

**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA -VIJAYAWADA-SECUNDERABAD PIPELINE**

SBS OPERATIONS MANUAL



**INTEGRATED MANAGEMENT SYSTEMS
(ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007)**

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA-VIJAYAWADA-SECUNDERABAD PIPELINE VISAKHAPATNAM ANDHRA PRADESH	ISSUE NO: 2 REVISION NO.: 0 EFFECTIVE DATE: 01/01/2018 SHEET: 1 OF 1
INTEGRATED MANAGEMENT PROCEDURES		DOCUMENT NO.: IMP/OSP
TITLE	INDEX	

S.No	Description
1	List of documents (IM Procedures/IM Instructions)
2	Amendment record Sheet
3	IM Procedures
4	List of Forms
5	IM Forms

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA-VIJAYAWADA-SECUNDERABAD PIPE LINE

LIST OF DOCUMENTS
(IM Procedures & IM Instructions)

Department/Section : Operations - Suryapet

Sl. No	IMP/IMI Title	IMP/IMI No	Rev No/ Amendme nt No	Effective date
1	SURYAPET CONTROL ROOM ACTIVITIES.	IMP/OSP/01	03	01/01/2018
2	START UP OF SURYAPET STATION.	IMP/OSP/02	01	01/01/2018
3	SHUT DOWN OF SURYAPET STATION	IMP/OSP/03	00	01/01/2018
4	SWITCH OVER OF PUMPS AT SURYAPET STATION	IMP/OSP/04	00	01/01/2018
5	PRODUCT SAMPLING AND LABORATORY TEST REPORTS.	IMP/OSP/05	02	01/01/2018
6	CHECKS BEFORE RECEIPT OPERATIONS AND TANK LINEUP.	IMI/OSP/01	01	01/01/2018
7	LINE UP OF TAP OFF LINE UP TO MANIFOLD.	IMI/OSP/02	00	01/01/2018
8	STATION LINE FILL PUSHUP INSTRUCTIONS.	IMI/OSP/03	00	01/01/2018
9	INTERFACE TRACKING/PRODUCT RECEIPT	IMI/OSP/04	02	01/01/2018
10	TANK SWITCH OVER FOR THE SAME PRODUCT.	IMI/OSP/05	00	01/01/2018
11	BOOSTER PUMPS OPERATION.	IMI/OSP/06	00	01/01/2018
12	PIG RECEIVING AND LAUNCHING	IMI/OSP/07	00	01/01/2018
13	SUMP TANK OPERATIONS	IMI/OSP/08	01	01/01/2018
14	ISSUE OF HOT/COLD WORK PERMITS	IMI/OSP/09	01	01/01/2018
15	PROCEDURE FOR TWO PUMP OPERATIONS AT SBS	IMI/OSP/10	00	01/08/2018
COMMON OPERATIONAL PROCEDURES		00		
1	START UP PROCEDURES FOR VVSPL	IMP/OPN/01	00	01/01/2018
2	SHUT DOWN PROCEDURES FOR VVSPL	IMP/OPN/02	00	01/01/2018
3	PROCEDURE FOR EMERGENCY SHUT DOWN OF VVSPL	IMP/OPN/03	00	01/01/2018
4	CALIBRATION OF THERMOMETER	IMI/OPN/01	00	01/01/2018
5	CALIBRATION OF HYDROMETER	IMI/OPN/02	00	01/01/2018

Signature of Department Head

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE VISAKHAPATNAM ANDHRA PRADESH	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 1 OF 1
INTEGRATED MANAGEMENT PROCEDURE		DOCUMENT NO.: IMP/OSP
TITLE	AMENDMENT RECORD SHEET	

IMP/IMI/ IMF No	Amendme nt/ Revision No	Effective Date	Brief Description of Changes
IMI/OSP/10	00	01/08/2018	PROCEDURE FOR TWO PUMP OPERATIONS AT SBS

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**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.: IMP/OSP/01

TITLE

SURYAPET CONTROL ROOM ACTIVITIES

Process: To provide guidelines for operation of Suryapet Booster station during receipt and pumping of products
Existing IMS Document no: QMP/OSP/01

Clause	Elements
4.4.1 a	<p>Inputs to perform the process Pumping plan from VDS, Monitoring od operational parameters, man power, Tanks gauging, SOP for operation of pumps & tanks line up, status reports from L/W, JDE Booking, general inspection</p> <p>Output of the process: Proper operation of Fire & Safety Equipment during emergency situation.</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"> 1. To take the detailed pumping program from Vizag control room shift In-charge. 2. To ensure safe operation of Suryapet Control Room facilities by closely monitoring and maintaining all Operating Parameters and recording, the relevant parameter in operation log book 3. To line up required manpower for product receipt and pumping 4. To coordinate with Suryapet terminal for nominating and gauging the tank. 5. To line up the tank up to the product manifold 6. To line up receipt line up to the manifold 7. To start the transfer in coordination with Vizag, Vijayawada and Secunderabad control room 8. To line up Suryapet station for operating booster pumps 9. To operate Suryapet booster pumps in co-ordination with Vizag, Vijayawada & Secunderabad Control Room 10. To provide hourly receipt figures to Vizag, Vijayawada and Secunderabad Control room.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 2 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/01
TITLE	SURYAPET CONTROL ROOM ACTIVITIES	

	<p>11. To book in ERP the quantity received in the tanks after the completion of receipt in coordination with Visakha Control room. To investigate if any abnormal variations in receipt vis-à-vis the quantity pumped at Vijayawada in coordination with Visakha, Vijayawada control room</p> <p>12. To handle the line operational parameters in coordination with Visakha, Rajahmundry, Vijayawada and Secunderabad control room within safe limits</p> <p>13. To carryout sampling of product being received as per Industry Quality Control Manual and to follow up with terminal for batch formation test. To enter the details of sample</p> <p>14. To receive status/reports from line walkers report and security guards and to log such information in IMF/ROW/01 & IMF/ROW/02 and coordinate with the Managers and Location-In-Charge in case of any abnormality</p> <p>15. The observations or findings during the general inspection checks are recorded in shift log book (IMF/OPN/01) and the Location in charge reviews the log on daily basis and thereby assesses the condition of the plant.</p> <p>16. To issue Hot/cold work permit for pipeline area in coordination with terminal</p> <p>17. To handle pigging operations at Suryapet Booster station</p> <p>18. To record, at the end of the shift, all the relevant events occurred during the shift requiring the attention of the next shift in charge by preparing Handing over Note (HON) in IMF/OPN/01 and discuss briefly about the same</p> <p>19. To acknowledge the HON prepared by the previous shift in charge and discuss briefly about the same</p> <p>Performance indicators: Safe and incident free operations</p>
4.4.1 d	Resource: Manpower
4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	<p>Risks:</p> <ol style="list-style-type: none"> 1. Improper monitoring of operational parameters 2. Accident & Incident due to not use of proper PPE <p>Opportunities:</p> <ol style="list-style-type: none"> 1. Close monitoring of operational parameters 2. Strict follow of all SOPs 3. Proper handling of equipment during maintenance
4.4.1 g	Review of the performance on the parameters identified in 4.4.1 c if required

