

# Marketing Discipline

## Guidelines

for RO / SKO Dealerships of  
Public Sector Marketing Companies



Effective 8<sup>th</sup> January 2013

## **MARKETING DISCIPLINE GUIDELINES – 2012**

### **RETAIL OUTLET DEALERSHIP / SUPERIOR KEROSENE OIL DEALERSHIP**

#### **INTRODUCTION –**

The evolution of oil industry in India can be traced to the early 20<sup>th</sup> century when the industry began its operations through Superior Kerosene Oil (SKO) dealerships. In due course of time the petroleum business prospered and expanded and by independence the industry had commenced marketing of Motor Spirit (MS) and High Speed Diesel (HSD). The network developed under private oil companies like Burmah Shell, Caltex and ESSO. In 1958, Indian Oil Corporation (IOC) was formed giving birth to the entry of the public sector in the petroleum business. Thereafter with the nationalization of Burmah Shell, Caltex and ESSO in the 1970s, the concept of public sector oil companies came into being and the petroleum business prospered witnessing substantial growth.

In 2001-02 the public sector oil marketing companies (OMCs) had a network around 16000 retail outlets (ROs), 9000 LPG distributorships and 6500 SKO dealerships. The network has seen tremendous expansion to nearly 41000 RO dealerships, 11100 LPG distributorships and 6600 SKO dealerships as on 01.01.2012. The deregulation of the petroleum sector witnessed the entry of private players like Reliance, Essar and Shell in the petroleum sector who between themselves have setup nearly 3000 ROs. However, the dominance of the OMCs continued unabated in the retail market. *The Marketing Discipline Guidelines (MDG)* which were formulated for the first time in 1981-82 helped the OMCs to maintain discipline in the operation of retail network and provide high customer service standards.

In recent times the Government as well as Industry has felt the need to review the MDG in view of the changing circumstances and market scenario. The need to set very high customer service benchmarks for OMCs and for their dealer network is the need of the hour. In view of this, after discussions at various forums, these guidelines have been formulated.

# INDEX

Chapter No.	Sub-head	Contents	Page NO.
1		<u>Procedure for handling of products at Retail Outlets by dealers</u>	5
	1.1	<u>Receipt of product</u>	5
	1.2	<u>Decanting of product</u>	5
	1.3	<u>Stock / price controls</u>	7
	1.4	<u>Quality / Quantity control measures</u>	8
	1.5	<u>Observance of statutory &amp; other regulations</u>	9
	1.6	<u>Customer service &amp; general amenities</u>	11
2		<u>Industry Guidelines for Sample collection and testing</u>	13
	2.1	<u>Preamble</u>	13
	2.2	<u>Drawal of samples</u>	13
	2.3	<u>Drawal of samples by dealer</u>	15
	2.4	<u>Drawal of samples by Oil Company representatives</u>	16
	2.5	<u>General procedure for drawl of Samples</u>	19
	2.6	<u>Sample containers to be used</u>	21
	2.7	<u>Sealing of sampling containers</u>	22
	2.8	<u>Sample tags</u>	22
	2.9	<u>Retention of samples</u>	22
	2.10	<u>Sample testing &amp; results</u>	23
3		<u>Handling of MS / HSD / SKO at Company's storage points and Duties of Oil Companies</u>	25
	3.1	<u>Quality / Quantity checks</u>	25
	3.2	<u>Sealing / GPS</u>	27
	3.3	<u>Training of dealer / dealer's staff</u>	27
4		<u>Maintenance of Company's equipments at Retail Outlets</u>	28
	4.1	<u>Dispensing units – Standardizations of report</u>	28
	4.2	<u>Maintenance of pumps &amp; other equipments</u>	28
	4.3	<u>Rectification of defects in Dispensing units / pipeline / tanks</u>	29
	4.4	<u>Detection of presence of water in tanks</u>	30
5		<u>Type of Irregularities at Retail Outlets ( MS / HSD) and SKO-LDO Dealerships</u>	31
	5.1	<u>MS / HSD</u>	31
	5.1.1	<u>Adulteration of product</u>	31
	5.1.2	<u>Short delivery of products</u>	32
	5.1.3	<u>Totalizer seals found tampered with</u>	33
	5.1.4	<u>Additional / unauthorized fittings / gears found in dispensing units</u>	33
	5.1.5	<u>Unauthorized storage facilities / Interconnection</u>	33
	5.1.6	<u>Unauthorized purchase / sales</u>	34
	5.1.7	<u>Tank lorry carrying unauthorized product found decanting product into RO tanks</u>	34
	5.1.8	<u>Refusal by the dealer to allow drawl of sample or carry out inspection</u>	34
	5.1.9	<u>Non-availability of reference density</u>	34

	5.1.10	<u>Selling of normal MS/HSD as branded fuel</u>	35
	5.1.11	<u>Stock variation of MS/HSD beyond permissible limits</u>	35
	5.1.12	<u>Non-maintenance of inspection / stock / sales / other records</u>	36
	5.1.13	<u>Overcharging in authorized selling prices</u>	37
	5.1.14	<u>Non provision of air, clean toilet, telephone, first aid, etc.</u>	37
	5.1.15	<u>Non display of authorized selling prices of products</u>	37
	5.1.16	<u>Dealer operating the automated RO in Manual Mode without authorization</u>	37
	5.1.17	<u>Miscellaneous</u>	38
		<u>Notes</u>	38
6		<u>Duties of SKO Dealers: Kerosene supplies under PDS</u>	39
7		<u>Mobile Laboratory</u>	40
	7.1	<u>Introduction</u>	40
	7.2	<u>Deployment</u>	40
	7.3	<u>Inspection at Retail Outlets</u>	40
	7.4	<u>Testing of Samples</u>	40
	7.5	<u>Sampling Procedure</u>	41
	7.6	<u>Clinical Tests</u>	41
	7.6.1	<u>Certification</u>	42
	7.6.2	<u>Note</u>	43
8		<u>Action to be taken by OMC under MDG</u>	44
	8.1	<u>Note</u>	44
	8.2	<u>Critical Irregularities</u>	44
	8.3	<u>Major Irregularities</u>	44
	8.4	<u>Minor Irregularities</u>	45
	8.5.1	<u>Notes</u>	46
	8.5.2	<u>Notes</u>	46
	8.5.3	<u>Notes</u>	46
	8.5.4	<u>Notes</u>	46
	8.5.5	<u>Notes</u>	47
	8.5.6	<u>Notes</u>	47
	8.5.7	<u>Notes</u>	47
	8.5.8	<u>Notes</u>	47
	8.6	<u>Notes</u>	48
	8.7	<u>Notes</u>	48
	8.8	<u>Authority to Take Action</u>	49
	8.9	<u>Appellate Proceedings</u>	49
	8.10	<u>Irregularities Malpractices in respect of SKO Dealers</u>	50
		<u>Annexure 1 – Density Record</u>	51
		<u>Annexure 2 – Sample Label Supply Location</u>	52
		<u>Annexure 3 – Sample label TL retention sample</u>	53
		<u>Annexure 4 – Sample label sample drawn from RO</u>	54
		<u>Annexure 5 – Test to be carried out onMS / HSD Samples</u>	55
		<u>Annexure 6 – Maintenance report</u>	56
		<u>Annexure 7 – Method for determination of Ethanol content</u>	58
		<u>Annexure 8 – Shrinkage allowance sample calculation Illustration</u>	62

		<b><u>Annexure 9 – Method for allowing Shrinkage Allowance in Stock Variation</u></b>	<b>63</b>
		<b><u>Annexure 10 – TVA Loss Sample calculation Illustration</u></b>	<b>64</b>
		<b><u>Annexure – 11 Mobile Lab Sample Tag</u></b>	<b>65</b>
		<b><u>Annexure – 12 Sample Details for MS</u></b>	<b>66</b>
		<b><u>Annexure – 13 Sample Details for HSD</u></b>	<b>68</b>

## **CHAPTER - 1**

### **1. PROCEDURE FOR HANDLING OF PRODUCTS AT RETAIL OUTLET BY DEALERS**

It will be the responsibility of the Dealers to sell product of correct Quality & Quantity and provide excellent customer service.

#### **1.1 RECEIPT OF PRODUCT**

At the time of arrival of tank lorry, the dealer should match following details mentioned on the Invoice with physical / actual parameters:

- i) Tank Lorry No.
- ii) Seal Number / Security Lock Number
- iii) No. of compartments and quantity/product contained therein
- iv) The time tank lorry left Supply Point
- v) Recorded Density at 15 Degree C
- vi) Dip rod with calibration certificate and other details as advised from Company from time to time.

#### **1.2 DECANTING OF PRODUCT**

The dealer to undertake the following actions:

- i) Park the tank lorry on level ground – allow 10 minutes settling time. Before starting the operation on the tank lorry, proper earthing / bonding should be ensured. Portable fire extinguisher of DCP type should be kept near to tank lorry at a suitable distance. All the tank lorry discharge hoses should comply with all the safety requirements, and under no circumstances, plastic/PVC hosepipes should be used.
- ii) Check condition of the seal / security lock on the tank lorry delivery manifold & manhole covers against those mentioned in the invoice.

- iii) Release master valve levers to ensure product fills the pipelines, where tank lorries are normally calibrated with lines full, before checking dips (Refer Calibration Certificate).
- iv) Dealer to check that the Density of product @ 15 Degree C using ASTM Tables (53B) is within +/- 3.0 Kg/M<sup>3</sup> as compared with the challan density for ascertaining quality of product.
- v) Ask the tank lorry driver to produce certificate of calibration which would mention product level and proof level details.
- vi) Check Weights & Measures markings on the dip rod at the bottom as well as at the proof level. As an additional check, verify dip rod calibration with an standard measuring tape.
- vii) Check dips of the product in all compartments with the dip rod duly certified by Weights & Measures Department and provided with the tank lorry. Also check for presence of water in each compartment by water finding paste. Before commencing tank lorry decantation operation, the sales from the concerned underground tank at the Retail outlet should be stopped till the completion of decantation.
- viii) Having ascertained the quantity of the product by the above method, draw samples after draining approx. 20 liters of the product from the manifold from each compartment in a clear glass container for density/temperature for quality checks.
- ix) In case of doubt as to the quality of product, contact the Supply Location/concerned Area Field Officer for further instructions.
- x) After having ascertained quality as per (vii to ix) above, and prior to decantation, the dealer/his representative shall draw bottom samples from the Tank lorry and follow instructions as given in 3 tier sampling procedure (as explained in chapter-2).

- xi) In the event of dip being short as per calibration certificate/water being detected with water finding paste, the short dip/quantity (including due to removal of water) should be made up by filling to the correct level through the dispensing pump and the quantity so filled should be recorded on the back of all the Invoice copies. Chamber-wise observed dip and quantity filled through dispensing unit for getting correct level to be recorded. In case the RO is dry at the time of receipt, measuring of shortage to be done by drawing product from other compartment and using calibrated measure. Shortages so recorded should be signed both by dealer/dealer's representative and tank lorry driver. After ascertaining quality & quantity, decant the product in the correct underground tanks.
- xii) After decanting the product, ensure that the tank lorry is fully emptied of the product before releasing the tank lorry.
- xiii) Make appropriate entries in the stock register/stock display board.
- xiv) After decanting the product into the tank, at least 50 liters of product (to displace the line content) should be dispensed through the pump before taking sample from pump nozzle for ascertaining the density of the composite product in the storage tank after receipt. The density at 15 Degrees C, thus ascertained should be recorded in the density register. The density records should be maintained in the format attached as **Annexure 1**.

