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ZIMBABWE STANDARD FOR
GUIDELINES FOR RETAIL SERVICE STATIONS

This draft is now available for **public comment**. Your views and technical comments on it would be appreciated. If you have no specific comments to make but find it generally acceptable it would be helpful if you would notify us accordingly. Suggestions entailing revisions of the text should indicate the preferred wording using the attached template. The relevant clause number should be quoted against any comment.

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PREFACE

This Zimbabwe Standard ZWS 970: 2016: Retail service station for liquid fuels – Guidelines and requirements, was prepared by Technical Committee CH 003: Petroleum and Petroleum Products, under the general direction of the Chemicals Standards Council.

This standard makes reference to the following publications:

- ZWS 400 : Electrical wiring of premises (ZWS wiring rules)
- ZWS 913 : The Petroleum industry.
- Part 2 : The installation of underground tanks, pumps/dispensers and pipework at service stations and consumer installations.
- ZWS 783 : Specifications for Carbon Steel Welded Horizontal Cylindrical Storage Tanks.

Trade Measures Act.

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ZIMBABWE STANDARD
FOR
RETAIL SERVICE STATION FOR LIQUID FUELS –
GUIDELINES AND REQUIREMENTS

INTRODUCTION

Prior to the liberalization of the Oil Industry in August 2003, there were only about six major oil companies in Zimbabwe and similarly, the retail service station network was either directly owned by them (the six only oil companies) or their franchisees. In 2003, the importation of fuel was opened up to other players. A lot of companies became registered as fuel importers and this led to a drastic increase of fuel industry players.

Due to the increased number of players in the fuel industry, there is a need to ensure that Retail Infrastructure and Operational standards are maintained by all players in the industry. The number of retail service stations and the owners out there has increased drastically. One way to provide this assurance is through independent verification against a published standard which defines appropriate Retail Site Infrastructure and Operational standards. This standard sets out the Infrastructure and Operational requirements which retail sites may adopt during development of the sites and to adhere to in their operations. The standard will be used to verify fuel industry players' retail service stations infrastructural and operational requirements.

Structure of this Standard

Each clause is broken down into sub-clauses and within each sub-clause are specific requirements. Each requirement is set out as follows:

<u>Requirement</u>	<u>Guidance</u>
<p>A requirement is a compulsory element of the standard. Fuel industry organization's management shall meet all relevant requirements and the Zimbabwe Energy Regulatory Authority(ZERA)/Certification bodies will check that each requirement is being met. 'Requirements are stated as 'shall' implying they are compulsory elements of the standard.</p>	<p>The guidance statements are intended to help the Fuel industry organization's management and the regulator/third-party auditor to understand how requirements should be applied in practice. This information is provided to elaborate some requirements, the meaning of certain terms or phrases is explained, and examples of appropriate action are given.</p>
<p><u>Means of Verification</u></p> <p>These suggest the type of objective evidence, documents, actions or discussions – that ZERA /Certification bodies should consider in order to verify that the requirement is being met. The verifiers suggested are not exclusive or exhaustive. ZERA/Certification bodies will not always need to use all the verifiers suggested, and may seek verification in other ways</p>	

1. SCOPE

This standard is applicable to all Fuel industry organizations including retail service stations which are operated in Zimbabwe.

2. LOCAL AUTHORITY APPROVAL

<u>Requirement</u>	<u>Guidance</u>
<p>The retail site shall obtain local authority approval for the site location and relevant business permit prior to construction of the service station.</p>	<p>a) The owner shall apply to the local authority for permission to construct retail service station and submit all the relevant information requested by the local authority part of which must be the site drawings for approval.</p>
<p><u>Verification</u></p> <p>a) Approved Drawings/plans by Building Inspectorate c/o Local Authority</p> <p>b) Business Permit specifying site to be used for Service Station.</p> <p>c) Fire clearance as issued by local authorities.</p>	<p>b) As part of the application process, the local authority shall circulate the plans through their Fire Department for issuance of a Fire Clearance Certificate.</p> <p>c) Siting and location of fuel retail sites</p> <ol style="list-style-type: none"> 1. Stations shall be located at a minimum of 50m from any public institution such as schools, churches, public libraries, auditoriums, hospitals, public playgrounds, etc. 3. Area of land to be developed should be sufficient to allow maneuvering of vehicles within its cartilage but should not be less than 1000m² with a minimum frontage of 40m on the primary street. 4. Filling Stations will not be allowed in any area where the traffic situation is such that it will cause obstructions in entering or leaving a station, or on tight curves where visibility is not adequate. 5. When sited in shopping centers, stations should be located in an isolated area of the development as long as planning criteria are met, for example, set back. 6. Petrol pumps shall be located a minimum of 30m from any residential building. 7. No fuel pumps or other mechanical equipment shall be installed so as to permit servicing of motor vehicles standing in a public street or highway. 8. In a residential area a landscaped open area 3m wide shall be provided along the rear property boundary and 4.5m wide along the side proper boundaries, and be separated from paved area by curb or other barrier. 9. Where the site adjoins the side or rear boundary of a residential lot, a solid wall 1.8m in height should be constructed and maintained along that lot boundary. 10. A raised curb of at least 150mm in height should be erected along street property lines except for driveway openings so as to prevent operation of vehicles on sidewalks, and to define entrance/exit points.