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 3 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/01
TITLE	SURYAPET CONTROL ROOM ACTIVITIES	

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	<p>Documents to be maintained:</p> <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Maintenance Log Book (IMF/OPN/02) 4. Cold work permit (IMF/OPN/03) 5. Hot work permit (IMF/OPN/04) 6. Certificate for Thermometer calibration (IMF/OPN/05) 7. Certificate for Hydrometer calibration (IMF/OPN/06) 8. PLC by-pass register (IMF/OPN/07) 9. Pigging report (IMF/OPN/08) 10. Working at heights permit (IMF/OPN/09) 11. Electrical Isolation & Energization Permit (IMF/OPN/10) 12. Critical behavior check list for PPE observation (IMF/OPN/12) 13. Quality control register (IMF/OSP/02) 14. Tank cum gauge cum check list (IMF/OSP/03) 15. Sample label (IMF/OSP/04) 16. Interface Log Sheet (IMF/OSP/06) 17. Daily line walkers' report (IMF/ROW/01) 18. Daily security guards' report (IMF/ROW/02) 19.
4.4.2 b	<p>Documents to be retained:</p> <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Maintenance Log Book (IMF/OPN/02) 4. Cold work permit (IMF/OPN/03) 5. Hot work permit (IMF/OPN/04) 6. Certificate for Thermometer calibration (IMF/OPN/05) 7. Certificate for Hydrometer calibration (IMF/OPN/06) 8. PLC by-pass register (IMF/OPN/07) 9. Pigging report (IMF/OPN/08) 10. Working at heights permit (IMF/OPN/09) 11. Electrical Isolation & Energization Permit (IMF/OPN/10) 12. Critical behavior check list for PPE observation (IMF/OPN/12) 13. Quality control register (IMF/OSP/02) 14. Tank cum gauge cum check list (IMF/OSP/03) 15. Sample label (IMF/OSP/04) 16. Interface Log Sheet (IMF/OSP/06) 17. Daily line walkers' report (IMF/ROW/01) 18. Daily security guards' report (IMF/ROW/02)

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 4 of 4**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/01

TITLE

SURYAPET CONTROL ROOM ACTIVITIES

Risk		Risk rating	Action Plan
Improper monitoring of operational parameters		H	<ul style="list-style-type: none"> Shift in-charge to ensure all safety measure before start of the job
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

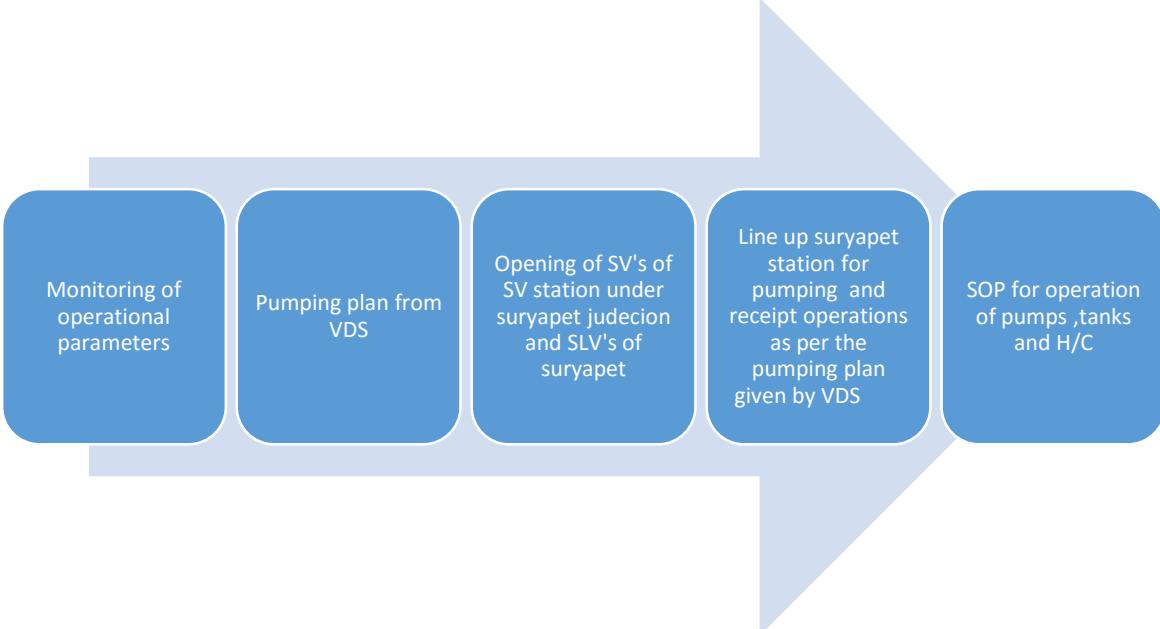
Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H-High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Unsafe environment	H	PARTIALLY	inspection by Officer In-charge		
Contract workmen	Safe Operations	Unsafe environment	H	PARTIALLY			

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	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.: IMP/OSP/01
TITLE	STARTUP OF SURYAPET STATION	

Process: To provide guidelines for startup of Suryapet Booster station (includes lining up of SV stations) during pump by pass, only pumping, only receipt, receipt and pumping both, dedicated receipt of products

Existing IMS Document no: QMP/OSP/02

Clause	Elements
4.4.1 a	<p>Inputs to perform the process Pumping plan from VDS, Monitoring of operational parameters, man power, Tanks availability, SOP for operation of pumps , SOP for operation of h/c & tanks line up, status reports from SV Station guards, status reports from field</p> <p>Output of the process: Suryapet Booster Station lineup for VVSPL pumping operations</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"> When station starts with VVSPL SRS to open SLV and bring down pressure to 2Kg/cm² SBS to open their SLV VDS to start their booster pump after opening SV's and SLV's SBS to start the pump In coordination with SRS,VBS,RBS & VDS VDS to start the pump VBS to start their pump and h/c as per the pumping plan

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 2 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/01
TITLE	STARTUP OF SURYAPET STATION	

