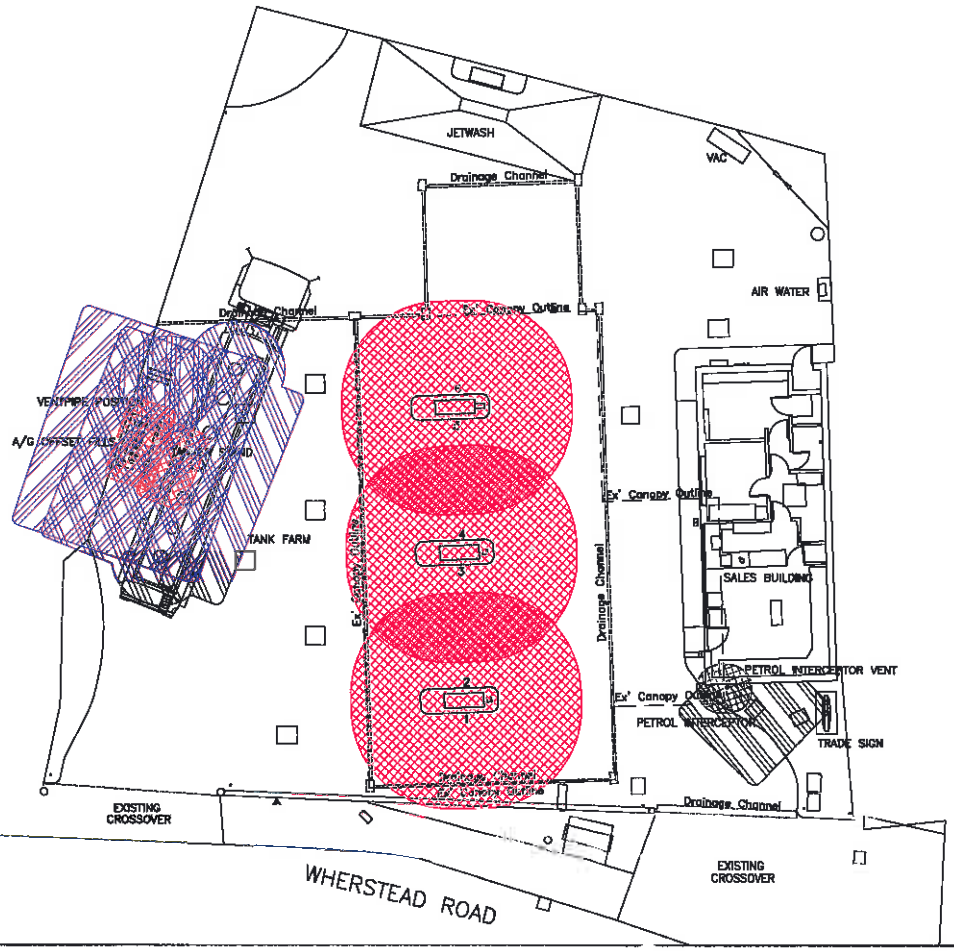
Please provide details of manhole chamber tank connections

	Y/N	
VR Return Line exists & Terminated in Tank	Y	If NO - DO NOT ENABLE VRII
Tank Number Labelled (write): TANK 2	Y	MC To take action
Tank Grade (Write): U/C	Y	If NO - DO NOT ENABLE VRII
VR Line Labelled	Y	MC To take action
Isolator Valve Fitted	N	For Info only.
Isolator Valve in OPEN position	—	If NO - DO NOT ENABLE VRII
Electrical Ducting Sealed	Y	MC To take action
TLS Wiring - No Damage	Y	MC To take action
Manhole Chamber Depth (mm)	1500	FT to Insert Height in mm.
Excessive Water in Manhole Chamber	N	MC To take action
Manhole Cover OK or damaged	Y	MC To take action
Manhole Frame OK - No Damage	Y	MC To take action
Take Photograph	Y	Must be attached.
Dispenser VRII System ENABLED	Y	Must be compliant.

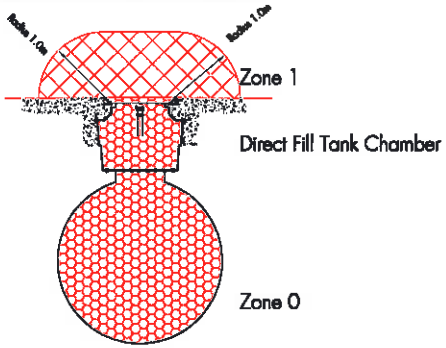
Any other H&S Issues in Manhole chamber (If VR not enabled give reason here)



Pump Zone 1 Cross Section. (n.t.s.)



NOTE:
DIRECT AND OFFSET FILL BELOW GROUND CHAMBERS ARE ZONE 0 HAZARDOUS AREAS.



Fill Point Zone 0 Cross Section. (n.t.s.)

TANK TO PUMP SCHEDULE						
TANK No.	GRADE	MAX WORKING CAPACITY (L)	NOMINAL FUEL CAPACITY (L)	PUMP BRANDS		
				1-2	3-4	5-6
1	UNLEADED	33920			●	
2	UNLEADED	24260		●		●
3	DERV	19400			●	
4	DERV	19400		●		●
5	V-POWER	19400		●	●	●

NOTATION AND SPECIFICATION :

1. THE CLASSIFICATION OF HAZARDOUS ZONES AS SHOWN ON THE LAYOUT IS IN ACCORDANCE WITH THE H & SE. GUIDANCE NOTES CS/4 & HS/G 34 AND BS 7117 and GUIDANCE FOR THE DESIGN, CONSTRUCTION, MODIFICATION AND MAINTENANCE OF PETROL FILLING STATIONS.

DESIGNATION OF ZONES :

2. ZONE 0 : AN AREA IN WHICH ANY FLAMMABLE ATMOSPHERE IS LIKELY TO BE CONTINUOUSLY PRESENT IN CONCENTRATIONS WITHIN THE UPPER AND LOWER LIMITS OF FLAMMABILITY.

ZONE 1 : AN AREA IN WHICH A DANGEROUS ATMOSPHERE IS LIKELY TO OCCUR IN NORMAL OPERATING CONDITIONS.

ZONE 2 : AN AREA IN WHICH A DANGEROUS ATMOSPHERE IS LIKELY TO OCCUR ONLY IN ABNORMAL OPERATING CONDITIONS AND NOT IN NORMAL OPERATING CONDITIONS.

3. LEGEND:

HAZARDOUS ZONE : 0

HAZARDOUS ZONE : 1

HAZARDOUS ZONE : 2

REV		DATE
A	GRADE CHANGE V-POWER REPLACED OPTIMAX.	OCT08

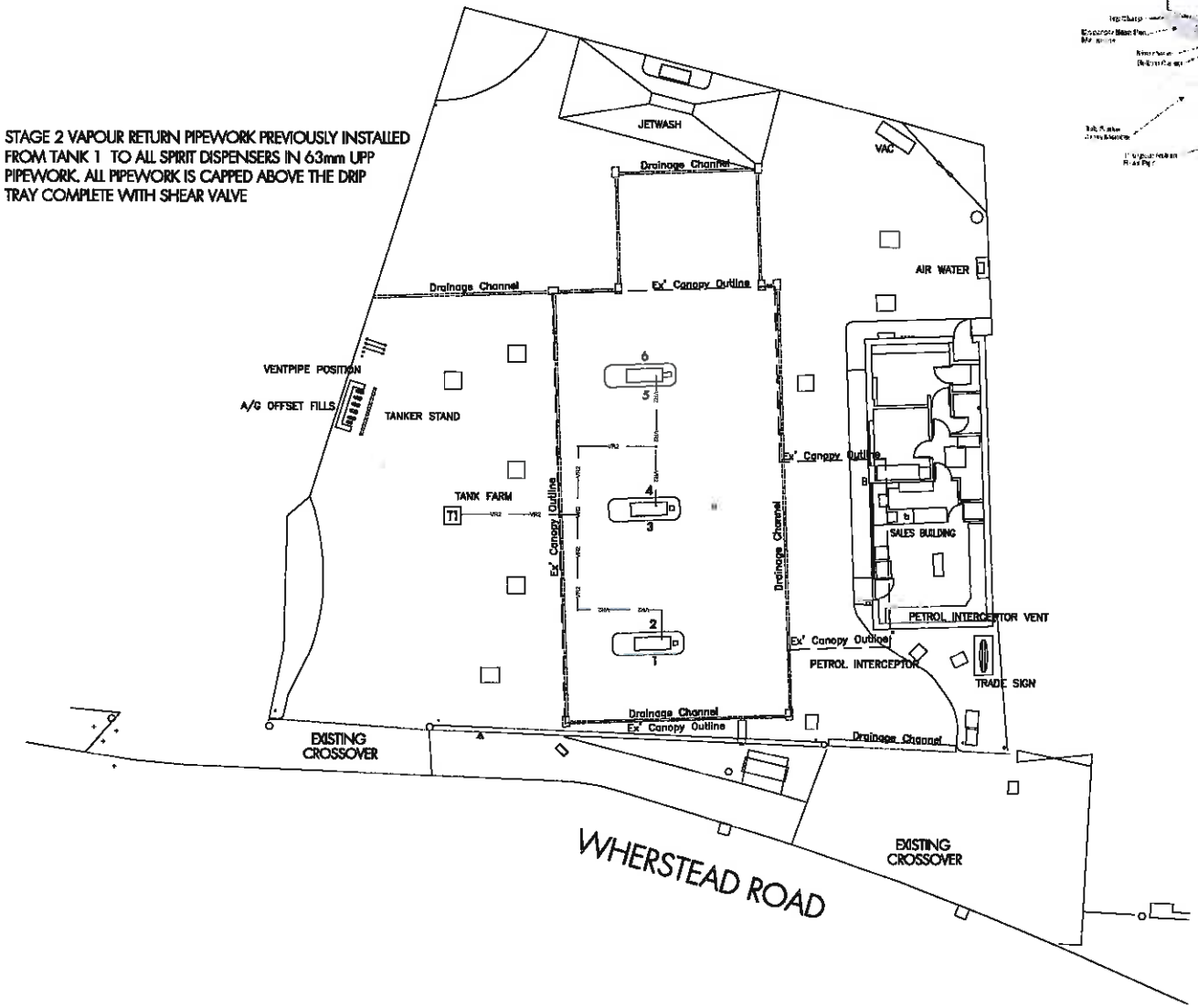
PROJECT : BOURNE BRIDGE SERVICE STATION, 551 WHERSTEAD ROAD, IPSWICH, SUFFOLK. IP2 8JR.

TITLE : HAZARDOUS AREAS DETAILS

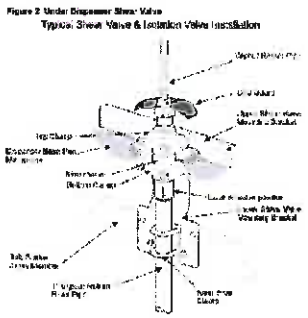
DRAWN BY :	MW/MSH	SCALE :	1:200
DATE :	OCT05	PLOT DATE :	.
CAD FILE :	S:\JOBS\HAZ\DRAWINGS\HAZTANK\BOURNE\BOURNE-HAZ		

DWG No :	356983	HAZ	001	A

STAGE 2 VAPOUR RETURN PIPEWORK PREVIOUSLY INSTALLED FROM TANK 1 TO ALL SPIRIT DISPENSERS IN 63mm UPP PIPEWORK. ALL PIPEWORK IS CAPPED ABOVE THE DRIP TRAY COMPLETE WITH SHEAR VALVE



TYPICAL UNDER PUMP VAPOUR RETURN - SHEAR VALVE DETAIL

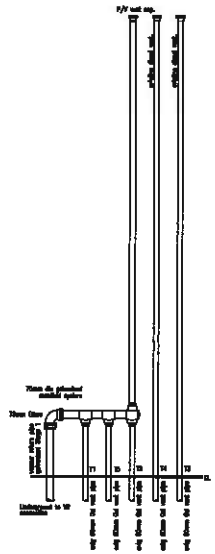


POST CONSTRUCTION

TANK TO PUMP SCHEDULE

TANK No.	GRADE	MANIFOLDED CAPACITY (l)	MANIFOLDED CAPACITY (l)	PUMP NUMBER				
				1/2	3/4	5/6		
1	UNLEADED		50000		●			
2	UNLEADED		84000	●		●		
3	SUPER		14000		●			
4	DIESEL		37000	●		●		
5	SUPER/DIESEL		14000	●	●	●		

EXISTING VENT STACK DETAIL - LOW LEVEL MANIFOLD



A. J. Bayliss
Petroleum Engineers Ltd.
Petroleum, Fuel Oil and Electrical Installations
Hadlow Road, Sandy Lane Industrial Estate, Stourport-on-Severn, Worcestershire DY13 9QB
Telephone: 01299 824541-2 Fax: 01905 857656 E-mail: enquiries@bayliss.com

REV No.	DATE	DESCRIPTION	BY	CHKD BY
A				

PROJECT : BOURNE BRIDGE SERVICE STATION, WHERSTEAD ROAD, IPSWICH, SUFFOLK, IP2 8LR.

TITLE : VR2 INSTALLATION DETAILS

DRAWN BY :	RLdm	SCALE :	1:300
DATE :	APRIL 08	PLOT DATE :	N/a
CAD FILE :			

DWG No :	356983	VR2	001	-

sira
Certification Service

1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Component intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: Sira 04ATEX9170U

4 Component: Vapour Recovery System Modules

5 Applicants: Tokheim UK Ltd and Tokheim Sofitam Applications

6 Address: Unit 3 Baker Road
West Pitkerro Industrial Estate
Dundee DD5 3RT
Scotland

Route de Sollers
14540
Grentheville
France

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of component intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number R53M11448A.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured with reference to the following document:

EN 13617-1:2004

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any special conditions for safe use are listed in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:

Ex II 1/2 G

D R Stubbings BA MIEE
Certification Manager

Project Number 53M11448
Date 1 November 2004
C. Index 09

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900 Fax: +44 (0) 1244 681330
Email: exhazard@sirate.co.uk
Sira Certification Service is a service of Sira Test & Certification Ltd

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE Sira 04ATEX9170U

13 **DESCRIPTION OF COMPONENT**

The vapour recovery system module is designed to fit into the hydraulic cabinet and frame of existing, liquid fuel dispensers and are intended to recover fuel vapour emitted from the nozzle during dispensing and return it to the storage tank. They comprise:

- a vapour pump, with associated flame arresters, powered by a motor, both of which are suitably certified and rated
- a filter unit
- suitably certified and rated control valves
- copper pipework and associated joints
- a splitter unit fitted to the outlet pipe

The vapour recovery system module is configured to suit the associated dispenser such that existing dispenser zoning is not compromised. The module requires a vapour recovery hose to EN 13483 and a suitably certified vapour recovery nozzle to be fitted.

Where pipework and/or cabling passes through existing vapour barriers, the characteristics of the barrier are maintained by using suitably rated cable glands.

The modules are controlled by: **VFM (Vapour Flow Module)** - signals from the existing pulser and an in-line vapour meter are processed by electronics mounted in the dispenser head to control the activation and flow of the vapour system. An in-line damping vessel is fitted to maintain system accuracy.
ECVR (Electronically Controlled Vapour Recovery) - signals from the existing pulser are processed by electronics mounted in the dispenser head to control the activation and flow of the vapour system.

Design Options

- the following devices may be fitted to the vapour return line, dependent on local regulations:
  - shear valve
  - non-return valve
  - manual isolation valve
  - flame arrester assembly
- two modules may be powered from a single motor
- a vapour line pressure gauge may be fitted

14 **DESCRIPTIVE DOCUMENTS**

14.1	Drawing No.	Sheet	Rev.	Date	Title
	900704-035	1 to 9	A	16 Aug 04	Vapour recovery systems - compliance details
	900704-036	1 to 3	A	16 Aug 04	System hardware.
	900704-037	1 of 1	A	16 Aug 04	System schematics
	900704-038	1 of 1	A	16 Aug 04	Component test rig.
	900704-042	1 of 1	A	02 Sep 04	Marking plate

14.2 Report number R53M11448A

Date 1 November 2004

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900 Fax: +44 (0) 1244 681330
Email: exhazard@sirate.co.uk
Sira Certification Service is a service of Sira Test & Certification Ltd

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE Sira 04ATEX9170U

15 **SPECIAL CONDITIONS FOR SAFE USE**

15.1 The units shall be installed with suitably certified liquid fuel dispensers with the following modified fittings:

- vapour recovery hose to EN 13483
- vapour recovery nozzle to EN 13617-2

15.2 Any pipework, joints and modifications to vapour barriers within the associated dispenser shall maintain compliance with the requirements of the equipment certificate; the existing equipment zoning shall not be compromised as a result of the fitting of this component.

15.3 The installation of this component shall be installed such as to not obstruct or compromise the existing ventilation of its associated dispenser.

15.4 When fitted in a dispenser, the electrical supply to this component shall not compromise the safety and control functions of the equipment, cognisant of the dispenser's rating and overload values.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in report number R53M11448A.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The electrical circuit of each unit shall be subjected to the routine electrical tests required by Annex A.9.2, A.9.3 and A.9.4 of EN 13617-1:2004.

Date 1 November 2004

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900 Fax: +44 (0) 1244 681330
Email: exhazard@siratc.co.uk
Sira Certification Service is a service of Sira Test & Certification Ltd

1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 00ATEX9219X** Issue: **10**

4 Equipment: **Quantium 500T Liquid Fuel Dispenser**

5 Applicant: **Tokheim UK Limited** **Tokheim Sofitam Applications**

6 Address:

Unit 3 Baker Road
West Pitkerro Industrial Estate
Dundee
DD5 3RT
UK

Route de Soliers
14540
Grentheville
France

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 13617-1: 2004

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2G
EN 13617-1

C. Ellaby
Certification Officer

Project Number 59M16476
C. Index 09

Form 9400 Issue 1

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13 **DESCRIPTION OF EQUIPMENT**

The Quantium 500T liquid fuel dispenser is a multi-product device for dispensing petrol and diesel on a garage forecourt. The Quantium 500T is a 'hose cassette' design, that utilises a fabricated steel frame clad with steel panels to form a hydraulic housing, hose cassette and display control unit.

The hydraulic housing contains up to five hydraulic circuits, each comprising an electrically driven pumping unit, metering unit, electrically actuated flow control valves and interconnecting pipework. The outlet pipes are connected to suitable dispensing hoses and are fitted with a nozzle and optional dry break coupling(s). When the nozzles are not in use, they are stored in a nozzle boot. Removing and replacing the nozzle in the nozzle boot activates and deactivates the dispenser. This operation is controlled using a spring loaded lever and magnet (nozzle flap) to actuate a proximity switch.

