



A. J. Bayliss Petroleum Engineers Ltd

Petroleum, Fuel Oil and Electrical Installations

Unit 9 Foley Business Park, Stourport Road, Kidderminster, Worcestershire DY11 7QL
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February 10, 2009

Environmental Health Officer
Warwick District Council
Environmental Health Department
PO Box 2176
Riverside House
Milverton Hall
Royal Leamington Spa
CV32 5QF



Ack Card Sent 19/2/09

Shell Leamington, Clarendon Avenue, Leamington Spa, Works, CV32 5PY

Dear Sir/Madam,

We have been requested by Shell to carryout the installation of Stage Two Vapour Recovery at the above site.

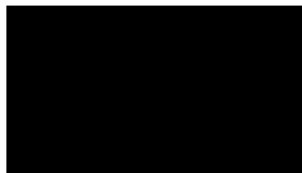
The works will entail installing a 63mm UPP Stage Two line from each dispenser manifolded into the 63mm return line to Tank 2 PU50.

The start date for the works is 02/03/2009.

On completion of the pipework installation works Tokheim will be employed by Shell to retrofit the fuel dispensers.

If you have any queries, please do not hesitate to contact me, alternatively please forward confirmation this letter has been received and you are aware of the forthcoming works.

Yours sincerely



Simon Bayliss
Director.

A.J. Bayliss Petroleum Engineers Ltd – JHA Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.	
Reference: HSM Section No. 7.1 Date: 9/2/09	Issue No. 5 Page 1 of 1

Location	
Description of Work	Laying concrete pads on operational sites.
Min. Personal Protection	Overall, & Safety Footwear, gloves, goggles.
Additional Protection	Hard Hat, Hand barmier cream & LWHOD gloves.
Hazards	Personal injury/s, particularly to back, hands, fingers and feet.
Hazard Reductions	Wear personal protective clothing. Test weight of object before lifting. Do not lift an object greater than a half of filer's body weight.
Tools/Equipment	Job Specific.
Disposal of Contaminants	Job Specific.
Documentation	Job Specific.
Other Applicable Documentation	HSE Note HS (G) 115. HSM Section 6.0. COSHH & H&S Manuals available for inspection on request.

- 1) Before starting a job determine what sort of manual handling is going to take place and what protection will be required.
- 2) Avoid double handling – it increases the risk.
- 3) Key factors: Balance, Hold/grip, Back position, Arms/body position & shape of weight. Refer to HSM Section No. 6.0.
- 4) Wear hard hat to hard hat zone and/or working overhead.
- 5) Excavate area to be concreted, install steel re-inforcing & install shuttering.
- 6) Pour concrete into position direct from the concrete mixer lorry.
- 7) Wear goggles & gloves whilst working with concrete.
- 8) Level concrete & tamp & trowel to finish requirements.
- 9) In poorly lit areas subject to vehicular/pedestrian traffic wear a reflective jacket.
- 10) Complete job specific Documentation.

Activity/Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Selling out work areas	L	L	L	L	L	L	L		L	L	L		L	L	L	L	L						L	L	
Handling Concrete	L	L		L	L				L	L	L		L	L	L	L	L			L	L	L	L	L	L
Handling steel reinforcing m	L	L			L																			L	L
Shut ring	L	L			L																				
Other Materials																								L	
Risk Ratings																									
1 Slips/Trips/Falls	6	Collapse				11	Explosion					16	Toxic Gas/Vapours	21	Vibration			H = High							
2 Trapping	7	Overturning				12	Arc Eye					17	Oxygen Deficiency	22	Disease										
3 Flying Particles	8	Overloading				13	Noise					18	Moving Machinery	23	Drowning			M = Medium							
4 Falling Material	9	UGAG Services				14	Harmful Substances					19	Radiation	24	Cuts/Accrations										
5 Manual Handling	10	Fire				15	Contaminated Ground					20	Burns	25	Thief/Piercings			L = Low							

A.J. Bayliss Petroleum Engineers Ltd – JHA Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.	
Work Instruction No. 20 Date: 9/2/09	Issue No. 5 Page 1 of 1

Location	SHELL FPS
Description of Work	Excavation & removing concrete tank farm pads over underground storage tanks.
Min. Personal Protection	Overall, Hard hat, reflective jacket, Safety Footwear.
Additional Protection	Ear defenders & Fire extinguisher.
Hazards	Fire Explosion, Work area, Open trenches, site traffic.
Reductions	Observe vapour zone regulations, uplift product & water fill tanks, deploy cones/barriers/tape.
Equipment	Standard tool kit, Batteries/cones, Warning signs & Power cutter/jack hammer, 5 ton excavator machine.
Disposal of Contaminants	Excavated waste materials removed from site in a ship.
Documentation	Site Clearance Certificate, QAS010, Installation/Service Report Form QAS015.
Other Applicable Documentation	COSHH & HAS Manuals available for instruction on request

- 1) Meet Operator and agree plan of work.
- 2) Cordoned off all work areas with safety fencing.
- 3) Prior to any commencement of works a PTW must be issued.
- 4) Uplift product & water fill tanks.
- 5) Disconnect & cap off all redundant pipework (if necessary) & seal tanks.
- 6) Measure & record tank manhole depths.
- 7) Check tank farm areas for tank gauge damage, LPG installations & electrical services.
- 8) The area(s) to be excavated shall be marked out taking into account the possible runs of the existing pipework (if retained).
- 9) Excavated area to be scanned for electrical cables / services (IF EXCAVATIONS ARE WITHIN 1M OF ELECTRIC CABLES / SERVICES ONLY HAND EXCAVATIONS WILL BE PERMITTED)
- 10) Plan of works to be agreed with client & AJB Installation Manager.
- 11) Tank farm excavation sign off report form to be completed & copy attached to AJB Job Pack.
- 12) All tank farm excavations to be supervised by non-working site foreman.