	RBS to start the pump and h/c as per the pumping plan
2)	<p>When dedicated receipt</p> <p>Take the clearance from VBS regarding the flow rate before starting the lineup the tank and manifold</p> <p>Keep PCV1603,HOV42,MOV1613,MOV1615 in closed condition</p> <p>Start the product receipt as IMI/OSP/02&05</p> <p>Tank switch over to be done as per IMI/OSP/05</p> <p>Ensure that HOV 42 should be open after dedicated receipt</p>
3)	<p>When receipt is to be taken along with pumping</p> <p>Take the conformation from VBS regarding the flow rate from VBS and pumping flow rate and receipt flow rate from VDS</p> <p>Line up the tank as well as manifold as per IMI/OSP/01,02&03</p> <p>Start the H/C and maintain adequate suction to start the mainline pump</p> <p>Inform about h/c and pumping flow rate to VDS/VBS/SRS</p>
4)	<p>When pumping the product without receipt</p> <p>Lineup the mainline pump</p> <p>Keep PCV1601,FCV1601,HOV66,MOV1620 fully closed</p> <p>Start the mainline pump and keep desired flow rate by controlling the flow through the PCV1602</p> <p>Inform the same to VDS, RBS, VBS, SRS about the pump starting and pumping flow rate.</p>
5)	<p>When station is under pump bypass</p> <p>Open the SLV's (MOV1601,MOV1615) and MOV1604 closed as per IMI/OSP/06</p> <p>Conform the same to VDS,RBS,VBS & SRS</p> <p>Once bypass flow started monitor flow and pressure parameters</p>
6)	<p>When station is under pump bypass and receipt to be taken</p> <p>Open the SLV's (MOV1601,MOV1615) and close HOV42 and lineup the station as per IMI/OSP/06</p> <p>Take the conformation from VBS regarding the flow rate and from VDS regarding the receipt and bypass flow rate</p> <p>Lineup the tank and manifold as per IMI/OSP/01,02&03</p> <p>Once bypass flow stabilized start the receipt as per IMI/OSP/02&05</p>
<p>Performance indicators:</p> <p>Safe and smooth operations.</p>	

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 3 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/01
TITLE	STARTUP OF SURYAPET STATION	

4.4.1 d	Resource: Manpower Electricity
4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	<p>Risks:</p> <ul style="list-style-type: none"> 1. Improper coordination 2. Safety negligence 3. Wrong feedback 4. Improper monitoring of operational parameters 5. Accident & Incident due to not use of proper PPE <p>Opportunities:</p> <ul style="list-style-type: none"> 1. Proper utilization of equipment 2. Innovation in operations 3. Close monitoring of operational parameters 4. Strict follow of all SOPs 5. Proper handling of equipment during maintenance
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	<p>Documents to be maintained:</p> <ul style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Maintenance Log Book (IMF/OPN/02) 4. PLC by-pass register (IMF/OPN/07) 5. Certificate for Thermometer calibration (IMF/OPN/05) 6. Certificate for Hydrometer calibration (IMF/OPN/06) 7. Electrical Isolation & Energization Permit (IMF/OPN/10) 8. Critical behavior check list for PPE observation (IMF/OPN/12) 9. Tank cum gauge cum check list (IMF/OSP/03)
4.4.2 b	<p>Documents to be retained:</p> <ul style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Maintenance Log Book (IMF/OPN/02) 4. Certificate for Thermometer calibration (IMF/OPN/05)

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 4 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/01
TITLE	STARTUP OF SURYAPET STATION	

	5. Certificate for Hydrometer calibration (IMF/OPN/06) 6. PLC by-pass register (IMF/OPN/07) 7. Electrical Isolation & Energization Permit (IMF/OPN/10) 8. Critical behavior check list for PPE observation (IMF/OPN/12) 9. Tank cum gauge cum check list (IMF/OSP/03)
--	---

Risk	Risk rating	Action Plan
Improper monitoring of operational parameters Wrong feedback	H H	<ul style="list-style-type: none"> Shift in-charge to ensure all safety measure before start of the job Shift officer to ensure proper feedback from field before start of any activity
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

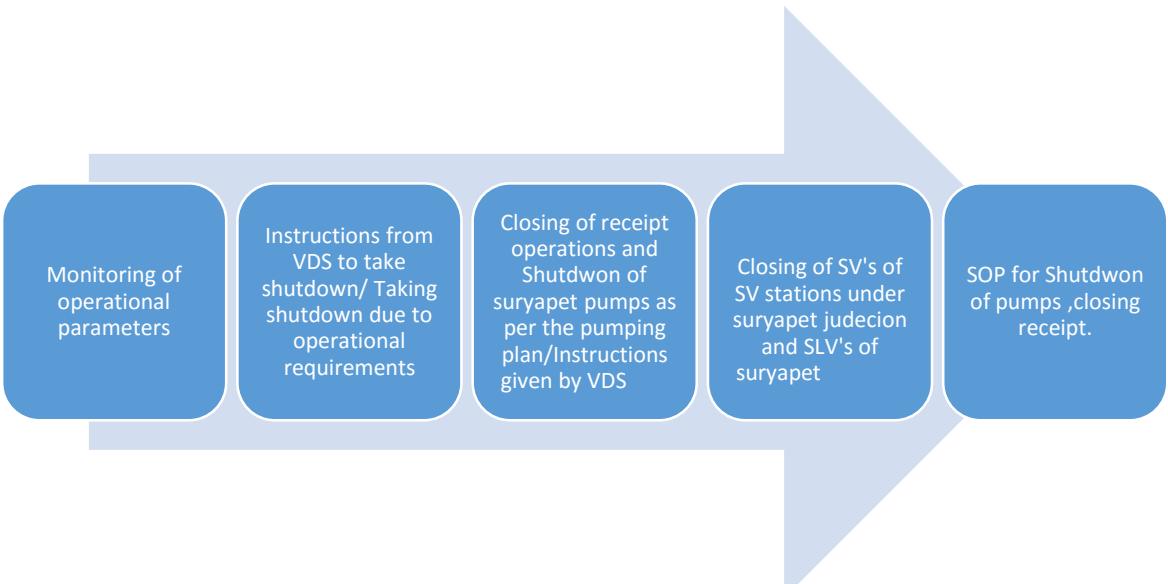
Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H-High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Unsafe environment	H	YES, PARTIALLY	inspection by Officer In-charge		
Contract workmen	Safe Operations	Unsafe environment	H	YES, PARTIALLY			

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 1 OF 5
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/03
TITLE	SHUTDOWN OF SURYAPET STATION	

Process: To provide guidelines for taking Shutdown of Suryapet pumps.

Existing IMS Document no: QMP/OSP/03

Clause	Elements
4.4.1 a	<p>Inputs to perform the process Pumping plan from VDS, Monitoring of operational parameters, man power, SOP for Stopping of pumps, SOP for stopping of h/c, Reports from SV Station guards, status reports from field.</p> <p>Output of the process: Suryapet Booster Station Shutdown.</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p> 
4.4.1 c	<p>Criteria & methods:</p> <p>1 When only Heart Cut is 'ON' & VSPL shutdown to be taken:</p> <ol style="list-style-type: none"> 1.1 Suryapet Pipeline shift engineer informs, Visakh, Vijayawada/ Rajahmundry & Secunderabad about closing the Heart Cut operation. 1.2 Pipeline shift engineer first closes FCV-1601 and other stations will simultaneously adjust the station pressures accordingly.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 2 OF 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/03

TITLE

SHUTDOWN OF SURYAPET STATION

1.3 After that Suryapet shift engineer closes MOV-1620 and will confirm back to Visakh, Vijayawada /Rajahmundry & Secunderabad.