Fuel vapour is isolated and vented from the hydraulic circuit by means of a vapour separator and flame arrester arrangement. Gaps between the external panels provide ventilation for the hydraulic housing. In addition the, ventilation for the type 2 vapour barrier utilised with the Quantium 500T dispenser is provided by means of a louvered panel.

The display control unit is mounted in a safe area that is created by head positioning and appropriate vapour barriers. The unit is electrically connected to pulsers and switches in the hydraulic housing via a type 2 vapour barrier. All electrical components in the hazardous zones are suitably certified and the cabling is also appropriate for use in fuel dispensers, as specified in the schedule drawings. All electrical circuits, metallic parts and the metalwork of the enclosure are electrically bonded to earth.

Design options

- Alternative rating of electrical circuits up to 440 V 3-phase.
- Alternative High Flow variant 10 m^3/ h (nominal) utilising two meter units.
- The flow rate, for attended use only, to be increased, through a single meter, up to 10m^3/hour for Class 1 fuel.
- Omission of any of the hydraulic circuits and consequent reduction in the frame length.
- The substitution of the 'type 2' barrier at the base of the existing card reader enclosure by a 'type 1' barrier.
- The extent and fabrication of the existing 'type 1' barrier to be modified, consequently, the need for IP 54 seals in the space box and calculator head is removed.
- The use of an alternative, 'full height' hose cassette/retractor housing; the retractor tension arm being eliminated.
- Alternative Satellite dispenser arrangement. This arrangement is used to fuel large vehicles with fuel tanks on either side and consists of a 'satellite' dispenser linked to and fed from, a 'host' dispenser via an underground fuel line. The satellite dispenser has no electrically driven components other than a nozzle out and side select switches and an optional display module powered from the host via an underground cable. The host dispenser is fitted with a satellite selection switch in the display head.
- The replacement of the 'Type 2' vapour barriers by 'Type 1' barriers; the display unit may be moved down to be mounted directly above the hydraulic housing.
- Alternative vapour recovery variant, the dispenser being fitted with a vapour recovery system as Sira 04ATEX9170U.
- Alternative submersible pump variant, the housing having the pump and associated motor omitted. A suitable shear valve is fitted at the dispenser inlet pipe.
- The option to use an alternative Nozzle Boot.
- The option to use a Fuel Temperature Measurement System as Sira 06ATEX9074U.

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 00ATEX9219X
Issue 10

- The manufacture of the dispensers without hoses and nozzles being fitted.
- The use of the equipment for dispensing ethanol blended fuels <85%> or 100%.
- The addition of a second hydraulic cabinet on the opposite side of the hose cassette.

The hydraulic housing contains up to two hydraulic circuits, each comprising an inlet shear valve, a filter unit, a vapour separator vessel, a meter, a differential valve and interconnecting pipework. Manual and electrical valves are provided to enable isolation and flow control. Non-return valves and excess pressure (flow) valves maintain the circuit integrity. A pressure gauge is fitted to enable system pressure to be monitored. The outlet pipe passes into the hose cassette and is connected to a suitable dispenser hose. The hose is fitted with a breakaway coupling and dispensing nozzle. The component parts and system configuration is shown on Tokheim drawing No. 90111-003 sheet 1.

Fuel is delivered to the dispenser by a remote LPG pump. Vapour is separated from liquid in the separator vessel, the vapour being returned to the storage tank. Positive liquid/vapour pressure of approximately 1 bar is maintained by the differential valve fitted at the meter outlet. Normal operating pressure is dependent on tank and temperature conditions, and is between 7 and 15 bar. The maximum system pressure is 25 bar and safety valves are set to vent at 23 bar.

The nozzles are located in suitable boots fitted on both sides of the hose cassette and actuate proximity switches as they are removed or replaced. The hose are fitted with sprung retractor assemblies. Delivery is only maintained whilst a manual 'dead man's switch', fitted to the cassette, is activated

Variation 1: This variation introduced the following changes:

i. The hydraulic housing has alternative overall dimensions, the method and materials of construction remained un-altered.

ii. The substitution of the 'type 2' barrier at the base of the existing card reader enclosure by a 'type 1' barrier.

iii. The extent and fabrication of the existing 'type 1' barrier was modified, consequently, the need for IP 54 seals in the space box and calculator head is removed.

iv. The use of alternative panel fabrications and consequent modifications to the ventilation methodology were permitted.

Variation 2: This variation introduced the following changes:

i. The use of an alternative, 'full height' hose cassette/retractor housing was permitted; the retractor tension arm being eliminated.

ii. The panel design was revised, the IP23 rating being maintained.

iii. The vapour barrier arrangements between the hose cassette, electronics enclosure and hydraulic housing was modified, the electronics enclosure remaining in the safe area.

iv. The provision of ventilation was re-designed.

Variation 3: This variation introduced the following changes:

i. An alternative payment terminal was fitted, consequently, the frame and cladding was modified; the payment terminal remains in a non-hazardous area.

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Variation 4: This variation introduced the following changes:

I. An alternative 'Radiant' payment terminal was fitted, consequently, the frame and cladding was modified; the payment terminal enclosure is larger than the existing type and may be partially in the designated hazardous area in some variants, additional cables may be routed as a separate cable or into the existing junction box.

Variation 5: This variation introduced the following changes:

i. The use of a vapour recovery system as detailed in Sira 04ATEX9170U was permitted.

ii. Minor drawing corrections and clarifications were introduced.

Variation 6: This variation introduced the following changes:

i. The option to use a revised pumping unit housing, including a revised Collector Unit and SIB Control Valve, was permitted. Designated either EPZ Pumping Unit or TQP Pumping Unit.

ii. The option to use a revised Meter Unit Housing was permitted. Designated either TM80 Meter Unit or TQM Meter Unit.

iii. The option to use an alternative Nozzle Boot was permitted.

iv. The option to use a Fuel Temperature Measurement System, Sira 06ATEX9074U, was permitted.

Variation 7: This variation introduced the following changes:

I. The dispensers may be manufactured without hoses and nozzles being fitted.

ii. The equipment may be used for dispensing ethanol blended fuels <85%> or 100%.

iii. The dispenser was updated to EN 13617-1:2004.

Variation 8: this variation introduced the following changes:

i. The introduction of the combined petrol and LPG option, in consequence, special conditions for safe use clauses 15.4 and 15.5 and conditions of certification clauses 17.10 and 17.11 have been introduced.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	23 May 2001	R53M7452A	The release of prime certificate.
1	17 December 2001	R53M8382A	The introduction of Variation 1.
2	15 May 2003	53V10273	The prime certificate was re-issued to add the name and address of a second applicant and to correct clause 17.5.
3	15 May 2003	R53M10804A	The introduction of Variation 2.

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Issue	Date	Report no.	Comment
4	12 May 2005	R53M12635A	The introduction of Variation 3, variation 1 and 2 were also re-issued to recognise the re-issue of the prime certificate dated 15 May 2003 and correct a typographical error.
5	22 July 2005	R51M13312A	The introduction of Variation 4.
6	12 August 2005	R51V13819A	The introduction of Variation 5.
7	9 August 2006	R51M13900A	The introduction of Variation 6.
8	3 May 2007	R51M16088A R51M16088B	This Issue covers the following changes: • All previously issued certification was rationalised into a single certificate, Issue 8, Issues 0 to 7 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format. • The introduction of Variation 7; these changes introduced special conditions for safe use, therefore, an 'X' suffix was added to the certificate number. • The certificate was rationalised to include changes to the product description and modify the list of descriptive documents.
9	30 August 2007	R59M17063A	The introduction of a new special condition concerning the use of the dispenser in respect of zoning.
10	31 August 2007	R59M16476A	The introduction of Variation 8.

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 Where a dispenser is supplied without hoses and/or nozzles, they shall be fitted in accordance with:

Hoses: EN 1360 or EN 13483
Nozzles: EN 13012.

15.2 When used for ethanol dispensing, the fuel specification must be <85%> or 100% with minimum water content.

15.3 These metering pumps and dispensers are designed for use in the open air. Where a metering pump or dispenser is positioned within a building, incorporated into an enclosure or integrated into a larger piece of equipment, additional measures shall be taken to ensure that the zoning diagrams illustrated in the schedule drawings are not compromised.

15.4 When used for dispensing LPG, the dispenser shall be supplied from a remote pressure source not exceeding 25 bar.

15.5 When used for dispensing LPG, a vapour return path to the storage tank shall be provided.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

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17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The electrical circuit of each unit shall be subjected to the routine electrical tests required by clause 6.2.1 of EN 13617-1:2004.

17.4 The hydraulic circuit of each unit shall be subjected to the routine hydraulic tests required by clause 6.2.2 of EN 13617-1:2004.

17.5 Components or apparatus specified for use with the dispenser defined as suitably certified shall be selected with due regard to the latest current standards and technical information.

17.6 When a payment terminal uses forced cooling, the manufacturer shall prove that the external hazardous atmosphere cannot be drawn into the enclosure.

17.7 The Stage II vapour recovery system, when fitted to the dispenser, shall be installed in accordance with the special conditions for safe use contained within Sira 04ATEX9170U.

17.8 When intended for use with ethanol blended fuels, the manufacturer shall assess the suitability of parts used in the construction of the fuel containment system for long-term suitability to ethanol blended fuels. Due regard should be placed on the use of corrosion inhibitors in the fuel mixture.

17.9 When used for dispensing ethanol blended fuels the manufacturer shall give due consideration to the correct selection of supplementary fittings (safe breaks etc.). Where such fittings are not provided as part of the assembly, suitable guidance should be provided in the equipment instructions.

17.10 The hydraulic circuit of each Automotive LPG fuel dispenser shall be subjected to one of the following pressure tests; there shall be no leakage during the test:

- Tested at 1.1X the maximum working pressure (27.5 bar) with pressure relief valves removed. The pressure gauge may be removed for this test.
- Tested at 0.9X the relief valve opening pressure (22.5 bar) with the pressure relief valves fitted.

In both cases, it shall be confirmed that the working pressure of the relief valves does not exceed 25 bar.

17.11 The electrical circuit of each type of Automotive LPG fuel dispenser shall be subjected to the routine electrical tests required by clause C.1 of EN 14678-1:2003.

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Certificate Annexe

Certificate Number: Sira 00ATEX9219X

Equipment: Quantium 500T Liquid Fuel Dispenser

Applicant: Tokheim UK Limited
Tokheim Sofitam Applications

sira CERTIFICATION

Issues 0 to 7

The drawings associated with these Issues were replaced by those listed in Issue 8.

Issue 8

Drawing No.	Sheet	Rev.	Date	Title
900704-001	1 to 17	D	29 Dec 06	Quantium 500T Dispenser Range
900704-002	2 to 8	B	24 Apr 03	Labels
900704-003	1 of 1	A	08 Dec 00	Drip Tray Sealing
900704-004	1 to 8	B	28 Aug 06	Hydraulic Components
900704-005	1 to 5	A	08 Dec 00	Circuit Diagrams
900704-006	1 of 1	B	28 Aug 06	Energy Isolation
900704-007	1 to 2	B	28 Aug 06	Nozzle Boots
900704-008	1 to 3	A	08 Dec 00	Hydraulic Schematics
900704-009	1 & 2	B	23 Jun 06	Pumping Units
900704-010	1 to 2	A	08 Dec 00	Meters
900704-040	1 to 5	A	04 Jun 06	Alternative hydraulic stack
900704-053	1 of 1	B	23 Jun 06	Nozzle Holder Assembly
900704-054	1 of 1	1	23 Jun 06	Test Rigs
900704-017	1 of 3	A	04 Sep 01	"Quantium 500 T" Variation No 1 ("Quantium 500").
900704-017	2 of 3	A	04 Sep 01	"Quantium 500 T" Variation No 1 ("Quantium 500").
900704-017	3 of 3	A	04 Sep 01	"Quantium 500 T" Variation No 1 ("Quantium 500").
900704-031	1 to 10	A	12 Aug 03	Modification to Quantium 500T
900704-048	1 to 6	A	19 Oct 04	Quantium 500T - alternative payment terminal arrangements
900704-055	1 to 12	A	05 Jul 05	Quantium 500T - alternative 'Radiant' payment terminal arrangements
900704-021	1 of 1	A	08 Oct 02	Modified EPZ pumping unit
900704-074	1 & 2	A	31 Oct 06	Ethanol dispensing details

Issue 9

No new drawings were introduced.

Issue 10

Drawing No.	Sheet	Rev.	Date	Title
903111-023	1 to 3	A	21 Mar 07	Q500T Combined petrol and LPG Dispenser.

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(2286)

dti

III(5)a

AMENDMENT TO CERTIFICATE

Certification No 2286 Amendment 48

Submitted by: **Tokheim UK Limited**
Unit 3 Baker Road
West Pitkerro Industrial Estate
Dundee
DD5 3RT

Authorisation is hereby given by the Secretary of State for Trade and Industry for the following certificate of approval relating to a pattern of a liquid flow meter to be amended as described below.

This approval is extended to include the addition of the following authorised alternative:-

Modified assisted vapour recovery system

As described in amendment 12 of the certificate but having the following alternatives:

- the electronic control valve described in the first paragraph may be any suitable alternative
- alternative layout using a Durr vacuum pump (Figures 1 & 2)

Signatory: **M A Bokota**
for Chief Executive
National Weights and Measures Laboratory
Department of Trade and Industry
Stanton Avenue
Teddington
Middlesex
TW11 0JZ
United Kingdom

Reference No: T1117/0027/2
(STD 7144)

Date: 28 February 2007

(2286)

dti

CONTINUATION OF AMENDMENT TO CERTIFICATE

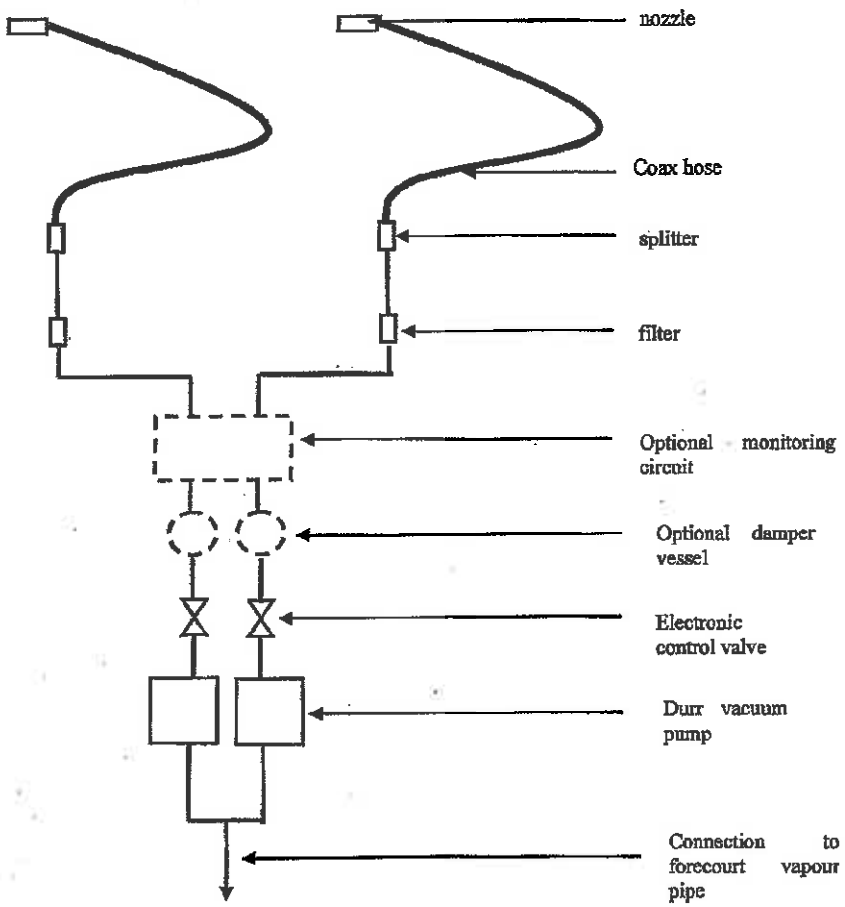

Figure 1 **Vapour recovery system schematic**

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CONTINUATION OF AMENDMENT TO CERTIFICATE

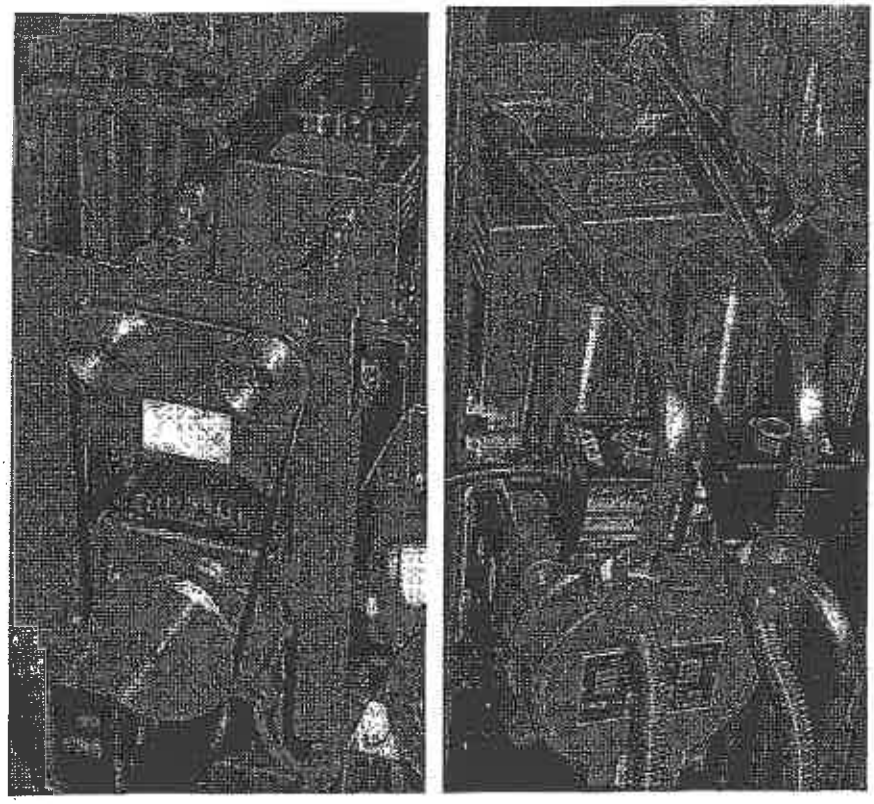


Figure 2 **Typical installation of vapour recovery system**

ZERTIFIKAT ◆ CERTIFICATE ◆ ZERTIFIKAT ◆ CERTIFICADO ◆ CERTIFICAT

Zertifikat Nr. Ü-12.2-2

TÜV SÜDDEUTSCHLAND

Die Prüfstelle für Gasrückführungssysteme des TÜV Süddeutschland, Kompetenzzentrum Tankanlagen, Westendstr. 199, D-80686 München, bescheinigt die Prüfung einer automatischen Überwachungseinrichtung für aktive Gasrückführungssysteme an Tankstellen gemäß § 6 Abs. 5 der 21. BImSchV.

