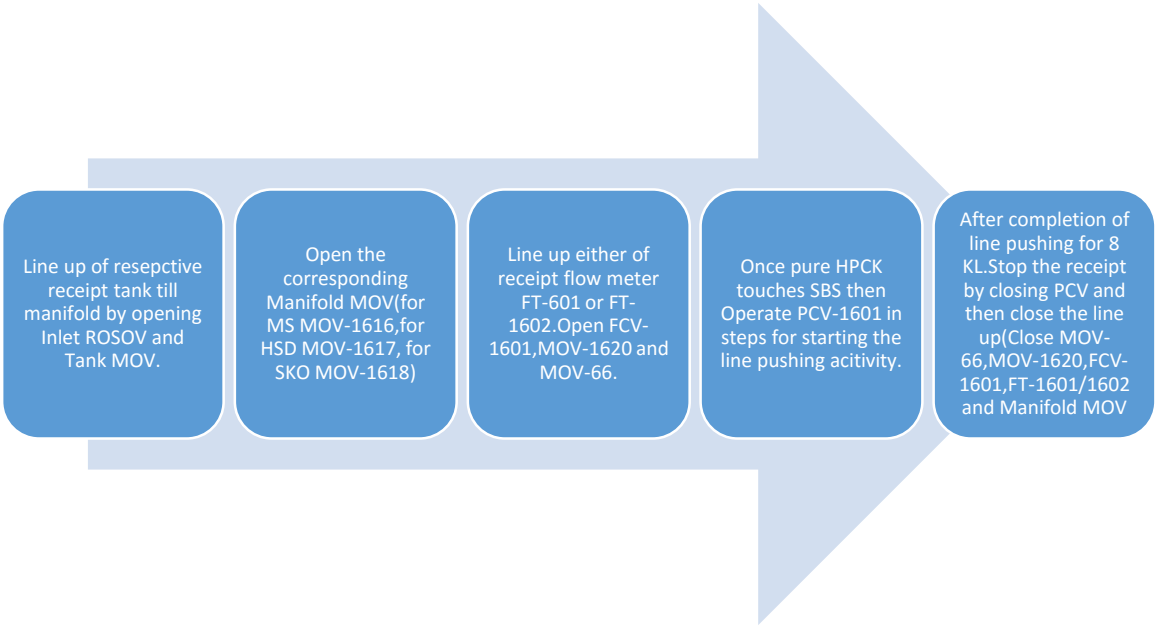
	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 1 of 4
INTEGRATED MANAGEMENT INSTRUCTION	DOCUMENT NO.: IMI/OSP/03	
TITLE	Station Line Fill Pushup Operation	

Process: To provide guidelines for Station Line fill Pushup operation.

Existing IMS Document no: QMI/OSP/03

Clause	Elements
4.4.1 a	<p>Inputs to perform the process PLC regarding status, control and operations of MOV,PCV-1601 and FCV-1601; Density Meter DT-1601; Control of receipt tank(HSD tank for line pushing of HSD and MS tank for line pushing of MS) ; Man power</p> <p>Output of the process: Presence of HPCK in receipt line before switch over of product (MS to HSD or vice versa). For ensuring no intermixing of MS,HSD</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p> 
4.4.1 c	<p>Criteria & methods:</p> <ol style="list-style-type: none"> Keep in mind always that the allowable percentage contamination levels are 1% of SKO in MS and 2.5% of SKO in HSD. <p>For line pushing, general procedure to be followed is:</p> <ol style="list-style-type: none"> Line up upto tap off manifold as given in IMI/OSP/02.Open FCV approx by 10%. Open MOV 1620 fully ensuring line is through. Keep flow rate at 70 to 80 Kls/Hr to push the line fill from MOV 1620 upto manifold into the respective tanks.

