REPUBLIC OF TRINIDAD AND TOBAGO
Ministry of Energy and Energy Affairs
Aboveground Hydrocarbons Storage Tanks (Horizontal) Inspection Checklist

This checklist is to be used as guideline for the inspection of horizontal aboveground tanks used for the storage of diesel, kerosene, bunker fuel, jet A1 fuel, etc.. It outlines the minimum requirements for inspection. Additional requirements may be considered depending on the uniqueness of the system. The checklist is not be used for underground and upright cylindrical storage tanks installed on the ground.

1. Inspection Particulars

Owner of Storage Facility:	
Storage Facility Address:	
Inspection Date:	
Last Inspection Date:	
Inspection Officer/s:	
Company Representative/s:	
Use of Storage:	
Type of Inspection:	□Site Assessment □Pre-commissioning □In-service

Storage Details:

Tank #	Capacity (Gals)	Material of Construction	Wall Type (Single/ Double)	Manufacture Date (mm/yy)	Location (Outside/ Room/ Roof/ Cellar)
□1					
□2					
□3					
□4					
□5					

Other Information:	

For further information contact the MEEA at (868) 697-1275/ 1283/ 1484/ 7864
Fax: 697-7013 Web: info@energy.gov.tt

2. Inspection Checklist

Tick as appropriate. A tick in the shaded region must be accompanied by a comment.

Legend: Y – Yes N – No NA – Not Applicable

		Y	N	NA	Comments
A. Document and Records					
1.	Does the facility have a MEEA valid approval for storage of hydrocarbons?	☐	☐	☐	
2.	Does the facility have a valid Fire Service Division approval? *Note: valid for a period of two years.*	☐	☐	☐	
3.	Is there a Site Plan and does it conform to the as built facility?	☐	☐	☐	
4.	Is there an Emergency Response Plan (ERP) which includes but not limited to the following: • Procedures in case of fires such as notification of fire department, evacuating personnel and controlling and extinguishing the fire; • Appointment and training of persons to carry out fire safety duties; • Maintenance of fire protection equipment; • Conducting fire drills; • Shutdown or isolation of equipment to control intentional releases; • Alternating measures for the safety of personnel while any fire protection equipment is shut down; • Emergency contact numbers.	☐	☐	☐	
5.	Is the ERP readily available?	☐	☐	☐	
6.	Is the ERP periodically reviewed and signed off by senior management?	☐	☐	☐	
7.	Are there Standard Operating Procedures (SOPs) available which addresses as a minimum: • Filling of storage tank; • Dispensing of fuel; • Maintenance of tank and fire fighting equipment.	☐	☐	☐	
8.	Is the Material Safety Data Sheets (MSDS) available for the product/s stored?	☐	☐	☐	
9.	Is a hydrotest/ pressure test certificate available for the tank and underground piping, prior to placing the system into service?	☐	☐	☐	
10.	If provided, is calibration chart/ gauging rod available and acceptable?	☐	☐	☐	

		Y	N	NA	Comments
B. Location					
1.	Are the minimum safety separation distances tabulated below, of the tanks from property lines, public ways and important buildings, observed?	☐	☐	☐	
2.	Is the shell to shell spacing between tanks ½ the diameter of the larger tank and not less than 3 ft. for maintenance?	☐	☐	☐	
3.	Is a minimum separation distance of 20 ft. between the tank (>660 USG) and LPG containers provided (>125 USG)?	☐	☐	☐	

Tank Capacity (gal)	Minimum Distance (ft)	
	From Property Line that Is or Can Be Built Upon, Including the Opposite Side of a Public Way	From Nearest Side of any Public Way or from Nearest Important Building on the Same Property
275 or less	5	5
276 to 750	10	5
751 to 12,000	15	5
12,001 to 30,000	20	5

