

MISTDO SYLLABUS

The MISTDO syllabus is designed for six (6) categories with different applicable modules as contained in the table below:

Notes:

- i. Modules highlighted must include a practical demonstration
- ii. This syllabus is not exhaustive and will be updated from time to time by the Department

S/No.	FACILITY TYPE	COURSE	LEVEL	PREREQUISITES	OBJECTIVES	MODULES	CONTENT
1	Petroleum Retail Outlets Stations	Retail Outlet HSE Training	Basic	NONE	Basic course that acts as foundation for all operators and managers of petroleum retail outlets. At the end of this course, they will have an understanding of HSSE fundamentals. Understand the day to day operations of a petroleum retail outlet and the associated hazards. Participants should be able to respond in the event of a spill, fire and security incidents.	Basic Station Operations	Introduction to Petrol Filling Station Operations.
							Applicable standards, law & regulation (DPR)
							Vehicle filling and fuel containers
							Ignition & re-ignition sources & Static Electricity.
							HSE Hazards of Filling Stations
							House Keeping
							Introduction to Fires
							Fire Extinguishers – types, usage and sand bucket.
							Spills – Minor and Major.
			PPE – usage.				
Introduction to First Aid.							
			Advanced	BASIC RETAIL OUTLET TRAINING	Specialised courses for Managers and Field Supervisors of retail outlets. This course will provide the	Retail Outlet Competent Person Training	Competent Person Responsibilities and legal requirements HSE Hazard Assessment

					required basic managerial skills. After completion, Participants would be able to provide basic first aid in the event of an emergency, coordinate evacuation and use the available equipment to fight fires.		Staff Management and customer service Storage of hazardous material Stock Accounting and book-keeping SIMOPS Confined Space Entry Advanced First Aid - Legal and other requirements, Basic Life Support (DRSABCD), CPR and AED, including BVM Fires – causes, escalation factors, prevention, Installation of Smoke Detectors, Fire Wardens Training and Appointment PPE – types, uses, legal requirements, selection criteria Contingency planning and Emergency response (clearing the area, dealing hydrocarbon fire) and coordination (including 3rd party retailers' coordination)
2	Depots and Jetties	Petroleum Bulk Storage HSE Training	Basic	NONE	Foundation course to be taken by all employees of petroleum Bulk Storage Facilities and Jetties. At the end of this course, participants will have an understanding of the various petroleum products that are stored in bulk and the marketing of these products. Employees will have the	Basic Depot Operations	Tank farm Operations, Planning and scheduling Physical, chemical & hazardous properties of Stored products Petroleum Fiscalisation Formal documents, permits and Approvals Loss of containment and contingency plan Ignition sources – Electrostatic charges & discharges Lightning Protection basis

				required skills to respond in the event of an emergency.		<p>Fire Detection, Firefighting & Protection - causes, escalation factors, prevention, Installation of Smoke Detectors, Fire Wardens Training and Appointment</p> <p>Safety Induction for visitors</p> <p>Emergency Evacuation procedure for safety and security</p> <p>Applicable standards, laws and regulations (DPR, SON, NFPA, Weights & Measures etc.)</p> <p>Basic First Aid</p> <p>PPE – types, uses, legal requirements, selection criteria</p> <p>Confined space and work at height hazards</p> <p>Basic Water Survival and managing safety around water related operations</p>
			Advanced	BASIC PETROLEUM BULK STORAGE TRAINING	Specialized courses for Managers and Field Supervisors of petroleum bulk storage facilities. At this level, it is expected that they will be able to provide basic first aid in the event of an emergency, coordinate evacuation and use the equipment in place to fight fires.	<p>Petroleum Depots Competent Person Training</p> <p>Competent Person Responsibilities and Legal requirements</p> <p>Advanced First Aid</p> <p>Advanced Fire Fighting</p> <p>Emergency Response and Coordination</p> <p>HSE Plan Development</p> <p>Confined Space Entry Requirements</p>
					Training for truck drivers and motor boys (usually employed and managed by a	<p>Licensing, Driving Requirements and restrictions.</p> <p>Vehicle Inspections, Identification, and documentation</p>