### **1.3 STOCK / PRICE CONTROLS**

- i) Dealer to display opening stock/authorized selling prices of products.
- ii) Dealer to maintain a daily stock-register provided by the company for all petroleum products.

In addition to the above, daily record of pump meter reading and product/water dips of each tank, taken in the morning separately, should be maintained.



## **1.4 QUALITY / QUANTITY CONTROL MEASURES**

### **1.4.1 QUALITY**

- a) Dealer to keep filter paper (Whatman 2) to check quality of MS. The filter paper should also be made available to customers on demand if they wish to satisfy themselves of the quality of MS. A suitable message to this effect should be included in Customer Education Board / Poster to be prominently displayed at the Retail Outlet.
- b) Dealer to maintain record of water dip on daily basis which will form a part of the daily stock register. In case presence of water is detected, he should immediately report to the controlling company office for taking necessary action.
- c) Dealer shall draw product sample from the pump nozzle in the morning and record the morning opening density @ 15 deg C before commencing daily sales.

### **1.4.2 QUANTITY**

- a) The dealer shall check on daily basis the Weights & Measures Dept. seal in the Metering Unit / Totaliser of the dispensing units for correctness and also that Weights & Measures certification for the unit is valid. In case W&M / totaliser seals are found tampered, sales through the concerned dispensing unit should be suspended forthwith and matter reported immediately to oil company. Sales to remain suspended till the seals are replaced.
- b) Dealer to keep a standard 5 liter. measure duly verified by the Weights & Measures Department for exclusive use of pump testing at the retail outlet.

- c) All measure used for dispensing bulk lube oil in the pump island and service bays must be duly stamped by Weights & Measures Department.
- d) It is the responsibility of the dealer to ensure the correct supply of fuel to the customers all the time. All the nozzles of the Dispensing units should be checked for the correct delivery on daily basis before commencement of sales. The quantity used for testing to be recorded in the stock register. In case of variation in delivery of dispensing units, the same should be immediately notified to Weights & Measures Department, as also to the Controlling Oil Company Office. Re-stamping will be done by the Weights & Measures Department. Until re-stamping is carried out and delivery is set right, the dealer should not operate the Dispensing unit.
- e) Dealer to carry out visual checks on a daily basis for any leaks in pump, delivery hose/nozzle. Such leaks, if any, must immediately be reported to the Oil Company for rectification.
- f) Dealer to ensure that after each delivery from the pump, the pump meter is brought back to zero before commencing the next delivery. A message to this effect should be displayed on each pump unit and the 'Zero' setting should be shown to the customer, before start of each delivery by the pump attendant.

### **1.5 OBSERVANCE OF STATUTORY AND OTHER REGULATIONS**

- i) All statutory rules and regulations in connection with storage and sale of petroleum products must be followed and implemented, such as maintaining stock / sales & density records, display of daily stock, price board etc.
- ii) To observe rules and regulations of the Petroleum & Explosives Standards Organisation.

- iii) Dealer will not buy, sell or exchange petroleum products with any other dealer or anybody other than the principal Oil Company.
- iv) Dealer to maintain files wherein all Inspection Reports, correspondence received from Oil Company from time to time, Test Reports, copies of Invoices etc be available at the retail outlet for ready reference at all times.
- v) The provisions contained in the Motor Spirit and High Speed Diesel (Prevention of Malpractices in Supply & Distribution) Order issued by the Government of India (or any amendment or revision thereof) and instructions issued by the Oil Company / State Govt authorities etc from time to time shall be strictly adhered to and all concerned records shall be maintained and produced to Inspecting officials on demand
- vi) It is mandatory on the part of the dealers to have calibrated Hydrometers/Thermometers and ASTM Density Conversion Table and any other testing kits / equipments as applicable. These testing kits / equipments shall be maintained in good working condition and made available to inspecting authorities on demand.
- vii) RO dealer shall monitor the movement of the Tank Lorry which is carrying supplies for his RO through VTS using the link provided. In case the dealer observes any deviation, supply location should be informed immediately before accepting the tank lorry. Further action should be taken after recording the observed deviations and instructions of concerned OMC officials.
- viii) In case of automated ROs, dealers will be responsible to ensure that automation is properly working at his RO as these ROs are designed for "No automation, No Operation"(NANO). In case of any malfunctioning, the dealer must report it to the authorized official of OMC immediately and take further action as per the direction of the concerned OMC official.

- ix) It must be ensured that there is a power backup facility, i.e. generator or UPS to take care of power failure. This is important for proper functioning of automated ROs, electronic totaliser, etc.

#### **1.6 CUSTOMER SERVICES AND GENERAL AMENITIES TO BE PROVIDED BY THE DEALER**

- i) Retail Outlet Dealer should ensure quality product at correct quantity and correct price.
- ii) Retail Outlet dealer would provide Air facility to customers during the operating hours of the Outlet.
- iii) Retail outlet Dealer should ensure prompt service and courteous behaviour at all times.
- iv) A suggestion/complaint book must be maintained and made readily available to customers on demand. A message indicating availability of this book must be prominently displayed.
- v) The working hours of the retail outlet should be prominently displayed. Holiday notices should be displayed well in time.
- vi) RO Dealer to ensure availability of clean Toilet in the RO premises.
- vii) RO Dealer should ensure availability of telephone facilities in the RO premises.
- viii) Dealer must prominently display his Name/Tel. No. and also Name/Tel. No. of the Oil Company personnel who are to be contacted by the customer in case of complaints. In addition, the dealer would display messages on the Customer Service Cell and posters on Customer Education as provided by the respective Oil Companies from time to time.

- ix) First Aid Box be made available by the dealer, with necessary valid medicinal aids.
  
- x) Dealer to ensure that the outlet is kept adequately illuminated and clean as per housekeeping standards laid down by the Oil Companies. All required facilities should be adequate.
  
- x) Safety equipments at Retail Outlet should be provided as per the statutory requirements and maintained in good working condition. Dealer to be trained in operating the equipments and trained staff should be available to handle and operate the same.

**INDUSTRY GUIDELINES FOR SAMPLE COLLECTION AND TESTING**

**2.1 PREAMBLE**

The basic objective of the 3-tier sampling procedure is to ensure that MS and HSD sold by retail outlets is the same product, which has been supplied to them by their principal oil companies.

To achieve this objective, results of the samples will be interpreted on the basis of reproducibility/permissible limits for which sampling procedure has to be followed both at supply locations as well as at retail outlets.

The implementation of this sampling procedure will also help in establishing whether the malpractice / adulteration, if any, has taken place at the retail outlet, during transportation or at supply locations.

**2.2 DRAWAL OF SAMPLES**

Samples will be required to be drawn at:

- 1) Supply locations
- 2) Retail outlets

**2.2.1 AT SUPPLY LOCATIONS :**

- (i) Every day, Supply locations should collect minimum of 4 X 1 litre samples of MS and 2 X 1 litre samples of HSD from the TLF from which the tank lorries are being filled. Industry Quality Control Manual (IQCM) procedures should be followed for sampling.
- (ii) Wherever there is a switchover of storage tank, sample as above will be taken again from TLF, after giving sufficient time for flushing out earlier product in the pipeline.

- (iii) Details of samples, as per **Annexure 2** shall be pasted on the sample container and the samples will be retained for a minimum period of 30 days as per IQCM. The samples should have clearly identifiable sample numbers for these to be traced easily. The storage locations should also keep a record of these samples.
- (iv) Supply Locations should give the details of Density @ 15 Degree C, TLF point and the storage tank No. from which TL is filled, and time of release of tank lorry on the Delivery/Invoice challan.

### **2.2.2 AT RETAIL OUTLETS**

At the Retail Outlets, samples are required to be drawn by the following:

2.2.2.1 By the dealer / his representative on receipt of each supply through tank lorries at the retail outlet.

2.2.2.2 Persons / agencies authorized to draw samples are :

Oil Company officials

Mobile labs

Agencies authorized by oil companies

Any other authority statutorily empowered to do so

Besides random sampling, oil companies are enjoined to also draw samples in case of stock variation beyond permissible limits, density failure, filter paper test failure and also during special drives/campaigns or in case of specific complaint against the retail outlets.

Samples are to be drawn from nozzle (s) of the dispensing units from all tanks of both MS and HSD by the persons / agencies as referred above.

All the inspecting officials shall bring their own Aluminum containers with wooden boxes for drawing samples. They will pay for the cost of samples collected by them and obtain cash memo for the same.

### **2.3 DRAWAL OF SAMPLES BY DEALER / HIS REPRESENTATIVE:**

On receipt of tank lorry, dealer/his representative should follow the steps as detailed in 1.2 above.

If density check is found to be within permissible limits as mentioned in para 1.2, the dealer is required to follow the procedure for drawal of sample as given below:

Dealer / his representative should draw 2 x 1 litres of MS and / or 1 x 1 liters of HSD bottom samples (Composite samples proportionate to the quantity of the product received in each compartment after removing a minimum of 20 liters from each compartment. Before drawing the samples the empty Aluminum containers should be rinsed with the same product from the tank lorry, seal and label the same as per details given in **Annexure 3**, before unloading the tank lorry. The sample label should be jointly signed by dealer / his representative and tank lorry driver. The dealer should retain this sample as retained tank lorry sample.

The dealer should retain the tank lorry sample in respect of the last two loads for each storage tank of MS and HSD.

The transporter will have the option to obtain another set of the same sample (2 x 1 liters MS and / or 1 x 1 liter HSD- duly labeled and jointly signed by the dealer/his representative and tank lorry driver). On such request from the transporter, the dealer should hand over this set of samples, against payment to the tank lorry driver / representative of the transporter for retention by the transporter. The transporter/ his driver will also have to pay a deposit of Rs. 300/- per sample container to the dealer. In such cases, the transporter will have to make his own arrangements for safe keeping and custody of his retention sample.

Where there is more than one storage tank for a product, the tank number in which the product was decanted should be indicated/ identified on the tank lorry sample container.



Notes: (i) In case the Tank Lorry driver refuses to sign, the Tank Lorry should not be decanted. Dealer to contact supply location/ sales officer.

(ii) In case the dealer notices any unusual deviation by the tank lorry (Time or Route) he will inform the supply location/ sales officer and decant the tank lorry thereafter on getting further instructions.

## **2.4 DRAWAL OF SAMPLES BY OIL COMPANY'S REPRESENTATIVE**

Random sampling at ROs by company officials will take place over and above the MDG samples. Random sampling will be done by the Sales Officer, Inspecting Teams, Senior Level Officers and Mobile Labs. The random sampling will cover at least 5% of the total retail outlet network every month.

In addition, samples should also be drawn in case of density failure, filter paper test failure, stock variation beyond permissible limit, as well as during special drives or during specific complaint against the retail outlet. These samples should be sealed and labeled as per **Annexure 4**.