1.4 Vijayawada /Rajahmundry shift engineer then informs Secunderabad shift engineer to close PCV-1701 and MOV-1703. Once pressure is 15 kg/cm² at Secunderabad, Vijayawada stops the pump. In case Rajahmundry pumps are running instead of Vijayawada pumps, Vijayawada will close their outlet SLV once pressure at Secunderabad is 15 kg/cm².

1.5 For a long shutdown Suryapet shift engineer closes MOV-1603, MOV 1613 and station limit valves, MOV-1601 and MOV-1615. Secunderabad shift engineer closes MOV-1701 apart from tank manifold.

2 VSPL Shutdown when booster pump and Heart Cut are ON :

2.1 Suryapet Pipe Line Shift engineer informs Vizag, Vijayawada /Rajahmundry & Secunderabad about closing the Heart Cut.

2.2 Suryapet Pipe Line Shift engineer first closes FCV-1601 and other stations simultaneously adjust the station pressures accordingly.

2.3 After the line pressure stabilizes, Suryapet will stop the pump and other stations will adjust the station pressures accordingly.

2.4 Vijayawada/ Rajahmundry will inform Secunderabad to close PCV –1701 and MOV-1703. Vijayawada pumps are stopped once pressure at Secunderabad is 15 kg/cm². In case Rajahmundry pumps are running instead of Vijayawada pumps, Vijayawada will close their outlet SLV once pressure at Secunderabad is 15 kg/cm².

2.5 In case of only Vizag and Suryapet pumps running,Suryapet pumps will run till pressure at Secunderabad is 15 kg/cm².After that Suryapet pumps are tripped and outlet SLV is closed.Once pressure at Suryapet reaches 20 kg/cm², Vijayawada will close their outlet SLV.

For a long shutdown, Secunderabad will close MOV-1701 apart from manifold and tank inlet and Suryapet will close MOV-1601 .

3 Shutdown of Suryapet Station during station by pass and no Heart cut.

During dedicated receipt at Secunderabad and station by pass condition at Suryapet , the product is either routed thru Suryapet station by-passing the pump or bypassing the Suryapet Station. In these cases, Suryapet is required to isolate the station after receipt is completed at Secunderabad by closing SLVs after obtaining confirmation from Vijayawada and Secunderabad.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 3 OF 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/03

TITLE

SHUTDOWN OF SURYAPET STATION

4 When Vijayawada and Suryapet Booster Station are ON and VSPL shutdown to be taken:

- 4.1 Stop one pump at VBS if two are running.Stop SBS pump.
- 4.2 Close PCV and SLV i.e. MOV-1701 at SRS.
- 4.3 Stop VBS second pump once pressure reaches 15 kg/cm² at SRS.
- 4.4 Close outlet SLVs at VBS immediately
- 4.5 Close outlet and inlet SLVs at SBS.
- 4.6 Incase of emergency or Vizag pump tripping, pump is stopped at Suryapet immediately and the relevant valves at Suryapet and Secunderabad will be closed subsequently.

5 When Heart cut is ON with station by pass and VSPL shut down is to be taken:

- 5.1 Stop Suryapet Heart cut.
- 5.2 Close PCV and SLV i.e. MOV-1701 at SRS.
- 5.3 Stop VBS pump once pressure reaches 15 kg/cm² at SRS.
- 5.4 Close outlet SLVs at VBS and Suryapet will close its SLVs if long shut down is there.

6 When Heart cut and Pumps are ON and VVSPL shut down is to be taken :

- 6.1 Stop Suryapet Heart cut.
- 6.2 Stop one pump at VBS if two are running.Stop SBS pump.
- 6.3 Close PCV and SLV i.e. MOV-1701 at SRS.
- 6.4 Stop VBS second pump once pressure reaches 15 kg/cm² at SRS.
- 6.5 Close out going SLVs at VBS.
- 6.6 Close out going and in coming SLVs at SBS.
- 6.7 Stop RBS Heart cut and pumps if on.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 4 OF 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/03

TITLE

SHUTDOWN OF SURYAPET STATION

6.8 Close PCV and in coming SLV at VBS after stopping one pump at VDS.

6.9 Stop second VDS pump once pressure reaches 20 kg/cm² at VBS.

Performance indicators:

Safe and smooth shutdown of Station without any surge in upstream and downstream locations.

4.4.1 d Resource:
Manpower

4.4.1 e Roles and Responsibilities:
Shift In Charge

4.4.1 f Risks:
1. Improper coordination
2. Improper monitoring of operational parameters
3. Accident & Incident due to not use of proper PPE

Opportunities:

1. Proper utilization of equipment
2. Innovation in operations
3. Close monitoring of operational parameters
4. Strict follow of all SOPs
5. Proper handling of equipment during maintenance

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. Operations Log Book (IMF/OSP/01)
3. Maintenance Log Book (IMF/OPN/02)
4. PLC by-pass register (IMF/OPN/07)
5. Critical behavior check list for PPE observation (IMF/OPN/12)
6.

4.4.2 b Documents to be retained:
1. Shift Log Book (IMF/OPN/01)
2. Operations Log Book (IMF/OSP/01)
3. Maintenance Log Book (IMF/OPN/02)
4. PLC by-pass register (IMF/OPN/07)

Approved By

Issued By

OPERATIONS INCHARGE

IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 5 OF 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/03

TITLE

SHUTDOWN OF SURYAPET STATION

5. Critical behavior check list for PPE observation (IMF/OPN/12)

Risk	Risk rating	Action Plan
Improper Co-ordination	H	<ul style="list-style-type: none"> Shift in charge to ensure proper co-ordination with upstream and downstream stations for smooth shutdown of station.
Improper monitoring of operational parameters	H	<ul style="list-style-type: none"> Shift in-charge to ensure all safety measures before start of the job
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