		Y	N	NA	Comments
4.	Is a minimum separation distance of 3 ft. provided between the centreline of the tank (if >660 USG) secondary containmentwall and any LPG container's shell (if >125 USG)?	☐	☐	☐	
5.	Are ignition sources at least 10 ft away from the storage area?	☐	☐	☐	
6.	Are crash barriers provided to protect against vehicular collision, where possible?	☐	☐	☐	
7.	Is protection against floatation (i.e. anchoring) provided in areas that are flood prone?	☐	☐	☐	
8.	Is the area free of slope failure?	☐	☐	☐	
9.	Is a pathway maintained to facilitate emergency response, personnel movement and RTW access?	☐	☐	☐	
10.	Is the area around the tank kept free of overgrown vegetation, combustibles, trash, etc?	☐	☐	☐	
11.	Is the storage, dispensing, use, and handling areas secured against unauthorised entry and safeguarded with such protective facilities as public safety requires?	☐	☐	☐	
12.	Is at least one 20BC portable fire extinguisher (or as recommended by FSD) provided near and within sight of the installation? *Check: FE is free of corrosion, installed on hanger, annual inspection, monthly checks, charge, condition of nozzle, etc.*	☐	☐	☐	
13.	Is the facility designed and operated to prevent the discharge of flammable or combustible liquids to public waterways, public sewers, or adjoining property under normal operating conditions?	☐	☐	☐	
14.	Is the tank located away from overhead electrical wires? *Note: Potential electrocution hazard whilst gauging.*	☐	☐	☐	
15.	Is the tank located away from potential dropped object hazards? *Check: overhead trees,*	☐	☐	☐	

C. Signs and Notices					
1.	Are the following signs conspicuously displayed on the tank: *Note: Letters should be min. 150mm in height X 52mm in width, painted red on a white background and observable from a distance of 15 ft.*				
	(a) Type of product?	☐	☐	☐	
	(b) Tank capacity?	☐	☐	☐	
	(c) No Smoking?	☐	☐	☐	
2.	Is a "Switch Off Engine While Filling" sign, where applicable displayed near the dispensing area?	☐	☐	☐	
3.	Is a name plate installed on the tank and provided with the following information:				
	(a) Manufacturer's name?	☐	☐	☐	
	(b) Date of manufacture?	☐	☐	☐	
	(c) Serial number?	☐	☐	☐	
	(d) Size of tank?	☐	☐	☐	
4.	Is a *"Keep Valve Closed When Unattended"* sign, or equivalent, provided next to the secondary containment bleed valve?	☐	☐	☐	
5.	Are piping labelled to show identity (e.g. suction, fill, etc.) and direction of flow?	☐	☐	☐	

		Y	N	NA	Comments
6.	Are ESD switches labelled and readily accessible? *Note: for generators, pumps, etc.*	☐	☐	☐	

D. Secondary Containment					
1.	Is secondary containment, 110% the capacity of the largest tank provided? *Verify by measurement and calculation.*	☐	☐	☐	
2.	Are the walls of the secondary containment free of cracks, holes and other breaches?	☐	☐	☐	
3.	Do all parts of the tank, its piping connections and remote fill connection, if applicable, fall within the plane of the secondary containment?	☐	☐	☐	
4.	Are the base and walls of the secondary containment impermeable? *Note concrete blocks should be filled and reinforced with steel.*	☐	☐	☐	
5.	Is a lockable metallic bleed valve provided outside the bund?	☐	☐	☐	
6.	Is the bleed valve in an acceptable condition?	☐	☐	☐	
7.	Do all liquids drain towards the secondary containment valve?	☐	☐	☐	
8.	Is the secondary containment free of the storage of combustible materials, empty drums, full drums, barrels, pollution, etc.?	☐	☐	☐	