The procedure to be followed is as under:

2.4.1 **MS** - Oil company representative should collect six samples of 1 litre each from each tank of the RO. Two samples are to be retained by the dealer, two samples at division/territory/regional office and two samples sent to the oil industry marketing laboratory for testing.

It would be the responsibility of the oil company representative drawing the sample to take / arrange action to ensure that the following samples are collected and sent to the oil industry marketing laboratory. Wherever the laboratory is not equipped for the testing of Octane number, then the second sample of each of the following should be sent to the lab where CFR engine is available for Octane number test.

- (i) Two (2x1 litre) samples of each tank drawn by him from the RO
- (ii) Two (2x1 litre) tank lorry samples of last two loads which were drawn and retained by the dealer for each tank (this should

pertain to the tank which is connected to the dispensing unit from which the samples were taken by oil co. representative).

- (iii) Two (2x1 litre) reference samples of the supply location - these samples should be those which are from the same tank from which the supply was made to the RO dealer and tank reference of which was mentioned on the delivery documents covering the supply to the retail outlets. If the RO has more than one tank for MS and the last receipt of each of these tanks were on different days, corresponding reference sample of the supply location for these supplies would have to be sent for testing.

2.4.2 **HSD** - Oil company representative should collect three samples of 1 litre each from each tank of the ROs. One sample is to be retained by the dealer, one sample at division /territory/ regional office and one sample sent to the oil industry marketing laboratory for testing

It would be the responsibility of the oil company representative drawing the sample to ensure that the following samples are collected and sent to the oil industry marketing laboratory for clinical tests.

- (i) One (1x1 litre) sample of each tank drawn by him from the RO
- (ii) One (1x1 litre) tank lorry sample of last two loads which was drawn and retained by the dealer for each tank (this should pertain to the tank which is connected to the dispensing unit from which the samples were taken by oil co. representative).
- (iii) One (1x1 litre) reference sample of the supply location - this sample should be the one which is from the same tank from which the supply was made to the RO dealer and tank reference of which was mentioned on the delivery documents covering the supply to the retail outlets. If the RO has more than one tank for HSD and the last receipt of each of these tanks were on different days, corresponding reference sample of the supply location for these supplies would have to be sent for testing.

### **2.4.3. DRAWAL OF SAMPLES BY JOINT INDUSTRY TEAMS**

Joint industry team members can collect samples from retail outlets irrespective of results of indicative/suggestive tests like density test, stock variation, filter paper etc during joint inspections. These samples should be sealed and labeled as per **Annexure 4** and jointly signed by the dealer/ his representative and the members of the joint industry team who are drawing the samples.

The procedure for drawal and dispatch of samples for testing would be the same as given in para (2.4) above.

It would be the responsibility of the concerned oil company member of the joint industry team or the senior officer of the team in the absence of any member from the concerned oil company to ensure that the samples are collected and sent to the oil industry marketing laboratory. In case of MS samples, wherever the laboratory is not equipped with the testing of octane number, then the second sample should be sent to the lab where CFR engine is available for octane number test.

### **2.4.4. DRAWAL OF SAMPLES BY MOBILE LABORATORIES**

1. Mobile laboratories will draw nozzle samples of MS and HSD from all the tanks at the retail outlets and will carry out clinical tests as applicable for mobile laboratories on these samples. If the sample passes no further action will be taken.
2. If any of the samples fails, the Mobile lab will follow the procedure for drawal and dispatch of samples for testing as explained in para (2.4) above. However, while the 1<sup>st</sup> set of sample will be retained with the dealer and the 2<sup>nd</sup> set sent to the concerned oil company for retention, the third set of sample will also be sent to the concerned oil company for testing and not directly to the lab. The mobile lab will hand over these samples to the concerned oil company representative preferably within the next 5 days. He should also inform the concerned supply

location immediately on telephone, so that depot sample can be retained.

Notes:

- (1) In case the samples at supply location are not available and the same has already been sent for lab testing at an earlier instance, the test report of the relevant sample available at the laboratory be utilized. In case such reports are being hoisted on the web site or available at the supply location then these reports be utilized for comparing the test results of the samples in question.
- (2) All the above samples should reach the laboratories for testing preferably within 10 days of the collection of the samples.
- (3) In case it is found during the inspection that the 'tank lorry retention samples' are not available at the retail outlet and has been sent for testing earlier, the test results of the sample drawn by the inspecting officials should be compared with the results which have been obtained by the laboratory for the 'tank lorry retention sample' sent earlier. For this purpose, a specific noting should be made by the inspecting officer so that this aspect is taken care of by the laboratory. Particulars of the date of dispatch of the "tank lorry retention samples" and the other details of the 'tank lorry retention samples' should be forwarded to the laboratory by the concerned oil company, (by the member or the senior officer of the joint industry team in the absence of member from the concerned oil company).
- (4) Payment for samples collected be made by the inspecting officer to the dealer.

## **2.5 GENERAL PROCEDURE FOR DRAWAL OF SAMPLES:**

- A) All samples should preferably be suitably coded before sending to lab for testing preferably within 10 days of drawal.
- B) Whenever tank lorry samples are not retained / made available by the dealer to the inspecting officials at the time of drawal of sample from the

RO this fact be recorded. The tank lorry sample produced at a later stage would not be considered for testing. In such case, the result of the RO sample will be compared with supply point sample and action if any will be initiated against the dealer only.

- C) If all the sample passes the test, dealer should be intimated in writing and all pertinent retention samples at ROs, Divisions/Territory/Regions, dispatch locations and transporter can be disposed off. All communication irrespective of whether sample passes or fails should be communicated to the dealer preferably within 30 days of drawal of sample.
- D) The Laboratory will test the RO sample, the last Tank Lorry Retention sample (TL1) and the correspondence supply location sample (SL1) and compare the reproducibility/ permissible limits of the test values. In case the RO sample fails and TL1 passes then TL2 and SL2 samples will also be tested. Action against the dealer/transporter would be taken based on the above test results.
- E) In case of sample failure and in the event of request from dealer for testing his retained sample, his sample along with the counter sample retained with the OMC are to be tested at any PSU laboratory of his choice in the same /nearby State or FTL- NOIDA as per guidelines and in the presence of field officer and RO dealer after due verification of the samples. The decision of the competent authority which would be based on the test results of all the 3 samples would be decisive and binding on all. The expenditure incurred for testing of retention samples to be borne by the dealer.
- F) In all situations including the situation explained above, the tests have to be conducted for the supply location sample (if within retention period), RO retention sample and tank lorry sample (if made available by the dealer at the time of inspection) before a decision is taken.
- G) Similarly in case of a request from the Transporter (not in case of a dealer-cum-transporter) for testing his retained sample, the same will be complied with by the oil company. The sample of the transporter retained by the transporter will be tested as per the guidelines, preferably in

presence of the Field Officer, dealer, transporter / representative of the Oil Co. after due verification of the samples.

The test result of this sample will be compared with the corresponding Tank lorry retention sample which was tested earlier and the supply location sample. The decision of the oil company, would be based on the test results of these 3 samples (i.e TT retention sample with the dealer, SL sample and the TT retention sample with the transporter) would be decisive and binding on all. All these samples should be tested in the same lab, and if possible by the same person to ensure repeatability and reproducibility. The expenditure incurred for such testing should be recovered from the transporter.

- H) In case of density/filter paper test failure, clinical test failure by mobile lab, sales and supply of all products will be suspended by the OMC officer after informing the concerned Territory/Divisional/Regional Manager and samples will be drawn and sent for testing on priority basis. Laid down procedure will be followed and appropriate action will be taken based on the outcome of the test results.
- I) The purpose of mentioning time frame for various activities e.g. sending samples to lab preferably within 10 days etc. is to streamline the system and is no way related to quality/result of the product.
- J) Whenever any one agency has detected any irregularity on account of quality and initiated investigation, parallel investigation by way of drawl of samples will not be carried out during pendency of the proceedings.

## **2.6 SAMPLE CONTAINERS TO BE USED**

- A) All samples need to be collected in one litre Aluminium containers with wooden boxes as per the existing norms.
- B) While procurement and positioning of adequate no. of sample containers, random numbered plastic seals, stainless steel ISI marked sealing wires and sealing pliers (free of cost) at retail outlets is the responsibility of the concerned oil company and it is the responsibility of

the Oil Co. representative / mobile laboratory to replace empty standard container in lieu of containers collected from the dealers, it would be the responsibility of the dealers to request the Corporation for the aforesaid materials in time.

NOTE: A corpus of sample containers should be maintained at the supply location for use by the company owned tank lorry when it supplies the product to the RO.

## **2.7 SEALING OF SAMPLING CONTAINERS**

Sealing of the sample containers may be done with ISI marked stainless steel wires.

Both the Aluminium containers and the wooden box should be properly sealed. Random numbered plastic seals, sealing wire, pliers are to be used for sealing of all sample containers. The above material is to be supplied by the respective oil companies free of cost. Oil companies can also put additional seals / holograms.

## **2.8 SAMPLE TAGS**

Sample tags, as per specimen in **Annexure 3** are to be printed and supplied to the retail outlets in sufficient nos. by respective oil companies free of cost.

## **2.9 RETENTION OF SAMPLES**

### **2.9.1 At Supply Locations**

Supply locations are required to keep the supply location retention sample for a minimum period of 30 days. Whenever the reference samples are required from the supply location, two samples of MS would be sent to the Oil Industry Marketing Laboratory. Wherever the laboratory is not equipped with the facility for testing of Octane number, then the second sample should be sent to the nearest Refinery or facility where CFR engine is available for Octane number test only. In case of HSD, one sample would be forwarded to the Oil Industry lab for testing.

### **2.9.2 At Retail Outlets:**

1. Dealer shall always retain the corresponding tank lorry samples of last two loads of the respective underground tanks. Wherever there is more than one tank for a product, the tank number in which the product was decanted should be indicated on the tank lorry retention sample container.
2. The dealer, from whom the sample is drawn by the representative of the Oil Company for testing should retain his sample till such time the testing and subsequent procedures are completed.

### **2.9.3. At Divisional / Territory / Regional Office of the Oil Company**

The Divisional Office should retain its sample (RO sample) till such time testing and subsequent procedures are completed.

### **2.9.4. Transporters**

The transporter, in case they opt for keeping the tank lorry retention sample pertaining to any delivery the same should be retained till such time the testing and subsequent procedures are completed.

## **2.10 SAMPLE TESTING AND RESULTS:**

The test to be carried out for MS/HSD samples drawn from retail outlets are given in **Annexure 5**.

All samples should reach the lab preferably within 10 days from the date of drawl and lab should test the samples preferably within the next 15 days. Results are to be communicated to the dealer by the concerned Oil Company preferably within the next 5 days from receipt of test reports.



Generally, the above procedure should be strictly followed and the time frame as stipulated above to be adhered to. However, during special drives, in view of the large number of samples, the sample should reach preferably within 15 days after drawl and the testing should be completed preferably within 30 days of the receipt of the samples.

All test reports are to be signed by authorized officers only.

Interpretation of results- Samples are deemed to have failed if the test results of sample under scrutiny and the reference sample do not fall under the reproducibility/ permissible limit of test method.