3	Petroleum Haulage Trucks	Product Haulage	Basic	NONE	3rd party contractor) transporting various types of Petroleum Products. This course will identify hazards involved with trucking Petroleum Products from Bulk storage to customer locations. The driver will have an understanding of loading and offloading procedure, truck requirements, maintenance and emergency management.	Petroleum Product Delivery Operations	<p>Recognizing and preventing hazards associated with handling LPG and other flammable liquids.</p> <p>Defensive Driving Safe Driving Strategies and Procedures for handling accidents and emergencies.</p> <p>Vehicle parking, servicing and security</p> <p>Truck equipment and systems, including cargo tank, gauges, valves, pumps, meters, delivery hoses, Truck Earthing's and Emergency Discharge Control equipment.</p> <p>Procedures for safely loading truck using the plant pump</p>
4	LPG Facilities	LPG Foundation Program	Basic	NONE	Foundation course to be taken by all workers in these facilities. this course will provide participants with the knowledge required to understand the hazards and controls associated with LPG when dealing with the delivery, storage and dispensing of the product and know how to respond to emergency situations.	Introduction to LPG's Physical & Combustion Properties	<p>Introduction to Basic Principles and Practices of LPG Operations</p> <p>LPG Customer Applications and Customer Service</p> <p>Odorants and Service Interruptions</p> <p>Applicable Standards, Laws and Regulations (DPR, SON etc.)</p> <p>Overview of Bulk Plants</p> <p>Standard Cylinders & Handling Techniques etc</p> <p>Hazards and Potential Risks in LPG</p> <p>Fire Fighting</p> <p>Emergency Preparedness and Evacuation - PPE, Spills, etc</p>
		Bulk Plants	Specialized				Main components of Bulk Plants

				LPG Foundation Program	<p>Training for Operators at Bulk LPG Plants and Depots. This course will identify hazards involved with filling Cylinders with LPG and transporting them to customer locations. Participants will have an understanding of the hazards associated with carrying out the processes and be equipped with the skills required to react in the event of an emergency. Retailers would also be trained on Cylinder standards and types, installation, maintenance and disposal.</p>	Bulk Plant Basic Operations	<p>Propane liquid supply system</p> <p>Inspection and filling of cylinders</p> <p>Inspection and filling of vehicle mounted ASME tanks</p> <p>Cylinders visual inspection and requalification</p> <p>Maintaining cylinders and ASME tanks</p> <p>Unloading cargo tank motor vehicles</p> <p>Bulk plant systems and equipment maintenance etc.</p>
5	Natural Gas Facilities	Natural Gas Safety & Operations Integrity Course	Basic	NONE	<p>This course is designed for Industrial End users of Natural Gas. They will have an understanding of natural Gas and its properties. Basic knowledge of the properties of Natural Gas, how it is stored, transported and possible hazards that may be encountered with industrial use. In addition, employees will be prepared to handle emergency situations</p>	End User Natural Gas Training 1	<p>Introduction to natural gas; -as delivered to end users, Overview of well head to end user</p> <p>Properties of natural gas, potential hazards and prevention</p> <p>Basic safety codes and standards and guidelines</p> <p>Gas safety Use and installation basic requirements and users' compliance</p> <p>Pressure Reduction and metering station (PRMS)</p> <p>Facility siting and layout -PRMS and gas line routes (internal piping)</p> <p>Safety signs & colour coding</p>

					Safety critical equipment locations and operations e.g. isolation valves
					Call before you dig program
					Identifying, recognising and reporting gas leak
					Firefighting and other Emergency Response
					Safety of Gas Pipe work and fittings (identification and installation)
					Characteristics of combustion and natural gas as delivered to end users
					Positioning of emergency control valves and emergency procedures
					Safety Relief Valve and depressurizing
					Standing and operating pressures
					Tightness testing and purging
					Ventilation requirements
					Gas safety devices and controls
					Unsafe situations/use of emergency notices and warning labels
					Prevention of fires and explosions
					Safety management and regulation of natural gas installations
					Hazardous area classification and control of operations and maintenance activities

Intermediate

Basic Natural Gas Safety & Operations Integrity Course

End User Natural Gas Training 2

					Natural gas case studies of incidents and lessons learnt
					Introduction to Safety of Natural gas Transmission and Distribution System
					Applicable codes and standards
					Facility Integrity Planning and management
					Management of change of safety critical elements
					Case studies of Natural Gas Incidents and Lessons Learnt
					Process Safety Management- Relating to natural gas transmission and distribution systems (End-users approach)
					Managing third party activities on Transmission and Distribution lines
					Safety Critical Elements and their Performance standards
					Odorization of NG
					Natural Gas chromatography
					Material of construction
					Fire and risk management with emphasis to natural gas piping
					Gas facility sitting and emergency evacuation and rescue analysis
					Facility labelling & Identification of SCE
					Permit to Work System
					Natural gas leak and response

Advanced

**Intermediate
Natural Gas
Safety &
Operations
Integrity Course**

**End User Natural
Gas Training 3**

							Gas blow by incidents and prevention
							Case study of Natural Gas explosion and lessons learnt
6	Lubricant Plants	Lube Blending and Refilling Plants	Basic	NONE	Training for lubricant blenders, filling /packaging, third party blenders, retailers and distributors. The course will introduce them to the properties of base oils and lubricant additives. Participants would be familiar with the design and operations of the facility, product testing and quality assurance. The training will also cover HSSE fundamentals such as housekeeping and emergency response and evacuation.	Plant Operations Training	Introduction to Lubricant refining and Lubricant manufacturing Plant Design and Operations Applicable standards, laws and regulations (DPR, SON etc.) Facility Integrity Management Testing and Analysis of Base Oils and Lubricants Storage, Packing and filling of lubricants Housekeeping and accident prevention Emergency response and evacuation procedure etc.