- Typ Bezeichnung: **TOKHEIM VR-Monitoring** in Verbindung mit der Gasrückführungssteuerung **TOKHEIM VRC3** Softwareversion 3.01
- Hersteller: **TOKHEIM Europe & Africa** Industrieweg 5 5531 AD Bladel The Netherlands
- System: Gasdurchflussmesser, Statische Messeinheit **TOKHEIM-VFM** zwischen dem Zapfventil und der Gasrückführungspumpe in der Gasrückführungsleitung.
- Messauswertung: Die Auswertung des Gasflusses, Bewertung und Alarmmeldung sowie Erzeugung des Abschaltsignals erfolgen in der Gasrückführungssteuerung **TOKHEIM VRC3**.

Die Prüfungen ergaben, dass die Anforderungen nach 21. BImSchV § 6 Abs. 5 und dem Merkblatt 1 Teil 2 erfüllt werden.

Diese automatische Überwachungseinrichtung ist für aktive Gasrückführungssysteme geeignet.

München, den 21.05.2009

Technische Überwachung Bayern 10 12

Der Sachverständige

Peter Szalata

Zertifikat Nr. Ü-12.2

TÜV SÜDDEUTSCHLAND

Die Prüfstelle für Gasrückführungssysteme des TÜV Süddeutschland, Kompetenzzentrum Tankanlagen, Westendstr. 199, D-80686 München, bescheinigt die Prüfung einer automatischen Überwachungseinrichtung für aktive Gasrückführungssysteme an Tankstellen gemäß § 3 Abs. 5 der 21. BImSchV.

- **Typ Bezeichnung:** **TOKHEIM ECVR - SOS**
  in Verbindung mit der
  Gasrückführungssteuerung **TOKHEIM VRC3**
  Software 3.00 und dem
  Zapfsäulenrechner **TOKHEIM WWCT1**
- **Hersteller:** **TOKHEIM Europe & Africa**
  Industrieweg 5
  5531 AD Bladel
  The Netherlands
- **System:**
  Gasdurchflussmesser: Statische Messeinheit **TOKHEIM VFM** zwischen dem Zapfventil und der Gasrückführungspumpe in der Gasrückführungsleitung
  Messauswertung: Auswertung des Gasflusses, Bewertung und Alarmmeldung in der Gasrückführungssteuerung **TOKHEIM VRC3**
  Erzeugung des Abschaltsignals im Zapfsäulenrechner **TOKHEIM WWCT1.**

Die Prüfungen ergaben, dass die Anforderungen nach 21. BImSchV § 3 Abs. 5 und dem Merkblatt 1 Teil 2 erfüllt werden.

Diese automatische Überwachungseinrichtung mit Selbstkalibrierungsfunktion ist für aktive TOKHEIM Gasrückführungssysteme in TOKHEIM Zapfsäulen für den Einbau in neue Zapfsäulen geeignet.

München, den 21.06.2003

Technische Überwachung TÜ 12 Bayern

Der Sachverständige

Peter Szalata

CERTIFICAT ◆ CERTIFICADO ◆ ЕРТИФИКАТ ◆ 認証証書 ◆ CERTIFICATE ◆ ZERTIFIKAT

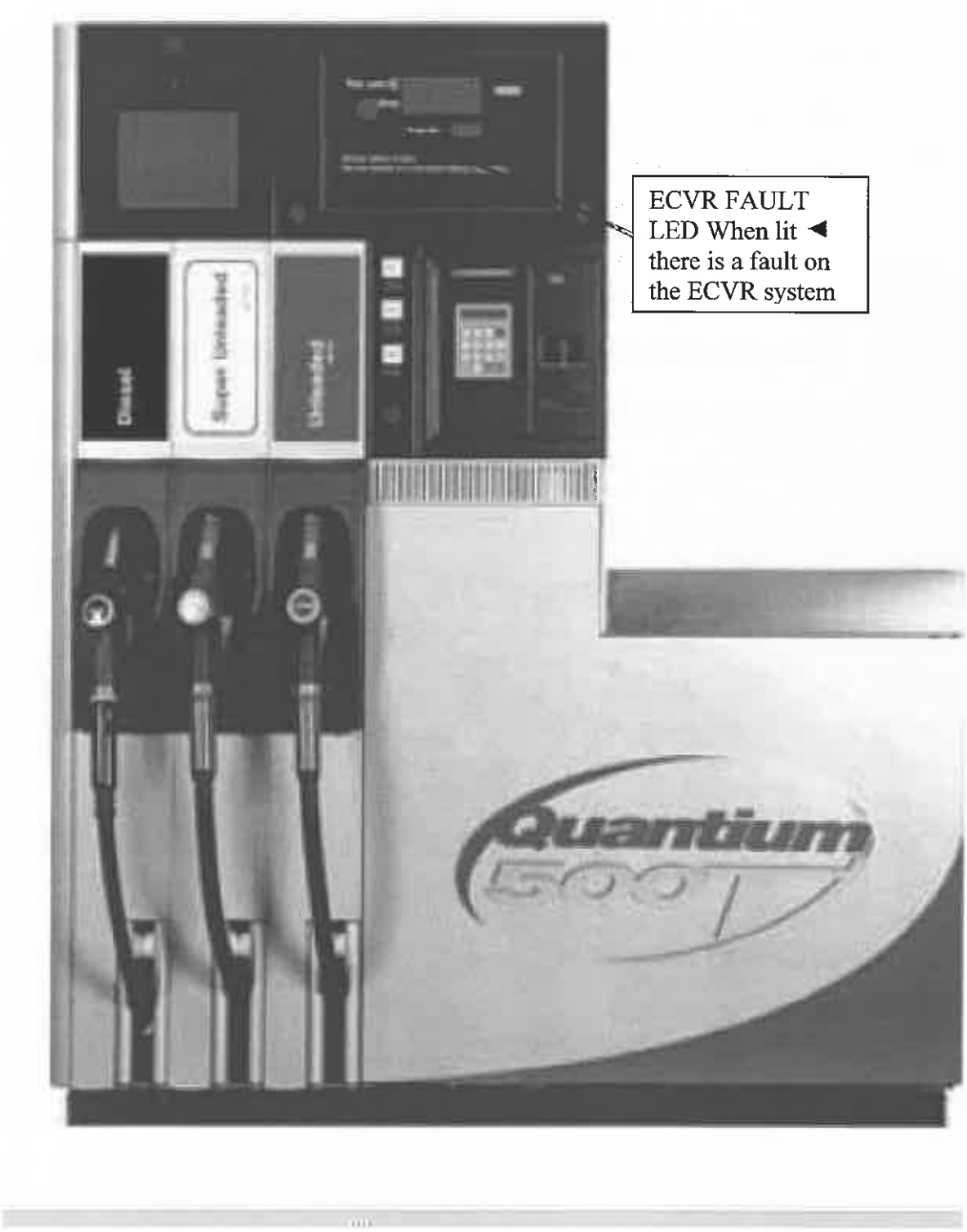
Tokheim ECVR Site Maintenance Daily Check

Please see below procedure for detecting ECVR System fault.

1. A visual inspection of each pump should be carried out daily by site staff
2. Check **both sides** of each dispenser to see if the red LED is lit on the main Display (see Fig 1).
3. If the LED is lit this is indicating a fault on the ECVR system. Please report this fault to your service provider immediately.
4. If the pump is not checked the warning light will stay on for 168 hrs. After this time has passed the ECVR system will close down the pump.

Tokhim UK ECVR Site Maintenance Daily Check

Fig 1



4.2 Receive Wetstock

Overview

Fuels must be discharged in an efficient and safe manner. This is both a legal and Shell requirement. It is the Retailer's responsibility to ensure that all processes and procedures are carried out at the retail site.

The responsibility for any delivery must be delegated to a competent member of staff in the event of the Retailer not being available on site to accept a delivery.

Procedure Description

The process describes how to accurately and safely complete the transfer of fuel from road tankers to site storage tanks in line with HSSE Shell policy requirements. In most countries Legislation plays a key role in the requirements of this procedure.

Objectives

- To ensure that every fuel delivery is carried out in accordance with all legal requirements and Shell procedures to minimise the risk of injury to people or damage to property and/or to environment.
- To ensure the safe discharge of fuel from a road tanker into the correct site storage tanks and the accurate recording of the delivered volume per tank whilst meeting Shell Group minimum HSSE standards and any local legal requirements. *(For HSSE requirements see Section 1 of this manual)*
- To identify any short deliveries e.g. fuel fraud/theft
- To identify any fuel product grade that is delivered into a tank containing a different product grade.
- To provide accurate delivery volumes of fuel (by tank and product grade) to enable site reconciliation process.

Minimum Standards & Big Rules

- The Retailer is trained in all aspects of Shell's policy and procedures regarding the requirements in this section plus any local legislation requirements
- The Retailer must train the Nominated Principal and site staff to execute this procedure according to Shell minimum standards and must retain training records for each individual
- The Retailer must make available all training records for himself and his staff at all times at site.
- Deliveries must not be made to any tank showing evidence of leakage.
- Both local legislation and Royal Dutch Shell Group HSSE standards are met on every delivery
- The Retailer must monitor the condition of all fill points and advise Shell of any potential connection faults
- Where assisted delivery is required the Retailer (or Nominated Principal) must:
  - ensure a competent member of staff is on site to receive a delivery
  - verify that the delivery paperwork clearly identifies that the delivery is intended for the site
  - ensure that there is adequate ullage in each tank prior to a discharge of fuel being made
  - advise the tanker driver of the correct fuel connections
  - agree with the tank driver that all relevant compartments on the tanker are dry when the delivery is completed
  - sign the delivery ticket and hand to driver and enter all details in the site fuels stock record
- If either the Retailer (or Nominated Principal) or the driver identifies insufficient tank ullage or it is not safe to discharge a complete compartment from the road tanker, the fuel will either remain on the tanker or be discharged to another appropriate tank on the site
- The tanker compartments must not be split in two different tanks or tank systems (unless accurate onboard tanker meters are available and the delivery paperwork accurately reflects what has happened whilst discharging)

- To execute reconciliation procedure the Retailer (or Nominated Principal) will use volumes detailed as indicated on the delivery note unless the volume measured at the time of delivery is outside local agreed tolerance levels *(see Section 4.2.1 or 4.2.2)*

- The Retailer (or Nominated Principal) must follow the local agreed process for any delivery discrepancies outside the tolerances.

- Tank level measurement must be made shortly after a delivery to ensure that the discharge of product grade has been made to the tanks intended

- The tanker driver and the Retailer (or Nominated Principal) must ensure that if there are any spillages during the discharge element of this process are reported in line with Shell HSSE requirements. *(See Section 1.5 of this manual)*

- In case of contamination caused by fuel crossover, the Retailer (or Nominated Principal) must execute the local process to close to the customers all dispensers that are affected by this event

- The Retailer (or Nominated Principal) must retain all documentation related to this procedure and must be available at site.

- The Retailer (or Nominated Principal) must endeavour to facilitate a prompt, safe and efficient delivery. If the delivery vehicle is delayed at the site due to failure on the part of the Retailer to fully co-operate with the implementation of agreed processes then this will be recognised and referred to the Shell Territory Manager for use in performance management

- The Retailer or Nominated Principal must ensure that adequate working lighting is available at all filling points for after dark deliveries

- The Retailer must provide feedback from site if there is a short delivery (compared to ordered quantity), spillage, split tanker compartment or incorrect delivery paperwork

- The delivery frequency and volumes may vary where VMI is implemented.

Procedure execution tools

- Either electronic tank gauges or manual dipsticks to record both pre and post physical dip measurements.
- Delivery paperwork from Distribution that shows delivered volumes.
- Process to provide feedback from site if there is a short delivery, spillage, split tanker compartment or incorrect delivery paperwork.
- Training material supplied by Shell
- See Appendices for templates

4.2.1 Retailer/Site Staff Assisted Delivery

Only individuals who have been accredited as a "Competent Person" should be involved in the procedure. (The Register of Competent persons should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart)

See Appendix 3: Example "Competent Person Register" COMMON PRACTICE
See Appendix 4: Example "Competent Person Form Of Certification" COMMON PRACTICE
See Appendix 8: Example of Delivery Note document

What to do before the delivery?

- **Floor conditions:** Check for slippery condition in the delivery area. When slippery conditions exist, but site is accessible, use sand, salt etc. to create safe working area.
- **Accessibility:** check accessibility and ensure that all obstructions (e.g. parked vehicles, snow, etc.) are removed prior to arrival of delivery vehicle.
- **Entering the site:** Assist the driver while entering in the site in case of difficult maneuvering. The delivery vehicle must be positioned in such a way that it can be easily driven off the site in an emergency in forward gears
- **Adequate Lighting:** The discharge area must be well lit during deliveries after dark (minimum 100 lux.) If a delivery is to be made during hours of darkness, check **all** lights in the delivery area are working.
- **Manhole:** The chambers should be free of water, fuel, snow, ice and debris
- **PPE** to be available for all staff working on the forecourt, i.e. High Visibilty clothing

- Ensure means of opening manholes is available and manhole platforms, where fitted, are in good order and secure, **particularly following tank maintenance**
- Ensure fire extinguishers (*in date and sealed*) and sand bucket, are available
- If required, assist driver to manoeuvre on the forecourt
- Ensure you comply with restrictions arising from your site Risk Assessment, including partial or full closure of the forecourt
- Where appropriate or necessary, switch off car wash, air machine and vacuum cleaner

What to do during the delivery?

- **Documentation:** Retailer or competent staff member checks all documents, making sure delivery is for the site (e.g. not for sites with similar address if located close), if grades and volumes are as expected, if compartments are properly marked etc.
- **Fill Pipes/dipping pipes/Central Delivery Points:** Unlock dip (where appropriate) and fill pipes (Note: Keep fill pipes locked at all times except during deliveries, stock checks and approved repairs. Each fill pipe must be clearly labeled showing tank compartment number, fuel grade, and tank maximum working capacity. If site equipped with automatic level gauging system - print out pre-delivery report. If the site is NOT equipped with level gauges, measure the fuel contained in the tanks before delivering (in cooperation with the driver).
- **Ullage:** Check volumes/ullage in tanks. Instruct driver in what compartments/tanks product needs to be delivered.
- **Clothing:** Wear High Viz vest / clothing while working on the forecourt
- The Retailer needs to check to ensure delivery is done in a safe manner
- **Fire Extinguishers:** Ensure fire extinguisher(s) are near discharging place

- Ensure any construction or maintenance work going on at the site does not cause a risk during the delivery
- Check that truck is connected to the ground
- On Tanker's arrival check the delivery note for the vehicle compartment allocation
- Complete the delivery certificate in the driver's presence.
  Do not sign lower part at this stage
- Check sight glasses are full with the ball floating at the top
- Agree with the driver the sequence of delivery, grades and quantities, tank number and compartment number. **Do not proceed until the sequence is agreed.**
- Where practical, Diesel should be discharged first (unless into above ground Diesel tanks, where it should be discharged last)
- **Unlock only the fill points needed for the delivery** and the vapour recovery.
- Manhole covers should only be removed when necessary to avoid the risk of falling down open manholes
- **IT IS A LEGAL REQUIREMENT THAT THE DRIVER AND COMPETENT PERSON STAY AT THE DELIVERY POINT THROUGHOUT THE DELIVERY**
- Should there be any vapour leaks, refer to the Vapour Recovery Stage 1B Emergency procedure document which should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart, together with the Register of Competent Persons
- The vapour recovery hose should be connected (tanker end first) before any delivery hose
- You must ensure that each delivery hose is connected to the storage tank end first and then to the

road tanker to reduce the risk of fuel leaks

- The number of tanker compartments connected shall not exceed 2, regardless of grade
- You **MUST** also ensure the driver has connected to the correct compartment on the vehicle. This is done by checking the grade label on the outlet of the vehicle, cross-referencing this with the delivery note
- You and the driver can now sign the delivery certificate for the specific tank. Delivery can then commence
- The above procedure should be repeated for each compartment. Remember to replace manhole lids and lock fill point caps as necessary as you progress with the delivery.
- When all compartments have been delivered, check the outlet sight glasses, which should be empty, with the balls at the bottom.
- After each compartment has been discharged, the delivery hose will be disconnected at the road tanker end first and then at the storage tank end.
- The Vapour recovery hose will be disconnected (storage tank end first) when all the delivery hoses have been fully disconnected at both ends

The above are requirements under the 2003 Approved Code of Conduct. A Retailer would be vulnerable under the law if an incident occurred and it was found that the guidelines had not been followed. You can be particularly vulnerable during periods of adverse weather, when some of the procedures may be prone to shortcut.

What to do after delivery?

- Lock dip and filling points and replace any manhole covers

- When driver has completed the delivery, record and check tank volumes before driver leaves site to confirm correct quantities have been delivered to each tank.

- Sign off delivery papers. Site retains one copy of delivery certificate and delivery note. Tank gauge reports taken before and after delivery, or delivery reconciliation report from tank gauge, should be retained and attached to the delivery certificate.

- Remove any barriers and cones

- Assist the driver while exiting from the site in case of heavy traffic or difficult maneuvering.

- If the delivered quantity of fuel is believed to be short against the documented quantities, ensure that a tank gauge calibration error or administration error is not misinterpreted as a short delivery. If delivery is still believed to be short, report the issue to the Fuels Ordering line on 08708 500 924 following the options given.

- Delivery certificates should be retained on site for a minimum of 12 months

- Any spillage of fuel must be reported to the Customer Service Centre. If a spillage occurs, follow the emergency procedure contained in section 1 of this manual.

What to do in case of fuel crossover?

A fuel crossover is the incorrect delivery of one product into a tank containing another, for example, delivery of unleaded fuel into a storage tank containing diesel. That should not occur if delivery procedures are correctly followed.

- As soon as a crossover is suspected, all dispenser nozzles fed by the tank or tanks involved should be closed until it is confirmed that the product within the tank is suitable for sale.

- The driver will contact the terminal control centre.

- The retailer should inform the Fuels Quality Focal Point (via the Customer Service Centre) and Territory Manager.