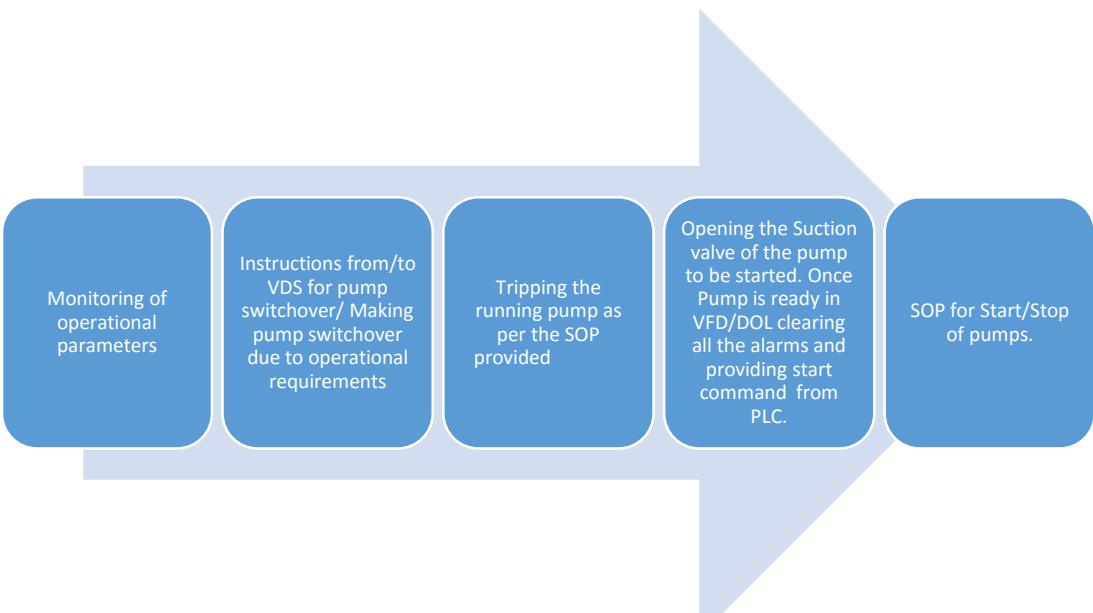
Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H-High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Improper monitoring of operational parameters	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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	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.: IMP/OSP/04
TITLE	SWITCHOVER OF PUMPS AT SURYAPET STATION	

Process: To provide guidelines for switching over of pumps at Suryapet station.

Existing IMS Document no: QMP/OSP/04

Clause	Elements
4.4.1 a	<p>Inputs to perform the process Status report from electrician at Substation, Monitoring of operational parameters, man power, SOP for Start/Stop of pumps, status reports from field.</p> <p>Output of the process: Switch over of pump at Suryapet Booster Station.</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p>  <pre> graph LR A[Monitoring of operational parameters] --> B[Instructions from/to VDS for pump switchover/ Making pump switchover due to operational requirements] B --> C[Tripping the running pump as per the SOP provided] C --> D[Opening the Suction valve of the pump to be started. Once Pump is ready in VFD/DOL clearing all the alarms and providing start command from PLC.] D --> E[SOP for Start/Stop of pumps.] </pre>
4.4.1 c	<p>Criteria & methods:</p> <ol style="list-style-type: none"> Idle pump is kept ready for operation by proper venting and other precautions before starting as displayed in PLC before Switch Over and suction MOV should be kept open. Running pump is tripped.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET:2 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/04
TITLE	SWITCHOVER OF PUMPS AT SURYAPET STATION	

	<p>3. Idle pump is started immediately and PCV is operated to control parameters in case pump started in DOL and Parameters can be controlled by using VFD in case of pump started in VFD.</p> <p>4. Increase the flow rate as per requirement and inform Vizag, Vijayawada & Secunderabad C/R about the pump S/O.</p> <p>5. Record the pump S/O time in shift log book.</p> <p>Performance indicators: Safe and smooth switch over of pumps.</p>
4.4.1 d	Resource: Manpower
4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	<p>Risks:</p> <p>1. Improper coordination</p> <p>2. Improper monitoring of operational parameters</p> <p>3. Accident & Incident due to not use of proper PPE</p> <p>Opportunities:</p> <p>1. Proper utilization of equipment</p> <p>2. Innovation in operations</p> <p>3. Close monitoring of operational parameters</p> <p>4. Strict follow of all SOPs</p> <p>5. Proper handling of equipment during maintenance</p>
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	<p>Documents to be maintained:</p> <p>1. Shift Log Book (IMF/OPN/01)</p> <p>2. Operations Log Book (IMF/OSP/01)</p> <p>3. Maintenance Log Book (IMF/OPN/02)</p> <p>4. Critical behavior check list for PPE observation (IMF/OPN/12)</p>

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET:3 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/04
TITLE	SWITCHOVER OF PUMPS AT SURYAPET STATION	

4.4.2 b	Documents to be retained: <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Maintenance Log Book (IMF/OPN/02) 4. Critical behavior check list for PPE observation (IMF/OPN/12)
---------	--

Risk	Risk rating	Action Plan
Improper Co-ordination	H	<ul style="list-style-type: none"> • Shift in charge to ensure proper co-ordination with upstream and downstream stations for smooth shutdown of station.
Improper monitoring of operational parameters	H	<ul style="list-style-type: none"> • Shift in-charge to ensure all safety measures before start of the job
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 monitoring of operational parameters	H	YES	Vigilant Shift in charge	NA	NA

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET:4 of 4

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/04

TITLE

SWITCHOVER OF PUMPS AT SURYAPET STATION

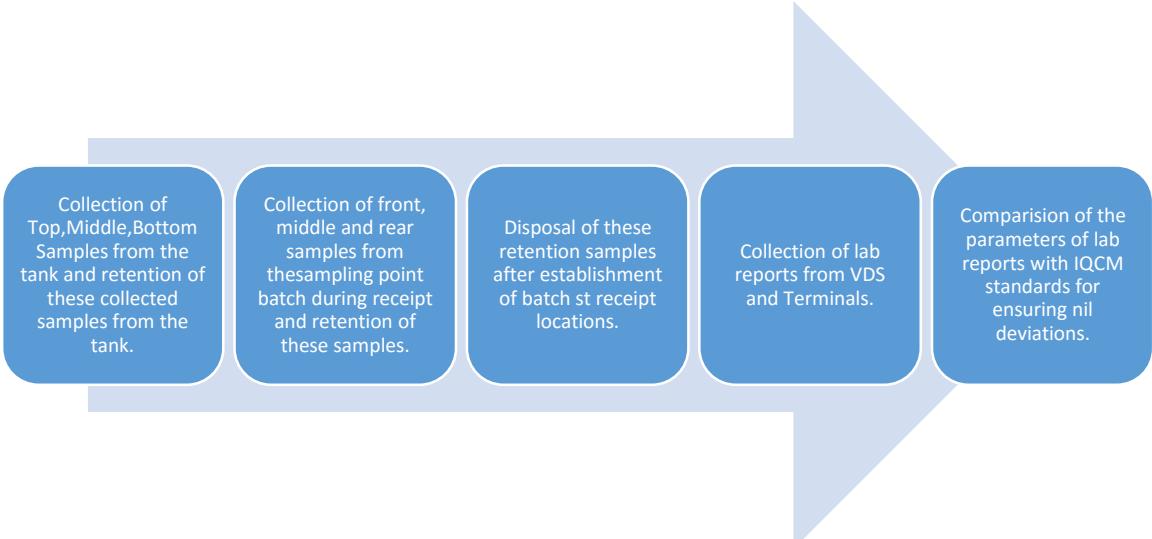
Contract workmen	Safe Operations	Accident & Incident due to not use of proper PPE	H	YES	inspection by Officer In-charge	NA	NA

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 02 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 1 of 5
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/02
TITLE	Product Sampling and Lab Test Reports	

Process: To provide guidelines for Product Sampling and Lab Test Reports.