The tests to be conducted on MS / HSD (as given in **Annexure 5**) will conform to the latest IS: 2796 specifications of Motor Spirit and IS: 1460 specifications of High Speed Diesel, and amendments thereupon from time to time.

The tests will be carried out as per standard test methods as given in the Bureau of Indian Standard Specification, IS: 1448:P or equivalent methods of tests for petroleum products and Standards applicable at the time of inspection.

The test results on the sample taken from the Retail Outlet and Tank Lorry should be within the reproducibility limits of the test method when compared to the reference sample at dispatching location.

Reference for density would, however, be that recorded in the dispatch document upto decanting of Tank Lorry at the Retail Outlet. Thereafter, for samples collected from Retail Outlet, reference density would be density of the composite product in Storage tank, recorded after receipt of product after dispensing at least 50 liters of product through the pump.

**HANDLING OF MS/HSD/SKO AT COMPANY'S STORAGE POINTS AND DUTIES OF OIL COMPANIES**

It will be the responsibility of Oil Companies to supply product of correct quality & quantity and provide excellent customer service.

**3.1 QUALITY / QUANTITY CHECKS**

- a) All storage points shall carry out quality control checks as laid down in the Industry Quality Control Manual (IQCM) at every stage of product handling to ensure that the product released meets the standard specifications.
- b) Water dips shall be taken to check presence of water in storage tanks and remedial measures be taken wherever necessary.
- c) Quality Control checks shall be recorded in the standard quality control formats in line with the IQCM.
- d) SKO will be released only after conducting visual, appearance, colour, density & flash point checks as per norms given in the IQCM.
- e) Samples shall be drawn and retained for minimum 30 days from tank lorries/tank wagon filling points everyday in the morning and at the time of switch over of tanks in line with the Quality Control Manual. This includes Refinery Dispatch Units supplying directly to ROs. Each such sample would be given a particular number / batch number which would also be mentioned in the delivery documents.
- f) It is the responsibility of the oil companies to market ethanol to be blended correctly as per the Govt. guidelines. It is also the responsibility of the dealer to ensure that the right quality of ethanol blended product is sold in the market.

The locations undertaking blending of Ethanol in MS shall blend the Ethanol as per the prescribed limits. The presence of Ethanol shall be checked by the locations before release of the product.

- g) All locations will ensure suitable Blue Colour Dyeing of Kerosene as per the prescribed dosage for SKO to be released under PDS.
- h) Visual appearance, colour, Density from the tank lorry fill point shall be checked, every two hours and whenever there is a switch over of tanks, records should be maintained. Density at 15 Degree C so observed shall be recorded in the delivery challan along with the Tank No. for all the tank lorries filled.
- i) Only tank lorries having a valid Calibration Certification and Explosives License from the Weights & Measures Deptt. and PESO respectively should be accepted for filling.
- j) Tank lorries to be checked for fitness as per (i) above, leaks to be checked after filling and before dispatch of tank lorries. Mixed loads shall not be permitted in tank lorries having common manifold. After the tank lorries are filled, visual checks to be carried out as per IQCM.
- k) In the event of any malpractices being detected in tank lorries, appropriate action shall be taken in line with the Industry Transport Discipline Guidelines.
- l) Transportation of PDS SKO should be in separate Tank Lorry and those used for transporting MS or HSD should not be used for transporting PDS SKO. The Tank Lorries used for transporting PDS SKO should be painted in Blue colour so that they are easily identifiable.

### **3.2 SEALING / GPS**

The tank lorries shall be sealed / locked properly as per Industry practice on Mechanical / Electronic sealing / locking of tank lorries. Seal / Security lock numbers should be recorded in the Invoices.

The supply location will be responsible for the smooth operation of GPS and no filling of the Tank Lorry would be undertaken if the VTS is not installed or it is installed but found not to be working in the prescribed manner.

The deviation reports will be generated by the system and automatic alerts will be sent to the officers monitoring VTS. The deviation reports/alerts will be viewed by officers at the supply locations as well as by the dealer. The deviation reports/alerts will cover time and route deviations by tank lorries and these have to be immediately investigated.

Dealers/ their representatives will be allowed to witness the respective Tank Lorry filing at the supply location in case of ex-MI supplies. The dealers may accompany the tank lorry to the RO. The RO also should monitor the movement of Tank lorry which is carrying supplies meant for it.

### **3.3 TRAINING OF DEALER / DEALER'S STAFF**

Oil companies should endeavour to continuously make efforts at training RO dealers and their staff on various aspects of RO Operation, including safe handling of petroleum products, customer service and courteous behaviour.

## CHAPTER 4

### MAINTENANCE OF COMPANY EQUIPMENTS AT RETAIL OUTLETS

#### 4.1 DISPENSING UNITS – STANDARDISATION OF FITTER'S / CHARGEMAN'S MAINTENANCE REPORT FORMAT

'Maintenance Job Report' Performa, to be printed in Hindi/English, for the Dispensing Units and other equipments provided at the Retail Outlets by the Oil Company is attached as **Annexure 6**.

#### 4.2 MAINTENANCE OF PUMPS AND OTHER EQUIPMENTS

##### a) Equipments belonging to the Oil Company

While, the Oil Company shall arrange to attend breakdown maintenance of the Dispensing Pumps and other equipments belonging to the Oil Company, it shall be the responsibility of the dealer to ensure that these equipments are handled in proper manner and day to day upkeep are carried out in accordance with the maintenance manual / instructions. In case of any breakdown, the same shall promptly be informed by the dealer to the Oil Company.

##### b) Equipments belonging to Dealer

The dealer shall maintain all equipments belonging to him in good working condition at all times in accordance with the maintenance manual / instructions.

### **4.3 RECTIFICATION OF DEFECTS IN DISPENSING UNITS / PIPELINE / TANKS**

#### **a) Dispensing Units**

##### **Calibration –**

If the pump is delivering short / excess, the Company's Maintenance Representative / Dealer should immediately arrange for recalibration with the help of the Weights & Measures Inspector.

In case the Weights & Measures Department seal is found to be broken, the Oil Company's Maintenance Representative shall inform the concerned Company Official for further action and incorporate the same in the Pump maintenance Report which should be duly signed by the dealer as well.

#### **b) Pipeline**

In case of detection of minor leaks in the pipeline, the Company's Maintenance Representative should arrange to rectify the defect/leaks.

In case of major leaks, he should inform his headquarter for getting necessary instructions. In the meantime, he should advise the dealer to suspend the sales, note down the totaliser reading and underground tank's dip and record it on the job report and obtain Dealer's signature on his job report.

#### **c) Tanks**

In case of seepage of water into the tank, Company's Maintenance Representative should check all tank openings and should arrange to take corrective action by replacing necessary packings, gaskets and replace the missing caps, if any.

In case of suspected loss of product due to leakage in tank, the dealer should report the same to the Controlling Office of the Company.

In case of Ethanol blended Motor Spirit, check the Ethanol content after removal of the water from the tank before its release. In case the Ethanol content is not in the desired range then stop sales and inform controlling office. Test method for Ethanol is as per **Annexure 7**

#### **4.4 DETECTION OF PRESENCE OF WATER IN THE UNDERGROUND TANK**

The Company's Maintenance Representative shall check the underground tanks for presence of water by carrying out water dip check on every visit to each retail outlet and in case water is detected, steps shall be taken to remove the water.

**TYPE OF IRREGULARITIES AT RETAIL OUTLETS (MS / HSD) AND SKO / LDO DEALERSHIPS**

**5.1 MS/HSD**

**5.1.1 ADULTERATION OF PRODUCT**

Definition :

“Adulteration” means the introduction of any foreign substance into Motor Spirit / High Speed Diesel illegally or unauthorizedly with the result that the product does not conform to the requirements of Bureau of Indian Standards specification number IS:2796 and IS:1460 for Motor Spirit and High Speed Diesel respectively and amendments thereon, and / or

If the observations on the sample under scrutiny and the reference sample do not fall within reproducibility / permissible limits of the test method for which the samples are examined, and / or

Any other requirement for the purpose to identify adulteration, issued by the Competent Authority from time to time.

**Handling of adulterated product**

In case of proven adulteration, the product (MS/HSD) will be sent to the nearest refinery as per the directive of MOP & NG’s letter (P-21027/29/2001-Dist dated 21-12-2002).

In case of proven adulteration at the RO, the entire expenses towards transportation, pumping of product, tank cleaning, incidental charges, local levies, etc. will be recovered from the dealer. The dealer will be paid an amount equivalent to the cost of Furnace Oil and for the actual quantity received at the Refinery end.



In case of proven adulteration by the transport contractor / crew, in addition to the action as per the TDG, all the expenses would be recovered from the transport contractor. The loss on account of product down gradation and transit loss, if any would also be recovered from the transport contractor. The dealer will receive full value of the product.

### **5.1.2 SHORT DELIVERY OF PRODUCTS**

#### **a) With Weights & Measures Department Seals intact**

Sales through the concerned dispensing unit to be suspended forthwith and recalibration and re-stamping to be done before recommencement of sales.

#### **b) With Weights & Measures department Seals tampered**

W&M department seals are put on Metering unit and Totaliser unit with the help of a sealing wire and a lead seal which is embossed by W&M inspector.

The seal would be deemed tampered in the following cases also:

1. Seal itself is missing
2. Different seal has been put other than embossed by W&M inspector
3. Sealing wire is broken and not in one piece.

In addition other situations which can lead to manipulation of delivery/quantity / totaliser may also be treated as tampering.

Penal action to be taken even if the delivery is found to be correct or excess.

In case of this irregularity sales from the concerned dispensing unit to be suspended, DU sealed. Samples to be drawn of all the products and sent to lab for testing.

### **5.1.3 TOTALISER SEALS FOUND TAMPERED WITH**

Totaliser seals will also be construed as tampered if it allows manipulation of Totaliser reading; deliberately making the totaliser non functional or not reporting to the OMC if totaliser is not working.

In case of this irregularity sales from the concerned dispensing unit to be suspended & DU sealed. Samples to be drawn of all the products and send to lab for testing.

### **5.1.4 ADDITIONAL / UNAUTHORISED FITTINGS / GEARS FOUND IN DISPENSING UNITS /TAMPERING WITH DISPENSING UNIT**

Any mechanism / fittings / gear found fitted in the dispensing unit with the intention of manipulating the delivery.

Removal, replacement / manipulation of any part of the Dispensing Unit including microprocessor chip / electronic parts/ OEM software will be deemed as tampering of the dispensing unit.

In case of this irregularity sales from the concerned dispensing unit to be suspended, DU sealed. Samples to be drawn of all the products and send to lab for testing.

### **5.1.5 UNAUTHORISED STORAGE FACILITIES/ INTER CONNECTION**

A storage facility within the licensed area of the retail outlet not approved by the Company and / or a storage facility outside the licensed premises with interconnection in to the retail outlet premises. Interconnection means unauthorized connection between tanks within the licensed premises.

**5.1.6 UNAUTHORISED PURCHASES / SALES OF MS/ HSD OR ANY OTHER PRODUCT WHICH COULD BE USED AS A SUBSTITUTE FOR THESE PRODUCTS**

Dealers should purchase only those petroleum products authorized by the principle Oil Company for sale from the Retail Outlet. Purchase of the products from sources other than those authorized by the oil company would be treated as unauthorized purchase.