3. ENVIRONMENTAL MANAGEMENT AGENCY (EMA) APPROVAL

<u>Requirement</u>	<u>Guidance</u>
The owner shall obtain Environmental Management Agency (EMA) approval to build a service station on site.	a) The owner shall submit the plans to EMA for approval to construct a service station on site. b) EMA or its registered agent shall carry out an Environmental Impact Audit (EIA) to ascertain the feasibility of constructing a service station on site and EIA considers the following:
<u>Verification</u>	
a) EMA approval	i) Risk facility poses to adjacent property ii) Proximity to waterways iii) Receipt and delivery of products
b) EIA report	iv) Proximity to ecologically or environmentally sensitive areas

4. FORECOURT AND TANK FARM

<u>Requirement</u>	<u>Guidance</u>
The Forecourt shall be constructed of impervious grade concrete with tank farm located clear of any building foundation or underground features, such as drains and tunnels. The installation of the underground tanks has to be in line with the ZWS 913: Part 2. All tanks shall have containment in accordance with ZWS 913: Part 2.	Some elements of the standard which can be used for quick checks are as follows:
<ul style="list-style-type: none"> The entrance and exit- from the roadside bell-mouth to the impervious forecourt- must be paved using, at least, heavy duty interlocking concrete blocks (Geoblocks). Catch drains must be installed in such a manner that all fuel dispensing points are fully located within the circumscribed area. All spillages into the catch drain must be directed to the interceptor pit. 	<p><u>1. Underground Tanks</u></p> <ul style="list-style-type: none"> Petrol shall always be stored in underground tanks. Underground Tank installation shall be in accordance with ZWS 913: Part 2 <p><u>2. Above Ground Tanks</u> No above ground tanks shall be permitted for retail service stations</p> <p>Note: Above ground tanks for diesel and paraffin in rural areas may be permitted through the approval of the relevant regulator.</p> <p><u>3. Forecourt General</u></p> <p>a) There shall be no potholes, cracks or protrusions in any roadway or area, which may damage or obstruct the passage of vehicles.</p> <p>b) Hard stand areas around forecourt must be paved to</p>

<p><u>Verification</u></p> <ul style="list-style-type: none"> a) Positioning of tanks away from buildings b) Sand, stone crushing or gravel backfill. c) Interceptor pit facility. d) Properly installed underground tanks e) Containment in the form of bund wall for above ground tanks and interceptor pit for all f) Geo-textile impervious lining for underground tanks g) Observation wells h) Certificate of Adherence from registered engineer i) Certificate of Completion from Class 1 electrician. 	<p>avoid dust nuisance</p> <ul style="list-style-type: none"> c) Hard stand area under canopy must be covered with impervious material d) A retail service station shall have an interceptor pit connected to a soak away or sewer separating oil/fuel from water
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5. DISPENSING EQUIPMENT

<p><u>Requirement</u></p> <p>Dispensing Equipment shall be in compliance with ZWS 913: Part 2</p> <p>The manholes and nozzles shall be Colour coded as:</p> <ul style="list-style-type: none"> a) Diesel – Yellow b) Mandatory Ethanol blend – Green c) Illuminating paraffin – Black d) Ethanol blend, E85 - Blue 	<p><u>Guidance</u></p> <ul style="list-style-type: none"> a) Dispensing equipment shall not be used interchangeably. b) Dispensing Equipment shall be calibrated as per Trade Measures Act c) Hazardous area of dispenser has to be wholly contained within the site boundary and should not encroach on any openings into occupied buildings. d) Dispensers should be located in open air where they will be adequately ventilated, such that vehicles can be parked easily alongside without restricting other vehicle movements and such that hoses do not have to
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<p><u>Verification</u></p> <p>a) Calibration certificates which are up to date for all dispensers/pumps</p> <p>b) Shear valves</p> <p>c) Emergency electrical stop switch</p> <p>d) Properly positioned dispensers away from buildings (at least 3 m) and allowing free passage of cars</p> <p>e) Colour coded nozzles</p>	<p>be stretched or damaged by contact with canopy stanchions or other obstructions.</p> <p>e) Dispenser panels to be intact and lockable in order to be accessed by service man only.</p> <p>f) Display illumination to be adequate (important for elderly customers and night operation.)</p> <p>g) Pumps/Dispensers to be firmly fixed to the island.</p> <p>h) Dispensers shall have shear valves which will cut off fuel supply when the dispenser is knocked down.</p> <p>i) Emergency cut off switch to cut off power to the dispensers to be installed.</p> <p>j) Colour coding of nozzles</p> <p>k) Illuminating Paraffin(IP) Pumps shall not be positioned under the canopy for the safety of walk-in clients.</p> <p>l) Fuel pumps/dispensers must show price/litre, volume dispensed and monetary value of fuel dispensed.</p> <p>m) Pump island(s) must not be located less than 5m from site boundary</p> <p>n) Dispenser pump must not be located as to allow servicing vehicles from a public road or highway</p> <p>o) Location of kiosks, cold drink dispensers, refrigerators, electrical signage, sound systems or electric generators must not be within 4m of dispensers and tank fill points.</p> <p>p) Presence of leaks from hoses, nozzles, inline filters, swivel joints, gaskets and couplings must not be allowed</p>
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6. AUXILIARY STRUCTURES