E. Tank and Support					
1.	Is the tank constructed of structural grade carbon steel? *Galvanised steel, plastic materials, cast steel are not recommended.*	☐	☐	☐	
2.	Is the tank appropriately colour coded? *Check: diesel – gray and kerosene – blue. Paint should be reflective and light coloured.*	☐	☐	☐	
3.	Is the tank in an acceptable condition? *Check for corrosion, leaks, indentations, etc.*	☐	☐	☐	
4.	Is the tank support adequately designed according to engineering standard? *Check: it should be resting on the ground or on foundation made of concrete, masonry, piling or steel*	☐	☐	☐	
5.	Is the tank supported in a manner that prevents excessive concentration of loads on the supported portion of the shell?	☐	☐	☐	
6.	Is the tank foundation designed to minimise the possibility of uneven settling of tank and corrosion to the part of the tank settling on the ground?	☐	☐	☐	
7.	Are the steel support structures or exposed piling protected by materials having a fire resistance rating of at least 2 hours?	☐	☐	☐	
8.	Are the legs of the tank supports not buried?	☐	☐	☐	
9.	Is the tank support in an acceptable condition? *Check: free of deformation, corrosion, etc.*	☐	☐	☐	
10.	Is the tank adequately electrically earthed? *Check: correct wire rating*	☐	☐	☐	
11.	Is an acceptable means of level determination provided?	☐	☐	☐	☐ Level Gauge ☐ Calibrated Tank ☐ Calibrated Gauging Rod
12.	If installed, is the level gauge:			☐	
	(a) material compatible with the fuel stored?	☐	☐	☐	
	(b) fitted with lockable valves at top and bottom?	☐	☐	☐	

		Y	N	NA	Comments
	(c) in a good condition? *Check: opaqueness, cuts, unsecured, etc.*	☐	☐	☐	
13.	If provided, is the calibrated gauging rod in good condition? Check: *free of bends and damage, ideal length for tank, etc.*	☐	☐	☐	
14.	If the tank is used to fuel vehicles, is the volume less than 12,000 USG?	☐	☐	☐	

F. Access Ladder/ Stairway					
1.	Is an access ladder/stairway provided?	☐	☐	☐	
2.	Is the ladder/ stairway:			☐	
	(a) accessible from outside the secondary containment?	☐	☐	☐	
	(b) rungs/ treads adequately spaced?	☐	☐	☐	
	(c) properly secured to the tank?	☐	☐	☐	
	(d) rungs/ treads provided with antiskid material?	☐	☐	☐	
	(e) if sloping, provided with handrails on at least one side?	☐	☐	☐	
	(f) in an acceptable condition *Check: damage, fuel on rungs, etc.*	☐	☐	☐	
3.	Is a gauging platform provided?	☐	☐	☐	
4.	Is the gauging platform provided with handrails (min. 42" high with intermediate rails) on at least one side?	☐	☐	☐	
5.	Is access from the stairway to the gauging platform safe?	☐	☐	☐	

G. Piping and Connections					
1.	Are all piping connections (except bleed valve) above the maximum liquid level?	☐	☐	☐	
2.	Are all piping and connections of compatible material? *Note: Should be Sch. 40 Carbon or Black Steel*	☐	☐	☐	
3.	Is piping adequately supported to protect against excessive vibration?	☐	☐	☐	
4.	Is piping to and from the tank through which liquid can flow, provided with valves located as close as practical to the shell?	☐	☐	☐	
5.	Are all openings other than vents provided with vapour tight caps or covers?	☐	☐	☐	
6.	Does the fill piping enter above the maximum liquid height, extend within 6" off the base of the tank and provided with anti-siphon protection (e.g. slotted pipe after entry)?	☐	☐	☐	
7.	Is piping below the maximum liquid level (e.g. bleed) provided with a liquid tight closure such as a valve, plug, or blind, or a combination of these?	☐	☐	☐	
8.	Is the **vent**:				
	(a) outlet protected to minimize the possibility of blockage from weather, dirt, or insect nests?	☐	☐	☐	
	(b) free of kinks and bends that would lead to accumulation of fluids?	☐	☐	☐	
	(c) size a minimum diameter of the size of the largest filling or withdrawal connection but in no case less than 1.25 in. (32mm) internal diameter?	☐	☐	☐	
	(d) installed so that vapours are not trapped by eaves and other obstructions?	☐	☐	☐	
	(e) outlets at least 5 ft. (1.5 m) from building openings	☐	☐	☐	