Any sales of MS / HSD other than through the dispensing units of that RO would be treated as unauthorized sales.

**5.1.7 TANK LORRY CARRYING UNAUTHORISED PRODUCT FOUND DECANTING PRODUCT INTO THE RETAIL OUTLET TANKS**

Tank lorry carrying unauthorized product found decanting product into the Retail Outlet tank.

**5.1.8 REFUSAL BY THE DEALER TO ALLOW DRAWAL OF SAMPLE OR CARRY OUT INSPECTION.**

Refusal / obstruction / creating circumstances disabling the process of drawl of samples / carrying out inspections.

**5.1.9 NON-AVAILABILITY OF REFERENCE DENSITY AT THE TIME OF INSPECTION**

The dealer is required to check and record morning density on daily basis. This has to be carried out latest by 10 AM every day. Similarly whenever fresh loads are received the dealer is expected to check and record density of composite product in the RO tank after decantation. Therefore non availability of the following density at the time of inspection would be treated as “non-availability of reference density”:

- (a) If inspection is carried out before 10 AM, density as recorded of the previous morning or density of composite product if load was received the previous day.
- (b) If inspection is carried out after 10 AM, but before receipt of any load on that date, the density as recorded on the morning of that day.
- (c) If inspection is carried out after 10 AM, but after receipt of any load on that date, the density as recorded of the composite product after unloading.

In case of non-availability of reference density at the time of inspection, sales and supplies of all the products to be suspended immediately. Samples of all products to be drawn and sent to lab for testing. If the sample passes then penal action specified for this irregularity to be taken. If sample fails, penal action in line with the irregularity of adulteration to be taken.

#### **5.1.10 SELLING OF NORMAL MS/HSD AS BRANDED FUEL**

Intentional sales of Normal MS/HSD as Branded fuel.

#### **5.1.11 STOCK VARIATION OF MS/HSD (Beyond Permissible limits) FUEL**

Stock reconciliation should be carried out and variation, if any, established after taking into account the normal operational variation of 4 % of tank stock and after considering the following factors :

- i) Evaporation/handling losses in MS as follows:

0.75% on quantity sold upto an annual average of 600 KLs

0.60% on additional quantity beyond an annual average of 600 KLs.

ii) Handling losses in HSD as follows :

0.25% on quantity sold upto an annual average of 600 KLs

0.20% on additional quantity beyond an annual average of 600 KLs

iii) Shrinkage losses and Temperature variation losses on MS and HSD to be taken into account (only in those cases/locations where and when the Shrinkage Allowance / TVA is applicable)

**(Annexure – 8, 9, 10)**

In case of positive stock variation beyond permissible limits, samples will be drawn and sent to laboratory for testing. Sales and supplies of all products to be suspended immediately. Study to be carried out to identify the reasons for stock variation. If the sample passes but some other irregularity like unauthorized purchase etc. is established action to be taken accordingly. However, if the sample fails, action in line with that of adulteration will be initiated.

In case of Negative stock variation and in the absence of any other irregularity the permissible limit be considered up to 4% as specified above and samples will be drawn and sent for testing. In case the negative stock variation is beyond permissible limits sales & supplies to the retail outlet will continue during the investigation period. Explanation of the dealer to be called. Supply to be immediately suspended in case explanation of the dealer not found satisfactory.

#### **5.1.12 NON-MAINTENANCE OF SPECIFIED RECORDS**

Dealers are required to maintain various records including the following. Non-maintenance of below mentioned records will be treated as an irregularity.

i. Daily sales register of OMC & Density register for current and previous financial years.

- ii. Pump maintenance records for current and previous financial years.
- iii. Inspection record for previous five years
- iv. Purchase Invoices & sales bills for the current and previous financial years
- v. Selling license, Explosives License and such other licenses which are needed for continued operation of the RO
- vi. Any other record as specified by OMCs in writing.

**5.1.13 OVERCHARGING IN AUTHORISED SELLING PRICES OF MS/HSD/CNG/AUTO LPG.**

Overcharging in authorized selling prices of MS/HSD/CNG/AUTO LPG.

**5.1.14 NON PROVISION OF FACILITIES** Like Air with calibrated Air Gauge, Clean Toilet, Telephone, First-Aid BOX with medicines not beyond expiry dates at RO premises.

**5.1.15 NON DISPLAY OF AUTHORISED RETAIL SELLING PRICES OF MS / HSD / CNG / AUTO LPG**

Dealers are required to exhibit at the retail outlet the retail selling prices of petroleum products sold from the RO.

**5.1.16 DEALER OPERATING THE AUTOMATED RO IN MANUAL MODE WITHOUT AUTHORIZATION.**

Where automation has been completed at a Retail outlet and if any dispensing unit there has been found to be operating in manual mode without proper authorization from the competent authority it will be treated under this irregularity.

### **5.1.17 MISCELLANEOUS**

Non display of density, opening stock of the day, sticker ensuring Zero before delivery on dispensing unit, name of product on each nozzle of MPD, contact details of authorized persons to be contacted in case of Complaint / Grievance / Emergency.

Non maintenance of complaint book or not providing the same when demanded by the customer.

Poor housekeeping.

Driveway Salesmen at the ROs not in uniform/wearing badges.

#### **NOTES:**

- i) Dealer is required to retain Tank Lorry samples of last two loads as per 3-tier sampling procedure. In case such Tank Lorry retention samples are found not available at the time of inspection, the dealer has to be instructed to follow the procedure as the same practice is suggested to safeguard the interests of innocent dealers.
- ii) While drawing samples from a MS tank through the nozzle of the dispensing unit connected to that tank, it should be ensured that the MS sample is drawn only through the nozzle delivering non-2T premixed MS. In case, all nozzles connected to a MS tank are delivering only 2T-premixed MS, then in such case necessary precaution is to be taken to ensure that the MS sample drawn is free from 2T Oil.

**DUTIES OF SKO DEALERS : KEROSENE SUPPLIES UNDER PUBLIC DISTRIBUTION SYSTEM**

Oil Industry provides SKO under the Public Distribution System. SKO dealers also known as the wholesale dealers are appointed by the Oil Companies after following the due Dealer Selection Process. The Retailers (Ration shops) are appointed by the respective State Govts. The Oil Company provides PDS Kerosene ex-their Depots / Installations and the dealers uplift the product. In other words, the responsibility of transporting the product from the Oil Company Depot onwards lies with the dealers under the guidance / supervision of the respective State Govts. In few cases like Hilly areas etc. the system of delivered supply of SKO also exist.

1. SKO dealers shall sell, distribute or supply blue dyed Kerosene to persons for whom the supplies are meant for.
2. SKO dealers having stocks of Kerosene, shall not, unless otherwise directed by the Govt. or Oil Company, refuse to sell, distribute or supply Kerosene to any consumer on any working day during working hours.
3. SKO dealers shall not keep their business premises, including the place of storage, closed during working hours on any working day without the prior written permission of the Oil Company.
4. SKO dealer shall not sell, distribute or supply Kerosene at a higher price than that fixed by the Govt. or the Oil Company.
5. Every dealer shall take all reasonable steps to ensure that adequate stocks of Kerosene are available at the business premises including the place of storage at all times.
6. Every dealer shall prominently display at the place of business, including the place of storage, at a conspicuous place, a stock-cum-price board.
7. Every dealer shall maintain a proper account of daily purchase, sale and stock of Kerosene at the business premises/Tank Lorry every day.

Oil Company officials shall inspect these dealerships and if any irregularity is noticed, action is taken against the erring dealers as detailed under para 9.10 of this document.



## **MOBILE LABORATORY**

### **7.1 INTRODUCTION**

The objective of deploying Mobile Labs is to assess the quality of MS / HSD and Lube samples at Retail outlets by surprise checks.

### **7.2 DEPLOYMENT**

The programme for the deployment of the Mobile Labs will be drawn by the respective SLC who will also coordinate with other Oil Companies to nominate Officers for joint industry team inspections with Mobile Labs.

The Mobile Lab shall operate on behalf of the Oil Industry and hence will carry the logo of all the three Oil Companies. Individual Oil Companies can also operate Mobile Labs for inspection of their retail outlets.

### **7.3 INSPECTION AT RETAIL OUTLETS**

- a) MS/HSD samples are to be drawn from the dispensing units in the premises of the retail outlets.

#### **7.3.1 TERMS OF PAYMENT**

Payment to be made to Retail Outlets for the quantity of samples consumed for testing. In case sample fails, the cost of samples retained also be paid to Retail Outlets. Cash Receipts should be preserved.

### **7.4 TESTING OF SAMPLES**

#### **a) MS / HSD samples**

The samples shall be subjected to clinical tests including density as mentioned in the MS/HSD Control Order. Tests to be carried out are :

MS – Appearance, colour (\*Visual), Density at 15 C, Distillation, HSD – Appearance, Colour (Visual), Density at 15 C, Distillation, KV at 40 C.\_\_\_\_

#### **NOTE**

- i) Clinical tests are to be conducted irrespective of the Density test results. In case the product fails either in Density or any parameter of clinical tests, action to be taken by the Oil Company for established adulteration.
- ii) Sales and supplies are to be suspended by Mobile Lab in the event of failure of sample in Lab test.
- iii) SLC and concerned Oil Company to be advised.

#### **7.5 SAMPLING PROCEDURE**

The procedure for drawal of samples and the container to be used for sampling would be as enumerated under **Chapter – 2** (Chapter on 3-tier sampling procedure)

**SAMPLE TAG** - All the sample particulars shall be recorded as per specimen **Annexure 11.**

#### **7.6 CLINICAL TESTS**

##### **TEST METHOD**

**IS : 1448**

##### **Motor Spirit : Tests**

- |    |                               |        |
|----|-------------------------------|--------|
| 1) | Appearance                    | Visual |
| 2) | Colour                        | Visual |
| 3) | Density @ 15 Degree C         | P – 16 |
| 4) | Distillation                  | P – 18 |
|    | IBP Degree C                  |        |
|    | Recovery upto 70 Degree C % V |        |

Recovery upto 100 Degree C % V  
Recovery upto 150 Degree C % V  
Final Boiling Point Degree C  
Residue, % V

### **High Speed Diesel**

1)	Appearance	Visual
2)	Colour	Visual
3)	Density @ 15 Degree C	P-16
4)	Kinematic Viscosity cSt at 40 Degree C	P-25
5)	Distillation, recovery up to 360 Deg C	P-18

The above mentioned tests will be carried out as per standard Test methods as given in the Bureau of Indian Standard Specification, IS: 1448 : P or equivalent – methods for respective tests and limits apply as per the relevant product specification.

If the product meets specification in respect of above tests, all the balance samples collected shall be returned to the Retail outlet. In case the product fails to meet specification, the SLC and the concerned Oil Company should be immediately informed. They should arrange for collection and testing of related reference samples which would be in line with provisions contained in **Chapter – 2**.

#### **7.6.1 CERTIFICATION**

- a. The Test Reports for MS/HSD shall be made as per **Annexure 12 /12(a) and 13/13(a)** respectively. Five copies of the Test Reports shall be made which will be distributed as follows :
  - i) To the Retail Outlet
  - ii) To the concerned Divisional / Territory / Regional Office of the OMCs.
  - iii) State Level Co-ordinator
  - iv) To the concerned Technical / Quality Control Department of the OMCs

- v) To Mobile Laboratory.
  