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Station Line Fill Pushup Operation

3. The line fill quantity from MOV-1620 to manifold is 2.6 KL. Hence approx. 8 KL of product to be pushed in the line during line pushing.
4. If MS to be received after HSD and vice versa or SKO to be received after receipt of MS/HSD, then 2.6 KL of line fill quantity to be pushed in respective tank with pure SKO. However in case MS/HSD to be received after SKO, line fill of SKO can be taken into MS/HSD tank along with receipt.
5. After pushing 8 Kls (ensure the same from flow computer) check the density from the DT-1602 for ensuring pure SKO density is observed (match with density at upstream of MOV 1620 sampling point), check the sample for visual clarity. After confirming the pure product, regular receipt to be started.
6. Inform Vizag, Vijayawada and Secunderabad about switchover. Slowly increase the flow rate by opening the FCV and maintain the same as per the requirement/as advised by Vizag/Vijayawada Control Room.

If MS to be received after HSD

7. After confirmation line up the HSD tank under receipt to push up the station line quantity, ensuring that the respective manifold MOV is open.
8. Plan line pushing in advance and when HPCK is being pumped thru SBS Clear the HSD line fill into HSD tank by pushing with pure HPCK so that MS receipt can start on arrival of MS in station.
9. Now line fill between MOV -1620 and manifold is pure HPCK
10. The above HPCK to be taken in MS tank along with MS receipt.
11. Similar procedure to be followed in case HSD to be received after MS with vice versa product notations between HSD & MS.

Performance indicators:

Presence of HPCK in receipt line.

4.4.1 d

Resource:

Manpower, Station PLC, Tank Control

4.4.1 e

Roles and Responsibilities:

Shift In Charge

4.4.1 f

Risks:

1. Improper coordination during lineup of tank and receipt line.
2. Malfunctioning of PLC and Density Meter(DT-1601)
3. Improper monitoring of receipt line parameters
4. Accident & Incident due to not use of proper PPE

Opportunities:

1. Safe and Secure Operations
2. Innovation in operations

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INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/03


TITLE

Station Line Fill Pushup Operation

	3. Close monitoring of all receipt line parameters 4. Strict follow of all SOPs
4.4.1 g	Review of the performance on the parameters identified in 4.4.1 c if required
4.4.1 h	Action planning for the negative deviation of the performance parameters identified in 4.4.1 c if required
4.4.2 a	Documents to be maintained: 1. Shift Log Book (IMF/OPN/01)
4.4.2 b	Documents to be retained: 1. Shift Log Book (IMF/OPN/01)

Risk	Risk rating	Action Plan
Improper Co-ordination during lineup of tank and receipt line.	H	<ul style="list-style-type: none">Shift in charge to ensure proper co-ordination with terminal officials and man power .
Malfunctioning of PLC and Density Meter(DT-1601).	H	<ul style="list-style-type: none">Shift in charge has to ensure proper functioning of station PLC and valve status in PLC has to be cross verified with field status with man power.Density meter values to be cross checked with sampling data.
Improper monitoring of receipt line parameters	H	<ul style="list-style-type: none">Shift in-charge to ensure all safety measures before start of line pushing.
Accident & Incident due to not use of proper PPE	H	<ul style="list-style-type: none">Safety training to be given to all Contractor & Contract workmen

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How to find the RISK/ opportunity for individual process

a) Analysis of individual interested party

Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H- High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Improper Co-ordination	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge	Safe Operations	Malfunctioning of PLC and Density Meter	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge	Safe Operations	Improper monitoring of receipt parameters, tank status	H	YES	Vigilant Shift in charge	NA	NA
Contract workmen	Safe Operations	Accident & Incident due to not use of proper PPE	H	YES	Inspection by Officer In-charge	NA	NA

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INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/04

TITLE

Interface Tracking/Product Receipt

Process: To provide guidelines for Interface Tracking/Product Receipt.

Existing IMS Document no: QMI/OSP/04

Clause	Elements
4.4.1 a	<p>Inputs to perform the process PLC regarding status, control and operations of MOV, PCV-1601 and FCV-1601; Density Meter DT-1601; Man power</p> <p>Output of the process: Interface Tracking will help in tracking the line product after completion of batch size.</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process For Interface Tracking:</p> <pre>graph LR; A[Stop of product receipt one hour before the arrival of interface] --> B[Sampling to be done for every ten minutes checking density of line product atleast one hour before start of interface.]; B --> C[Start sampling for every two minutes once change in density is observed. This has to be continued till consecutive three readings are same. Log and track these details.]; C --> D[If HPCK/SKO receipt is planned then start receipt at such a way that parcel size will be completed before arrival of next interface.]; D --> E[After completion of parcel size close the receipt lineup and carry out sampling for tracking next interface.];</pre>