		Y	N	NA	Comments
	(doors, windows, ventilation blocks, etc.) and property lines and at least 15 ft. (4.5 m) from powered ventilation air intake devices?				
	(f) located away from the gauging hatch?	☐	☐	☐	
9.	If installed, is underground piping:			☐	
	(a) provided with secondary containment and leak detection?	☐	☐	☐	
	(b) protected from aboveground loading? *Note: at least 6" cover of well compacted bedding material should be provided. If vehicles traverse, at least 18" cover and pavement should be provided.*	☐	☐	☐	
	(c) protected against corrosion?	☐	☐	☐	
	(d) spaced by at least two pipe diameters from other pipe in the same trench?	☐	☐	☐	
10.	If installed, is remote fill piping:				
	(a) connection installed inside the secondary containment or provided with secondary containment?	☐	☐	☐	
	(b) provided with an isolation or check valve if back flow is possible?	☐	☐	☐	
11.	Are isolation valves painted in a contrasting colour to the piping for ease of identification?	☐	☐	☐	
12.	Is the strainer (if provided), in safe location that permits access for maintenance.	☐	☐	☐	
13.	Are piping, valves and connections in good condition?				

H. Double-walled Tanks (additional requirements)					
1.	Is the outer tank constructed of steel?	☐	☐	☐	
2.	Is the outer tank in an acceptable condition? *Check: corrosion, indentations, 100% enclosure, etc.*	☐	☐	☐	
3.	Is a means of monitoring leaks in the interstitial space provided?	☐	☐	☐	☐ Sensor ☐ View Glass ☐ Other
4.	Is each compartment of the interstitial space provided with independent venting?	☐	☐	☐	

I. Storage Inside Buildings (additional requirements)					
1.	Is the filling connection:				
	(a) located outside the building at a safe distance (>5 ft.) away from any source of ignition?	☐	☐	☐	
	(b) located not less than 5 ft. away from any building opening?	☐	☐	☐	
	(c) closed tight and protected against tampering when not in use?	☐	☐	☐	
	(d) identified by labelling?	☐	☐	☐	
2.	Is the vent:				
	(a) routed to the outside of the building?	☐	☐	☐	
	(b) outlet at least 12 ft above grade level?	☐	☐	☐	
	(c) outlet discharging upward or horizontally away from building walls?	☐	☐	☐	
3.	Are means provided to prevent overspill of the tank during filling?	☐	☐	☐	
4.	Are buildings walls and floor constructed of material that will maintain their structural integrity under fire exposure for two	☐	☐	☐	

		Y	N	NA	Comments
	hours?				
5.	Are smoke detectors or equivalent provided?	☐	☐	☐	
6.	Is a corridor of minimum width 3 ft. maintained to facilitate access to the room for personnel and fire protection equipment?	☐	☐	☐	
7.	Is a clear space of at least 3 ft maintained between the top of each tank and the building structure?	☐	☐	☐	
8.	Are openings to adjacent rooms or buildings provided with noncombustible, liquidtight raised sills or ramps at least 4 inches in height or otherwise designed to prevent the flow of liquids to the adjoining areas?	☐	☐	☐	
9.	Is the floor (except for drains) and walls (where they join the floor) and for at least 4 in. above the floor, impermeable?	☐	☐	☐	
10.	Are electrical fittings/ equipment in the room suitable for the class?	☐	☐	☐	
11.	Is the room free of combustible materials and empty or full drums or barrels?	☐	☐	☐	
12.	Where the room is constructed of combustible materials, is an automatic sprinkler (with metallic piping), or equivalent fixed fire protection system provided?	☐	☐	☐	
13.	Are combustible waste material and residues in operating areas stored in covered metal containers, and disposed of daily?	☐	☐	☐	