[illegible]

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Work Instruction No. 17 Date: 9/2/09	Issue No. 5 Page 1 of 1

Location	SHELL PES
Description of Work	Excavating a trench on an existing site, & removal of concrete rubble into skips.
Min. Personal Protection	Overall, Hard hat, reflective jacket, Safety Footwear.
Additional Protection	Ear defenders & Fire extinguisher.
Hazards	Work area, open trenches, & low voltage electricity, site traffic.
Hazard Reductions	Observe vapour zone regulations, deploy cones/barricade/lape.
Tools/Equipment	Standard LOTO, Barbed/cones, Warning signs & Power cut-off/Jack hammer, 5 ton excavator machine.
Disposal of Contaminants	Excavated waste materials removed from site in a lape.
Documentation	Site Clearance Certificate, QAS010, Installation/Service Report Form QAS015.
Other Applicable Documentation	COSH & H&S Manuals available for inspection on request.

- 1) Meet Operator and agree plan of work.
- 2) Cordoned off all work areas.
- 3) Plan of works to be agreed with regards to clearing the area of concrete rubble prior to excavating trenches for offset fill pipework.
- 4) The area(s) to be excavated shall be marked out taking into account the possible runs of the existing pipework.
- 5) Excavated area to be scanned for electrical cables / services. (IF EXCAVATIONS ARE WITHIN 1M OF ELECTRIC CABLES / SERVICES ONLY HAND EXCAVATIONS WILL BE PERMITTED)

Activity Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Setting out work areas	L	L																							
Excavating	L	L	M			L	L			M	M	L			M	L	M								L
Buried Services												L													
Risk Ratings																									
1 Slip/Trips/Falls	6					Collapse		11		Explosion				16		Toxic Gas/vapours		21		Vibration					H = High
2 Tripping	7					Overturning	12		Ac Eye				17		Oxygen Deficiency		22		Digest						
Falling Particles							13		Hole				18		Major Machinery		23		Drowning			M = Medium			
Falling Material	3					UGAG Services	14		Harmful Substances				19		Radiation				24		Cut/Lacerations				
Manual Handling	10						15		Contaminated Ground	20			Burns					25		Child Care			L = Low		

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Work Instruction No. 27.0 Date: 9/2/09	Issue No. Page 1 of 1

Location	SHELL FPS
Description of Work	Laying concrete kerbs.
Min. Personal Protection	Overall, gloves, goggles & Safety Footwear.
Additional Protection	Hard Hat, Hand baffle cream, & Reflective jacket.
Hazards	Surrounding work area, manual handling.
Hazard Reductions	Operation of lifting tool for installing kerbs.
Tools/Equipment	Standard tools, kerb lifting tool, Barriers/cones, Warning signs & Fire extinguisher.
Disposal of Contaminants	Waste materials disposed of by waste carrier via skip.
Documentation	Site Clearance Certificate, QASD10, Installation/Service Report Form QASD15.
Other Applicable Documentation	COSH & H&S Manuals available for inspection on request.

- 1) Meet the site Operator and agree extent, duration & plan of work.
- 2) Cord off work areas using safety fencing / cones barriers or tape.
- 3) Lift up & remove existing blocks.
- 4) Prepare the area for relaying the blocks with sharp sand.
- 5) Relay the blocks.
- 6) Using a whacker plate vibrate the blocks back into position, ensuring there are no potential trip hazards.
- 7) Spread play pit sand over the blocks & sweep into the joints.
- 8) Sweep up the access sand on completion.
- 9) Complete Documentation.
- 10) Leave site in a clean and tidy condition.

Activity/Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Sitting out work areas	L	L	L	L	L							L		L	L	L	L	L				L	L		
Removing existing blocks	L	L	M	L	L							L	L	L	L	L	L	L				L	L		
Relaying block pavours	L	L	L	L	L							L		L	L	L	L	L			L		L		
</																									

RE: SHELL PFS

EMERGENCY NEEDS ON SITES UNDER SITE MANAGER CONTROL.

Location	SHELL PFS
Description of Work	To identify site emergency procedures, & evaluate if they are acceptable for AJB / Subcontractors personnel working on site.
Hazards	Open trenches, Fire & explosion, high & low voltage electricity, excavations, construction traffic.
Hazard Reductions	Observe site conditions, fence off all excavated areas, daily site meetings, toolbox talks.