- The Fuels Quality Focal Point will determine the necessary action and inform the Retailer and Distribution.

4.2.2 Driver Controlled or Unassisted Deliveries

Approval for unassisted deliveries may be site specific therefore authorisation must be received from Shell before they may commence. A risk assessment for Driver Controlled or Unassisted deliveries should be completed and a copy filed at site before the delivery process is changed from site assisted deliveries to driver unassisted deliveries or driver controlled deliveries. As there are equipment and procedural differences between the two methods of delivery, where differences occur they appear in separate sections listed below.

Driver Controlled Deliveries (DCD) require a separate box on the forecourt containing tank gauge equipment, telephone and emergency equipment. DCD requires no involvement from site staff during the delivery.

Driver Unassisted Deliveries do not require the additional forecourt equipment. Sites which are equipped with either overfill prevention valves and/or alarms, along with spillage containment to separate the delivery area from members of the public and the environment, will be able to receive deliveries by a driver, without a nominated competent person in attendance during the delivery. However a nominated person will be required on site to complete the delivery certificate.

Approval for unassisted deliveries is site specific and must be received from Shell before they may commence

What to do before the delivery? (DCD & DUD)

- **Accessibility:** Check for accessibility and ensure that all obstructions (e.g. parked vehicles, tables, snow) are removed prior to arrival of delivery vehicle. The delivery vehicle must be positioned in such a way that it can be easily driven – forwards – off the site in case of an emergency.

- **Floor conditions:** When slippery conditions exist, but site is accessible, use sand, salt, etc. to create a safety working area.

- **Adequate Lighting:** The discharge area must be well lit during deliveries after dark. If a delivery is to be made during hours of darkness, check all lights in the delivery area are working.

- **Manholes / dipping / filling:** The chambers should be free of water, fuel and debris.

- **Fill Pipes / dipping pipes / Central Delivery Points:** Keep fill pipes locked at all times except during deliveries, stock checks and approved repairs. An agreement regarding keys and locks is set up locally with Supply and Distribution. Each fill and dip pipe must be clearly labeled showing tank compartment number, fuel grade, and tank ullage. See section "Manage Wet Stock at site" for details.

- Ensure tanker **delivery area is clear** of obstructions and does not present any slip or trip hazards. In wintry conditions, the area must be clear of snow and be well gritted.

- Ensure **fire extinguishers** (*in date and sealed*) and sand bucket, are available

- Where appropriate or necessary, switch off car wash, air machine and vacuum cleaner

- Ensure Statutory Notices (No Smoking Large sign for the Vent Pipes & No Smoking small sign for the pump islands) are displayed

DRIVER CONTROLLED DELIVERIES (DCD) only *(DUD procedure continues on next sub section)*

Only individuals who have been accredited as a "Competent Person" should be involved in the procedure. (The Register of Competent persons should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart)

Complete certificate with the exception of the signature boxes, as close to the estimated delivery time as possible. You will have been advised of the load, grade, quantities and compartment allocation. When completing the certificate you should have the ullage available at the time of completion. Do not estimate future sales when completing the certificate.

- Ensure the forecourt equipment and lighting is in good working order. Test the audible alarm, check the visual display, printer and paper, and telephone all work. Ensure the forecourt box is

only locked with standard key, i.e. no padlocks. Each fill point should have a unique key and padlock. Ensure that fire extinguishers are in date and sealed, and that sand and tools are available

- All fill points and vapour points should be locked. Keep padlocks maintained and free moving

- Ensure the driver is able to comply with any special conditions as required by the Petroleum Licensing Authority or your risk assessment (*Conditions to be displayed in forecourt box, e.g. if it is a requirement for an area to be coned off, site should provide cones or barrier*)

- If your pre-delivery checks on the forecourt box fail or highlight a problem which means that the driver will be unable to use the forecourt equipment, you will still be able to accept an unassisted delivery providing the site is open and the driver has access to the site telephone and dip reports from within the shop. Please note that if high level alarms have failed then unassisted deliveries may only take place if the site is equipped with overfill prevention valves.

- Ensure that the tanker delivery area is kept clear and does not present any slip or trip hazards. In wintry conditions, the area must be clear of snow and ice and be well gritted.

- Place the completed delivery certificate in the forecourt box, together with the keys required for the delivery. **Only leave the keys for the tanks shown on the delivery certificate, plus the vapour recovery key.**

- If you expect two unassisted deliveries on the same day you **MUST**:
    i. Complete two delivery certificates
    ii. Keep the keys separate for each load

- On sites where you do not have two boxes, or two key compartments within one forecourt box, it is recommended that the keys and delivery certificates for each delivery are put in different envelopes and clearly marked so the driver is in no doubt which envelope is for which load.

- If the same tank is to be utilised for 2 deliveries, you must ensure 2 keys for that tank are available and one is placed in each envelope.

- Remember to leave the vapour recovery key out separately for each load.

- Should there be any vapour leaks, the Vapour Recovery Stage 1B Emergency procedure should be followed. This document should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart, together with the Register of Competent Persons

What to do during the delivery?

- Assist the diver if required to adhere to any local licence conditions (or control measures identified on the site specific risk assessment) e.g. closure of car wash etc.

What to do after delivery?

- Remove the delivery note, delivery certificate and tank keys from the forecourt box

- Record and check tank ullages. Tank gauge reports taken before and after delivery, or delivery reconciliation report from tank gauge, should be retained, attached to the delivery certificate.

- If the delivered quantity of fuel is believed to be short against the documented quantities, ensure that a tank gauge calibration error or administration error is not misinterpreted as a short delivery. If delivery is still considered to be short, report the issue to the Fuels Ordering line on 08708 500 924 following the options given.

- Delivery certificates should be retained on site for a minimum of 12 months.

- Any spillage of fuel must be reported to the Customer Service Centre. If a spillage occurs, follow the emergency procedure contained in section 1 of this manual.

DRIVER UNASSISTED DELIVERIES (DUD)

Only individuals who have been accredited as a "Competent Person" should be involved in the

procedure. (The Register of Competent persons should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart)

- **Ullage:** If site equipped with automatic level gauging system, make the system available for the driver to obtain a pre-delivery and post-delivery report.
- Where appropriate or necessary, switch off car wash, air machine and vacuum cleaner
- Check tank ullages immediately prior to delivery.

What to do during the delivery

- On Tanker's arrival check the delivery note for;
- Correct Site Name and address
- The vehicle compartment allocation
- Complete the delivery certificate as far as tank, grade, ullage and quantity allocation, using the delivery note as appropriate.
- Competent person should hand driver completed delivery certificate along with a written record of the current tank ullages, vapour recovery keys and the keys to the tanks into which a delivery is to be made. ***NB all keys must be clearly marked as to tank to which they relate.***
- Driver will now ask to check that the phone is working and the gauge system is operative, and confirm that all emergency equipment is available.
- Should there be any vapour leaks, the Vapour Recovery Stage 1B Emergency procedure should be followed. This document should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart, together with the Register of Competent Persons

What to do after discharge

- On completion of the delivery the driver will return keys to the vapour recovery, and tanks along with one copy of the delivery certificate.
- Record and check tank ullages before driver leaves site. Tank gauge reports taken before and after delivery, or delivery reconciliation report from tank gauge, should be retained, attached to the delivery certificate.
- The competent person should then sign the delivery note.
- **The above are requirements under the 2003 Approved Code of Conduct.**
- **A Retailer would be vulnerable under the law if an incident occurred and it was found that the guidelines had not been followed.** You can be particularly vulnerable during periods of adverse weather, when some of the procedures may be prone to shortcut.
- Delivery certificates should be retained on site for a minimum of 12 months
- Any spillage of fuel must be reported to the Customer Service Centre. If a spillage occurs, follow the emergency procedure contained in section 1 of this manual.

VAPOUR RECOVERY - STAGE 1B- Emergency Action Plan

All service stations have now been fitted with a vapour recovery system known as Stage 1B.

Stage 1B prevents vapours being discharged into the atmosphere during a tanker delivery by routing the vapours back to the tanker where they are collected and taken back to the terminal.

This process requires a permit (Similar to your Petroleum Licence).

Part of the permit requirement is that you have an emergency action plan in place should a leak occur in the vapour recovery system during a delivery. Whilst this situation is unlikely to be dangerous, it may cause some nuisance to your neighbours, therefore please carry out the following actions.

1. Ensure the driver stops the delivery.
2. Inform Retailer Maintenance Support on **0870 850 0924** so that the correct contractor can be sent to site to fix the problem.
3. Contact the Retailer Call Centre on **0870 850 0924** to record the incident.
4. Cancel further deliveries until the leak has been fixed.
5. Inform your local Environmental Protection Officer, name and telephone number should be on the permit.
6. Record the incident in your log sheet Incidents of vapour leak or vapour lock.

If you have any questions about this procedure please contact the HSSE Manager - don't wait until you have a problem.

VAPOUR RECOVERY - STAGE 2- Operation and Records

All service stations are now being fitted with a vapour recovery system known as Stage 2.

Stage 2 prevents vapours being discharged into the atmosphere during the filling of the vehicle fuel tank by routing the vapours back to the underground tank from where they are transferred to the tanker during a fuel delivery and taken back to the terminal.

This process requires a Permit (Similar to your Petroleum Licence).

The vapour recovery system has the benefit of automatic monitoring. Each pump has a LED display that should be checked on a daily basis.

1. In normal operation the LED is GREEN
2. In the event that insufficient vapour is being collect by the vapour recovery system the LED will change to orange, and an alert will be printed on the end of day and end of shift reports
3. Contact the Retailer Call Centre on **0800 731 5555** to report the incident and request that the contractor attend the site to resolve the issue.
4. If the fault is not fixed within 7 days the pump will automatically stop operating and no more fuel can be dispensed from that pump until a contractor has attended and fixed the problem.
5. Record the incident in your log sheet Incidents of vapour leak or vapour lock.

If you have any questions about this procedure please contact the HSSE Manager - don't wait until you have a problem.

The Retailer should ensure that at all times the following are available for inspection:-

1. A copy of the permit
2. The log book
3. Staff training records
4. Plan of the site and site pipe work
5. Copy of the compliance/ testing certificate

VAPOUR RECOVERY – Staff Training

All staff should be trained on the operation of the vapour Recovery system and provided with refresher training once every 12 months.

Training should include the following items:-

a. Basic principles of vapour balancing related to the type of VR System.

b. The safety precautions to be followed before, during and after a delivery to ensure that the system functions correctly so there is no spillage of petrol should there be an equipment failure.

c. Their statutory obligations not to permit the delivery to commence until the vapour balance hose has been properly connected by the driver.

d. The reasons for and the correct sequence in which the vapour balance hose should be connected.

e. The signs and symptoms of vapour leaks.

f. Monitoring the delivery for vapour leaks and the reporting/recording procedure of instances of vapour lock, vapour leak, equipment failures, or unusually slow deliveries.

g. The precautions to be taken should there be a malfunction of the equipment which over-pressurises the system.

Pollution Prevention and Control Act 1999
Environmental Permitting (England and Wales) Regulations 2007
VAPOUR RECOVERY TRAINING

It is a requirement of your 'Permit' that anyone who's duties include using, or supervising the use of, and maintaining the vapour recovery system must be trained in the use of the vapour recovery system and be informed of the Permit Holder's responsibilities and their individual roles and responsibilities in achieving them.

It is therefore important that anyone who is a designated 'Competent Person' for the receipt of fuel deliveries is trained in:

1. The Permit Holder's responsibilities and their individual roles and responsibilities in achieving them.
   (See site Permit Conditions)

2. The correct procedure for connection of vapour recovery hose.

3. Action required as a result of a leak in the vapour recovery system during a delivery.
   (See attached Emergency Action Plan)

Please ensure that relevant staff members have been trained in the above, been signed off as having been trained, and the sign off below filed with Competent Person Training records.

Staff Member	Permit Responsibilities	Vapour Recovery Hose Connection	Emergency Action Plan	Trainer Signature	Trainee Signature	Date

ZJ 8354 5280 2GB SD 1pm

Ipswich Borough Council
Grafton House
15-17 Russell Road
Ipswich
Suffolk
IP1 2DE

Shell U.K. Oil Products Limited
PO BOX 403,
Staines,
Middlesex
TW18 3ZB
Tel: +44 (0)845 309 3091
Fax: +44 (0)1784 897845
Email: kerry.toms@shell.com
Internet http://www.shell.com/uk

20th November 2009

Vapour Recovery Stage II Application

Dear Sir / Madam

Please find enclosed the completed application form regarding Vapour Recovery Stage II for Site:

1) Shell Bourne Bridge

Could you please send all correspondence to:

Kerry Toms
Shell U.K Oil Products Ltd
P.O. Box 403
Staines
TW18 3ZB

Full responsibility for forwarding the Vapour Recovery Permit 0to the sites will be undertaken by the administrator of Shell U.K Limited.

Yours faithfully

Kerry Toms
Retailer Contracting Assistant

Part B Application form

Application to vary a permit for a Part B service station to add PVR Stage II

Local Authority Pollution Prevention and Control
Pollution Prevention and Control Act, 1999
Environmental Permitting (England and Wales) Regulations 2007

Introduction

When to use this form
Use this form if you are applying for a variation to an existing service station permit in order to extend it to cover the operation of PVR Stage II.

A fee is only required to be enclosed if the variation involves a 'substantial change'. A substantial change is defined as "a change in operation which, in the opinion of the competent authority [the regulator] may have significant **negative** effects on human beings or the environment". (Closure of an existing service station and the building of a new replacement station at another location is likely to require a full fresh application, ie not constitute a variation.)

When complete, send the form and the fee and any additional information to:

Insert local authority address

If you need help and advice
We have made the application form as straightforward as possible, but please get in touch with us at the local authority address given above if you need any advice on how to set out the information we need.

LAPPC application form: to be completed by the operator		
For Local Authority use		
Application reference	**Officer reference**	**Date received**

A1.1. **Name of the premises**

Shell Bourne Bridge

A1.2. Please give the address of the premises

551 Wherstead Road, Ipswich, Suffolk

Postcode: **IP2 8LR** Telephone: **01473 685 135**

A1.3. Reference number of existing PVR Stage I permit for the installation

1.2/RJD/15/05

A2.1. **The applicant** - Please provide the full name of company or corporate body or the name of the sole trader or the names of the partners

SHELL UK LIMITED

Trading/business name (if different)

.....

Registered Office address

Shell Centre,
York Road,
London

Postcode: **SE1 7NA** Telephone: **0207 934 1234**

A2.2. **Holding companies**

Is the operator a subsidiary of a holding company within the meaning of section 1159 of the Companies Act 2006?

☐ No

X Yes

If yes? Name of ultimate holding company: **SHELL TRANSPORT AND TRADING COMPANY PLC**

Ultimate holding company registered office address

SHELL CENTRE
YORK ROAD
LONDON

Postcode: .**SE1 7NA** Telephone: **0207 934 1234**

A3 **Who can we contact about your application?**

It will help to have someone who we can contact directly with any questions about your application. The person you name should have the authority to act on behalf of the operator - This can be an agent or consultant.

Name: **Kerry Toms**

Position: **Retailer Contracting Assistant**

Address:

P O Box 403
Staines
Middlesex

Postcode: **TW18 3ZB** Telephone: **0845 309 3091**

Fax number: **01784 897 845** emailaddress:**operations-support@shell.com**

B. **About the installation**

B1.1 Is PVR Stage II equipment already fitted:

☐ No

X Yes

B1.2 If the answer to B1.1 is "no",

a) when do you intend to fit it .....

b) what arrangements are in place (eg contract with installers) to fit it

.....

B2.1 What systems have been installed or is it intended to install to comply with PVR Stage II?

Tokheim – model unknown, test certificate to follow

Doc Reference **1**

B2.2 What is or will be the vapour/petrol ratio?

-15% to +15%

B2.3 Please attach process diagrams and plans of VPR Stage II system, including pipework layout.

Doc Reference: **2**

B2.4 What arrangements will be/have been made for preventative maintenance of the PVR Stage II equipment.

……..

……

……

Doc Reference: **3**

B2.5 What arrangements will be/have been made to ensure relevant staff are adequately familiar with and trained in the use of the PVR Stage II equipment.

……..

……

……

Doc Reference: **4**

B2.6 Please attach procedures and contingency measures in the event of vapour containment equipment failure (including the system for vapour recovery during filling of vehicle petrol tanks).

Doc Reference: **4**

B2.7 Please provide a certificate to confirm conformity of the PVR Stage II equipment with approval for use under the regulatory regimes of at least one European Union or European Free Trade Association country and to confirm that the

hydrocarbon capture efficiency of the equipment is not less than 85% (ie that at least 85% of the displaced vapours are recovered, according to the relevant 'type approval' test (see Section 5.16 of PG1/14(06)), expressed as the ratio of the volume of hydrocarbon vapours displaced to the volume of petrol discharged.

Doc Reference: **3**

B2.8 What arrangements will be put in place to test delivery systems and vapour recovery systems, including the testing of the vapour/petrol ratio? Please provide details of testing of the vapour containment integrity in accordance with the manufacturer's specifications (to be undertaken prior to commissioning and periodically at least once every 3 years thereafter and always following substantial changes or significant events that lead to the removal or replacement of any of the components required to ensure the integrity of the containment system).

Doc Reference: **1 & 3**

B2.9 Is an "automatic monitoring system" installed, or will it be installed, to automatically detect faults in the proper functioning of the petrol vapour recovery system including the automatic monitoring system; to indicate faults to the operator; and to automatically cut off the flow of fuel on the faulty delivery system if the fault is not rectified within 1 week?

☐ No

X Yes

B3 Additional Information

Please supply any additional information, which you would like us to take account of in considering this application.

Doc Reference: **See Attached**

C1. **Fees and Charges**

C1.1. Please enclose the relevant sum if this variation involves a substantial change, and state the amount enclosed.

£.....

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. If you don't pay, your permit can be revoked and you will not be able to operate your installation.

C2.1.If different to details provided in relation to your current PVR Stage I permit, please provide details of the address you wish invoices to be sent to and details of someone we may contact about fees and charges.

Shell Shared Service Centre Glasgow Ltd
P O Box 25071
72 Gordon Street
Glasgow

Postcode G1 3WR Telephone.

C3. Commercial confidentiality

C3.1. Is there any information in the application that you wish to justify being kept from the public register on the grounds of commercial or industrial confidentiality?

If **Yes**, please provide full justification, considering the definition of commercial confidentiality within the EP Regulations (See the General Guidance Manual).

C4. 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,
- make sure you keep to the conditions of your permit and deal with any matters relating to your permit
- investigate possible breaches of environmental law and take any resulting action,
- prevent breaches of environmental law,
- offer you documents or services relating to environmental matters,
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows)
- 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 38 of the EP 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).