<p><u>Requirement</u></p> <p>All buildings for the retail site shall comply with Town and Country Planning Act and only Fire resistant materials shall be used in the construction of the buildings. The retail service station shall have the following as a minimum:</p> <ul style="list-style-type: none"> a) Office Space b) A safe and secure Attendants' Room c) Ablution facilities for forecourt personnel conveniently accessible at all hours d) Convenience room (recommended separate toilets for male and female). e) An accessible water point on the premises 	<p><u>Guidance</u></p> <ul style="list-style-type: none"> a) Office space in this case entails the facility for cash collection b) Convenience room accessible to customers (recommended separate toilets for men and female).
<p><u>Verification</u></p> <ul style="list-style-type: none"> a) Office Space. b) Convenience Room c) Water point on premises. 	

7. FIRE FIGHTING EQUIPMENT

<p><u>Requirement</u></p> <p>All service stations shall have adequate fire equipment as per fire authority regulations.</p>	<p><u>Guidance</u></p> <ul style="list-style-type: none"> a) Sand or sorbent material is used to clean up small spills and leaks of vehicle fuels b) Normally one full sand bucket is sufficient for every two dispensers (including multi-fuel dispensers) and these are to be located so that they are readily accessible to both forecourt staff and general public. c) To prevent any insipient fire spreading to the petrol facilities, a number of fire extinguishers are to be provided. d) A fire hose reel a must be installed on site and easily accessible from the forecourt.
<p><u>Verification</u></p> <ul style="list-style-type: none"> i) Sand filled buckets on forecourt ii) Fire extinguishers as per recommendations of Appendix B iii) Fire hose reels iv) Fire hydrants 	

8. AUXILIARY EQUIPMENT

<u>Requirement</u>	<u>Guidance</u>
<p>Each Retail Service station shall have the following auxiliary equipment</p> <ul style="list-style-type: none"> a) Fire fighting equipment on site b) Sand filled buckets that are full of dry sand of not less than 10 kg per island c) Sorbent materials used for cleaning fuel spills to be readily accessible by the attendants d) Appropriate signage and safety symbols. e) Emergency Electrical shut off switch f) Compressor, air hose-reel and functioning air pressure gauge. g) Water point. 	<ul style="list-style-type: none"> a) Fire fighting equipment requirements are enlisted (see 4.15). b) Sand buckets are handy in case of minor spills. c) Signage and safety symbols are detailed (see 4.16)
<p><u>Verification</u></p> <ul style="list-style-type: none"> a) Fire extinguisher service sticker b) Sand filled buckets c) Appropriate signage and safety symbols d) Emergency shut off valve 	

9. SIGNAGE

<u>Requirement</u>	<u>Guidance</u>
<p>The retail service station shall have clearly legible safety signage on each pillar and each pump/dispenser at eye level.</p> <ul style="list-style-type: none"> a) Brand/corporate name or colours to be clearly visible. b) Fuel type/grade clearly displayed at each dispenser location. c) Price/litre for each product to be clearly visible on approaching the site. d) Price/litre to be shown on the dispensing equipment. e) Directional signs for traffic into and out of the station, i.e. ENTRANCE & EXIT Signs. 	<p><u>Fire Safety signs:</u></p> <ul style="list-style-type: none"> a) Provide information on escape routes and emergency exists in case of fire. b) Provide information on the identification or location of the fire-fighting equipment and c) Give adequate warning in case of a fire. <p><u>Safety Information Notices:</u> Prohibition notices- these notices identify the nature of the hazard and the prohibition on activities and the use of equipment that could ignite petrol vapor (and where applicable) anticipated signs in the road tanker discharge area and the fuel dispensing area as below-</p> <ul style="list-style-type: none"> i) “no smoking”- no naked lights ii) “switch off mobile phones” and v) “switch off engine”.
<p><u>Verification</u></p> <p>Clear signs on-</p> <ul style="list-style-type: none"> i) “no smoking”- no naked lights ii) “switch off mobile phones” and iii) “switch off engine”. 	

10. PUMP/DISPENSER CALIBRATION

<u>Requirement</u>	<u>Guidance</u>
Retail Service Stations shall have all its pumps/dispensers calibrated in line with the Trade Measures Act Chapter14:23 Meters for dispensers to be as assize every six months.	Trade Measures Act requires that measuring equipment used in trade be assized and re-assized: a) Dispenser/pump meters to be re-assized every six months and issued with calibration certificates. b) The assizing and sealing of meters only to be done by certified pump-fitters.
<u>Verification</u> a) Copies of calibration certificates to be displayed on site b) Calibration seals to be placed on the Dispensers/pumps.	