- Procedures.
- 1) Site Foreman & workforce to fully understand scope of works.
 - 2) Existing fuel tanks & systems must be made safe for the duration of the contract.
 - 3) Emergency evacuation point to be marked out on site plan.
 - 4) All AJB personnel, Sub Contractors & visitors must be fully inducted before commencing works. Inductions to incorporate fire muster point & fire fighting equipment positions.
 - 5) Emergency contact numbers to be displayed in site office, with Hospital address including map & telephone number.
 - 6) Access to site for emergency vehicles must be maintained at all times, & personnel informed.
 - 7) Carry out emergency evacuation drill.

Activity Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Drilling out work areas	L	L	L	L	L					L	L					L								L	L
Emergency evacuation drill	L																								
Risk Ratings																									
1 Slip/Trip/Fall	6	Collapse					11	Explosion						16	Toxic Gas/Asphyx	21	Vibration					H	= High		
2 Tripping	7	Overturning					12	Arc Eye						17	Oxygen Deficiency	22	Disease								
3 Flying Particles	8	Overloading					13	Noise						18	Moving Machinery	23	Drowning					M	= Medium		
4 Falling Material	9	USAG Services					14	Harmful Substances						19	Radiation	24	Over/Understress								
5 Manual Handling	10	Fire					15	Contaminated Ground						20	Burns	25	Third Parties					L	= Low		

Emergency Services - 999

Hospital

Emergency Services - 999



Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.

Work Instruction No. 1.3
Date 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

DE-COMMISSIONING & REMOVING DISPENSER(S) FROM SITE

Location	SHELL PFS
Description of Work	De-Commissioning a Dispenser(s) on site.
Min. Personal Protection	Overall, Safety Footwear, goggles & Fire extinguisher.
Additional Protection	Hard Hat, Hand hammer, chain, HD gloves, & Reflective jacket, goggles.
Hazards	Fire & explosion, high & low voltage electricity, forecast traffic, conveying fuel to return point & harmful substances.
Hazard Reductions	Cable release, vision zone regulations, isolate electrical supply, deploy cones/barriers/tape, careful handling of product to avoid spillage/s.
Tools/Equipment	Standard tools, Barriers/cones, Warning signs, Spill Kit, Fire extinguisher, Gas oil (Red diesel) in steel drum & approved drip tray with drain hose. Forklift truck.
Disposal of Contaminants	Product drawn for testing/measure checks returned to site tanks. Gas oil returned to steel drum and removed from site. Contaminated waste materials removed from site in sealed bags for approved disposal.
Documentation	Site Clearance Certificate, QAS010, Work Instruction No. 2.0 - Check List, Installation/Service Report Form QAS019.
Other Applicable Documentation	Detailed Work Instruction Nos. 1.3 & 2.0, COSHH & H&S Management available for inspection on request.

Procedures.

- 1) Meet and agree plan of work with site operator.
- 2) Cord on off work areas (at dispenser(s) and at area around the fuel return point to tank(s)) using cones, barriers or tape.
- 3) Drain residual fuel from dispenser(s) and pipeline.
- 4) Where necessary disconnect and temporarily remove Spreader Boxes over dispenser(s). Do not disturb electrical connections unless supply has been isolated.
- 5) Using the drain hose & flexible connector flush out dispenser with gas oil into a measure can.
- 6) Switch off and isolate electrical supply to the dispenser(s).
- 7) Disconnect supply and data cables and make safe.
- 8) Fully remove the dispenser(s) HD bolts and lift dispenser(s) from island with forklift truck.
- 9) Secure nozzles and hoses before loading onto removal vehicle.
- 10) When loaded the dispenser(s) shall be fully secured for transporting.
- 11) Excavate around island base, disconnect & remove suction riser(s) and plug exposed suction lines.
- 12) Cement over flush with top of island.
- 13) Where the dispenser(s) is only removed temporarily the risers shall be plugged and the base left open and protected with tapelcones.
- 14) Following return of fuel to tank(s) check to ensure all fill points are securely locked.
- 15) Complete Documentation.
- 16) Leave site in a clean and tidy condition.

Activity Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Mining or work areas	L				L				L							L									L
Hauling/Dispensers	L	L				L				L	L				L		L								L
Petroleum products					L					M	M			L										L	L
Electrical works																									
Pipework		L								L	L	L													
Lifting/Transporting		L	L			L		L							L									L	
																									L
Risk Ratings																									
1 Spill/Trip/Falls	6	Collapse					11	Explosion				16	Toxic Gas/Vapours			21	Vibration				H	= High			
2 Trapping	7	Overturning					12	Arc Eye				17	Oxygen Deficiency			22	Disease								
3 Flying Particles	8	Overloading					13	Noise				18	Moving Machinery			23	Drowning			M	= Medium				
4 Fatigue Material	9	UGAG Services					14	Harmful Substances				19	Radiation			24	Cuts/Abrasions								
5 Manual Handling	10	Fire					15	Contaminated Ground				20	Burns			25	Third Parties			I	= Low				

A.J. Bayliss Petroleum Engineers Ltd – JHA
Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.

Work Instruction No. 2.0
Date: 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

WORKING IN AN INSPECTION CHAMBER ON AN OPERATIONAL SITE.