J. Storage on roofs (additional requirements)					
1.	Is the filling connection:				
	(a) located off the side of the building at a at a safe distance (>5 ft.) away from any source of ignition?	☐	☐	☐	
	(b) located not less than 5 ft (1.5 m) away from any building opening?	☐	☐	☐	
	(c) closed tight and protected against tampering when not in use?	☐	☐	☐	
	(d) identified by labelling?	☐	☐	☐	
2.	Are means provided to prevent overspill of the tank during filling?	☐	☐	☐	
3.	Is the floor of sufficient strength to support the tank when filled to maximum capacity?	☐	☐	☐	
4.	Is the floor constructed of material that will maintain its structural integrity under fire exposure for two hours?	☐	☐	☐	
5.	Are openings to adjacent rooms or buildings provided with noncombustible, liquidtight raised sills or ramps at least 4 in. (100 mm) in height or otherwise designed to prevent the flow of liquids to the adjoining areas?	☐	☐	☐	
6.	Is the floor (except for drains) and walls where they join the floor and for at least 4 in. above the floor, impermeable?	☐	☐	☐	
7.	Is the area free of combustible materials and empty or full drums or barrels?	☐	☐	☐	
8.	Are combustible waste material and residues in operating areas kept to a minimum, stored in covered metal containers, and disposed of daily?	☐	☐	☐	
9.	Are electrical in the area suitable for the intended class? *Check: switches, electrical wires, etc.*	☐	☐	☐	
10.	Is a safe means of access provided to facilitate personnel involved in maintenance and emergency response?	☐	☐	☐	

K. Pumps, Dispensers & Hoses		Y	N	NA	Comments
1.	Is the pump:				
	(a) rated for the intended service?	☐	☐	☐	
	(b) safely located? *Check area classification*	☐	☐	☐	
	(c) free of leaks?	☐	☐	☐	
	(d) provided with remote shut off?	☐	☐	☐	
	(e) controls labelled?	☐	☐	☐	
2.	Is the dispenser:				
	(a) face glasses in place?	☐	☐	☐	
	(b) provided with ID lamps?	☐	☐	☐	
	(c) areas free of excess spillages?	☐	☐	☐	
	(d) panels satisfactorily in place and secured?	☐	☐	☐	
	(e) safely located?	☐	☐	☐	
	(f) on a concrete island (plinth) above the grade level and bolted in place? *Should be at least 150mm high.*	☐	☐	☐	
	(g) protected from damage by vehicular collision?	☐	☐	☐	
	(h) provided with controls that permit the pump to operate only when a dispensing nozzle is removed from its bracket or normal position? *Note: This control should also stop the pump when nozzles are returned to their storage position.*	☐	☐	☐	
	(i) in good condition? *Check corrosion, damage, tampering, etc.*	☐	☐	☐	
	(j) emergency shutdown switches or circuit breakers at a remote location?	☐	☐	☐	
3.	Are hoses and nozzles approved for the intended service?	☐	☐	☐	
4.	Are hoses in good condition? *Check for kinks, flattened areas, leaks, insulation damage, etc.*	☐	☐	☐	
5.	Are nozzles in good condition?	☐	☐	☐	
6.	Are 'latch-open' devices not provided on hoses' nozzles?	☐	☐	☐	

L. Generators					
1.	Is the generator located in a well-ventilated area?	☐	☐	☐	
2.	Is the generator not near doors, vents or open windows leading into the building?	☐	☐	☐	
3.	Is the exhaust away from powered air intake devices, windows?	☐	☐	☐	
4.	Is the generator properly grounded?	☐	☐	☐	
5.	Is the generator shielded from contact with liquid?	☐	☐	☐	
6.	Are electrical wires free of punctures and not exposed?	☐	☐	☐	
7.	Is the day tank labelled to show content and capacity?	☐	☐	☐	
8.	Are no smoking and electric shock hazard signs provided?	☐	☐	☐	
9.	Are shut down and reset switches labelled?	☐	☐	☐	
10.	Are fire suppression agent (where installed) warning signs provided on access doors?	☐	☐	☐	
11.	Is a "Danger, Automatic Start" sign provided?	☐	☐	☐	

3. Remarks

...End of Document...

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Fax: 697-7013 Web: info@energy.gov.tt