C5 Declaration: previous offences (delete whichever is inapplicable)

I/ certify

EITHER

No offences have been committed in the previous five years which are relevant to my/our competence to operate this installation in accordance with the EP Regulations.

OR

~~The following offences have been committed in the previous five years which may be relevant to my/our competence to operating this installation in accordance with the Regulations:~~

.....

.....

Signature .....

Name: **Kerry Toms**

Position: **Retailer Contracting Assistant**

Date: **19th November 2009**

6 Declaration

C6.1 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:

Premises name: **Shell Bourne Bridge**

Signature .....

Name: **Kerry Toms**

Position: **Retailer Contracting Assistant**

Date: **19th November 2009**

Signature .....

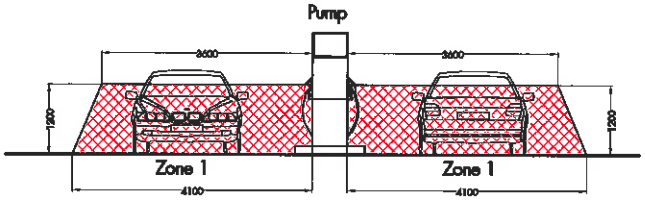
Name Andrew Thomas

Position Operational Support

Date 20/11/2009

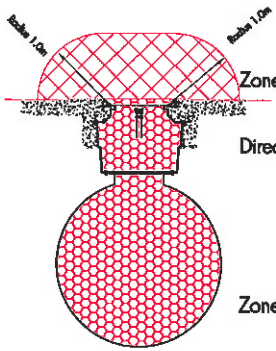
** Where more than one person is defined as the operator, all should sign. Where a company or other body corporate – an authorised person should sign and provide evidence of authority from the board of the company or body corporate.*

2



Pump Zone 1 Cross Section. (n.t.s.)

NOTE:
DIRECT AND OFFSET FILL BELOW GROUND CHAMBERS ARE ZONE 0 HAZARDOUS AREAS.



Fill Point Zone 0 Cross Section. (n.t.s.)

TANK TO PUMP SCHEDULE						
TANK No.	GRADE	MAX WORKING CAPACITY (l)	NOMINAL WORK CAPACITY (l)	PUMP ISLANDS		
				1-2	3-4	5-6
1	UNLEADED	33950			●	
2	UNLEADED	34350		●		●
3	DERV	19400			●	
4	DERV	19400		●		●
5	VPOWER	19400		●	●	●

NOTATION AND SPECIFICATION :

1. THE CLASSIFICATION OF HAZARDOUS ZONES AS SHOWN ON THE LAYOUT IS IN ACCORDANCE WITH THE H & SE GUIDANCE NOTES CS/4 & HS/G 34 AND BS 7117 and GUIDANCE FOR THE DESIGN, CONSTRUCTION, MODIFICATION AND MAINTENANCE OF PETROL FILLING STATIONS.

DESIGNATION OF ZONES :

2. ZONE 0 : AN AREA IN WHICH ANY FLAMMABLE ATMOSPHERE IS LIKELY TO BE CONTINUOUSLY PRESENT IN CONCENTRATIONS WITHIN THE UPPER AND LOWER LIMITS OF FLAMMABILITY.

ZONE 1 : AN AREA IN WHICH A DANGEROUS ATMOSPHERE IS LIKELY TO OCCUR IN NORMAL OPERATING CONDITIONS.

ZONE 2 : AN AREA IN WHICH A DANGEROUS ATMOSPHERE IS LIKELY TO OCCUR ONLY IN ABNORMAL OPERATING CONDITIONS AND NOT IN NORMAL OPERATING CONDITIONS.

3. LEGEND:

HAZARDOUS ZONE : 0

HAZARDOUS ZONE : 1

HAZARDOUS ZONE : 2

A	GRADE CHANGE V-POWER REPLACED OPTIMAX.	OCT05
REV		DATE

PROJECT : BOURNE BRIDGE SERVICE STATION, 551 WHERSTEAD ROAD, IPSWICH, SUFFOLK. IP2 8LR.

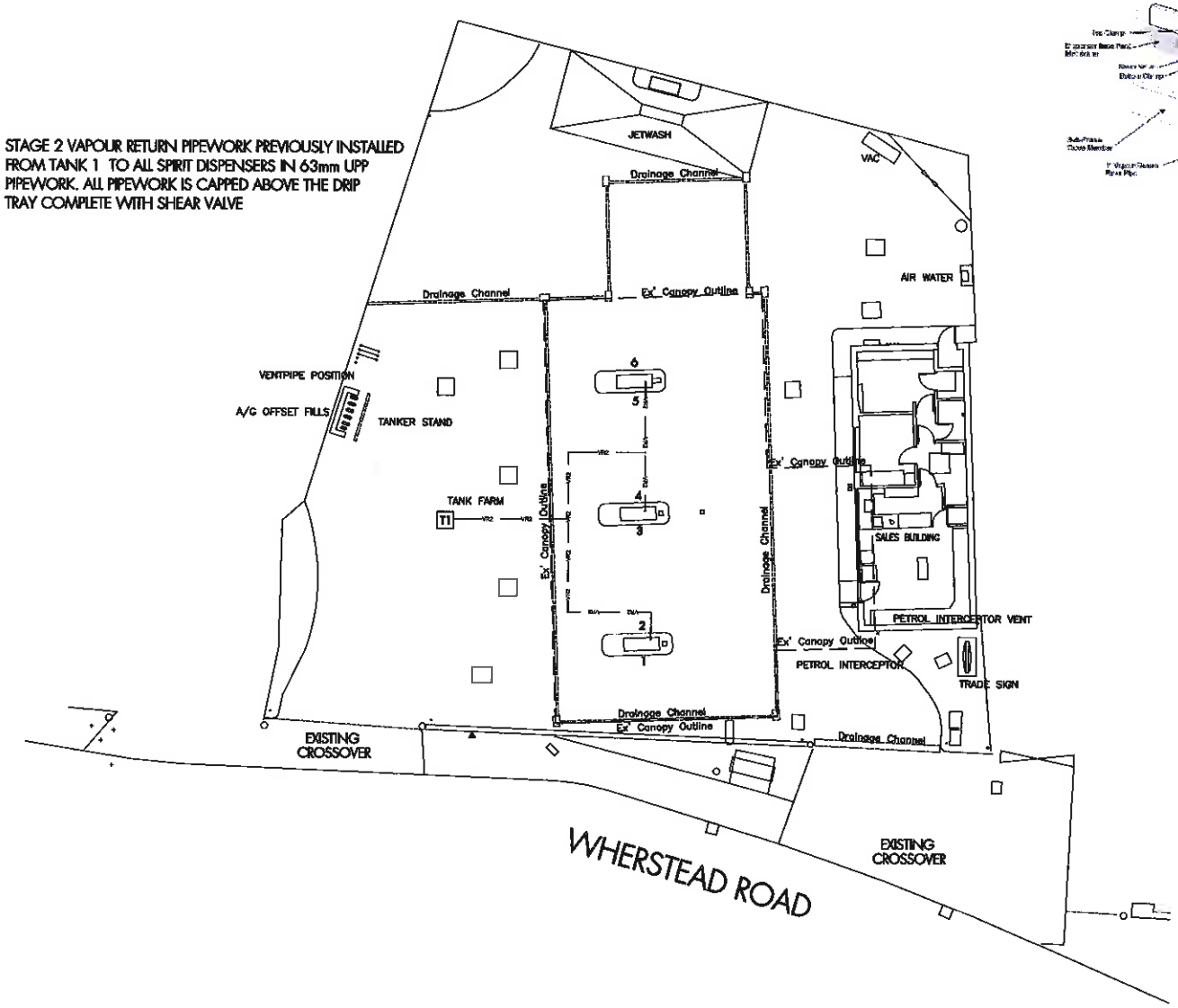
TITLE : HAZARDOUS AREAS DETAILS

[redacted]

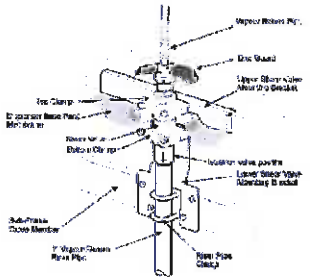
DRAWN BY :	MW/MH	SCALE :	1:200
DATE :	OCT05	PLOT DATE :	
CAD FILE :			

DWG No :	356983	HAZ	001	A

STAGE 2 VAPOUR RETURN PIPEWORK PREVIOUSLY INSTALLED FROM TANK 1 TO ALL SPIRIT DISPENSERS IN 63mm UPP PIPEWORK. ALL PIPEWORK IS CAPPED ABOVE THE DRIP TRAY COMPLETE WITH SHEAR VALVE



TYPICAL UNDER PUMP VAPOUR RETURN - SHEAR VALVE DETAIL

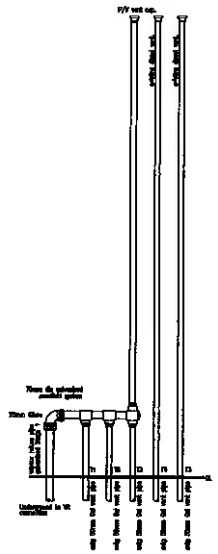


POST CONSTRUCTION

TANK TO PUMP SCHEDULE

TANK No.	GRADE	MANUFACTURERS CODE NUMBER	NOMINAL SIZE OF PRODUCT PIPE	PUMP NUMBER				
				20	25	26		
1	UNLEADED		40MM		●			
2	UNLEADED		50MM	●		●		
3	VP DIESEL		75MM		●			
4	DIESEL		75MM	●		●		
5	VP MACHINE		75MM	●	●	●		

EXISTING VENT STACK DETAIL - LOW LEVEL MANIFOLD



A. J. Bayliss
Petroleum Engineers Ltd.
Petroleum, Fluid Control Electrical Installations
Hadlar Road, Comly Lane Industrial Estate, Kidderminster, Worcestershire DY14 9QR
Telephone 01299 824614 Fax 01299 827528 E-mail: mail@ajbayliss.com

REV No.	DATE	DESCRIPTION	BY	CHKD BY
A				

PROJECT : BOURNE BRIDGE SERVICE STATION, WHERSTEAD ROAD, IPSWICH, SUFFOLK, IP2 8LR.

TITLE : VR2 INSTALLATION DETAILS

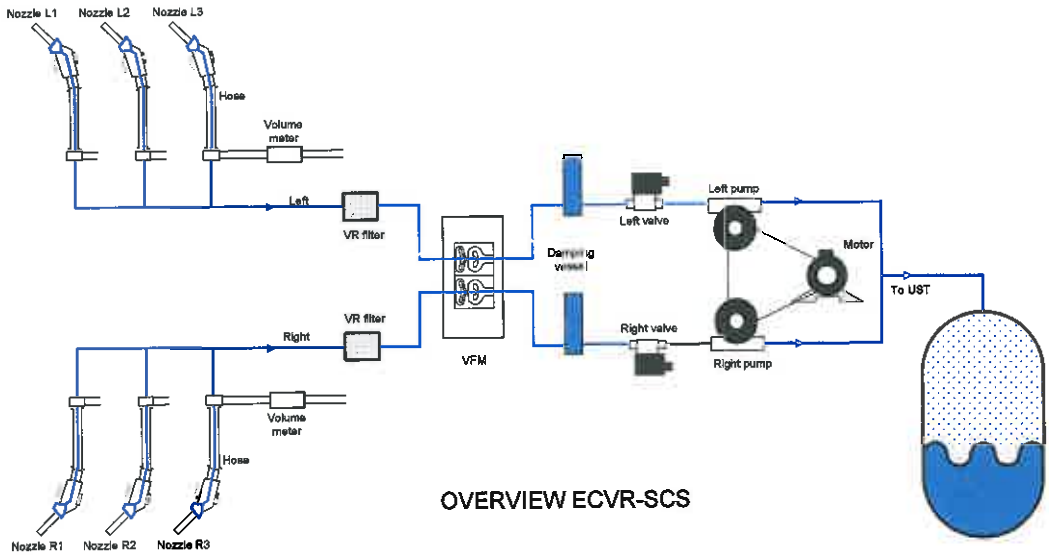
DRAWN BY :	RJdm	SCALE :	1:200
DATE :	APRIL 08	PLOT DATE :	N/a
CAD FILE :	D:\ARCHIVE\DRAWINGS\VR2\BOURNEBRIDGE356983-VR2		

DWG No :	356983	VR2	001	-

Tokheim ECVR SCS Retrofit brief overview

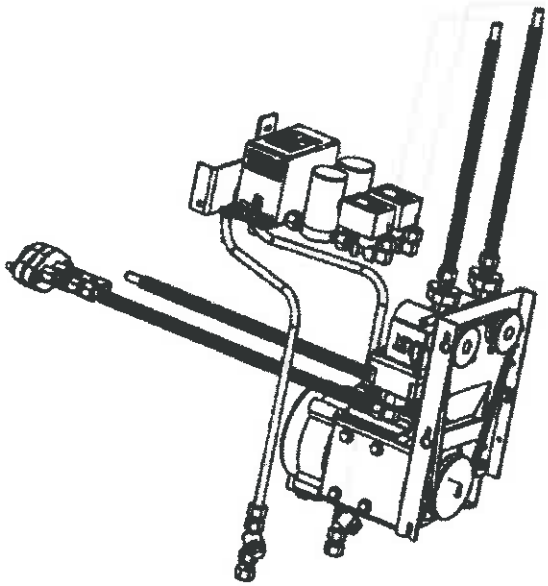
The core components of the ECVR system are:

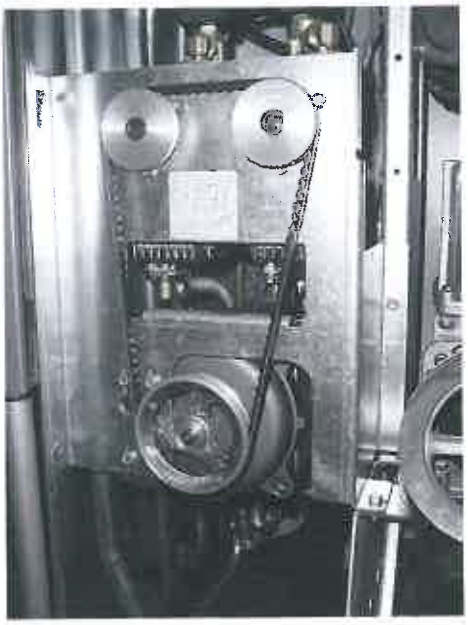
Elaflex hoses and nozzles – replacing the existing.
Durr vacuum pumps (one for each side)
Rial motor
Asco proportional valves (one for each side)
Tokheim manufactured Vapour Flow Meter (VFM) one for each side
Tokheim manufactured Vapour Recovery Control board (VRC3)



OVERVIEW ECVR-SCS

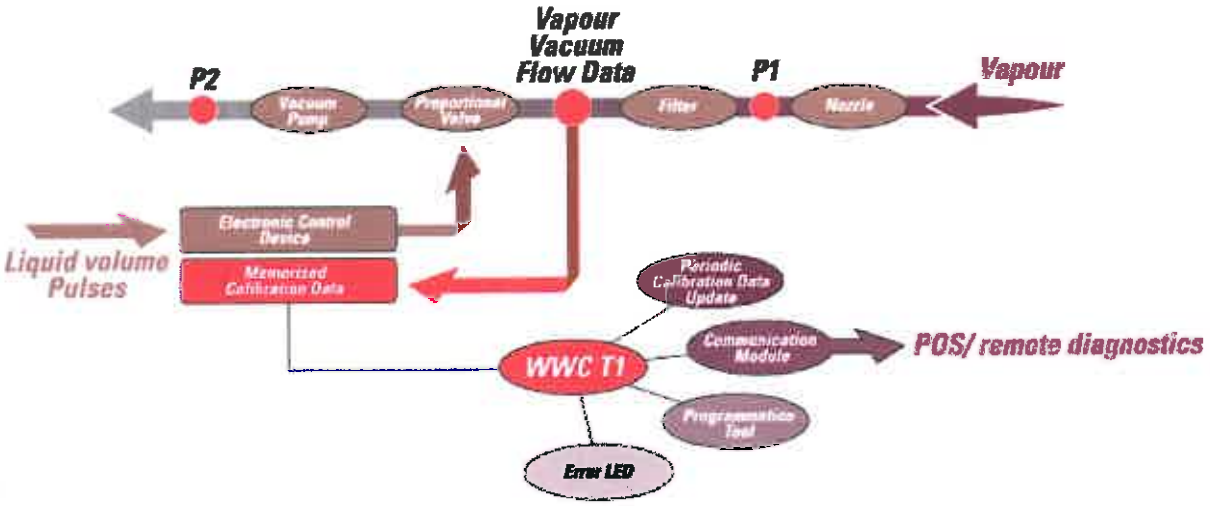
The motor, pumps, solenoid valves and VFM are mounted in the hydraulic cabinet as follows:



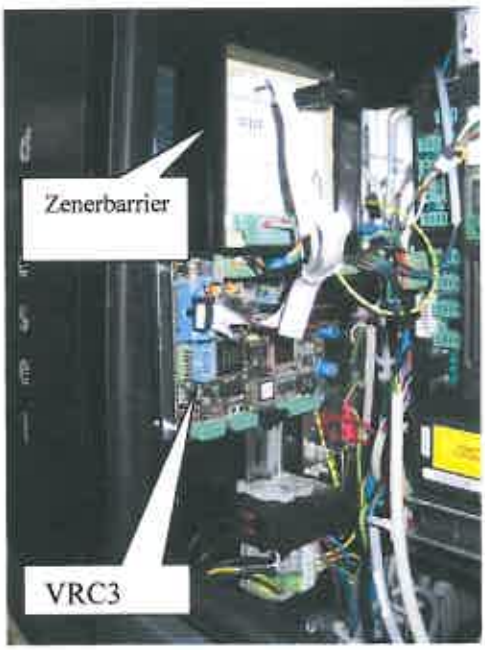


The system as a whole operates with fuel delivery feedback from the WWC to the VRC3 board and vapour flow information being passed from the VFM.

Proportional valve control is provided by the VRC3 and calibration data is modulated for the conditions of each sale.



Dependant on pump type the VRC3 board is mounted in the calculator housing and connected to the WWC via the DIPNET comms.



Power to the motor is provided direct from the mains junction box and VFM cabling routed via existing glands and cable routes from the VFM to the VRC3 via a Zener barrier.