11. ELECTRICAL WIRING

<u>Requirement</u>	<u>Guidance</u>
Electrical equipment shall be in accordance with ZWS 400, (ZWS Wiring Rules)	a) No naked wiring b) No loose wiring connection c) No connections without flame-proof glands
<u>Verification</u> a) No naked electrical wires b) No loose wiring connections c) No burnt plug tops d) Certificate of compliance issued by class 1 electrician	

11. INGRESS AND EGRESS

<u>Requirement</u>	<u>Guidance</u>

<p>The site chosen for a retail service station should be sufficiently spacious to allow it to be designed to minimize the risks from vehicles to any person likely to be at or near the filling station. The entrance and exits should be so designed as not to create a traffic hazard by interfering with the safe traffic flow in the adjacent roads.</p>	<p>a) Location of tanks, till points, vent pipes, dispensers, road tankers, delivery stands and buildings should be designed to provide for satisfactory means of escape for persons in the event of a fire or other incidents</p> <p>b) Safe access, routing, parking and exit of customers, vehicles, service vehicles and road tankers.</p>
<p><u>Verification</u></p> <p>a) Proper route for delivery tank.</p> <p>b) Proper tank discharge position and tanker emergency escape route without any reversing which is not allowed.</p>	

13. DISTRIBUTION BOARDS

<p><u>Requirement</u></p> <p>The retail service station has to have proper and adequate Distribution boards (DB) to power the overall site and the forecourt</p>	<p><u>Guidance</u></p> <p>a) Forecourt to have a separate DB to the main one for the site.</p> <p>b) Forecourt DB to be accessible by night shift (preferably in attendants' kiosk)</p> <p>c) Ensure the DB's are installed by qualified master electrician</p> <p>d) DB's to be properly and correctly labelled such that the labelling corresponds to the actual circuitry</p>
<p><u>Verification</u></p> <p>i) Separate forecourt DB</p> <p>ii) Proper Main DB</p> <p>iii) Correctly labelled Forecourt and main DB's which identify specific pumps, lights, switches and plugs</p>	

14. SHOP OR BUILDING

<p><u>Requirement</u></p> <p>The shop or building needs to be located clear from the underground tanks Keys to the safe are not to be kept on site</p>	<p><u>Guidelines</u></p> <p>a) The shop or building has to be constructed in line with the Town and country planning Act.</p> <p>b) Buildings to be clear from the underground tanks, dispensers and filler tanks.</p> <p>c) Vapor space for the tanks, filler points and dispensers are not to encroach into the buildings space especially where there are openings into the building.</p>
<p><u>Verification</u></p> <p>a. Shop or building constructed clear off the underground tanks minimum 3 m from dispensers and minimum 4 m from filler points.</p>	

15. VENT PIPES

<p><u>Requirement</u></p> <p>Vent pipes are provided in order to allow movement of air in and out of the tank.</p> <p>Vent discharge should not be within 3 m in any direction of opening windows or any other opening to a building</p>	<p><u>Guidance</u></p> <p>a) Vent pipes should extend to a height greater than the maximum liquid level in any road tanker likely to deliver product to the associated tanks and in any event should not be less than 4 m above ground level.</p> <p>b) The hazardous areas created by the tank vent points should be wholly located within the site i.e. should be a minimum of 1 metre from the property boundary.</p> <p>c) Vent pipes need to have a slope of 3 % back to the tank to ensure there is no fuel trapped in the pipes. A liquid cap prevents venting.</p> <p>d) Only Steel vent pipes of minimum 50mm diameter shall be used.</p>
<p><u>Verification</u></p> <p>a) Vent pipes located at least 3 m from opening windows or any building openings.</p> <p>b) Vent pipes sloping at 3° (might not be easy to verify underground) i.e. falling towards the tank.</p> <p>c) Steel Vent pipes</p>	

16. CANOPY INTEGRITY

<p><u>Requirement</u></p> <p>A retail service station shall have a canopy to cover the forecourt area to protect both the customers and attendants from inclement weather conditions of the scorching sun and rain. Set standard for forecourt canopy shall be 4,6m minimum height.</p>	<p><u>Guidance</u></p> <p>a) The canopy normally covers all the petrol and some of the diesel pumps/dispensers.</p> <p>b) Any cladding to the canopy itself should not readily contribute to any fire and the selection of materials should inhibit fire growth</p> <p>c) Ensure structural integrity of canopy to be secure and intact to be able to withstand forces of the wind.</p>
<p><u>Verification</u></p> <p>i) Firm and intact canopy covering forecourt</p> <p>ii) Forecourt canopy a minimum height of 4.6 m</p> <p>iii) Cladding of canopy made from fire resistant materials</p>	