  - b. If the sample fails, the meter reading of all the dispensing units and the dip readings of the Tank(s) of the concerned product shall be recorded in the Report (**Annexure 12 or 13** as applicable) and the dealer shall be advised to suspend the sales of the concerned product.
  
  - c. The above instruction shall be recorded under the "Remark" column of the Test Report and the Dealer's signature with seal shall be obtained on all copies of the Test Report.
  
  - d. The Mobile Lab Officer shall inform the State Level Coordinator immediately regarding failure of sample and action taken.
- 7.6.2** i) No corrections shall be made either in the Record Book or the Laboratory Test Report on entry of the Test results already made.
- ii) All the Test Reports should be serially numbered.

**8. Action to be taken by OMC under the Marketing Discipline Guidelines**

**8.1** All irregularities (mentioned in chapter – 5) are classified into three categories, i.e. Critical, Major and Minor.

**8.2 Critical Irregularities:** The following irregularities are classified as critical irregularities:

- i. Adulteration of MS/HSD (5.1.1)
- ii. Seals of the metering unit found tampered in the dispensing pumps.{5.1.2 (b)}
- iii. Totalizer seal of dispensing unit tampered or deliberately making the totalizer non functional or not reporting to the company if totalizer is not working. (5.1.3 read with 5.1.2)
- iv. Additional/Unauthorized fittings and gears inside the dispensing units/tampering with dispensing units. (5.1.4)
- v. Unauthorized storage facilities (5.1.5)
- vi. Unauthorized purchase / sales of products. (5.1.6)
- vii. Tank lorry carrying unauthorized product found under decantation at the RO (5.1.7)

**Action:** Termination at the FIRST instance will be imposed for the above irregularities.

**8.3 Major Irregularities:** The following irregularities are classified as major irregularities:

- i. Refusal by the dealer to allow drawl of samples /carry out inspections. (5.1.8)
- ii. Non availability of reference density at the time of inspection. (5.1.9)
- iii. Selling of normal MS/HSD as branded fuels.(5.1.10)
- iv. Stock variation beyond permissible limits but sample passing quality tests. ((5.1.11)
- v. Non maintenance of records since last inspection. (5.1.12)
- vi. Overcharging of MS/HSD/CNG/ Auto LPG(5.1.13)

- vii. Dealer operating the automated RO in manual mode without authorization. (5.1.16)

**Action: Except in case of (iii)** Suspension of sales and supplies for 15 days for the first irregularity, 30 days for the second irregularity, and a third offence would lead to termination of the dealership.

**Action in case of (iii) above would be as under:-**

In the first instance OMC would impose a penalty of recovery of differential price since last inspection. Termination will be the action in case of 2<sup>nd</sup> instance.

**8.4 Minor Irregularities:** The following irregularities are classified as minor irregularities:

- i. Short delivery with Weights & Measures Departments' seals intact where the dealer has not informed the OMC of this defect. {5.1.2(a)}
- ii. Non maintenance of specified records where records from last inspection are maintained but prior records are not available. (5.1.12)
- iii. Non provision of facilities like air, clean Toilet, Telephone and first aid box. (5.1.14)
- iv. Miscellaneous.
  - a) Non display of authorized Retail Selling prices of MS / HSD / CNG / AUTO LPG. (5.1.15)
  - b) Non display of density, opening stock of the day, sticker ensuring Zero before delivery on dispensing unit, name of product on each nozzle of MPD, contact details of authorized persons to be contacted in case of Complaint / Grievance / Emergency. (5.1.17)
  - c) Non maintenance of complaint book or not providing the same when demanded by the customer. (5.1.17)
  - d) Poor housekeeping. (5.1.17)
  - e) Driveway Salesmen at the ROs not in uniform/wearing badges. (5.1.17)

(One or more irregularity under the above category a, b, c, d or e will be considered as one irregularity only for the purpose of taking action).

**Action:** (except in case of (i) above): -Warning-cum-guidance letter in the first instance, Rs. 10000/- per irregularity on second instance and Rs. 25000/- per irregularity on third instance onwards.

**Action in case of (i) above would be as under:-**

First instance: warning letter to be issued

Second instance within one year of 1<sup>st</sup> instance: Rs.10000/- per nozzle found delivering short.

Third and subsequent instances within one year of 1<sup>st</sup> instance: Rs. 25000/- per nozzle found delivering short.

**8.5.1** The above are general guidelines and the actions prescribed in MDG 2012 are minimum. The competent Authority of the concerned Oil Company can however take appropriate higher action against the erring dealer, if deemed necessary including termination in the first or any instance in line with the provisions of the Agreement.

**8.5.2** All cases of irregularities needs to be established before any action is taken against a dealer.

**8.5.3** In case, two or more irregularities are detected at the same time at the same RO,

- a. Each of the irregularities should be accounted as an instance against the respective class of irregularity.
- b. Suitable action will be taken for that specific irregularity and also for that specific instance.
- c. Suitable action will be taken for each of the irregularity thereby giving a compounding effect.

**8.5.4** In case of irregularities not specifically mentioned/covered above, the competent/appropriate authority of the concerned Oil Company will take suitable action after enquiry and in accordance with the principles of natural justice.

**8.5.5** The cycle of calculating second and third instance shall be five years starting from the date of first irregularity. In other words if an irregularity is established as on date, records of previous 5 year period from this date will be examined to determine whether the present irregularity is the first, second or the third instance of irregularity. Irregularities under the previous MDG within the 5 years period will be counted as instances.

**8.5.6** In respect of all cases of irregularities, a show cause notice, within 30 days from the date of inspection will be issued to the dealer indicating all the irregularities. However, in case samples of MS/HSD were drawn during inspection then the show cause notice will be issued within 30 days of test results. The show cause notice should be issued along with all reports and other documents, etc. which forms the basis of the notice.

**8.5.7** The dealer would have a period of 15 days to reply from the date of receipt of show cause notice.

**8.5.8** Upon receipt of the reply to the show cause notice, the authorized officer of the OMC will review the charges leveled and the reply received and pass a speaking order preferably within a period of 45 days from the receipt of the reply. The speaking order shall indicate complete details of the irregularities committed the reply of the dealer and detailed reasons as to why the reply is acceptable / not acceptable to the official.



- 8.6** In case of Critical irregularities leading to termination, the Head of the State office/Regional office/Zonal office of the concerned OMC or their nominee before recommending / approving the termination of dealership will provide a personal hearing to the signatories to the dealership or their nominee(s). However, if signatories to the dealership or their nominee (s) fail to attend the hearing on an appointed date, one more chance will be given and after that the case may be processed ex party based on available facts.
- 8.7** In the case of all critical major and minor offences committed by the RO dealers under the Marketing Discipline Guidelines, other than the offences where the sales and supplies are to be stopped, sales and supplies to the RO will continue during the investigation period upto the time the appeal is disposed off.

Under existing laws, Control Orders etc., various authorities, Acts / Rules of Central Government/State Government – in addition to Oil Company Officers – are empowered to carry out checks of the dealership for determining and securing compliance with such laws/Control Order. If any “malpractice or irregularity” is established by such authorities after checking, the same would also be taken as a “malpractice or irregularity” under these guidelines and prescribed action would be taken by the Oil Company, on receipt of advice from such authority.

In cases of action taken for some of Major / Minor irregularities where there is only fine and no suspension of sales and supplies involved, such fine should be paid by the concerned dealers within a period of 30 days from the date of notice by the company. If not paid within this period, the action of suspension of sales and supplies would be taken from the 31<sup>st</sup> day for a period of 15 days. The fine should be paid within this suspension period failing which the suspension would be extended for another 15 days. If fine is not paid within the extended suspension period, the dealership would be terminated.

## **8.8 Authority to take action:**

- i) The action of termination and all other critical irregularities will be approved by Regional head/State head/Zonal head of the concerned oil company (General Manager and above). However, in respect of SC/ST category dealerships termination will be approved by the Director (Marketing) HQ.
- ii) In respect of major irregularities, the approving authority would be an authorized officer not below the rank of Dy. General Manager at State/Region/Zonal level.
- iii) In respect of minor irregularities the approving authority would be the head of Territory / Regional / Divisional office.

## **8.9 Appellate proceedings:**

1. In case of orders in critical irregularities, the dealer will have the right to appeal within a period of 30 days from the date of receipt of order, before the appropriate authority who will be empowered to decide the matter and the appeal shall be disposed off preferably within 90 days from the date of filling the appeal in the office of the appellate authority. During this period also, the RO will be kept open if the sales and supplies were not suspended earlier.
2. For all appeals in case of critical irregularities, except termination in case of SC/ST dealerships, the appellate authority will be the ED (Retail) in the Head Quarters or any other ED level officer at the Head Quarter so nominated by the company. For all cases of termination of SC/ST dealerships, the appellate authority will be a Director other than Director (Mktg.) of the OMC.

## **8.10 IRREGULARITIES / MALPRACTICES IN RESPECT OF SKO DEALERSHIPS**

In respect of SKO-LDO dealerships, the following are the irregularities which are grouped under critical, major and minor.

### **Critical Irregularities:**

1. Short delivery of product (Weights & Measures seals tampered)
2. Totaliser seals found tampered.
3. Unauthorized purchases / sales / exchange of SKO or any product which could be used as a substitute for this product
4. Stock variation between physical stock and book stock beyond permissible limits

Stock variation between physical stock and book stock beyond permissible limits as established by an officer authorized for only search & seizure under Kerosene Control Order, 1993: Sales and supplies to be suspended immediately Dealer's explanation to be called for. a) If explanation is found satisfactory, sales / supplies to be resumed. b) If explanation is found unsatisfactory, penal action in line with unauthorized purchase / sales.

### **Major Irregularities:**

1. Overcharging.
2. Non-observance of Govt. regulations and Company's operating guidelines/instructions, if any, on sale and distribution of SKO.

### **Minor Irregularities:**

1. Short delivery of products (Weights & Measures seals intact).

### **Penalties in respect of SKO-LDO dealerships:**

In respect of proven **critical** irregularities, the dealership be terminated at the 1<sup>st</sup> instance.

In respect of **major** irregularities, the dealers' allocation will be reduced by 50% for 3 calendar months after taking due approval from the State Govt.

In respect of **minor** irregularities, a warning letter be issued.

However, any action against a SKO-LDO dealership will be taken only in consultation with the local Civil Supplies Authorities as the action of OMCs should not result in disruption of supplies of PDS SKO to the common people. In case the Civil Supplies Authorities do not agree for the action, decided by OMCs which may involve suspension of supplies/reduction of allocation, a strong warning letter to be issued to the dealer.

In respect of SKO-LDO dealerships, all other provisions would apply as explained under RO dealerships as applicable.