Existing IMS Document no: QMI/OSP/05

Clause	Elements
4.4.1 a	<p>Inputs to perform the process: Sampling Apparatus (Sampling Containers, Funnel and Sampling Labels), laboratory test reports from VDS and Terminal.</p> <p>Output of the process: For Ensuring Quality of the product</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p> 
4.4.1 c	<p>Criteria & methods: PRODUCT SAMPLING:</p> <ol style="list-style-type: none"> Take over the tank at least 4 hrs after last withdrawal from tank. Before a pipeline receipt is effected through a multiproduct pipeline, a composite sample from the tank nominated for transfer is jointly taken and retained till the batch has been established by the receiving location. Sampling Apparatus and Containers are used separately product wise.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 02
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 2 of 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/02

TITLE

Product Sampling and Lab Test Reports

4. When samples are required from various levels in a tank, the order of sampling should be from the top downwards so that each sample is obtained before the liquid at that level is disturbed.
5. Careless pouring and splashing will cause loss of light fractions and the sample must be poured from the sampling can into the sample containers by making use of special funnels.
6. The sample should always be poured gently down the side of a funnel and never in a stream at the center.
7. The sample containers shall be closed immediately after the sample has been taken (within one minute of drawing).
8. The apparatus should be rinsed with the material to be sampled at least twice (or adequately) and allowed to drain before drawing sample.
9. Safety precautions as stated in SAFETY Manual should be strictly observed while sampling.
10. Sample Containers: The sample container should never be a clear glass bottle, as the clean glass may permit the sun rays to change the composition of certain components particularly those found in MS and LAN, which may render the sample unsatisfactory for any future analysis. The recommended sample container is a metal can with a screw cap.
11. Sample labelling: Sample container is labeled immediately after a sample is obtained. Gummed labels may be used on glass sample bottles but in general tied on labels are preferred (IMF/OSP/04).
12. Sample Collection: In addition to the samples taken from the tanks, one liter of front, one liter of middle and one liter of rear samples are also be taken during the receipt of a batch. These samples are collected from sampling point of the pipeline. Sample are properly labeled and retained till the pumping batch is established in the receiving locations. Details of sample collection are recorded in QC Register (IMF/OSP/02).
13. Sample Retention : For retaining the sample following steps are adopted
14. Sample of materials which may be affected by light or heat are stored in a cool, dark place. Periodical examination is made for leakage.
15. Sample of product is kept in a separate chamber in order to prevent them from being misused. Adequate ventilation is provided in the chamber.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 02
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 3 of 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/02

TITLE

Product Sampling and Lab Test Reports

16. Sample disposal: Hourly density figures are recorded by the receiving locations while receipt is on and any variations from the density range are investigated by the receiving location in coordination with the pumping location.
17. Once the product is received in the storage tanks of the receiving location, the receiving location carries out batch formation test as per Appendix 15 of Industry Quality control manual and then the product is reware-housed under specific batch No.
18. Any variation beyond the limits in receiving location test reports is investigated with help of pumping location. The sample retained is sent to the refinery or marketing laboratory for further investigations.
19. After ascertaining the above, the product sample is disposed off under the supervision of the shift in-charge. The sample thus collected is poured back into the respective sump tanks (20KL for MS and 70 KL for HSD/SKO) as applicable. While pouring the product back into the tank care is taken not to splash the product nor is any plastic funnel used for pouring. Details of sample disposed are entered in Quality Control register
20. The empty sample containers are cleaned and kept for future sampling.
21. Laboratory Test Reports: Laboratory test reports are collected from VDS and Terminal
22. It is ensured by shift in-charge that test reports of products are available in control room. Specification of product is in line with Industry and ISI standards.

PRODUCT	IS SPECIFICATIONS
M. S.	IS - 2796 - 2000
S. K. O.	IS - 1459 - 2000
H. S. D.	IS - Grade HSD Specs 2000

Tests such as flash point, pour point etc, which are susceptible for change depending upon the crude and production pattern are subject to review and deviation on Industry basis

Performance indicators:

Collection and Retention of samples, Collection of lab reports.

4.4.1 d

Resource:

Manpower, Sampling Apparatus (Sampling Containers, Funnel and Sampling Labels), Lab Reports from VDS and terminal.

4.4.1 e

Roles and Responsibilities:

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 02 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 4 of 5
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/02
TITLE	Product Sampling and Lab Test Reports	

	Shift In Charge
4.4.1 f	<p>Risks:</p> <ol style="list-style-type: none"> 1. Improper collection and retention of samples. 2. Improper Disposal of samples 3. Deviation from IQCM standards 4. Accident & Incident due to not use of proper PPE <p>Opportunities:</p> <ol style="list-style-type: none"> 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	<p>Documents to be maintained:</p> <ol style="list-style-type: none"> 1. Quality Control Register (IMF/OSP/02) 2. Sample Label(IMF/OSP/04)
4.4.2 b	<p>Documents to be retained:</p> <ol style="list-style-type: none"> 1. Quality Control Register (IMF/OSP/02) 2. Sample Label(IMF/OSP/04)

Risk	Risk rating	Action Plan
Improper Collection and retention of samples	H	<ul style="list-style-type: none"> • Shift in charge to ensure proper collection and retention of samples from tank and sample point.
Improper Disposal of samples	H	<ul style="list-style-type: none"> • Shift in charge has to ensure proper disposal of line and tank samples after batch establishment at receipt location.
Deviation from IQCM Standards.	H	<ul style="list-style-type: none"> • Shift in-charge to ensure all product parameters are meeting the IQCM standards.
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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 02 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 5 of 5
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/02
TITLE	Product Sampling and Lab Test Reports	