17. INTERCEPTOR PIT

<p><u>Requirement</u></p> <p>The drainage system should be designed to convey potentially contaminated materials to suitable disposal points and prevent environmental pollution.</p>	<p><u>Guidance</u></p> <p>a) Oil contaminated water is discharged via the interceptor pit.</p> <p>b) Ordinary storm water is discharged via the storm water drains. Refer to Appendix A.</p> <p>c) Interceptor pit to be constructed as per ZWS 913: Part 2.</p> <p>d) Catchment drains which direct spillages from the forecourt to the interceptor pit, must fully circumscribe/enclose the forecourt area on which all the pumps are located.</p> <p>e) Delivery points also to be linked to the interceptor pit. Catchment drain must also surround the area.</p> <p>f) Interceptor pits to be cleaned on a regular basis</p> <p>g) Contents from the interceptor pit shall be disposed in accordance to the requirements of the relevant authority.</p> <p>h) Spill kits to be made use of in attending to small spills.</p>
<p><u>Verification</u></p> <p>i) Interceptor pit to ZWS 913: Part 2</p> <p>ii) Drainage system in compliance to Appendix A recommendations.</p>	

	i) Treatment and disposal of sand/sorbent materials used for cleaning a spill shall be in accordance to the requirements of the relevant authority.
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18. OPERATING PROCEDURES

<u>Requirement</u>	<u>Guidance</u>
<p>A Filling station shall have written minimum operating procedures which are to include the following:</p> <ul style="list-style-type: none"> i) Emergency Response Plan. ii) Receiving Procedure. iii) Works Control Procedure. iv) Fuel Dispensing Procedure v) Personal Protective Equipment Policy vi) All employees shall be aware of the procedures through periodic training. 	<ul style="list-style-type: none"> a) Emergency Response plan must give steps to be followed in the event of an emergency situation such as but not limited to fire, robbery, spillage and product contamination. Emergency numbers are to be displayed and these will include the following numbers: <ul style="list-style-type: none"> i) Fire Brigade ii) Nearest Police Station iii) Ambulance b) Receiving Procedure will detail the steps to be undertaken for receiving product. To be included are the following: <ul style="list-style-type: none"> i) Dipping of tankers ii) Chocking the vehicles wheels iii) Earthing iv) Coupling procedures v) Safety security vi) Checks to be done prior to decanting product c) Works Control procedure. This procedure will give guidelines on the permits to be issued before any work takes place on site. To be included are: <ul style="list-style-type: none"> i) Control work permit ii) Hot work permit iii) Confined space entry iv) Electrical work permit v) Excavation permit vi) Lifting permit d) Fuel dispensing procedure will give guidelines to the fuel attendants on how to execute their duties. The following aspects to be covered; <ul style="list-style-type: none"> i) Ensuring the switching off of engines ii) Resetting of the dispenser meters
<p><u>Verification</u></p> <ul style="list-style-type: none"> i) Emergency Response Plan. ii) Receiving Procedure. iii) Works Control Procedure. iv) Fuel Dispensing Procedure v) Personal Protective Equipment Policy vi) Training awareness records, counter signed distribution list. 	

	<ul style="list-style-type: none">iii) Removal of nozzles and replacing fuel capsiv) Checking and replacing dip sticks. <p>e) Personal Protective equipment policy; service attendants are to have the necessary personal protective clothing which includes;</p> <ul style="list-style-type: none">i) Safety bootsii) Cotton anti-static weariii) Corporate identifiable uniforms and name tags.iv) At least one (1) attendant per shift must be trained in First Aid. <p>f) Fuel must not be filled in unapproved containers</p> <p>g) Fuel must not be filled in containers off the ground or placed in vehicles</p> <p>h) It is not to carry out unauthorised activities at a service station or within its property boundaries</p> <p>i) A petroleum accident shall be reported as per the relevant statutory requirements.</p>
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APPENDIX A – GUIDELINE TO DRAINAGE SYSTEMS

This appendix is for information only.

General guide of the risk based approach indicating the suitability of activity or level of protection required.

Area	Contamination Possible	Risk Ranking	Surface Quality	Drainage Routing
Tanker stand area	Yes	High	Impermeable	Via Separator
Dispenser island fill position	Yes	Normal	Impermeable	Via separator
Under canopy	Yes	Normal	Impermeable	Via separator
Vehicle wash entrance/exit	Yes	Normal	Impermeable	Fowl sewer
Perimeter roads	Unlikely	Low	Permeable	Surface water drains
Car parking	Unlikely	Low	Permeable	Surface water drains
Site access and egress	Unlikely	Low	Permeable	Surface water drains

APPENDIX B – RETAIL AUDIT CHECKLIST

This appendix is for guidance.

AUDIT 1: Retail Site (Liquid Fuels)

This Audit checklist is to be used on Liquid Fuel Retail Sites.