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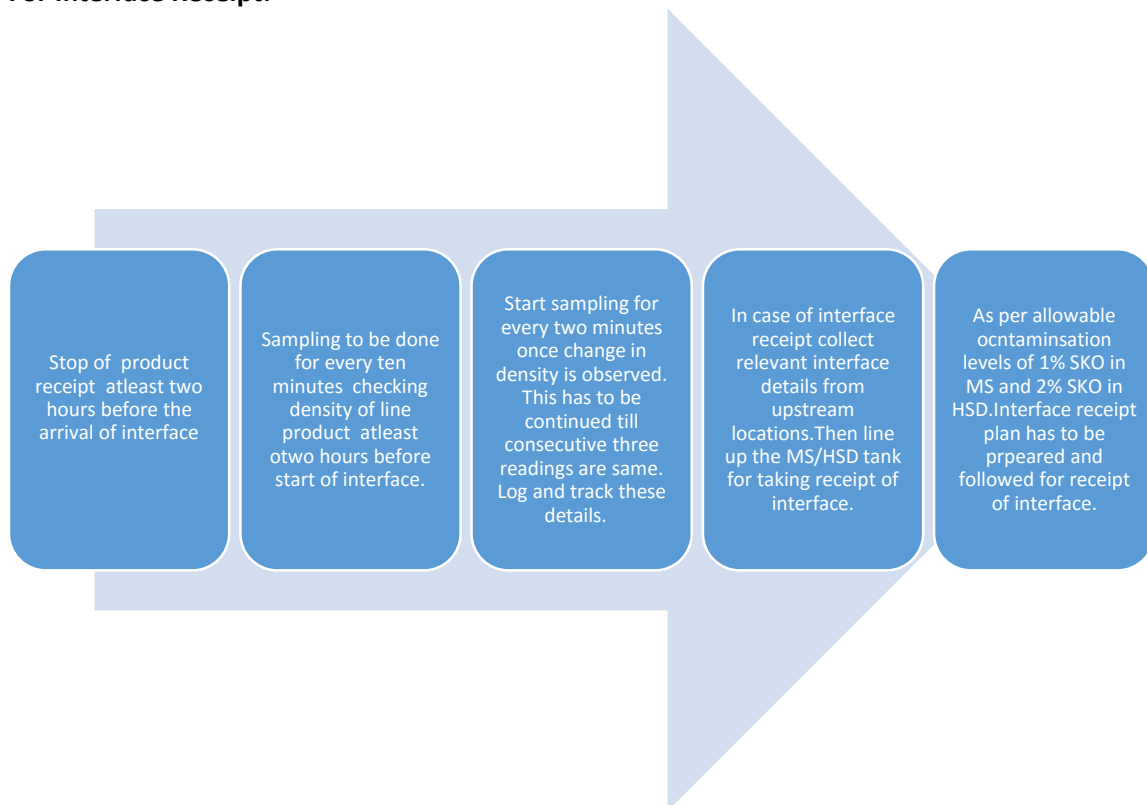
INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/04

TITLE

Interface Tracking/Product Receipt

For Interface Receipt:



4.4.1 c

Criteria & methods:

1. Interface is to be received at Suryapet tanks in rarity and only when advised by VDS.
2. However, interface has to be always tracked, recorded and reported to Vizag and Secunderabad control room

MS/HSD – SKO Interface Tracking & Product Receipt

3. Before start of any receipt take clearance from VDS & VBS. If receipt of MS/HSD is going on at Suryapet, calculate the expected time of arrival of interface at Suryapet. Stop receipt before the expected time of arrival of interface. Start sampling one hour before expected time of arrival of interface and take samples every 10 minutes at the sampling point provided near DT-1601. Ensure that the density converter is online in regular operation.

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Interface Tracking/Product Receipt

4. Once the interface is started take density measurement manually every 2 minutes. Continue the same till consecutive three readings are same. Check the sample to ensure that pure SKO has arrived. Log the tracked density readings in IMF/OSP/04 and inform SRS/ publish it online.