Component parts:

The main component parts and pricing for 3rd party supply are as follows:

Elaflex VR hose:
Elaflex VR nozzles:
Durr pump. MEXX 0831-11:
Asco Prop Valve. FMXX:
Rial Motor (3 phase). v80 TL4PR:
VRC3 board:
VFM complete:

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Certification Service

1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Component intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: Sira 04ATEX9170U

4 Component: Vapour Recovery System Modules

5 Applicants: Tokheim UK Ltd and Tokheim Sofitam Applications

6 Address: Unit 3 Baker Road
West Pitkerro Industrial Estate
Dundee DD5 3RT
Scotland

Route de Soliers
14540
Grentheville
France

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of component intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number R53M11448A.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured with reference to the following document:

EN 13617-1:2004

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any special conditions for safe use are listed in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:

Ex II 1/2 G

D R Stubbings BA MIEE
Certification Manager

Project Number 53M11448
Date 1 November 2004
C. Index 09

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE Sira 04ATEX9170U

13 **DESCRIPTION OF COMPONENT**

The vapour recovery system module is designed to fit into the hydraulic cabinet and frame of existing, liquid fuel dispensers and are intended to recover fuel vapour emitted from the nozzle during dispensing and return it to the storage tank. They comprise:

- a vapour pump, with associated flame arresters, powered by a motor, both of which are suitably certified and rated
- a filter unit
- suitably certified and rated control valves
- copper pipework and associated joints
- a splitter unit fitted to the outlet pipe

The vapour recovery system module is configured to suit the associated dispenser such that existing dispenser zoning is not compromised. The module requires a vapour recovery hose to EN 13483 and a suitably certified vapour recovery nozzle to be fitted.

Where pipework and/or cabling passes through existing vapour barriers, the characteristics of the barrier are maintained by using suitably rated cable glands.

The modules are controlled by: **VFM (Vapour Flow Module)** - signals from the existing pulser and an in-line vapour meter are processed by electronics mounted in the dispenser head to control the activation and flow of the vapour system. An in-line damping vessel is fitted to maintain system accuracy.
ECVR (Electronically Controlled Vapour Recovery) - signals from the existing pulser are processed by electronics mounted in the dispenser head to control the activation and flow of the vapour system.

Design Options

- the following devices may be fitted to the vapour return line, dependent on local regulations:
  - shear valve
  - non-return valve
  - manual isolation valve
  - flame arrester assembly
- two modules may be powered from a single motor
- a vapour line pressure gauge may be fitted

14 **DESCRIPTIVE DOCUMENTS**

14.1

Drawing No.	Sheet	Rev.	Date	Title
900704-035	1 to 9	A	16 Aug 04	Vapour recovery systems - compliance details
900704-036	1 to 3	A	16 Aug 04	System hardware.
900704-037	1 of 1	A	16 Aug 04	System schematics
900704-038	1 of 1	A	16 Aug 04	Component test rig.
900704-042	1 of 1	A	02 Sep 04	Marking plate

14.2 Report number R53M11448A

Date 1 November 2004

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE Sira 04ATEX9170U

15 **SPECIAL CONDITIONS FOR SAFE USE**

15.1 The units shall be installed with suitably certified liquid fuel dispensers with the following modified fittings:

- vapour recovery hose to EN 13483
- vapour recovery nozzle to EN 13617-2

15.2 Any pipework, joints and modifications to vapour barriers within the associated dispenser shall maintain compliance with the requirements of the equipment certificate; the existing equipment zoning shall not be compromised as a result of the fitting of this component.

15.3 The installation of this component shall be installed such as to not obstruct or compromise the existing ventilation of its associated dispenser.

15.4 When fitted in a dispenser, the electrical supply to this component shall not compromise the safety and control functions of the equipment, cognisant of the dispenser's rating and overload values.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in report number R53M11448A.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The electrical circuit of each unit shall be subjected to the routine electrical tests required by Annex A.9.2, A.9.3 and A.9.4 of EN 13617-1:2004.

Date 1 November 2004

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1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 00ATEX9219X** Issue: **10**

4 Equipment: **Quantium 500T Liquid Fuel Dispenser**

5 Applicant: **Tokheim UK Limited** **Tokheim Sofitam Applications**

6 Address:

Unit 3 Baker Road
West Pitkerro Industrial Estate
Dundee
DD5 3RT
UK

Route de Soliers
14540
Grentheville
France

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 13617-1: 2004

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2G
EN 13617-1

C. Ellaby
Certification Officer

Project Number 59M16476
C. Index 09

Form 9400 Issue 1

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13 DESCRIPTION OF EQUIPMENT

The Quantium 500T liquid fuel dispenser is a multi-product device for dispensing petrol and diesel on a garage forecourt. The Quantium 500T is a 'hose cassette' design, that utilises a fabricated steel frame clad with steel panels to form a hydraulic housing, hose cassette and display control unit.

The hydraulic housing contains up to five hydraulic circuits, each comprising an electrically driven pumping unit, metering unit, electrically actuated flow control valves and interconnecting pipework. The outlet pipes are connected to suitable dispensing hoses and are fitted with a nozzle and optional dry break coupling(s). When the nozzles are not in use, they are stored in a nozzle boot. Removing and replacing the nozzle in the nozzle boot activates and deactivates the dispenser. This operation is controlled using a spring loaded lever and magnet (nozzle flap) to actuate a proximity switch.

Fuel vapour is isolated and vented from the hydraulic circuit by means of a vapour separator and flame arrester arrangement. Gaps between the external panels provide ventilation for the hydraulic housing. In addition the, ventilation for the type 2 vapour barrier utilised with the Quantium 500T dispenser is provided by means of a louvered panel.

The display control unit is mounted in a safe area that is created by head positioning and appropriate vapour barriers. The unit is electrically connected to pulsers and switches in the hydraulic housing via a type 2 vapour barrier. All electrical components in the hazardous zones are suitably certified and the cabling is also appropriate for use in fuel dispensers, as specified in the schedule drawings. All electrical circuits, metallic parts and the metalwork of the enclosure are electrically bonded to earth.

Design options

- Alternative rating of electrical circuits up to 440 V 3-phase.
- Alternative High Flow variant 10 m^3/ h (nominal) utilising two meter units.
- The flow rate, for attended use only, to be increased, through a single meter, up to 10m^3/hour for Class 1 fuel.
- Omission of any of the hydraulic circuits and consequent reduction in the frame length.
- The substitution of the 'type 2' barrier at the base of the existing card reader enclosure by a 'type 1' barrier.
- The extent and fabrication of the existing 'type 1' barrier to be modified, consequently, the need for IP 54 seals in the space box and calculator head is removed.
- The use of an alternative, 'full height' hose cassette/retractor housing; the retractor tension arm being eliminated.
- Alternative Satellite dispenser arrangement. This arrangement is used to fuel large vehicles with fuel tanks on either side and consists of a 'satellite' dispenser linked to and fed from, a 'host' dispenser via an underground fuel line. The satellite dispenser has no electrically driven components other than a nozzle out and side select switches and an optional display module powered from the host via an underground cable. The host dispenser is fitted with a satellite selection switch in the display head.
- The replacement of the 'Type 2' vapour barriers by 'Type 1' barriers; the display unit may be moved down to be mounted directly above the hydraulic housing.
- Alternative vapour recovery variant, the dispenser being fitted with a vapour recovery system as Sira 04ATEX9170U.
- Alternative submersible pump variant, the housing having the pump and associated motor omitted. A suitable shear valve is fitted at the dispenser inlet pipe.
- The option to use an alternative Nozzle Boot.
- The option to use a Fuel Temperature Measurement System as Sira 06ATEX9074U.

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 00ATEX9219X**
Issue 10

- The manufacture of the dispensers without hoses and nozzles being fitted.
- The use of the equipment for dispensing ethanol blended fuels <85%> or 100%.
- The addition of a second hydraulic cabinet on the opposite side of the hose cassette.

The hydraulic housing contains up to two hydraulic circuits, each comprising an inlet shear valve, a filter unit, a vapour separator vessel, a meter, a differential valve and interconnecting pipework. Manual and electrical valves are provided to enable isolation and flow control. Non-return valves and excess pressure (flow) valves maintain the circuit integrity. A pressure gauge is fitted to enable system pressure to be monitored. The outlet pipe passes into the hose cassette and is connected to a suitable dispenser hose. The hose is fitted with a breakaway coupling and dispensing nozzle. The component parts and system configuration is shown on Tokheim drawing No. 90111-003 sheet 1.

Fuel is delivered to the dispenser by a remote LPG pump. Vapour is separated from liquid in the separator vessel, the vapour being returned to the storage tank. Positive liquid/vapour pressure of approximately 1 bar is maintained by the differential valve fitted at the meter outlet. Normal operating pressure is dependent on tank and temperature conditions, and is between 7 and 15 bar. The maximum system pressure is 25 bar and safety valves are set to vent at 23 bar.

The nozzles are located in suitable boots fitted on both sides of the hose cassette and actuate proximity switches as they are removed or replaced. The hose are fitted with sprung retractor assemblies. Delivery is only maintained whilst a manual 'dead man's switch', fitted to the cassette, is activated

Variation 1: This variation introduced the following changes:

i. The hydraulic housing has alternative overall dimensions, the method and materials of construction remained un-altered.

ii. The substitution of the 'type 2' barrier at the base of the existing card reader enclosure by a 'type 1' barrier.

iii. The extent and fabrication of the existing 'type 1' barrier was modified, consequently, the need for IP 54 seals in the space box and calculator head is removed.

iv. The use of alternative panel fabrications and consequent modifications to the ventilation methodology were permitted.

Variation 2: This variation introduced the following changes:

i. The use of an alternative, 'full height' hose cassette/retractor housing was permitted; the retractor tension arm being eliminated.

ii. The panel design was revised, the IP23 rating being maintained.

iii. The vapour barrier arrangements between the hose cassette, electronics enclosure and hydraulic housing was modified, the electronics enclosure remaining in the safe area.

iv. The provision of ventilation was re-designed.

Variation 3: This variation introduced the following changes:

I. An alternative payment terminal was fitted, consequently, the frame and cladding was modified; the payment terminal remains in a non-hazardous area.

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Variation 4: This variation introduced the following changes:

I. An alternative 'Radiant' payment terminal was fitted, consequently, the frame and cladding was modified; the payment terminal enclosure is larger than the existing type and may be partially in the designated hazardous area in some variants, additional cables may be routed as a separate cable or into the existing junction box.

Variation 5: This variation introduced the following changes:

i. The use of a vapour recovery system as detailed in Sira 04ATEX9170U was permitted.

ii. Minor drawing corrections and clarifications were introduced.

Variation 6: This variation introduced the following changes:

i. The option to use a revised pumping unit housing, including a revised Collector Unit and SIB Control Valve, was permitted. Designated either EPZ Pumping Unit or TQP Pumping Unit.

ii. The option to use a revised Meter Unit Housing was permitted. Designated either TM80 Meter Unit or TQM Meter Unit.

iii. The option to use an alternative Nozzle Boot was permitted.

iv. The option to use a Fuel Temperature Measurement System, Sira 06ATEX9074U, was permitted.

Variation 7: This variation introduced the following changes:

i. The dispensers may be manufactured without hoses and nozzles being fitted.

ii. The equipment may be used for dispensing ethanol blended fuels <85%> or 100%.

iii. The dispenser was updated to EN 13617-1:2004.

Variation 8: this variation introduced the following changes:

i. The introduction of the combined petrol and LPG option, in consequence, special conditions for safe use clauses 15.4 and 15.5 and conditions of certification clauses 17.10 and 17.11 have been introduced.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	23 May 2001	R53M7452A	The release of prime certificate.
1	17 December 2001	R53M8382A	The introduction of Variation 1.
2	15 May 2003	53V10273	The prime certificate was re-issued to add the name and address of a second applicant and to correct clause 17.5.
3	15 May 2003	R53M10804A	The introduction of Variation 2.

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 00ATEX9219X
Issue 10

Issue	Date	Report no.	Comment
4	12 May 2005	R53M12635A	The introduction of Variation 3, variation 1 and 2 were also re-issued to recognise the re-issue of the prime certificate dated 15 May 2003 and correct a typographical error.
5	22 July 2005	R51M13312A	The introduction of Variation 4.
6	12 August 2005	R51V13819A	The introduction of Variation 5.
7	9 August 2006	R51M13900A	The introduction of Variation 6.
8	3 May 2007	R51M16088A R51M16088B	This Issue covers the following changes: • All previously issued certification was rationalised into a single certificate, Issue 8, Issues 0 to 7 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format. • The introduction of Variation 7; these changes introduced special conditions for safe use, therefore, an 'X' suffix was added to the certificate number. • The certificate was rationalised to include changes to the product description and modify the list of descriptive documents.
9	30 August 2007	R59M17063A	The introduction of a new special condition concerning the use of the dispenser in respect of zoning.
10	31 August 2007	R59M16476A	The introduction of Variation 8.

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 Where a dispenser is supplied without hoses and/or nozzles, they shall be fitted in accordance with:

Hoses: EN 1360 or EN 13483
Nozzles: EN 13012.

15.2 When used for ethanol dispensing, the fuel specification must be <85%> or 100% with minimum water content.

15.3 These metering pumps and dispensers are designed for use in the open air. Where a metering pump or dispenser is positioned within a building, incorporated into an enclosure or integrated into a larger piece of equipment, additional measures shall be taken to ensure that the zoning diagrams illustrated in the schedule drawings are not compromised.

15.4 When used for dispensing LPG, the dispenser shall be supplied from a remote pressure source not exceeding 25 bar.

15.5 When used for dispensing LPG, a vapour return path to the storage tank shall be provided.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 00ATEX9219X
Issue 10

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The electrical circuit of each unit shall be subjected to the routine electrical tests required by clause 6.2.1 of EN 13617-1:2004.

17.4 The hydraulic circuit of each unit shall be subjected to the routine hydraulic tests required by clause 6.2.2 of EN 13617-1:2004.

17.5 Components or apparatus specified for use with the dispenser defined as suitably certified shall be selected with due regard to the latest current standards and technical information.

17.6 When a payment terminal uses forced cooling, the manufacturer shall prove that the external hazardous atmosphere cannot be drawn into the enclosure.

17.7 The Stage II vapour recovery system, when fitted to the dispenser, shall be installed in accordance with the special conditions for safe use contained within Sira 04ATEX9170U.

17.8 When intended for use with ethanol blended fuels, the manufacturer shall assess the suitability of parts used in the construction of the fuel containment system for long-term suitability to ethanol blended fuels. Due regard should be placed on the use of corrosion inhibitors in the fuel mixture.

17.9 When used for dispensing ethanol blended fuels the manufacturer shall give due consideration to the correct selection of supplementary fittings (safe breaks etc.). Where such fittings are not provided as part of the assembly, suitable guidance should be provided in the equipment instructions.

17.10 The hydraulic circuit of each Automotive LPG fuel dispenser shall be subjected to one of the following pressure tests; there shall be no leakage during the test:

- Tested at 1.1X the maximum working pressure (27.5 bar) with pressure relief valves removed. The pressure gauge may be removed for this test.
- Tested at 0.9X the relief valve opening pressure (22.5 bar) with the pressure relief valves fitted.

In both cases, it shall be confirmed that the working pressure of the relief valves does not exceed 25 bar.

17.11 The electrical circuit of each type of Automotive LPG fuel dispenser shall be subjected to the routine electrical tests required by clause C.1 of EN 14678-1:2003.

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Certificate Annexe

Certificate Number: Sira 00ATEX9219X

Equipment: Quantium 500T Liquid Fuel Dispenser

Applicant: Tokheim UK Limited
Tokheim Sofitam Applications

sira CERTIFICATION

Issues 0 to 7

The drawings associated with these Issues were replaced by those listed in Issue 8.

Issue 8

Drawing No.	Sheet	Rev.	Date	Title
900704-001	1 to 17	D	29 Dec 06	Quantium 500T Dispenser Range
900704-002	2 to 8	B	24 Apr 03	Labels
900704-003	1 of 1	A	08 Dec 00	Drip Tray Sealing
900704-004	1 to 8	B	28 Aug 06	Hydraulic Components
900704-005	1 to 5	A	08 Dec 00	Circuit Diagrams
900704-006	1 of 1	B	28 Aug 06	Energy Isolation
900704-007	1 to 2	B	28 Aug 06	Nozzle Boots
900704-008	1 to 3	A	08 Dec 00	Hydraulic Schematics
900704-009	1 & 2	B	23 Jun 06	Pumping Units
900704-010	1 to 2	A	08 Dec 00	Meters
900704-040	1 to 5	A	04 Jun 06	Alternative hydraulic stack
900704-053	1 of 1	B	23 Jun 06	Nozzle Holder Assembly
900704-054	1 of 1	1	23 Jun 06	Test Rigs
900704-017	1 of 3	A	04 Sep 01	"Quantium 500 T" Variation No 1 ("Quantium 500").
900704-017	2 of 3	A	04 Sep 01	"Quantium 500 T" Variation No 1 ("Quantium 500").
900704-017	3 of 3	A	04 Sep 01	"Quantium 500 T" Variation No 1 ("Quantium 500").
900704-031	1 to 10	A	12 Aug 03	Modification to Quantium 500T
900704-048	1 to 6	A	19 Oct 04	Quantium 500T - alternative payment terminal arrangements
900704-055	1 to 12	A	05 Jul 05	Quantium 500T - alternative 'Radiant' payment terminal arrangements
900704-021	1 of 1	A	08 Oct 02	Modified EPZ pumping unit
900704-074	1 & 2	A	31 Oct 06	Ethanol dispensing details

Issue 9

No new drawings were introduced.

Issue 10

Drawing No.	Sheet	Rev.	Date	Title
903111-023	1 to 3	A	21 Mar 07	Q500T Combined petrol and LPG Dispenser.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

(2286)

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III(5)a

AMENDMENT TO CERTIFICATE

Certification No 2286 Amendment 48

Submitted by: **Tokheim UK Limited**
Unit 3 Baker Road
West Pitkerro Industrial Estate
Dundee
DD5 3RT

Authorisation is hereby given by the Secretary of State for Trade and Industry for the following certificate of approval relating to a pattern of a liquid flow meter to be amended as described below.