SITE NAME & ADDRESS:
NATURE OF BUSINESS:
NAME & POSITION OF RESPONSIBLE PERSON ON SITE:
CONTACT NUMBER(S):

1. INGRESS & EGRESS		YES	NO	N/A	COMMENTS
1.1	Does the site have an accessible entrance to the forecourt?				
1.2	Does site have clearly accessible pump islands for vehicles?				
1.3	Does site have clearly marked products on the pumps?				
1.4	Is there routing of traffic from ingress to egress of the forecourt? (<i>Directional arrows</i>)				
1.5	Is the exit from site clear from obstructions?				
1.6	Is the Prime sign clean and clearly visible? (<i>ID sign, Pole sign, Monolith</i>)				
1.7	Are the entrances free of portholes, cracks or protrusions?				
2. SHOP OR BUILDING		YES	NO	N/A	COMMENTS
2.1	Does the site have a shop or kiosk/building?				
2.2	Does site have a designated secure kiosk for the cashier or lead attendant?				
2.3	Does the site have a safe to store cash on site?				
2.4	Are the keys to the safe kept off site?				
2.5	Does the site have an ablution for customers?				
2.5a	Are the toilets clean and tidy and is housekeeping schedule in place?				
2.5b	Does site have ablution facilities for forecourt personnel?				
2.6	Are the keys to the ablutions accessible?				
2.7	Does site have parking area for customers to access the shop?				
2.8	Is there at least one fire blanket in the fast foods preparation area?				
2.9	Are extractors free of fat and grime acculation?				
2.10	Did a random check reveal no expired products in the quick shop?				
2.11	Are the food products stored away from harmful substances				
2.12	Is the shop clean, tidy and free from obstructions?				

3. TANK FARM		YES	NO	N/A	COMMENTS
3.1	Have the tanks been installed as per ZWS 913? (<i>Link to Section 6</i>)				
3.2	How many tanks are installed?				
3.3	What products are stored on site?				
3.4	Are all tank manholes properly labelled? (<i>Tank capacity and product name</i>)				
3.5	Are all tank filler caps in good condition and lockable?				
3.6	Are all dip pipes, tank and filler manhole covers and frames identified and Colour-coded per product? (<i>Tank manhole must have both rim and lid Colour-coded</i>)				
3.7	Are only wooden dipsticks used and are the ends in good condition? Is water finding paste being used?				
3.8	Is leak detection in place and operational? (<i>Applicable for submersible pumps</i>)				
4. VENT PIPES		YES	NO	N/A	COMMENTS
4.1	Are vent pipes away from ignition sources?				
4.2	Are vent pipes 50 mm in diameter?				
4.3	Are vent pipes 1,5 m away from windows, basement openings, air conditioners, hot surfaces etc.?				
4.4	Are vent pipes free from corrosion?				
4.5	Are vent pipes 4m high and at least 600 mm above roof level?				
5. DISPENSERS AND PUMPS		YES	NO	N/A	COMMENTS
5.1	Are pump panels intact?				
5.2	Are the pumps calibration certificates valid, on file and available for inspection?				
5.3	Are pumps fitted with shear valves? Is the shear valve fixed with the bracket under the pump/dispenser? (<i>Where verifiable</i>)				
5.4	Are pumps fitted with leak detectors?				
5.5	Are pumps/dispensers with correct product decals?				
5.6	Are pumps/dispensers solidly fixed to the pump island?				
5.7	Are all hoses neatly hung to prevent traffic hooking and dragging?				
5.8	Are pump islands clean with no loose bricks and protrusions?				
5.9	Are air points in good working order (no leaks), hoses neatly coiled and gauges clean?				
6. SITE DRAWINGS/APPROVALS		YES	NO	N/A	COMMENTS
6.1	Does the site have approved drawings by Local Authority?				
6.2	Have drawings been approved by the fire department?				
6.3	Has the site been issued with a business permit for petroleum products?				

7. DISTRIBUTION BOARDS		YES	NO	N/A	COMMENTS
7.1	Is the site powered from the national grid?				
7.2	Does the site have a proper Distribution Board to supply electric power?				
7.3	Is the DB clearly marked with permanent labels?				
7.4	Are the switch labels corresponding with legend?				
7.5	Is the Distribution Board capable of being locked out?				
7.6	Is the Distribution Board in a serviceable condition with loose wires?				
7.7	Does the site have an emergency STOP button?				
7.8	Is the emergency stop button clear labeled and visible?				
7.9	Is the emergency button located 2 m above ground level on the front elevation of the building?				
7.10	Is the Fireman's switch clearly labeled and visible?				
7.11	Is the gas-break manhole filled with sand and is the warning label in place?				
7.12	Is the annual service station electrical compliance certificate and license to operate, store fuel, conduct a commercial business, trading rights (whichever is applicable) available and valid?				
8. CANOPY INTEGRITY		YES	NO	N/A	COMMENTS
8.1	Does the site have a canopy?				
8.2	Is the canopy of acceptable standard in terms of? a) Clearance height? b) Structural integrity and stability?				
8.3	Are the columns intact?				
8.4	Are the supporting braces intact?				
8.5	Is canopy roof leaking?				
8.6	Is canopy free of objects on the roof?				
9. INTERCEPTOR PIT		YES	NO	N/A	COMMENTS
9.1	Does the site have a proper drainage system with interceptor pit?				
9.2	Is the interceptor pit designed to the standard ZWS 913: Part 2?				
9.3	Does interceptor pit discharge into sewer pipes?				
9.4	Are the interceptor pits clean of objects and serviceable?				
9.5	Any improvement or suggestion of the interceptor pit?				
9.6	Is a manhole tool/tommy bar available to open gas break/drain covers?				
9.7	Has an effluent test been done in the last year (12 months)?				