Location	SHELL PFS
Description of Work	Working in an inspection chamber on an operational site.
Min. Personal Protection	Overall, Safety Footwear, goggles & Fire extinguisher.
Additional Protection	Hard Hat, Hand barrier cream, HD gloves, Breathing Apparatus, Resuscitation equipment & Reflective jacket
Hazards	Fire, explosion, exposure to toxic vapours & forecourt traffic.
Reductions Equipment	Observe vapour zone regulations, wear breathing apparatus, <u>deploy cones/barriers/tape</u> . Standard toolkit, Air blower assembly, Explosimeter, Safety harness, Rescue lifting equipment, Barriers/cones, Warning signs, Fire extinguisher.
Disposal of Contaminants	Contaminated waste materials removed from site in sealed bags for approved disposal.
Documentation	Site Clearance Certificate, QAS010, Work Instruction No. 2.0 – Page 6 Check List, Installation/Service Report Form QAS015.
Other Applicable Documentation	Detailed Work Instruction No. 2.0. COSHH & H&S Manuals available for consultation on request.

Procedures.

- 1) The definition of 'Operational Site' is any site/station in which petroleum products are, or have been, stored in underground tanks and/or pipelines.
- 2) The Procedures detailed in Work Instruction No. 2.0 are MANDATORY.
- 3) Meet and agree plan of work with site operator and complete Check list (Page 5) before commencing work.
- 4) Cordon off areas around chambers.
- 5) Lift cover(s) and, where applicable, examine platform for stability. Measure depth of chamber.
- 6) Depending upon depth of chamber adopt the appropriate detailed Procedure. (Note if the chamber is more than 1.2m deep a PTW will need to be issued prior to starting works)
- 7) Before commencing work inform Site Operator.
- 8) In the event of an accident/emergency adopt the measures detailed.
- 9) Complete Documentation.
- 10) Leave site in a clean and tidy condition.

[illegible]

A.J. Bayliss Petroleum Engineers Ltd – JHA
Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7Q

Work Instruction No. 1.7
Date 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

INSTALLING A DISPENSER(S) ON SITE.

Location	SHELL PFS
Description of Work	Installing a Dispenser(s) on site.
Min. Personal Protection	Overall, Safety Footwear, goggles & Fire extinguisher.
Additional Protection	Hand Hat, Hand barrier cream, HD gloves, & Reflective jacket, goggles.
Hazards	Fire & explosion, high & low voltage electricity, forecast traffic, conveying fuel to return point & harmful substances.
Hazard Reductions	Observe vapor zone regulations, isolate electrical supply, deploy cones/barriers/stops, careful handling of product to avoid spillage/s.
Tools/Equipment	Standard tools, barrier cones, warning signs, Split kit, Fire extinguisher, Gas oil (Red diesel) in steel drum & approved dip tray with drain hose, FOGM truck.
Disposal of Contaminants	Product drawn for testing/measure checks returned to site tanks. Gas oil returned to steel drum and removed from site. Contaminated waste materials removed from site in sealed bags for approved disposal.
Documentation	Site Clearance Certificate, QAS10, Work Instruction No. 2-8 - Check List, Installation/Service Report Form QAS015.
Other Applicable Documentation	Detailed Work Instruction Nos. 1.3 & 2.0. COSHH & H&S Manual available for inspection on request.

Procedures.

- 1) Meet and agree plan of work with site operator.
- 2) Cordon off work areas.
- 3) Remove caps from suction risers.
- 4) Lift the dispenser onto the pump island with an approved fork lift.
- 5) Care should be taken to position electrical cables through pump frame, before lowering into position.
- 6) Fix pump to the pump island / pump cradle.
- 7) Connect suction lines to the flexible connectors.
- 8) Connect electrical supplies (by others).
- 9) Prime system.
- 10) Check suction lines for leaks.
- 11) Complete Documentation.
- 12) Leave site in a clean and tidy condition.

Activity Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Hailing/out work areas	L				L			L								L								L
Handling Dispensers	L	L					L			L	L				L		L							L
Petroleum products					L					M	M			L										L
Electrical works																								
Pipeswork	L								L	L	L													L
Lifting/transporting	L	L			L		L							L										L
										</														

A.J. Bayliss Petroleum Engineers Ltd – JHA
Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7

Work Instruction No. 3.0
Date: 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

INSTALLATION OF POLYETHYLENE PIPEWORK.

Location	SHELL PFS
Description of Work	Installing polyethylene pipework.
Min. Personal Protection	Overall, Hard hat, Safety Footwear & Goggles.
Additional Protection	Hand barrier cream, HD gloves, Reflective jacket, goggles & Fire extinguisher.
Hazards	Open trenches, Fire & explosion (existing sites), high & low voltage electricity, forecourt traffic.
Hazard Reductions	Observe vapour zone regulations (existing sites), deploy cones/barriers/fencing.
Tools/Equipment	Standard tools, Barriers/cones, Warning signs & pipe cutting/welding equipment.
Disposal of Contaminants	Contaminated waste materials removed from site in sealed bags for approved disposal.
Documentation	Site Clearance Certificate, QAS010, Certificate of Test Form: QAS014, Completion Checklist Form: QAS015a, Gate Verification Checklist Form: QAS036 & Installation/Service Report Form: QAS015.
Other Applicable Documentation	Detailed Work Instruction Nos. 3.0. COSHH & H&S Manuals available for inspection on request.