How to find the RISK/ opportunity for individual process

a) **Analysis of individual interested party**

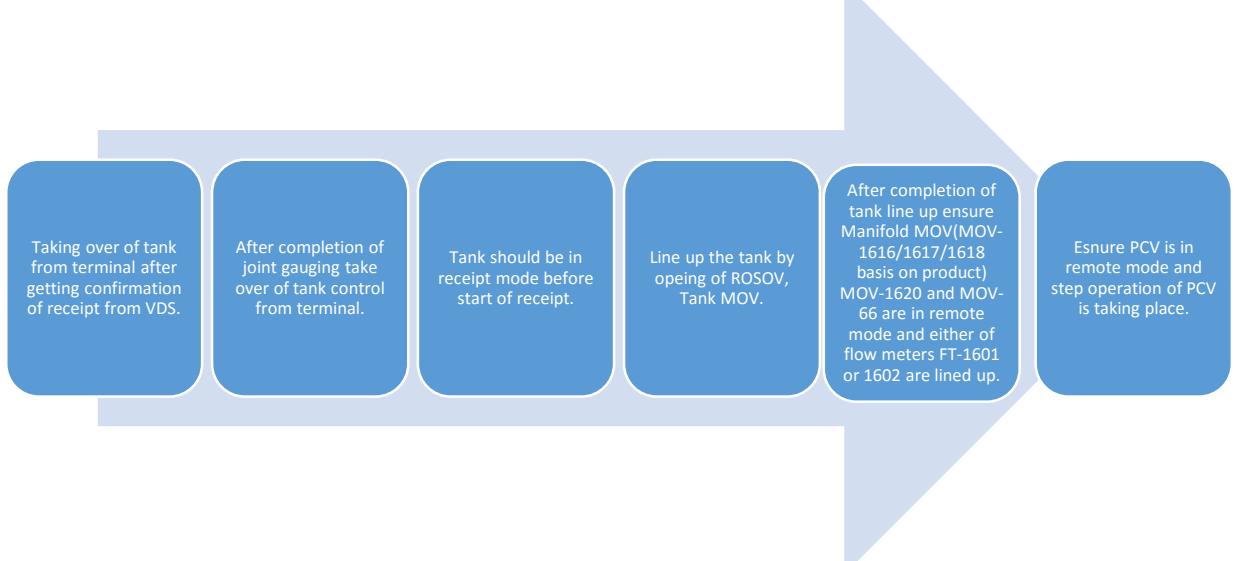
Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H-High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Improper Collection and retention of samples	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge	Safe Operations	Improper Disposal of samples	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge	Safe Operations	Deviation from IQCM Standards.	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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

 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/02
TITLE	Checks Before Receipt Operations and Tank Lineup

Process: To provide guidelines for Checks before Receipt Operations and Tank Lineup.

Existing IMS Document no: QMI/OSP/01

Clause	Elements
4.4.1 a	<p>Inputs to perform the process MOV Status of receipt line, Tank Control, ROSOV and Tank MOV Status. Output of the process: Tank lineup for start of receipt operations.</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p>  <pre> graph LR A[Taking over of tank from terminal after getting confirmation of receipt from VDS.] --> B[After completion of joint gauging take over of tank control from terminal.] B --> C[Tank should be in receipt mode before start of receipt.] C --> D[Line up the tank by opening of ROSOV, Tank MOV.] D --> E[After completion of tank line up ensure Manifold MOV(MOV-1616/1617/1618 basis on product) MOV-1620 and MOV-66 are in remote mode and either of flow meters FT-1601 or 1602 are lined up.] E --> F[Ensure PCV is in remote mode and step operation of PCV is taking place.] </pre>
4.4.1 c	<p>Criteria & methods:</p> <ol style="list-style-type: none"> 1. Line up the tank after completion of joint gauging take over the tank control to receipt mode. 2. Open Inlet ROSOV and tank MOV. 3. Ensure the tank is in receipt mode 4. Line-up the tank by opening the ROSOV and tank MOV 5. After Completion of tank line up ensure manifold MOV (1616/1617/1618),MOV-66 and MOV-1620 are in remote mode . FV-1601 and either of flow meters FT-1601 or 1602 are lined up. 6. Check status of PCV-1601.It has to be in remote mode and step operation of PCV is ok for regulating the flow.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 2 of 4

INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/02
TITLE	Checks Before Receipt Operations and Tank Lineup	

	Performance indicators: Safe and smooth tank switch.
4.4.1 d	Resource: Manpower, Station PLC, TAS-PLC Integration
4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	Risks: 1. Improper coordination during takeover of tank 2. Incomplete line up of tank or receipt line or both 3. Improper monitoring of receipt line parameters 4. Accident & Incident due to not use of proper PPE Opportunities: 1. Safe and Secure operations 2. Close monitoring of all receipt line parameters 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. Operations Log Book (IMF/OSP/01) 3. Tank gauge cum check list(IMF/OSP/03) 4. Quality Control Register (IMF/OSP/02)
4.4.2 b	Documents to be retained: 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Tank gauge cum check list(IMF/OSP/03) 4. Quality Control Register (IMF/OSP/02)

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 3 of 4**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/02

TITLE

Checks Before Receipt Operations and Tank Lineup

Risk	Risk rating	Action Plan
Improper Co-ordination	H	<ul style="list-style-type: none"> Shift in charge to ensure proper co-ordination with man power and terminal officials.
Incomplete line up of tank or receipt line or both	H	<ul style="list-style-type: none"> Line up of both tank and receipt line to be checked physically and to be completed.
Improper monitoring of receipt line parameters	H	<ul style="list-style-type: none"> Shift in-charge to ensure all safety measures before start of receipt.
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	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge	Safe Operations	Incomplete lineup of tank or receipt line or both	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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 4 of 4

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/02

TITLE

Checks Before Receipt Operations and Tank Lineup

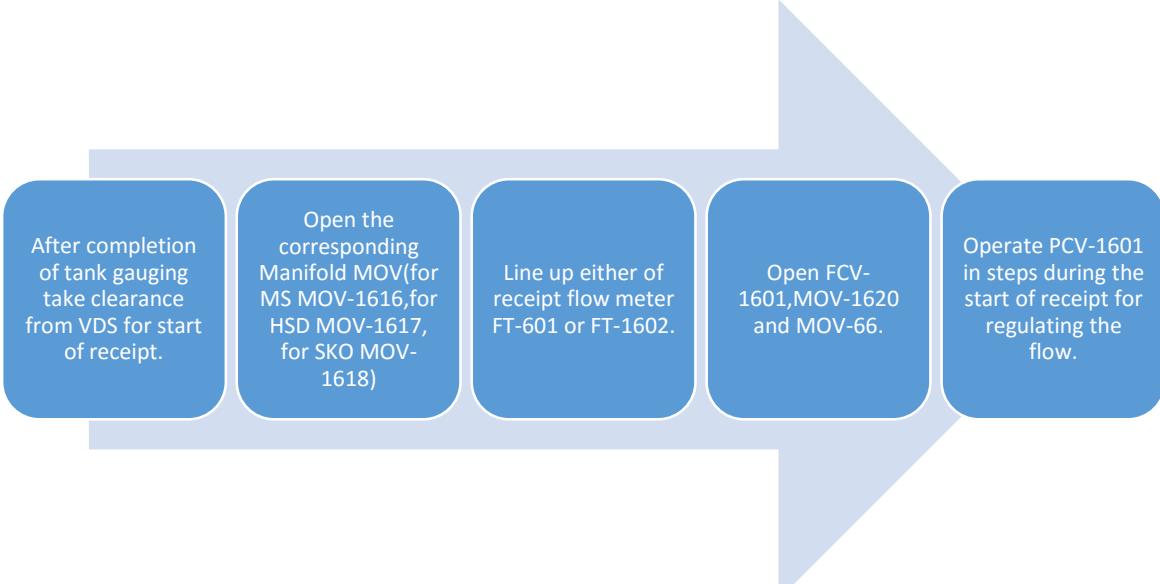
Contract workmen	Safe Operations	Accident & Incident due to not use of proper PPE	H	YES	Inspection by Officer In-charge	NA	NA
------------------	-----------------	--	---	-----	---------------------------------	----	----

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 1 of 3
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/02
TITLE	Line up of Tap off line up to manifold	

Process: To provide guidelines for Lineup of Tap off line up to manifold.