This approval is extended to include the addition of the following authorised alternative:-

Modified assisted vapour recovery system

As described in amendment 12 of the certificate but having the following alternatives:

- the electronic control valve described in the first paragraph may be any suitable alternative
- alternative layout using a Durr vacuum pump (Figures 1 & 2)

Signatory: **M A Bokota**
for Chief Executive
National Weights and Measures Laboratory
Department of Trade and Industry
Stanton Avenue
Teddington
Middlesex
TW11 0JZ
United Kingdom

Reference No: T1117/0027/2
(STD 7144)

Date: 28 February 2007

(2286)

dti

CONTINUATION OF AMENDMENT TO CERTIFICATE

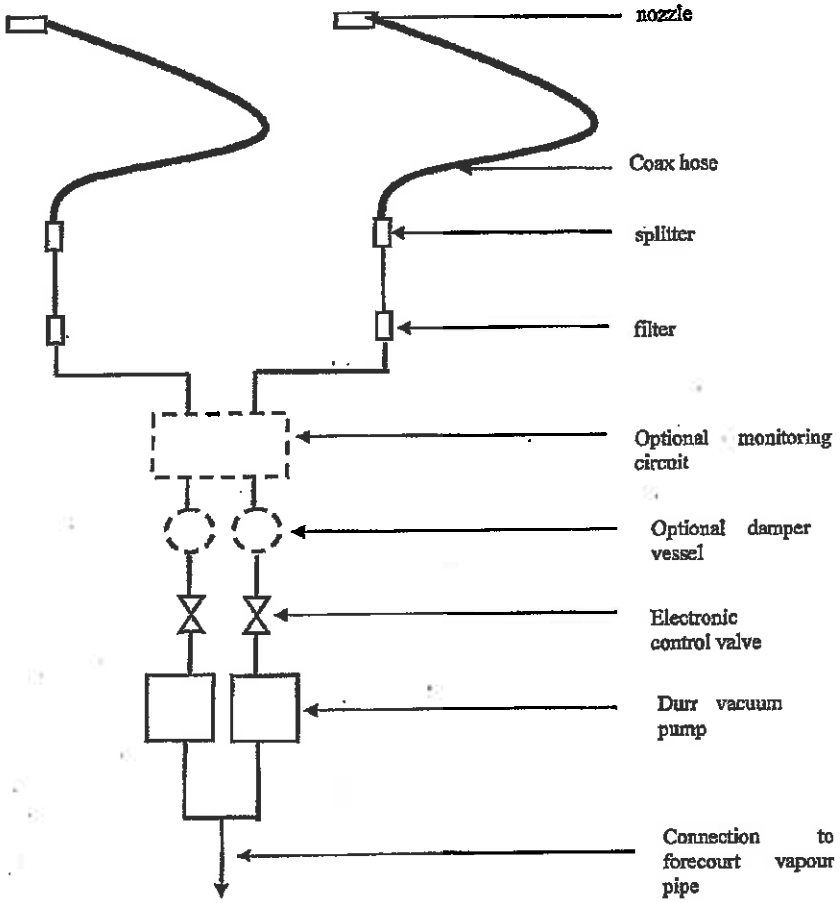

Figure 1 **Vapour recovery system schematic**

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CONTINUATION OF AMENDMENT TO CERTIFICATE

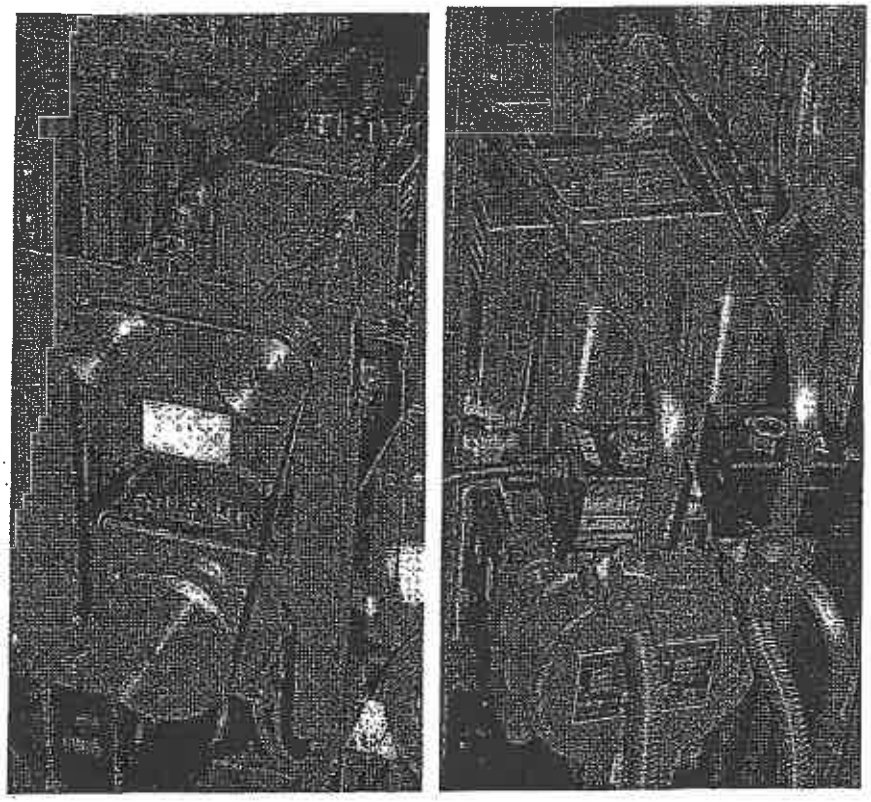

Figure 2 **Typical installation of vapour recovery system**

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ CERTIFICADO ◆ CERTIFICAT

Zertifikat Nr. Ü-12.2

TÜV SÜDDEUTSCHLAND

Die Prüfstelle für Gasrückführungssysteme des TÜV Süddeutschland, Kompetenzzentrum Tankanlagen, Westendstr. 199, D-80686 München, bescheinigt die Prüfung einer automatischen Überwachungseinrichtung für aktive Gasrückführungssysteme an Tankstellen gemäß § 4 Abs. 5 der 21. BImSchV.

- Typ Bezeichnung: **TOKHEIM ECVR - SCS** in Verbindung mit der Gasrückführungssteuerung **TOKHEIM VRC3** Software 3.00 und dem Zapfsäulenrechner **TOKHEIM WWCT1**
- Hersteller: **TOKHEIM Europe & Africa** Industrieweg 5 5531 AD Bladel The Netherlands
- System: Gasdurchflussmesser: Statische Messeinheit **TOKHEIM VFM** zwischen dem Zapfventil und der Gasrückführungspumpe in der Gasrückführungsleitung
- Messauswertung: Auswertung des Gasflusses, Bewertung und Alarmmeldung in der Gasrückführungssteuerung **TOKHEIM VRC3**. Erzeugung des Abschaltsignals im Zapfsäulenrechner **TOKHEIM WWCT1**.

Die Prüfungen ergaben, dass die Anforderungen nach 21. BImSchV § 3 Abs. 5 und dem Merkblatt 1 Teil 2 erfüllt werden.

Diese automatische Überwachungseinrichtung mit Selbstkalibrierungsfunktion ist für aktive TOKHEIM Gasrückführungssysteme in TOKHEIM Zapfsäulen für den Einbau in neue Zapfsäulen geeignet.

München, den 21.08.2003

Technische Überwachung 19 12 Bayern

Der Sachverständige

Peter Szalata

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ ЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Zertifikat Nr. Ü-12.2-2

TÜV SÜDDEUTSCHLAND

Die Prüfstelle für Gasrückführungssysteme des TÜV Süddeutschland, Kompetenzzentrum Tankanlagen, Westendstr. 199, D-80686 München, bescheinigt die Prüfung einer automatischen Überwachungseinrichtung für aktive Gasrückführungssysteme an Tankstellen gemäß § 3 Abs. 5 der 21. BImSchV.

Typ Bezeichnung:	TOKHEIM VR-Monitoring in Verbindung mit der Gasrückführungssteuerung TOKHEIM VRC3 Softwareversion 3.01
Hersteller:	TOKHEIM Europe & Africa Industrieweg 5 5531 AD Bladel The Netherlands
System Gasdurchflussmesser:	Statische Messeinheit TOKHEIM-VFM zwischen dem Zapfventil und der Gasrückführungspumpe in der Gasrückführungsleitung
Messauswertung:	Die Auswertung des Gasflusses, Bewertung und Alarmmeldung sowie Erzeugung des Abschaltsignals erfolgen in der Gasrückführungssteuerung TOKHEIM VRC3.

Die Prüfungen ergaben, dass die Anforderungen nach 21. BImSchV § 3 Abs. 5 und dem Merkblatt 1 Teil 2 erfüllt werden.

Diese automatische Überwachungseinrichtung ist für aktive Gasrückführungssysteme geeignet.

München, den 21.05.2003

Technische Überwachung Bayern 10 12

Der Sachverständige

Peter Szalata

Tokheim ECVR Site Maintenance Daily Check

Please see below procedure for detecting ECVR System fault.

1. A visual inspection of each pump should be carried out daily by site staff
2. Check **both sides** of each dispenser to see if the red LED is lit on the main Display (see Fig 1).
3. If the LED is lit this is indicating a fault on the ECVR system. Please report this fault to your service provider immediately.
4. If the pump is not checked the warning light will stay on for 168 hrs. After this time has passed the ECVR system will close down the pump.

Tokhim UK ECVR Site Maintenance Daily Check

Fig 1

ZERTIFIKAT ◆ CERTIFICATE ◆ 证书 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Certificate No. 85 A/L-2.2

Industrie Service

waiting

The TÜV SÜD Test Body for Vapor Recovery Systems,
Westendstr. 199, D-80686 Munich, certifies having conducted tests according the following code:
"Measurement and test methods for the assessment of vapour recovery systems on filling stations- VDI 4205"
on the following vapour recovery system:

Fuel-hose nozzle:	**ELAFLEX** ZVA 200 GRV3
Hose:	**ELAFLEX** Conti Slimline 21/8 Coax
A / L regulator valve[1]:	ASCO, Model JV13285902 24/DC, Type EMXX with Control board: „Tokheim SAS" Typ ECVR-SCS – self calibrating
Vapor valve[2]:	Not required - if internal in fuel-hose nozzle
Vapor recovery pump:	Dürr, MEX 0831-11

Test results:

A/L	**99,4 %** at volumetric fuel-flow rate 40 l/min
Average[3] efficiency	**95,4 %**

The following general conditions must be observed during installation:

Maximum volumetric fuel-flow rate:	**40 l/min**
Maximum counter pressure in recovery line:	**50 mbar**
Correction coefficient for system settings with air:	not necessary

Germany
Munich. xxx.2007

The officially authorized expert

20.3.07

Peter Szalata

[1] regulates air to liquid ratio
[2] opens the vapour path during liquid flow
[3] According to VDI 4205 in normal position and 45° position using VW Polo as reference car under realistic fueling conditions

4.2 Receive Wetstock

Overview

Fuels must be discharged in an efficient and safe manner. This is both a legal and Shell requirement. It is the Retailer's responsibility to ensure that all processes and procedures are carried out at the retail site.

The responsibility for any delivery must be delegated to a competent member of staff in the event of the Retailer not being available on site to accept a delivery.

Procedure Description

The process describes how to accurately and safely complete the transfer of fuel from road tankers to site storage tanks in line with HSSE Shell policy requirements. In most countries Legislation plays a key role in the requirements of this procedure.

Objectives

- To ensure that every fuel delivery is carried out in accordance with all legal requirements and Shell procedures to minimise the risk of injury to people or damage to property and/or to environment.
- To ensure the safe discharge of fuel from a road tanker into the correct site storage tanks and the accurate recording of the delivered volume per tank whilst meeting Shell Group minimum HSSE standards and any local legal requirements. *(For HSSE requirements see Section 1 of this manual)*
- To identify any short deliveries e.g. fuel fraud/theft
- To identify any fuel product grade that is delivered into a tank containing a different product grade.
- To provide accurate delivery volumes of fuel (by tank and product grade) to enable site reconciliation process.

Minimum Standards & Big Rules

- The Retailer is trained in all aspects of Shell's policy and procedures regarding the requirements in this section plus any local legislation requirements
- The Retailer must train the Nominated Principal and site staff to execute this procedure according to Shell minimum standards and must retain training records for each individual
- The Retailer must make available all training records for himself and his staff at all times at site.
- Deliveries must not be made to any tank showing evidence of leakage.
- Both local legislation and Royal Dutch Shell Group HSSE standards are met on every delivery
- The Retailer must monitor the condition of all fill points and advise Shell of any potential connection faults
- Where assisted delivery is required the Retailer (or Nominated Principal) must:
  - ensure a competent member of staff is on site to receive a delivery
  - verify that the delivery paperwork clearly identifies that the delivery is intended for the site
  - ensure that there is adequate ullage in each tank prior to a discharge of fuel being made
  - advise the tanker driver of the correct fuel connections
  - agree with the tank driver that all relevant compartments on the tanker are dry when the delivery is completed
  - sign the delivery ticket and hand to driver and enter all details in the site fuels stock record
- If either the Retailer (or Nominated Principal) or the driver identifies insufficient tank ullage or it is not safe to discharge a complete compartment from the road tanker, the fuel will either remain on the tanker or be discharged to another appropriate tank on the site
- The tanker compartments must not be split in two different tanks or tank systems (unless accurate onboard tanker meters are available and the delivery paperwork accurately reflects what has happened whilst discharging)

- To execute reconciliation procedure the Retailer (or Nominated Principal) will use volumes detailed as indicated on the delivery note unless the volume measured at the time of delivery is outside local agreed tolerance levels *(see Section 4.2.1 or 4.2.2)*

- The Retailer (or Nominated Principal) must follow the local agreed process for any delivery discrepancies outside the tolerances.

- Tank level measurement must be made shortly after a delivery to ensure that the discharge of product grade has been made to the tanks intended

- The tanker driver and the Retailer (or Nominated Principal) must ensure that if there are any spillages during the discharge element of this process are reported in line with Shell HSSE requirements. *(See Section 1.5 of this manual)*

- In case of contamination caused by fuel crossover, the Retailer (or Nominated Principal) must execute the local process to close to the customers all dispensers that are affected by this event

- The Retailer (or Nominated Principal) must retain all documentation related to this procedure and must be available at site.

- The Retailer (or Nominated Principal) must endeavour to facilitate a prompt, safe and efficient delivery. If the delivery vehicle is delayed at the site due to failure on the part of the Retailer to fully co-operate with the implementation of agreed processes then this will be recognised and referred to the Shell Territory Manager for use in performance management

- The Retailer or Nominated Principal must ensure that adequate working lighting is available at all filling points for after dark deliveries

- The Retailer must provide feedback from site if there is a short delivery (compared to ordered quantity), spillage, split tanker compartment or incorrect delivery paperwork

- The delivery frequency and volumes may vary where VMI is implemented.

Procedure execution tools

- Either electronic tank gauges or manual dipsticks to record both pre and post physical dip measurements.
- Delivery paperwork from Distribution that shows delivered volumes.
- Process to provide feedback from site if there is a short delivery, spillage, split tanker compartment or incorrect delivery paperwork.
- Training material supplied by Shell
- See Appendices for templates

4.2.1 Retailer/Site Staff Assisted Delivery

Only individuals who have been accredited as a "Competent Person" should be involved in the procedure. (The Register of Competent persons should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart)

See Appendix 3: Example "Competent Person Register" COMMON PRACTICE
See Appendix 4: Example "Competent Person Form Of Certification" COMMON PRACTICE
See Appendix 8: Example of Delivery Note document

What to do before the delivery?

- **Floor conditions:** Check for slippery condition in the delivery area. When slippery conditions exist, but site is accessible, use sand, salt etc. to create safe working area.
- **Accessibility:** check accessibility and ensure that all obstructions (e.g. parked vehicles, snow, etc.) are removed prior to arrival of delivery vehicle.
- **Entering the site:** Assist the driver while entering in the site in case of difficult maneuvering. The delivery vehicle must be positioned in such a way that it can be easily driven off the site in an emergency in forward gears
- **Adequate Lighting:** The discharge area must be well lit during deliveries after dark (minimum 100 lux.) If a delivery is to be made during hours of darkness, check **all** lights in the delivery area are working.
- **Manhole:** The chambers should be free of water, fuel, snow, ice and debris
- **PPE** to be available for all staff working on the forecourt, i.e. High Visibilty clothing

- Ensure means of opening manholes is available and manhole platforms, where fitted, are in good order and secure, **particularly following tank maintenance**
- Ensure fire extinguishers (*in date and sealed*) and sand bucket, are available
- If required, assist driver to manoeuvre on the forecourt
- Ensure you comply with restrictions arising from your site Risk Assessment, including partial or full closure of the forecourt
- Where appropriate or necessary, switch off car wash, air machine and vacuum cleaner

What to do during the delivery?

- **Documentation:** Retailer or competent staff member checks all documents, making sure delivery is for the site (e.g. not for sites with similar address if located close), if grades and volumes are as expected, if compartments are properly marked etc.
- **Fill Pipes/dipping pipes/Central Delivery Points:** Unlock dip (where appropriate) and fill pipes (Note: Keep fill pipes locked at all times except during deliveries, stock checks and approved repairs. Each fill pipe must be clearly labeled showing tank compartment number, fuel grade, and tank maximum working capacity. If site equipped with automatic level gauging system - print out pre-delivery report. If the site is NOT equipped with level gauges, measure the fuel contained in the tanks before delivering (in cooperation with the driver).
- **Ullage:** Check volumes/ullage in tanks. Instruct driver in what compartments/tanks product needs to be delivered.
- **Clothing:** Wear High Viz vest / clothing while working on the forecourt
- The Retailer needs to check to ensure delivery is done in a safe manner
- **Fire Extinguishers:** Ensure fire extinguisher(s) are near discharging place

- Ensure any construction or maintenance work going on at the site does not cause a risk during the delivery
- Check that truck is connected to the ground
- On Tanker's arrival check the delivery note for the vehicle compartment allocation
- Complete the delivery certificate in the driver's presence.
  Do not sign lower part at this stage
- Check sight glasses are full with the ball floating at the top
- Agree with the driver the sequence of delivery, grades and quantities, tank number and compartment number. **Do not proceed until the sequence is agreed.**
- Where practical, Diesel should be discharged first (unless into above ground Diesel tanks, where it should be discharged last)
- **Unlock only the fill points needed for the delivery** and the vapour recovery.
- Manhole covers should only be removed when necessary to avoid the risk of falling down open manholes
- **IT IS A LEGAL REQUIREMENT THAT THE DRIVER AND COMPETENT PERSON STAY AT THE DELIVERY POINT THROUGHOUT THE DELIVERY**
- Should there be any vapour leaks, refer to the Vapour Recovery Stage 1B Emergency procedure document which should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart, together with the Register of Competent Persons
- The vapour recovery hose should be connected (tanker end first) before any delivery hose
- You must ensure that each delivery hose is connected to the storage tank end first and then to the

road tanker to reduce the risk of fuel leaks

- The number of tanker compartments connected shall not exceed 2, regardless of grade
- You **MUST** also ensure the driver has connected to the correct compartment on the vehicle. This is done by checking the grade label on the outlet of the vehicle, cross-referencing this with the delivery note
- You and the driver can now sign the delivery certificate for the specific tank. Delivery can then commence
- The above procedure should be repeated for each compartment. Remember to replace manhole lids and lock fill point caps as necessary as you progress with the delivery.
- When all compartments have been delivered, check the outlet sight glasses, which should be empty, with the balls at the bottom.
- After each compartment has been discharged, the delivery hose will be disconnected at the road tanker end first and then at the storage tank end.
- The Vapour recovery hose will be disconnected (storage tank end first) when all the delivery hoses have been fully disconnected at both ends

The above are requirements under the 2003 Approved Code of Conduct. A Retailer would be vulnerable under the law if an incident occurred and it was found that the guidelines had not been followed. You can be particularly vulnerable during periods of adverse weather, when some of the procedures may be prone to shortcut.