Procedures.

- 2) For existing sites meet and establish, from Operator, the dispenser/tank/product grade configurations agree plan of work.
- 3) Cordoned off all work areas.
- 4) Polyethylene pipe is used ONLY for the underground pipeline of a composite installation and it shall terminate and change to galvanneal mild steel, with a transition coupling at, or near, finished ground level.
- 5) Polyethylene pipe may be handled by hand, fork-lift truck or crane and shall be protected from damage. Steel cables, sharp impact or friction rubbing must be avoided.
- 6) Any pipework that is inadvertently damaged, particularly by a sharp object, resulting in partial wall penetration of greater than 1 mm, shall not be used.
- 7) Pipe joints will normally be cut using an approved pipe cutter or guillotine. The cut shall be square leaving a cross section at 90°, clean of any burrs, and finally wiped with acetone.
- 8) To minimise the effect of oxidation, by UV radiation, all moulded fittings and couplings shall be kept in their respective packing boxes until they are required for use.
- 9) Pipes shall be laid on a bed of pea gravel, which must have been firmly compacted and resistant to any subsidence, with an even and continuous fall back towards the associated tank.
- 10) It may be necessary to use a geotextile filter fabric beneath and to the sides of pipe trenches to prevent the migration of the back fill material.
- 11) The open ends of pipework shall be protected to prevent ingress of water, debris, etc.
- 12) Only polyethylene pipe with a 'yellow' liner shall be used for the suction and tank fill lines.
- 13) On completion of a pre-test inspection, and before the removal of any protective barriers, all pipelines shall be tested, as specified by the client or the local Licensing Authority, independently of their respective tank(s).
- 14) All below ground pipelines to be covered with pea gravel followed by concrete.
- 15) Complete Documentation.
- 16) Clean site in a clean and tidy condition.

Activity/Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Safety work areas	L				L				L							L									L
Handling Dispersants	L					L		L		L	L				L	L									L
Installing Pipework	L	L	L	L	L	L			L	L	L				L	L									L
Petroleum products						L									L	L									L
Commissioning	L									L	L					L	L								
Risk Ratings																									
1 Slips/Trips/Falls	6	Collapse				11	Explosion					16	Toxic Gas/vapours				21	Vibration		H	= High				
2 Trapping	7	Overturning					Arc Eye						17	Oxygen Deficiency				Disease							
3 Flying Particles	8	Overloading				13	Noise						18	Moving Machinery			23	Drowning		M	= Medium				
4 Falling Material	9	UGAG Services				14	Harmful Substances					19	Radiation				24	Cuts/Accrations							
5 Manual Handling	10	Fire				15	Contaminated Ground					20	Burns				25	Twist Perforis		I	= Low				

A.J. Bayliss Petroleum Engineers Ltd – JHA
Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.

Work Instruction No. 3.3
Date: 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

EXCAVATING A TRENCH ON AN OPERATIONAL SITE.

Location	SHELL PFS
Description of Work	Excavating a trench on an existing site.
Min. Personal Protection	Overall, Hard hat, Safety Footwear & Goggles.
Additional Protection	Hand barrier cream, HD gloves, Dust mask, Ear defenders, Reflective jacket & Fire extinguisher.
Hazards	Open trenches, Fire & explosion, high & low voltage electricity, forecourt traffic.
Hazard Reductions	Observe vapour zone regulations, deploy cones/barriers/tape.
Tools/Equipment	Standard tool kit, Barriers/cones, Warning signs & Power cutter/Jack hammer.
Disposal of Contaminants	Excavated waste materials removed from site in a skip.
Documentation	Site Clearance Certificate, QAS010, Installation/Service Report Form QAS015.
Other Applicable Documentation	Detailed Work Instruction Nos. 3.3, COSHH & H&S Manuals available for inspection on request.

Procedures.

- 1) Meet Operator and agree plan of work.
- 2) Cordoned off all work areas.
- 3) A PTW must be issued prior to any commencement of works.
- 4) The area(s) to be excavated shall be marked out taking into account the possible runs of the existing pipework.
- 5) Excavated area to be scanned for electrical cables / services, (IF EXCAVATIONS ARE WITHIN 1M OF ELECTRIC CABLES / SERVICES ONLY HAND EXCAVATIONS WILL BE PERMITTED)
- 6) The surface area of the paving shall be sufficiently wetted down, with water, to extinguish any sparks that may occur from the rotating disk.
- 7) The area to be cut may have to be cordoned off in stages to allow public access and to protect traffic.
- 8) The paving shall be cut, using an approved power cutter fitted with an appropriate disk.
- 9) When the cutting is in progress the paved surface shall be continuously monitored and additional water applied to the cutting area, as necessary, to prevent sparks.
- 10) If and when the cutting comes within a 4 metre radius of a petrol dispenser(s) the dispenser(s) shall be switched off and taken out of commission until the cutting is completed.
- 11) On completion of the cutting the area shall be safely fenced off to allow the trench to be excavated and to restore, if possible, access to the petrol forecourt area.
- 12) The trench shall be excavated using an approved Jackhammer operated by a single tool compressor.
- 13) The spoil arising from the excavation shall be removed and placed in a skip that will be specially provided. The skip will be placed in an area that is safe and likely to minimise disruption.
- 14) On completion the trench shall be backfilled with appropriate material, consolidated, and the surface reinstated in type and levels to match the adjoining areas.
- 15) In areas subject to vehicular traffic the backfill above a pipe run shall be adequately reinforced to protect the pipe from the weight of the vehicles.
- 16) Complete Documentation.
- 17) On completion of the work the site shall be left in a clean, tidy and safe condition.