**ANNEXURE – 1**

**DENSITY RECORD**

Tank No. -

Product -

Month -

DATE	MORNING DENSITY	TANK TRUCK RECEIPT DENSITY				DENSITY AT 15 DEG C AS PER CHALLAN	DENSITY AT 15 DEG C AFTER DECONTATION AND AFTER DISPENSING 50 LTRS.		
		COMPARTMENT							

**ANNEXURE – 2**

**COMPANY LOGO: IOC/ BPC / HPC**

**SAMPLE LABEL – SUPPLY LOCATION**

LOCATION : \_\_\_\_\_

DATE

1. Product : MS/HSD
2. Source of sample :  
Tank Lorry Filling Bay No. : \_\_\_\_\_  
Tank No.: \_\_\_\_\_
3. Samples drawn on \_\_\_\_\_ at \_\_\_\_\_ hours
4. Quantity : 2 x 1 ltrs. For MS / 1 x 1 litre for HSD
5. Density at 15 Deg. C \_\_\_\_\_
6. Plastic Seal Nos. for the Aluminium container :
7. Plastic Seal Nos. for the Wooden Box :

Certified that empty containers are rinsed with the same product just before drawing of samples, labeled and sealed.

Signature: \_\_\_\_\_

Name : \_\_\_\_\_

Designation: \_\_\_\_\_

**ANNEXURE – 3**

COMPANY LOGO: IOC BPC HPC

**SAMPLE LABEL - TANK LORRY RETENTION SAMPLE  
(DRAWN AT RETAIL OUTLETS)**

**SUPPLY LOCATION: \_\_\_\_\_ DIVISION/TERRITORY/REGION: \_\_\_\_\_**

1. Name & address of the Retail Outlet:
2. Name of the Oil Company
3. Product : MS/HSD
4. Source of sample:
5. Tank Lorry No. \_\_\_\_\_ Invoice No. \_\_\_\_\_
6. Samples drawn on \_\_\_\_\_ at \_\_\_\_\_ hours
7. Density at 15 Deg C a) as recorded in the Challan \_\_\_\_\_  
b) of sample collected from the lorry \_\_\_\_\_
8. RO Tank No. of Product decanted \_\_\_\_\_
9. Plastic Seals Nos. of Aluminium container : \_\_\_\_\_
10. Plastic Seals Nos. of wooden box : \_\_\_\_\_

Certified that empty containers are rinsed in my presence with the same product just before drawing of samples and the sample is retained after proper labeling and sealing.

Signature of the Dealer/ Dealer's representative: \_\_\_\_\_

Name of the Dealer/ Dealer's representative : \_\_\_\_\_

Seal/rubber stamp : \_\_\_\_\_

Place and Date : \_\_\_\_\_

Signature of T/L driver : \_\_\_\_\_

Name of T/L driver : \_\_\_\_\_

Transporter's name : \_\_\_\_\_

Oil Company : \_\_\_\_\_

COMPANY LOGO:        IOC    BPC    HPC

**SAMPLE LABEL - SAMPLES DRAWN FROM RETAIL OUTLET**

**SUPPLY LOCATION:** \_\_\_\_\_

**DIVISION/TERRITORY/REGIONAL OFFICE:** \_\_\_\_\_

- 1.** Name of the Retail Outlet :
- 2.** Name of the Oil Company :
- 3.** Product : MS/HSD
- 4.** Source of sample :
- 5.** Dispensing Unit .No. \_\_\_\_\_  
Tank No. \_\_\_\_\_
- 6.** Samples drawn on \_\_\_\_\_ at \_\_\_\_\_ hours
- 7.** Density at 15 Deg C a) as recorded in the Density register \_\_\_\_\_  
b) observed by inspecting officer \_\_\_\_\_
- 8.** Date of last receipt of product in this tank : \_\_\_\_\_
- 9.** Tank Lorry No. of last receipt \_\_\_\_\_
- 10.** Plastic Seals Nos. of Aluminium container : \_\_\_\_\_
- 11.** Plastic Seals Nos. of wooden box : \_\_\_\_\_

Certified that empty containers are rinsed in my presence with the same product before drawing of samples and that one (1) set of samples out of the 3 sets of samples drawn has been handed over to me for retention in safe custody till further advice from Oil Company.

Signature of the Dealer/ Dealer’s representative : \_\_\_\_\_

Name of the Dealer/ Dealer’s representative: \_\_\_\_\_

Seal/rubber stamp of the RO: \_\_\_\_\_

Place and Date : \_\_\_\_\_

Sample drawn by :

Signature : \_\_\_\_\_

Name : \_\_\_\_\_

Designation : \_\_\_\_\_

Oil Company : \_\_\_\_\_

**TEST TO BE CARRIED OUT ON MS / HSD SAMPLES****MOTOR SPIRIT**

<b>Sr. No.</b>	<b>Tests</b>	<b>Method of Test P:ofIS:1448</b>	<b>Test Result</b>
1	Appearance	Visual	
2	Colour	Visual	
3	Distillation	P: 18	
	IBP Deg C		
	Recovery upto 70 Deg C, % V		
	Recovery upto 100 Deg C, % V		
	Recovery upto 150 Deg C, % V		
	Final Boiling Point, Deg C		
	Residue, % V		
4	Existent Gum, g/m3	P: 29	
5	RON*	P: 27	
6	Sulphur content in PPM	ISO 20847	

\* To be tested at a laboratory where facilities are available.

**HIGH SPEED DIESEL**

<b>Sr. No.</b>	<b>Tests</b>	<b>Method of Test P:ofIS:1448</b>	<b>Test Result</b>
1	Appearance	Visual	
2	Colour	Visual	
3	Density @ 15 Deg C	P: 16	
4	Kinematic Viscosity at 40 Deg C, cSt	P: 25	
5	Distillation: Recovery upto 360 C % by volume __	P: 18	
6	Sulphur Content in PPM	XRF	

The above mentioned tests will be carried out as per standard test methods as given in the BIS specification, IS : 1448 P-methods for respective tests.



**ANNEXURE -6**

**MAINTENANCE REPORT**

To be printed in Hindi & English  
(Company's Monogram)

DEALER  
-----  
LOCATION

DETAILS OF EQUIPMENT						PURPOSE OF VISIT - Routine / Maintenance / Break-down	
		1	2	3	4	Date last visited	
NAME							
MODEL							
S.NO.							
PRODUCT							

YES / NO      REMARKS

1. Rate of Delivery – Okay?
2. Filters/Strainers – Cleaned?
3. Pulleys & Belts – Adjusted?
4. Pump Hose & Nozzles – Leaks rectified?
5. Pumping Unit – Checked?
6. Electric Motor Switch Mechanism – Oiled?
7. Metering unit (W&M Seal) Calibration checked and found correct?
8. Float & Air Separator – Working satisfactorily?
9. Dial/Panel Glasses/Rubber Beading/Panel Locks – Condition okay?
10. Internal Joints, Pipes, Glands – Examined for leaks?
11. Hand Drive Mechanism – Working satisfactorily?
12. Tank Manhole, Pipe/Connections/Vents/Fill, Dip points – Examined for leaks?
13. Electric Fitting & Installation of Dispensing Unit/s – checked for loose connections and found satisfactory?
14. Water Dip Reading of Tank ( in cms)
15. Inter-connection of tank ?
16. Any addl. unauthorized fitting in the disp. Pumps / Tanks ?
17. Quality of silica gel in Ethanol blended MS vent pipe
- 18.
- 19.

Details of Repairs undertaken

Parts Replaced

Parts Required

DATE OF VISIT :  
TIME OF  
ARRIVAL \_\_\_\_\_ Hrs.      DEPARTURE \_\_\_\_\_ Hrs.

COPY No.1 DIVISIONAL ENGINEER/PME (WHITE)

COPY No. 2 RETAIL OUTLET (PINK)

DEPARTED      TO      :

COPY No.3 FILE COPY (YELLOW)

SIGNATURE  
DEALER \_\_\_\_\_

SIGNATURE  
-----

## Company's Maintenance Representative

### **POSSIBLE PUMP COMPLAINTS**

- 1) Nozzle Leaking
- 2) Hose Pipe leaking
- 3) Hose pipe burst out
- 4) Excess / short measure
- 5) Pump running slow
- 6) Pump running but does not deliver
- 7) Register jumping
- 8) Not resetting to zero
- 9) Faulty reading on register
- 10) Motor defective / burnt
- 11) Product escapes from jump vent
- 12) Pump delivers but does not register
- 13) Operating handle defective
- 14) Totaliser defective
- 15) Hand drive operation defective
- 16) Pump unit / flow meter leaking
- 17) Water in underground tank

**METHOD FOR DETERMINATION OF ETHANOL CONTENT IN 5% ETHANOL  
DOPED MOTOR GASOLINE BY WATER EXTRACTION – A FIELD TEST**

**1. Scope :**

This method covers the determination of ethanol content in ethanol doped Motor Gasoline as field test at Supply Point, retail outlet etc. by using water. This method provides a test of on line ethanol doped gasoline for ethanol content by % by volume. The method can suitably be used for estimation of ethanol content in ethanol doped Motor Gasoline and quantification 5% ethanol (upto 8%) can be made by using the method in down stream. In case of dispute the sample may be subjected to ASTM D 4815 method as referred under IS:2796-2000, amendment no. 1 , for Motor Gasoline.

**2. Reference :**

- a. Motor Gasoline - Specification IS 2796
- b. Anhydrous ethanol for use in automotive fuel IS 15464

**3. Definitions :**

- a. Ethanol / Denatured Ethanol: Ethanol is the pure chemical, otherwise known as hydroxyl-ethane, corresponding to the constitution  $\text{CH}_3\text{CH}_2\text{OH}$  and molecular formula:  $\text{C}_2\text{H}_5\text{OH}$ . Nominally anhydrous ethanol made unfit for beverage use by the addition of noxious or toxic materials (denaturants) and same is used as ethanol for the purpose of doping Motor Gasoline.
- b. Motor Gasoline: A volatile mixture of liquid hydrocarbon, generally containing a small amount of additives, suitable for use as a fuel in spark ignition and internal combustion engines conforming to IS:2796.
- c. Ethanol Doped Motor Gasoline: A fuel consisting primarily of Motor Gasoline doped with 5% vol./vol. of denatured anhydrous Ethanol for fuel conforming to IS:2796 .
- d. Water: Distilled water is preferred for extraction procedure, but potable water may also be used.

**4 Outline of the test method:**

30ml of water is added to 100 ml of ethanol doped Motor Gasoline taken in 100 ml graduated stoppered cylinder. The mixture is shaken vigorously for about 30 seconds and cylinder is set aside for five minutes to observe the separation of aqueous layer.

Increase in the volume of aqueous layer over and above 30 ml indicates the presence of extractable ethanol in the ethanol doped motor gasoline sample tested. The exact quantity of ethanol is then worked out referring the observation to the calibration plot. The plot is made on exact quantity of ethanol extracted from 100ml of various known concentrations of ethanol doped Motor Gasoline using 30 ml of water vis-a-vis the concentration of ethanol used for doping. For better results the calibration chart needs to be re-plotted whenever there is change in the source of Motor Gasoline.

#### **5. Significance and use:**

The test method is employed to check the percentage of ethanol in ethanol doped Motor Gasoline, as ethanol is having more affinity for mixing with water. The addition of water in ethanol doped Motor Gasoline extracts the ethanol present in the ethanol doped Motor Gasoline into aqueous phase. The increase in the water level indicates the quantity of extractable ethanol in Ethanol Doped Motor Gasoline.