What to do after delivery?

- Lock dip and filling points and replace any manhole covers

- When driver has completed the delivery, record and check tank volumes before driver leaves site to confirm correct quantities have been delivered to each tank.

- Sign off delivery papers. Site retains one copy of delivery certificate and delivery note. Tank gauge reports taken before and after delivery, or delivery reconciliation report from tank gauge, should be retained and attached to the delivery certificate.

- Remove any barriers and cones

- Assist the driver while exiting from the site in case of heavy traffic or difficult maneuvering.

- If the delivered quantity of fuel is believed to be short against the documented quantities, ensure that a tank gauge calibration error or administration error is not misinterpreted as a short delivery. If delivery is still believed to be short, report the issue to the Fuels Ordering line on 08708 500 924 following the options given.

- Delivery certificates should be retained on site for a minimum of 12 months

- Any spillage of fuel must be reported to the Customer Service Centre. If a spillage occurs, follow the emergency procedure contained in section 1 of this manual.

What to do in case of fuel crossover?

A fuel crossover is the incorrect delivery of one product into a tank containing another, for example, delivery of unleaded fuel into a storage tank containing diesel. That should not occur if delivery procedures are correctly followed.

- As soon as a crossover is suspected, all dispenser nozzles fed by the tank or tanks involved should be closed until it is confirmed that the product within the tank is suitable for sale.

- The driver will contact the terminal control centre.

- The retailer should inform the Fuels Quality Focal Point (via the Customer Service Centre) and Territory Manager.

- The Fuels Quality Focal Point will determine the necessary action and inform the Retailer and Distribution.

4.2.2 Driver Controlled or Unassisted Deliveries

Approval for unassisted deliveries may be site specific therefore authorisation must be received from Shell before they may commence. A risk assessment for Driver Controlled or Unassisted deliveries should be completed and a copy filed at site before the delivery process is changed from site assisted deliveries to driver unassisted deliveries or driver controlled deliveries. As there are equipment and procedural differences between the two methods of delivery, where differences occur they appear in separate sections listed below.

Driver Controlled Deliveries (DCD) require a separate box on the forecourt containing tank gauge equipment, telephone and emergency equipment. DCD requires no involvement from site staff during the delivery.

Driver Unassisted Deliveries do not require the additional forecourt equipment. Sites which are equipped with either overfill prevention valves and/or alarms, along with spillage containment to separate the delivery area from members of the public and the environment, will be able to receive deliveries by a driver, without a nominated competent person in attendance during the delivery. However a nominated person will be required on site to complete the delivery certificate.

Approval for unassisted deliveries is site specific and must be received from Shell before they may commence

What to do before the delivery? (DCD & DUD)

- **Accessibility:** Check for accessibility and ensure that all obstructions (e.g. parked vehicles, tables, snow) are removed prior to arrival of delivery vehicle. The delivery vehicle must be positioned in such a way that it can be easily driven – forwards – off the site in case of an emergency.

- **Floor conditions:** When slippery conditions exist, but site is accessible, use sand, salt, etc. to create a safety working area.

- **Adequate Lighting:** The discharge area must be well lit during deliveries after dark. If a delivery is to be made during hours of darkness, check all lights in the delivery area are working.

- **Manholes / dipping / filling:** The chambers should be free of water, fuel and debris.

- **Fill Pipes / dipping pipes / Central Delivery Points:** Keep fill pipes locked at all times except during deliveries, stock checks and approved repairs. An agreement regarding keys and locks is set up locally with Supply and Distribution. Each fill and dip pipe must be clearly labeled showing tank compartment number, fuel grade, and tank ullage. See section "Manage Wet Stock at site" for details.

- Ensure tanker **delivery area is clear** of obstructions and does not present any slip or trip hazards. In wintry conditions, the area must be clear of snow and be well gritted.

- Ensure **fire extinguishers** (*in date and sealed*) and sand bucket, are available

- Where appropriate or necessary, switch off car wash, air machine and vacuum cleaner

- Ensure Statutory Notices (No Smoking Large sign for the Vent Pipes & No Smoking small sign for the pump islands) are displayed

DRIVER CONTROLLED DELIVERIES (DCD) only *(DUD procedure continues on next sub section)*

Only individuals who have been accredited as a "Competent Person" should be involved in the procedure. (The Register of Competent persons should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart)

Complete certificate with the exception of the signature boxes, as close to the estimated delivery time as possible. You will have been advised of the load, grade, quantities and compartment allocation. When completing the certificate you should have the ullage available at the time of completion. Do not estimate future sales when completing the certificate.

- Ensure the forecourt equipment and lighting is in good working order. Test the audible alarm, check the visual display, printer and paper, and telephone all work. Ensure the forecourt box is

only locked with standard key, i.e. no padlocks. Each fill point should have a unique key and padlock. Ensure that fire extinguishers are in date and sealed, and that sand and tools are available

- All fill points and vapour points should be locked. Keep padlocks maintained and free moving

- Ensure the driver is able to comply with any special conditions as required by the Petroleum Licensing Authority or your risk assessment (*Conditions to be displayed in forecourt box, e.g. if it is a requirement for an area to be coned off, site should provide cones or barrier*)

- If your pre-delivery checks on the forecourt box fail or highlight a problem which means that the driver will be unable to use the forecourt equipment, you will still be able to accept an unassisted delivery providing the site is open and the driver has access to the site telephone and dip reports from within the shop. Please note that if high level alarms have failed then unassisted deliveries may only take place if the site is equipped with overfill prevention valves.

- Ensure that the tanker delivery area is kept clear and does not present any slip or trip hazards. In wintry conditions, the area must be clear of snow and ice and be well gritted.

- Place the completed delivery certificate in the forecourt box, together with the keys required for the delivery. **Only leave the keys for the tanks shown on the delivery certificate, plus the vapour recovery key.**

- If you expect two unassisted deliveries on the same day you **MUST**:
    i. Complete two delivery certificates
    ii. Keep the keys separate for each load

- On sites where you do not have two boxes, or two key compartments within one forecourt box, it is recommended that the keys and delivery certificates for each delivery are put in different envelopes and clearly marked so the driver is in no doubt which envelope is for which load.

- If the same tank is to be utilised for 2 deliveries, you must ensure 2 keys for that tank are available and one is placed in each envelope.

- Remember to leave the vapour recovery key out separately for each load.

- Should there be any vapour leaks, the Vapour Recovery Stage 1B Emergency procedure should be followed. This document should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart, together with the Register of Competent Persons

What to do during the delivery?

- Assist the diver if required to adhere to any local licence conditions (or control measures identified on the site specific risk assessment) e.g. closure of car wash etc.

What to do after delivery?

- Remove the delivery note, delivery certificate and tank keys from the forecourt box

- Record and check tank ullages. Tank gauge reports taken before and after delivery, or delivery reconciliation report from tank gauge, should be retained, attached to the delivery certificate.

- If the delivered quantity of fuel is believed to be short against the documented quantities, ensure that a tank gauge calibration error or administration error is not misinterpreted as a short delivery. If delivery is still considered to be short, report the issue to the Fuels Ordering line on 08708 500 924 following the options given.

- Delivery certificates should be retained on site for a minimum of 12 months.

- Any spillage of fuel must be reported to the Customer Service Centre. If a spillage occurs, follow the emergency procedure contained in section 1 of this manual.

DRIVER UNASSISTED DELIVERIES (DUD)

Only individuals who have been accredited as a "Competent Person" should be involved in the

procedure. (The Register of Competent persons should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart)

- **Ullage:** If site equipped with automatic level gauging system, make the system available for the driver to obtain a pre-delivery and post-delivery report.
- Where appropriate or necessary, switch off car wash, air machine and vacuum cleaner
- Check tank ullages immediately prior to delivery.

What to do during the delivery

- On Tanker's arrival check the delivery note for;
- Correct Site Name and address
- The vehicle compartment allocation
- Complete the delivery certificate as far as tank, grade, ullage and quantity allocation, using the delivery note as appropriate.
- Competent person should hand driver completed delivery certificate along with a written record of the current tank ullages, vapour recovery keys and the keys to the tanks into which a delivery is to be made. ***NB all keys must be clearly marked as to tank to which they relate.***
- Driver will now ask to check that the phone is working and the gauge system is operative, and confirm that all emergency equipment is available.
- Should there be any vapour leaks, the Vapour Recovery Stage 1B Emergency procedure should be followed. This document should be displayed adjacent to the "Deliveries to a Retail Service Station" wallchart, together with the Register of Competent Persons

What to do after discharge

- On completion of the delivery the driver will return keys to the vapour recovery, and tanks along with one copy of the delivery certificate.
- Record and check tank ullages before driver leaves site. Tank gauge reports taken before and after delivery, or delivery reconciliation report from tank gauge, should be retained, attached to the delivery certificate.
- The competent person should then sign the delivery note.
- **The above are requirements under the 2003 Approved Code of Conduct.**
- **A Retailer would be vulnerable under the law if an incident occurred and it was found that the guidelines had not been followed.** You can be particularly vulnerable during periods of adverse weather, when some of the procedures may be prone to shortcut.
- Delivery certificates should be retained on site for a minimum of 12 months
- Any spillage of fuel must be reported to the Customer Service Centre. If a spillage occurs, follow the emergency procedure contained in section 1 of this manual.

VAPOUR RECOVERY - STAGE 1B- Emergency Action Plan

All service stations have now been fitted with a vapour recovery system known as Stage 1B.

Stage 1B prevents vapours being discharged into the atmosphere during a tanker delivery by routing the vapours back to the tanker where they are collected and taken back to the terminal.

This process requires a permit (Similar to your Petroleum Licence).

Part of the permit requirement is that you have an emergency action plan in place should a leak occur in the vapour recovery system during a delivery. Whilst this situation is unlikely to be dangerous, it may cause some nuisance to your neighbours, therefore please carry out the following actions.

1. Ensure the driver stops the delivery.
2. Inform Retailer Maintenance Support on **0870 850 0924** so that the correct contractor can be sent to site to fix the problem.
3. Contact the Retailer Call Centre on **0870 850 0924** to record the incident.
4. Cancel further deliveries until the leak has been fixed.
5. Inform your local Environmental Protection Officer, name and telephone number should be on the permit.
6. Record the incident in your log sheet Incidents of vapour leak or vapour lock.

If you have any questions about this procedure please contact the HSSE Manager - don't wait until you have a problem.

VAPOUR RECOVERY - STAGE 2- Operation and Records

All service stations are now being fitted with a vapour recovery system known as Stage 2.

Stage 2 prevents vapours being discharged into the atmosphere during the filling of the vehicle fuel tank by routing the vapours back to the underground tank from where they are transferred to the tanker during a fuel delivery and taken back to the terminal.

This process requires a Permit (Similar to your Petroleum Licence).

The vapour recovery system has the benefit of automatic monitoring. Each pump has a LED display that should be checked on a daily basis.

1. In normal operation the LED is GREEN
2. In the event that insufficient vapour is being collect by the vapour recovery system the LED will change to orange, and an alert will be printed on the end of day and end of shift reports
3. Contact the Retailer Call Centre on **0800 731 5555** to report the incident and request that the contractor attend the site to resolve the issue.
4. If the fault is not fixed within 7 days the pump will automatically stop operating and no more fuel can be dispensed from that pump until a contractor has attended and fixed the problem.
5. Record the incident in your log sheet Incidents of vapour leak or vapour lock.

If you have any questions about this procedure please contact the HSSE Manager - don't wait until you have a problem.

The Retailer should ensure that at all times the following are available for inspection:-

1. A copy of the permit
2. The log book
3. Staff training records
4. Plan of the site and site pipe work
5. Copy of the compliance/ testing certificate

VAPOUR RECOVERY – Staff Training

All staff should be trained on the operation of the vapour Recovery system and provided with refresher training once every 12 months.

Training should include the following items:-

a. Basic principles of vapour balancing related to the type of VR System.

b. The safety precautions to be followed before, during and after a delivery to ensure that the system functions correctly so there is no spillage of petrol should there be an equipment failure.

c. Their statutory obligations not to permit the delivery to commence until the vapour balance hose has been properly connected by the driver.

d. The reasons for and the correct sequence in which the vapour balance hose should be connected.

e. The signs and symptoms of vapour leaks.

f. Monitoring the delivery for vapour leaks and the reporting/recording procedure of instances of vapour lock, vapour leak, equipment failures, or unusually slow deliveries.

g. The precautions to be taken should there be a malfunction of the equipment which over-pressurises the system.

Pollution Prevention and Control Act 1999
Environmental Permitting (England and Wales) Regulations 2007
VAPOUR RECOVERY TRAINING

It is a requirement of your 'Permit' that anyone who's duties include using, or supervising the use of, and maintaining the vapour recovery system must be trained in the use of the vapour recovery system and be informed of the Permit Holder's responsibilities and their individual roles and responsibilities in achieving them.

It is therefore important that anyone who is a designated 'Competent Person' for the receipt of fuel deliveries is trained in:

1. The Permit Holder's responsibilities and their individual roles and responsibilities in achieving them.
   (See site Permit Conditions)

2. The correct procedure for connection of vapour recovery hose.

3. Action required as a result of a leak in the vapour recovery system during a delivery.
   (See attached Emergency Action Plan)

Please ensure that relevant staff members have been trained in the above, been signed off as having been trained, and the sign off below filed with Competent Person Training records.

Staff Member	Permit Responsibilities	Vapour Recovery Hose Connection	Emergency Action Plan	Trainer Signature	Trainee Signature	Date

APPENDIX 3

SPECIMEN APPLICATION FOR AUTHORISATION

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. Given the consistent nature of service station operations, it is likely to be more efficient for both industry and local enforcing authorities to make use of this form in all cases.

In accordance with the Environmental Protection (Prescribed Processes & Substances Etc) (Amendment) (Petrol Vapour Recovery) Regulations 1995, SI 2678, applications may not be made more than 15 months before the date on which authorisation is required. (See Clause 9). Operators are strongly advised to submit their applications no later than 9 months before the relevant date in order to allow local authorities sufficient time to determine the application. Operation without an authorisation after the relevant date would be an offence.

References to the term "process" are references to the unloading into storage of petrol. The operator of the process under the terms of the Act 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 section 158 of the Act.

Further advice on transfer of authorisations and on process changes may be found in General Guidance Note GG1—"Introduction to Part I of the Act"; ISBN 0 11 752423 9, published by HMSO, £5 net.

Application for Authorisation; Part I,
Environmental Protection Act, 1990

Section A: General Information

1. Name and address of premises where process is/will be carried out

SHELL BOURNE BRIDGE (403) 551 - WHERSTEAD RD.
IPSWICH SUFFOLK Post Code IP2 8LR
Telephone No. 01473 685135 Contact Name KANNAN UTHAYAKUMAR
Position CURRENT SITE MANAGER.

2. Name and address of applicant[s]

SHELL U.K. LIMITED
MERCURY HOUSE
HANGER GREEN
EALING
LONDON W5 3BA

Telephone No 0181 758-7819 Contact Name JAMES FLYNN

Position LOCAL AUTHORITY LIAISON

3. Name and address of registered office (if applicable) In the case of partnerships, names and home addresses of the partners.

SHELL UK LTD.
SHELL MEX HOUSE
THE STRAND
LONDON, WC2R 0DX

Telephone No 0171 257-3000 Contact Name N/A

Position N/A

4. Name of the ultimate holding company (if applicable)

N/A

5. Address for correspondence if different from (1) above

SHELL U.K. LIMITED
MERCURY HOUSE
HANGER GREEN
EALING
LONDON W5 3BA

6. Enclose a map/plan with the application showing the location where the process is/will be carried out. Where the process is/will be carried out on only part of the premises please indicate the exact location on the plan enclosed.

7. Is the service station located under permanent living quarters or working areas? See Clause 9

YES	NO

8. When was vapour balancing equipment installed or when will it be installed?

INSTALLED BETWEEN 1996/1997

Section B. Process and Control Information

9. Volume of petrol unloaded into the service station in each of the last three calendar years (see Clause 9 of this Note for the relevant timescales); in cubic metres (ie litres divided by 1000). Circle the appropriate band

YEAR	VOLUME OF PETROL/m^3			
1997	<100	100–500	501–1000	>1000
1996	<100	100–500	501–1000	>1000
1995	<100	100–500	501–1000	>1000

10. Are deliveries "Driver Controlled"

YES	NO

11. At a maximum, how many tanker compartments discharge into storage tanks at any one time, or will do so once a vapour balancing 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 Clause 17).

UP TO THREE (03)

12. Measures taken or to be taken for vapour emission control, both during unloading and in storage

TANK VENTING SYSTEM HAS MANIFOLD STAGE 1B VAPOUR BALANCING SYSTEM INSTALLED.

13. Please attach process diagrams and plans of vapour balancing equipment (including height and location of tank vent pipes)

SEE ATTACHED PLAN

14. Unloading procedure and instructions (please attach)

SEE ATTACHED PACK.

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

SEE ATTACHED PACK

16. Schedule of maintenance of vapour balancing controls [please attach]

SEE ATTACHED PACK

17. Schedule of examination and testing for vapour balancing controls [please attach]

SEE ATTACHED PACK.

18. Procedures or contingency measures in the event of vapour containment equipment failure. [please attach]

SEE ATTACHED PACK.

You may also supply any other information you wish the Local Authority to take into account when considering your application.

I hereby certify that I am authorised to sign to sign this application and all the information contained in this application is correct to the best of my knowledge and belief.

Name (BLOCK CAPITALS): JAMES FLYNN

Signature: James Flynn **Date:** FRI 16TH OCT '9

Designation: LOCAL AUTHORITY LIAISON IPSWICH

Fee attached (cheques payable to the BOROUGH Council) £. 100-00