MS/HSD-SKO Interface Receipt

5. In case interface is to be taken then collect relevant details like rear density of the preceding product and front density of the succeeding product from VDS/VBS. Note any other characteristic of the following product like unusually high/low density, unusual colour to avoid any confusion and ensure accurate interface cutting in such cases.
6. Line up MS/HSD tank assigned for receipt upto the manifold at least one hour before the expected time of interface. Before assigning the tank keep in mind always that the allowable percentage contamination levels are 1% for SKO in MS and 2% for SKO in HSD.
7. Two hours before expected time, start sampling of the line product once in every 10 minutes and test for density on each sample. Colour and smell of product (visual clarity) also to be observed as an additional reference. Frequency of sampling is gradually increased as the interface approaches.
8. When density of the product changes in the desired direction, this indicates the arrival of interface. Check the density indicator also for change in density. Start recording of the details of each sample.
9. If the change in density is coupled with change in colour and odour, assume it as beginning of the interface.
10. All through the interface receipt, carry out continuous sampling as mentioned above. When the density finally stabilizes and nearly matches that provided by VDS/VBS reference density, interface deemed to have ended.
11. Following minimum samples are collected during interface:
- a) Preceding batch clear sample
 - b) Beginning of Interface
 - c) Middle of Interface
 - d) Towards end of Interface
 - e) Succeeding batch clear sample

Record details in format IMF/OSP/02 (QC Register)

12. Switch over from one receipt line to another from the manifold after the interface ends.
13. Log the interface details in IMF/OSP/04 and advise to VDS.

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TITLE

Interface Tracking/Product Receipt

SKO-MS/HSD Interface Tracking and Product Receipt

Follow the similar procedure with vice-versa product notations.

SKO-MS/HSD Interface Receipt

Follow the similar procedure with vice-versa product notations and except that switch over from one receipt line to another from the manifold is to be done as soon as interface begins.

Performance indicators:

Information about line product.

4.4.1 d

Resource:

Manpower, Station PLC, Density Meter(DT-1601), Tank Control

4.4.1 e

Roles and Responsibilities:

Shift In Charge

4.4.1 f

Risks:

1. Improper coordination during sampling.
2. Malfunctioning of PLC and Density Meter(DT-1601)
3. Accident & Incident due to not use of proper PPE

Opportunities:

1. Safe and Secure Operations
2. Innovation in operations
3. Strict follow of all SOPs

4.4.1 g

Review of the performance on the parameters identified in 4.4.1 c if required

4.4.1 h

Action planning for the negative deviation of the performance parameters identified in 4.4.1 c if required

4.4.2 a

Documents to be maintained:

1. Shift Log Book (IMF/OPN/01)
2. Quality Control Register(IMF/OSP/02)
3. Checks before starting of pumps/receipt at SBS(IMF/OSP/05).
4. Interface Log Sheet(IMF/OSP/06)

4.4.2 b

Documents to be retained:

1. Shift Log Book (IMF/OPN/01)
2. Quality Control Register(IMF/OSP/02)

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TITLE

Interface Tracking/Product Receipt

3. Checks before starting of pumps/receipt at SBS(IMF/OSP/05).
4. Interface Log Sheet(IMF/OSP/06)

Risk	Risk rating	Action Plan
Improper Co-ordination during Sampling.	H	<ul style="list-style-type: none">Shift in charge to ensure proper co-ordination with man power.
Malfunctioning of PLC and Density Meter (DT-1601).	H	<ul style="list-style-type: none">Shift in charge has to ensure proper functioning of station PLC and valve status in PLC has to be cross verified with field status with man power.Density meter values to be cross checked with sampling data.
Accident & Incident due to not use of proper PPE	H	<ul style="list-style-type: none">Safety training to be given to all Contractor & Contract workmen

How to find the RISK/ opportunity for individual process

a) Analysis of individual interested party

Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H-High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Improper Co-ordination during sampling	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge	Safe Operations	Malfunctioning of PLC and Density Meter	H	YES	Vigilant Shift in charge	NA	NA
Contract workmen	Safe Operations	Accident & Incident due to not use of proper PPE	H	YES	Inspection by Officer In-charge	NA	NA

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