Activity Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Setting out work areas	L				L					L						L									L
Excavating	L	L	L		L	L			L	L			L	L	L			L						L	L
Buried Services										L															
Risk Ratings																									
1 Slips/Trips/Falls	6	Collapse					11	Explosion					16	Toxic Gas/vapours		21	Vibration					H	= High		
2 Trapping	7	Overturning					12	Arc Eye					17	Oxygen Deficiency		22	Disease								
3 Flying Particles	8	Overloading					13	Noise					18	Moving Machinery		23	Drowning					M	= Medium		
4 Falling Material	9	UGIAG Services					14	Harmful Substances					19	Radiation		24	Cuts/Lacerations								
5 Manual Handling	10	Fire					15	Contaminated Ground					20	Burns		25	Third Parties					L	= Low		

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A.J. Bayliss Petroleum Engineers Ltd – JHA
Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.

Work Instruction No. 3.7
Date: 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

DISC CUTTING A TRENCH ON AN OPERATIONAL SITE.

Location	SHELL PFS
Description of Work	Disc cutting a trench on an existing site.
Min. Personal Protection	Overall, Hard hat, Safety Footwear & Goggles.
Additional Protection	Hand barrier cream, HD gloves, Dust mask, Ear defenders, Reflective jacket & Fire extinguisher.
Hazards	Open trenches, Fire & explosion, high & low voltage electricity, forecourt traffic.
Hazard Reductions	Observe vapour zone regulations, deploy cones/barriers/tape/fencing or close site.
Tools/Equipment	Standard tool kit, Barriers/cones, Warning signs & power floor saw.
Disposal of Contaminants	Excavated waste materials removed from site in a skip.
Documentation	Site Clearance Certificate, QAS010, Installation/Service Report Form QAS015.
Other Applicable Documentation	Detailed Work Instruction Nos. 3.3, COSHH & H&S Manuals available for inspection on request.

Procedures.

- 1) Meet Operator and agree plan of work.
- 2) Cordoned off all work areas.
- 3) A PTW must be issued prior to any commencement of works.
- 4) Disc cut area to be scanned for buried electrical cables / services
- 5) If disc cutting to be carried out with in 10m radius of operational fuel dispensers, above ground offset fills the site must be closed until either the disc cutting works have been completed or when the works extend outside the 10m zone.
- 6) The area(s) to be disc cut shall be marked out taking into account the possible runs of the existing pipework & buried services.
- 7) The surface area of the paving shall be sufficiently wetted down, with water, to extinguish any sparks that may occur from the rotating disk.
- 8) The area to be cut may have to be cordoned off in stages to allow public access and to protect traffic.
- 9) The paving shall be cut, using an approved power cutter fitted with an appropriate disk.
- 10) When the cutting is in progress the paved surface shall be continuously monitored and additional water applied to the cutting area, as necessary, to prevent sparks.
- 11) Complete Documentation.
- 12) On completion of the work the site shall be left in a clean, tidy and safe condition.

Activity Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Setting out work areas	L				L					L						L									L
Disc cutting	L	L	L		L	L			L	L			L	L	L			L					L	L	
Buried Services										L															
Risk Ratings																									
1 Slips/Trips/Falls	6	Collapse					11	Explosion					16	Toxic Gas/vapours		21	Vibration					H	= High		
2 Trapping	7	Overturning					12	Arc Eye					17	Oxygen Deficiency		22	Disease								
3 Flying Particles	8	Overloading					13	Noise					18	Moving Machinery		23	Drowning					M	= Medium		
4 Falling Material	9	UGIAG Services					14	Harmful Substances					19	Radiation		24	Cuts/Lacerations								
5 Manual Handling	10	Fire					15	Contaminated Ground					20	Burns		25	Third Parties					L	= Low		

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Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.

Work Instruction No. 3.4
Date: 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

PRESSURE TESTING OF MILD STEEL, POLYETHYLENE & DURA PIPEWORK ON AN OPERATIONAL SITE.

Location	SHELL PFS
Description of Work	Pressure testing mild steel, polyethylene & Dura pipework.
Min. Personal Protection	Overall, Safety Footwear, goggles & Reflective jacket.
Additional Protection	Hard hat, Hand barrier cream & HD gloves.
Hazards	Open trenches, Fire & explosion, forecourt traffic.
Hazard Reductions	Observe vapour zone regulations, deploy cones/barriers/tape.
Tools/Equipment	Standard tool kit, Barriers/cones, Warning signs, Company's test rig, pressure gauges & relief valves. Fire extinguisher & Nitrogen.
Disposal of Contaminants	Contaminated waste materials removed from site in sealed bags for approved disposal.
Documentation	Site Clearance Certificate, QAS010, Certificate of Test Form: QAS014 & Installation/Service Report Form QAS015.
Other Applicable Documentation	Detailed Work Instruction Nos. 2.0, 3.4, COSHH & H&S Manuals available for inspection on request.