#### **6. Apparatus:**

- a) 100 ml glass stoppered cylinder with 1ml graduation (Class 'A' Certificate)
- b) 10ml or 25 ml and 5 ml glass pipette, (Class 'a' Certificate)
- c) Water

#### **7. Calibration on known ethanol content in ethanol doped Motor Gasoline and its extraction.**

- a) Prepare a set of standards of ethanol doped Motor Gasoline samples with the concentration of ethanol in Motor Gasoline ranging from 0.5 to 8 ml by percentage volume.
- b) Take 100 ml of each sample above in 100 ml graduated stoppered glass cylinder along with one blank Motor Gasoline (without ethanol).
- c) Shake the stopper cylinder vigorously for at least 30 seconds.
- d) Loosen the stopper of glass cylinder to release the vapor pressure in the cylinder but do not remove the stopper.
- e) Tighten the stopper and allow the stopper cylinder to sit undisturbed at ambient temperature upright on the levelled surface for a period of at least five minutes to allow the water-ethanol mixture to settle to the bottom.
- f) If separation of two layers is not complete lightly tap the cylinder to encourage the complete separation.
- g) Record the level of aqueous layer in glass cylinder by reading the measurement at the lowest part of the meniscus.
- h) Presence of Ethanol % in ethanol doped Motor Gasoline =  
$$\frac{\text{Volume of aqueous layer observed in graduated cylinder} - 30 \text{ ml (water added during testing)}}{\text{Volume of Motor Gasoline}} \times 100$$

- i) Plot a graph on various values obtained in "h" as ordinate (X-axis) against corresponding concentration of ethanol used in the standard blend as per "a" as abscissa (Y-axis) including that of the observation made on the blank.

## **8. Procedure:**

- a) Take 100 ml sample of ethanol –blended Motor Gasoline under test in 100 ml graduated stoppered glass cylinder (thoroughly cleaned and dried).
- b) Add precisely 30 ml water to the sample taken in the glass cylinder and place the stopper tightly.
- c) Shake the stoppered cylinder vigorously for at least 30 seconds.
- d) Loosen the stopper of glass cylinder to release the vapor pressure in the cylinder but do not remove the stopper.
- e) Tighten the stopper and allow the stoppered cylinder to sit undisturbed at ambient temperature upright on the levelled surface for a period of at least five (05) minutes to allow the water-ethanol mixture to settle to the bottom.
- f) If separation of two layers is not complete lightly tap the cylinder to encourage the complete separation  
Record the level of aqueous layer in glass cylinder by reading the measurement at the lowest part of the meniscus.
- g) Presence of Ethanol % in ethanol doped Motor Gasoline=  
Volume of aqueous layer observed in graduated cylinder –30 ml (water added during testing).

## **9. Calculation:**

- a) Observation made under 8.(g), is read against the standard plot and the corresponding concentration of ethanol value is obtained.
- b) Whenever there is a change in source of Motor Gasoline, for better results, it is recommended to re-plot the graph as mentioned in the paragraph7 ( i ).

## **10. Report:**

Report the fully corrected results to the nearest 0.5 ml.

## **11. Precision and bias:**

In the absence of calibration plot the value observed in aqueous phase can be calculated to the nearest percentage volume as per the under mentioned precision levels.

Based on the field test data, it was observed that a maximum of 4.6 ml (average) of ethanol content is extracted in to the aqueous phase as against 5 ml ethanol added in ethanol doped Motor Gasoline.

The Standard Deviation of the test results indicates +/- 0.24%

Considering the precision of the graduated glass cylinder, the maximum possible measurement can be treated as 4.5% Volume with standard deviation of + 0.5%. Thus the repeatability under the method is as under:

<b>Percentage</b>	<b>Repeatability / Reproducibility</b>
5 % v/v	0.5 ml (Approximately)

**SHRINKAGE ALLOWANCE - SAMPLE CALCULATION ILLUSTRATION**

STATION : KODAIKANAL (Ex Coimbatore)

Shrinkage Allowance = MS : Rs. 135.92 / KL  
HSD : Rs. 36.61 / KL

(w.e.f. 1.4.98)

	MS (Rs./KI)	HSD (Rs./KI)
Price Build up		
Ex-Storage Point	21673.14	9202.83
Road Freight	56.34	78.25
Toll Charges	5.00	5.00
	<u>21734.48</u>	<u>9286.08</u>
Sales Tax	5216.28	1671.49
Commission	80.00	168.00
Shrinkage Allowance	135.92	36.61
	<u>27166.68</u>	<u>11162.18</u>
Sales Tax Rate	24%	18%

For arriving at the volume represented by the Shrinkage Allowance, product price excluding Commission, Taxes, Shrinkage Allowance etc. will be taken in proportion to percentage of Shrinkage Allowance to nett price arrived t e.g.

	MS (Rs./KI)	HSD (Rs./KI)
Nett Price	21734.48	9286.08
Shrinkage Allowance	135.92	36.61
Proportion of Shrinkage Allowance to nett price	0.63%	0.39%

**IMPORTANT NOTE**

This percentage should be applied to the total receipts of product during the period under inspection.

**ANNEXURE – 9**

**METHOD FOR ALLOWING SHRINKAGE ALLOWANCE  
IN STOCK VERIFIATION**

Stocks as per Opening Dip	A	KL
Plus Receipts	B	KL
Less percentage of Shrinkage (arrived at as per Annexure I)	C	KL
$A + B - C =$	D	KL
Less Sales as per Meter	E	KL
Closing Stock as per Book (D-E)	F	KL
Closing Stock as per Dip	G	KL
F compared to G +/- 4 % of G		



**ANNEXURE - 10****TVA LOSS - SAMPLE CALCULATION ILLUSTRATION**

STATION :

TEMPERATURE VARIATION ALLOWANCE : MS NIL

HSD Rs. 38.40 per KL

For the period Apr/June `98

Price Build up	HSD
	(Rs/Kl)
Ex-Storage Point	8792.29
Road Freight	18.25
State Surcharge	54.55
Nett Price	<u>8865.09</u>
Octroi	453.20
Toll Tax	<u>5.83</u>
Total	9324.12
Sales Tax	1966.37
Commission	168.00
	<u>11458.49</u>

1. TVA applicable shown in each invoice as a credit and deducted in the total invoiced amount.
2. For arriving at the volume represented by TVA, product price excluding commission, taxes will be taken and proportion in percentage of TVA to nett price arrived at as follows :-

	HSD
	(Rs./Kl)
Nett Price	8865.09
TVA	38.40
Proportion of TVA to net price	0.43%

**IMPORTANT NOTE**

1. This percentage should be applied only to actual quantity received during the period under inspection for which TVA has been allowed by the Oil Company in the invoices.
2. Generally, TVA will be revised every quarter based on the average locating temperature etc.
3. Method of Calculation : Same as **Annexure - 9**.

**MOBILE LABORATORY SAMPLE TAG**

LOCATION : \_\_\_\_\_ DIVISIONAL OFFICE : \_\_\_\_\_

1. Name of Retail Outlet
2. Name of Oil Company
3. Product : MS/HSD
4. Source of Sample \_\_\_\_\_ Dispensing Unit Sl. No. \_\_\_\_\_  
Tank No. \_\_\_\_\_
5. Sample drawn on \_\_\_\_\_ at \_\_\_\_\_ Hours
6. Plastic Seal Nos. a) Aluminium Container  
b) Wooden Box

Certified that empty containers are rinsed in my presence with the same product just before drawing of samples and that one set of samples out of the three sets of samples drawn has been handed over to me for retention in safe custody.

Signature of the Dealer/ : \_\_\_\_\_

Dealer's representative

Name : \_\_\_\_\_

Place and Date : \_\_\_\_\_

Sample drawn by : Signature : \_\_\_\_\_

Name : \_\_\_\_\_

Designation : \_\_\_\_\_

Oil Company : \_\_\_\_\_

Mobile Lab Ref. No. : \_\_\_\_\_

**MONOGRAM OF OIL COMPANIES**

**SAMPLE DETAILS FOR MOTOR SPIRIT**

**Tested to Specification IS 2796 – 2008**

Mobile Lab  
Registration No.

Oil Company:

1. Serial No. of the Sample : \_\_\_\_\_
2. Source of Sample : \_\_\_\_\_  
Dispensing Unit Sl. No. : \_\_\_\_\_  
Tank No. : \_\_\_\_\_
3. Test Report No. ML/MS \_\_\_\_\_ Dt. \_\_\_\_\_
4. a) Name & Address of Retail Outlet : \_\_\_\_\_  
b) Name of the Oil Company : \_\_\_\_\_
5. Sample drawn by : \_\_\_\_\_
6. Sample drawn on : \_\_\_\_\_

**MOBILE LAB TEST REPORT FOR MOTOR SPIRIT  
IS 2796 – 2008**

<b>S. No.</b>	<b>Test</b>	<b>Test</b>	<b>Test Result</b>
1.	Appearance	--	
2.	Colour (Visual)	--	
3.	Density @ 15 deg/C (MS/HSD) Control Order)	P-16	
	a) Dealer's Tank(s) Density after last receipt		
	b) Density observed By Mobile Lab		
	c) Variation (between a & b)		
4.	Distillation	P – 18	
	a) IBP deg/C		
	b) Recovery @ 70 deg/C % vol.		
	c) Recovery @ 100 deg/C % vol.		
	d) Recovery @ 150 deg/C % vol.		
	e) Final Boiling Point deg/C		
	f) Residue % vol.		

**Remarks :**

(Signature)  
Dealer/Dealer's Representative

SEAL

(Signature)  
Name :  
Designation :  
I/C of Mobile Lab

SEAL

**MONOGRAM OF OIL COMPANIES**

**SAMPLE DETAILS FOR HIGH SPEED DIESEL**

**Tested to Specification IS 1460 – 2005**

Mobile Lab  
Registration No.

Oil Company :

1. Serial No. of the Sample : \_\_\_\_\_
2. Source of Sample : \_\_\_\_\_  
Dispensing Unit Sl. No. : \_\_\_\_\_  
Tank No. : \_\_\_\_\_
3. Test Report No. ML/HSD \_\_\_\_\_ Dt. \_\_\_\_\_
4. a) Name & Address of Retail Outlet : \_\_\_\_\_  
b) Name of the Oil Company : \_\_\_\_\_
5. Sample drawn by : \_\_\_\_\_
6. Sample drawn on : \_\_\_\_\_

**MOBILE LAB TEST REPORT FOR HIGH SPEED DIESEL  
IS 1460 – 2005**

<b>S. No.</b>	<b>Test</b>	<b>Test</b>	<b>Test Result</b>
1.	Appearance	--	
2.	Density @ 15 deg/C (MS/HSD Control Order)	P-16	
	a) Dealer's Tank(s) Density after last receipt		
	b) Density observed By Mobile Lab. Office		
	c) Variation (between a & b)		
3.	Kinematic Viscosity @ 40 deg. C cSt	P - 25	
4.	Distillation Recovery @ 360 deg/C (% vol.)	P - 18	

(Signature)  
Dealer/Dealer's Representative

SEAL

(Signature)  
Name:  
Designation:  
I/C of Mobile Lab

SEAL