10. FIRE FIGHTING EQUIPMENT		YES	NO	N/A	COMMENTS
10.1	Does site have dry powder fire extinguishers?				
10.2	Are the dry powder fire extinguishers serviced?				
10.2a	Is the correct type of fire extinguisher in place? Dry chemical powder (Type ABC) for forecourt CO ₂ for electrical equipment and kitchens.				
10.2b	Is there at least one 9 kg dry chemical powder extinguisher at each island?				
10.2c	Are all extinguishers inspected and serviced annually and is a label showing last service date affixed to the unit?				
10.2d	Are all extinguishers still fully charged (<i>pressure gauge in green, are the seal pins still in place</i>)				
10.3	Does site have sand buckets? Is sand or other spill absorbent available for containing and absorbing spills?				
10.3a	Is a labeled bin/container available for storage of contaminated sand/absorbent for collection by waste contractor?				
10.4	Are sand buckets located in appropriate positions?				
10.5	Is all fire equipment located in an accessible position?				
10.5a	Is the fire hose reel in place and serviced? Is there sufficient water pressure at minimum 3.5bar?				
10.6	Does site have all emergency numbers displayed? <ul style="list-style-type: none"> • Medical emergency? • Fire brigade? • Site responsible persons? 				
11. SIGNAGE (SAFETY SYMBOLS)		YES	NO	N/A	COMMENTS
11.1	Are there safety/hazard signage in place on each side of the canopy column facing car filling placement?				
11.2	Does site have "no smoking signs"?				
11.3	Does site have cell phone prohibition sign?				
11.4	Does site have prohibition of naked flames?				
11.5	Signage or warning to switch off engine when fuelling?				
11.6	Does site have proper labels for products on pumps/dispensers?				
11.7	Does the site have a sign notifying that the keys to the safe are kept off site?				
12. OPERATING PROCEDURE		YES	NO	N/A	COMMENTS
12.1	Does the site have Emergency procedures in case of the following: - <ul style="list-style-type: none"> • Fire • Robbery • Spillage • Product contamination 				
12.2	Does the site have a proper uniform for identification of attendants? (<i>Anti-static fabric</i>)				

12.3	Are the attendants neatly dressed in their uniforms? With safety boots and name badges?				
12.3a	Does the site have safety clothing: -? <ul style="list-style-type: none"> • Safety boots • Gloves for use when needed 				
12.4	Is the staff trained in fire-fighting? (<i>Record available</i>)				
12.5	Are there at least two trained first aiders on site? (<i>Certificate available</i>)				
12.6	Is there a First AID box and is the first aid box stocked with basic emergency items which have not expired?				
12.7	Are the emergency plan and contact numbers displayed?				

APPENDIX C – EMERGENCY RESPONSE PLAN

This appendix forms part of the requirements of this standard.

The organization shall have an emergency response plan that shall give the steps to be followed in the case of an emergency situation such as but not limited to fire, robbery, spillage and product contamination.

C.1 Emergency Numbers. These are to be displayed at a conspicuous position and to include the following:

- i) Local Fire Brigade
- ii) Nearest Police Station
- iii) Ambulance or Hospital.

C.2 Fire. Guidelines on action to take in case of a fire.

- i) Do not panic
- ii) Immediately switch the emergency shutdown switch to OFF Position
- iii) Call Emergency Services. Give them the details of the fire.
- iv) Move all staff and customers to a safe location (assembly point) away from the site.
- iv) If safe to do so, remove flammable items such as LPG cylinders away from the fire and surrounding areas.
- v) If safe and competent to do so, approach the fire with the wind behind you and attempt to extinguish the flames with the appropriate fire extinguisher. Keep out of the smoke.
- vi) Prevent access to the area except to emergency or repair vehicles.
- vii) Record the incident in writing before close of business day or change of shift.

- C.3 Robbery. Guidelines on actions to take in case of a robbery.
- i) Don't be a hero. Cooperate with the robbers so that the robbery is quick. Don't let the robber lose patience (he could shoot).
 - ii) Give the robber only that which he demands.
 - iii) Don't surprise the robber by making sudden movements.
 - iv) Do not attack the robber
 - v) Do not try to follow the robber
 - vi) Call the police immediately as soon as the robber has left
 - vii) Do not disturb anything that may have been handled by a robber. Where applicable, close the shop.
 - viii) Note as much details as possible about the robbers.
 - ix) Ask customers who were present during the robbery to act as witnesses to the police.
- C.4 Spillage. Guidelines on what to do in case of a spill.
- i) Immediately switch off the emergency shutdown switch.
 - ii) Call the emergency Services and give them details of location etc.
 - v) Attempt to stop the spill from spreading by covering it with sand or earth.
 - vi) Prevent access to the area to all vehicles, except to emergency or repair vehicles.
 - vii) Assist customers to push their vehicles from the forecourt. Do not let them start their engines
 - viii) Customers or staff who have been splashed with fuel must move to a safe location and remove contaminated clothing. If competent to do so, provide correct first aid to them.
 - ix) Try by all means to prevent the spilled product from entering the storm water drains. Spills should be directed to oil interceptor.
- C.5 Product contamination. Guidelines on what to do in the case of product contamination. Once the service station has noticed a contamination the following must be undertaken
- i) If it is noticed that wrong fuel has been put in the car, don't turn the key on or start the engine. Have the fuel completely drained and refuel with the correct fuel.
 - ii) If contamination is in the storage tank proceed as follows:
 - a) Stop sales immediately and lock the pumps connected to the affected tank.
 - b) Get a sample and have the laboratory check the contamination level.