Procedures.

- 1) Meet the site Operator and agree plan of work.
- 2) Cordoned off all work areas.
- 3) The test medium is nitrogen.
- 4) Establish the pipeline(s) to be tested and if any terminate within an Inspection Chamber then that work shall be carried out in strict compliance with Work Instruction No. 2.0.
- 5) Before commencing work on existing pipelines ensure that all associated Dispensers are "locked out" and all filling points are locked. Only the Company's test rig & approved pressure gauges with current calibration status shall be used for testing.
- 6) Suction line(s) shall be disconnected and capped off before priming and pressurising.
- 7) Care to be exercised when disconnecting existing pipelines to avoid any spillage and ALL open ends shall immediately be capped or plugged until they are finally re-connected.
- 8) Vent line(s) shall be disconnected in the Inspection Chamber(s) and the Company's pressure test rig shall be fitted to the open end in the tank chamber. On non-Stage 1B vapour recovery systems the vent termination cap(s) shall be removed and the end(s) blanked off.
- 9) On Stage 1B vapour recovery systems the vapour recovery manifold shall be disconnected and removed from the vent stack. The vent line(s) that is to be tested shall then be capped off and tested.
- 10) Vapour recovery pipework to be tested separately as detailed in Work Instruction No. 3.4.
- 11) On completion of satisfactory tests the pressure is released, pipework & dispensers reconnected.
- 12) Complete Documentation.
- 13) Clean site in a clean and tidy condition.

Activity Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Setting out work areas	L				L					L						L									L
Petroleum products					L					M	M			L											
Handling Dispensers	L	L			L		L			L	L			L		L							L	L	
Pipework										L	L					L								L	
Commissioning	L									L	L			L		L									
Handling nitrogen bottle.	L	L			L		L																		
Risk Ratings																									
1 Slips/Trips/Falls	6	Collapse								11	Explosion			16	Toxic Gas/vapours		21	Vibration					H	= High	
2 Trapping	7	Overturning								12	Arc Eye			17	Oxygen Deficiency		22	Disease							
3 Flying Particles	8	Overloading								13	Noise			18	Moving Machinery		23	Drowning				M	= Medium		
4 Falling Material	9	UGIAG Services								14	Harmful Substances			19	Radiation		24	Cuts/Lacerations							
5 Manual Handling	10	Fire								15	Contaminated Ground			20	Burns		25	Third Parties				L	= Low		

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A.J. Bayliss Petroleum Engineers Ltd – JHA
Unit 9 Foley Business Park, Stourport Rd, Kidderminster, Worcestershire DY11 7QL.

Reference: HSM Section No. 6.6
Date: 9/2/09

Issue No. 5
Page 1 of 1

RE: SHELL PFS

MANUAL HANDLING.

Location	SHELL PFS
Description of Work	Manual lifting and handling.
Min. Personal Protection	Overall, goggles & Safety Footwear.
Additional Protection	Hard Hat, Hand barrier cream & LWH/HD gloves.
Hazards	Personal injury(s), particularly to back, hands, fingers and feet.
Hazard Reductions	Wear personal protective clothing. Test weight of object before lifting. Do not lift an object greater than a half of lifter's body weight.
Tools/Equipment	Job Specific.
Disposal of Contaminants	Job Specific.
Documentation	Job Specific.
Other Applicable Documentation	HSE Note HS (G) 115. HSM Section 6.0. COSHH & H&S Manuals available for inspection on request.

Procedures.

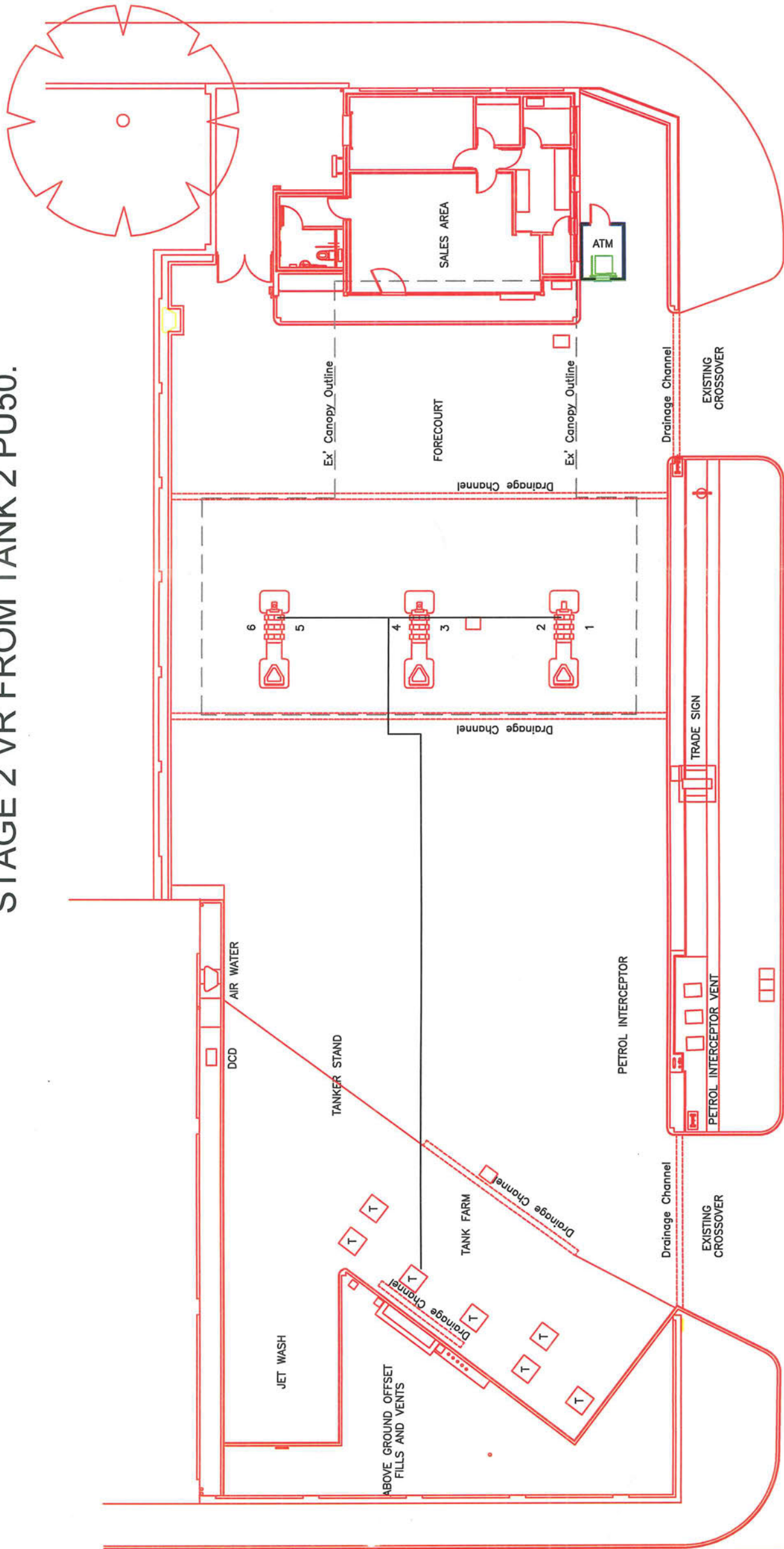
- 1) Before starting a job determine what sort of manual handling is going to take place and what protection will be required.
- 2) Avoid double handling – it increases the risk.
- 3) Key factors: Balance, Hold/grip, Back position, Arms/body position & shape of weight. Refer to HSM Section No. 6.0.
- 4) Wear hard hat in hard hat zone and/or working overhead.
- 5) Wear goggles if lifting loose or hazardous materials.
- 6) In poorly lit areas subject to vehicular/pedestrian traffic wear a reflective jacket.
- 7) Test weight of object before lifting, do not attempt to lift anything greater than one half your body weight.
- 8) Check surrounding area and intended route for obstructions.
- 9) Do not lift an object that, when lifted, obscures your vision and do not hurry when carrying.
- 10) Objects shall not be lifted above chest height, use a platform.
- 11) Lifting Inspection Chamber covers – Refer to HSM Section No.3.9.
- 12) Complete job specific Documentation.

Activity Risk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Setting out work areas					L																				
Handling Dispensers					L																				
Petroleum products					L																				
Electrical Equipment					L																				
Pipework & Fittings					L																				
Ducting					L																				
Other Materials					L																				
Inspection Chambers					L																				
Risk Ratings																									
1 Slips/Trips/Falls	6	Collapse								11	Explosion			16	Toxic Gas/vapours		21	Vibration					H	= High	
2 Trapping	7	Overturning								12	Arc Eye			17	Oxygen Deficiency		22	Disease							
3 Flying Particles	8	Overloading								13	Noise			18	Moving Machinery		23	Drowning				M	= Medium		
4 Falling Material	9	UGIAG Services								14	Harmful Substances			19	Radiation		24	Cuts/Lacerations							
5 Manual Handling	10	Fire								15	Contaminated Ground			20	Burns		25	Third Parties				L	= Low		

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TANK TO PUMP SCHEDULE				
TANK No.	GRADE	MAX WORKING CAPACITY	PUMP ISLANDS	
1	UNLEADED	42700	•	•
2	UNLEADED	42700	•	•
3	DERV	25900	•	•
4	OPTIMAX	17100	•	•
5	DERV	12950	•	•
6	OPTIMAX	12573	•	•
7	DERV	24700	•	•

STAGE 2 VR FROM TANK 2 PU50.



CLARENDON AVENUE

REV

DATE

PROJECT : LEAMINGTON S/S,
CLARENDON AVENUE
LEAMINGTON SPA,

TITLE : STAGE 2 V/R



SHELL UK RETAIL
PO BOX 430
STAINES
MID 32B
UNITED KINGDOM

DRAWN BY : GY/ABH

SCALE : 1:200

DATE : DECOS

PLOT DATE :

CAD FILE : P:\LIVE\DRAWINGS\VAZ-05\355639\VAZ-001

DWG No : 355639

HAZ 001