c) Drain the contaminated tank and dispose of product according to laboratory recommendations.

d) Deliver fresh clean product and resume sales

APPENDIX D – PRODUCT RECEIVING PROCEDURE

This appendix forms part of the requirements of this standard.

The organization shall have a product receiving procedure.

- D.1 The receiver shall check the delivery instructions to ascertain whether it's the correct fuel grade and the receiver shall also check whether all valve seals are in place.
- D.2 The ullage space of the storage tanks shall be checked to ensure that there is enough space for the fuel to be delivered.
- D.3 The filling points of the storage tanks shall be clearly marked and colour coded to ensure that deliveries are made into the correct storage tanks.
- D.4 The receiver shall also check the product quality certificate to ensure that the product being received is of the correct specification. Tests such as water, density, distillation etc. shall be done to check the quality of the product.
- D.5 Quantities of product to be delivered shall be verified by way of dips or meter readings.
- D.6 The delivery area around the truck shall be barricaded by cones for safety purposes.
- D.7 When off-loading has been finished, the receiver shall physically check the compartments to ensure that all products have been drained.
- D.8 Keys for filler points shall be kept separately.

APPENDIX E – WORKS CONTROL PROCEDURE

This appendix forms part of the requirements of this standard.

The organization shall have a works control procedure that gives guidelines on the precautions and permits to be issued before any work takes place on site.

- E.1 Hot Work Permit shall be required for any temporary operation involving open flames or producing heat and/or sparks. This includes but is not limited to brazing, cutting, grinding, soldering, torch-applied roofing, and welding.
- E.2 Required Precautions Checklist:
- i) Check that available fire sprinklers, hose streams and fire extinguishers are in service and operable.
 - ii) Hot work equipment is in good working condition
 - iii) Hot work should not be done on site when product is being received
- E.3 Cold Work Permit shall be obtained for all general work that does not involve activities related to hot work, i.e. the tools and equipment used or the work itself do not generate any sparks or heat. And cold work refers to general maintenance work on the plant or equipment where the uses of any open flames, any source of ignition or any electrical equipment is not allowed
- E.4 Confined Space Entry Permit. Shall be issued by a competent or trained person to allow entry into a confined space. A confined space entry permit has limited or restricted means for entry or exit, and it is not designed for continuous employee occupancy. Confined spaces include, but are not limited to underground vaults, tanks, storage bins, manholes, pits, silos, process vessels, and pipelines.
- E.5 Electrical Work Permit. An electrical work permit must be issued for work that will expose personnel to:
- i) Working on electrically driven rotating equipment.
 - ii) Working on flameproof or intrinsically safe equipment.
 - iii) Where there is a potential exposure to voltage exceeding 250 V.
- E.6 Excavation Permit. The following excavation work requires an excavation permit:
- i) Tasks imposing a severe local load which may disturb the ground to a depth greater than 230 mm (e.g. crane outriggers during heavy lift operations).
 - ii) Insertion of metal spikes on the ground to a depth of 230 mm.

- iii) Hand excavations to a depth exceeding 230 mm.
- iv) Excavations made using powered plant (e.g. pneumatic drills, mechanical excavators etc).

E.7 Lifting Permit (cranes). Before any lifting operation is undertaken, a permit must be issued by a competent supervisor making sure that these potential hazards have been taken care of (list is not exhaustive). Crane capacity in relation to the load to be lifted, ground suitability e.g. not excavations, area free of overhead cables, is crane certified, is crane operator certified, destination of load cleared and properly prepared.

APPENDIX F – FUEL DISPENSING PROCEDURE

This appendix forms part of the requirements of this standard.

The organization shall have a fuel dispensing procedure. This procedure shall give guidelines on what steps to be followed during the dispensing of fuel to vehicles on the forecourt.

- a) Ensuring that the vehicle is properly parked beside or in between pump islands.
- b) Ensure that the Engine is switched off.
- c) Ensure that there are no prohibited activities taking place in the car that cause naked like lighting a match or smoking
- d) Resetting of pump register to zero.
- e) Fuelling of the tank up to requested quantity.
- f) Removal of nozzle from the tank opening.
- g) Accepting of the payment.