Existing IMS Document no: QMI/OSP/02

Clause	Elements
4.4.1 a	<p>Inputs to perform the process PLC regarding MOV,PCV-1601 and FCV-1601 - status, control and operations, Man power</p> <p>Output of the process: Successful lineup of receipt line till manifold.</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"> 1. Open the corresponding manifold MOV (MOV-1616 for MS, MOV-1617 for HSD and MOV-1618 for SKO). 2. Line up either of receipt flow meter i.e. FT-1601 or FT-1602. 3. Open FCV-1601, MOV-1620 and MOV-66 in sequence. 4. Operate PCV-1601 in steps for start of the receipt. This will help in regulating the flow. <p>Performance indicators:</p>

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.:00 EFFECTIVE DATE: 01/01/2018 SHEET: 2 of 3
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/02
TITLE	Line up of Tap off line up to manifold	

	Successful completion of receipt lineup till manifold
4.4.1 d	Resource: Manpower, Station PLC
4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	<p>Risks:</p> <ul style="list-style-type: none"> 1. Improper coordination during receipt lineup. 2. Malfunctioning of PLC 3. Improper monitoring of receipt line parameters 4. Accident & Incident due to not use of proper PPE <p>Opportunities:</p> <ul style="list-style-type: none"> 1. Safe and Secure Operations 2. Innovation in operations 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: <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Quality Control Register (IMF/OSP/02)
4.4.2 b	Documents to be retained: <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Quality Control Register (IMF/OSP/02)

Risk	Risk rating	Action Plan
Improper Co-ordination during receipt lineup	H	<ul style="list-style-type: none"> • Shift in charge to ensure proper co-ordination with man power.
Malfunctioning of PLC	H	<ul style="list-style-type: none"> • Shift in charge has to ensure proper functioning of station PLC and valve status in PLC

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 3 of 3**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/02

TITLE

Line up of Tap off line up to manifold

			has to be cross verified with field status with man power.
Improper monitoring of receipt line parameters		H	<ul style="list-style-type: none"> Shift in-charge to ensure all safety measures before start of receipt.
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 receipt lineup	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge	Safe Operations	Malfunctioning of PLC	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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**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

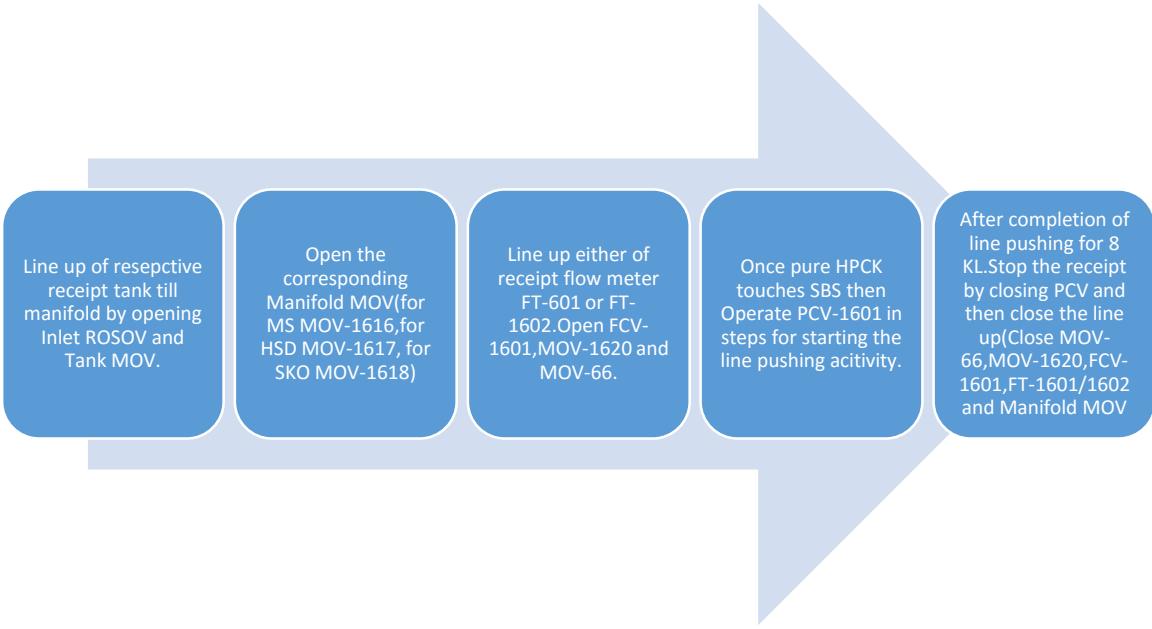
DOCUMENT NO.: IMI/OSP/03

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.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 2 of 4**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/03

TITLE

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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 3 of 4**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/03

TITLE

Station Line Fill Pushup Operation

	<p>3. Close monitoring of all receipt line parameters 4. Strict follow of all SOPs</p>
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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE: 01/01/2018
SHEET: 4 of 4**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/03

TITLE

Station Line Fill Pushup Operation

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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 1 of 5**

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</p> <p>For Interface Tracking:</p> <pre>graph TD; A[For Interface Tracking] --> B[Stop of product receipt one hour before the arrival of interface]; A --> C[Sampling to be done for every ten minutes checking density of line product atleast one hour before start of interface.]; A --> D[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.]; A --> E[If HPCK/SKO receipt is planned then start receipt at such a way that parcel size will be completed before arrival of next interface.]; A --> F[After completion of parcel size close the receipt lineup and carry out sampling for tracking next interface.]</pre>

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 2 of 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/04

TITLE

Interface Tracking/Product Receipt

For Interface Receipt:

Stop of product receipt atleast two hours before the arrival of interface

Sampling to be done for every ten minutes checking density of line product atleast two hours before start of interface.

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.

In case of interface receipt collect relevant interface details from upstream locations.Then line up the MS/HSD tank for taking receipt of interface.

As per allowable contamination levels of 1% SKO in MS and 2% SKO in HSD.Interface receipt plan has to be prepared and followed for receipt of interface.

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.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 3 of 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/04

TITLE

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.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 4 of 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/04

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)

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.:00
EFFECTIVE DATE:01/01/2018
SHEET: 5 of 5**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/04

TITLE

Interface Tracking/Product Receipt

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

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

Approved By

Issued By

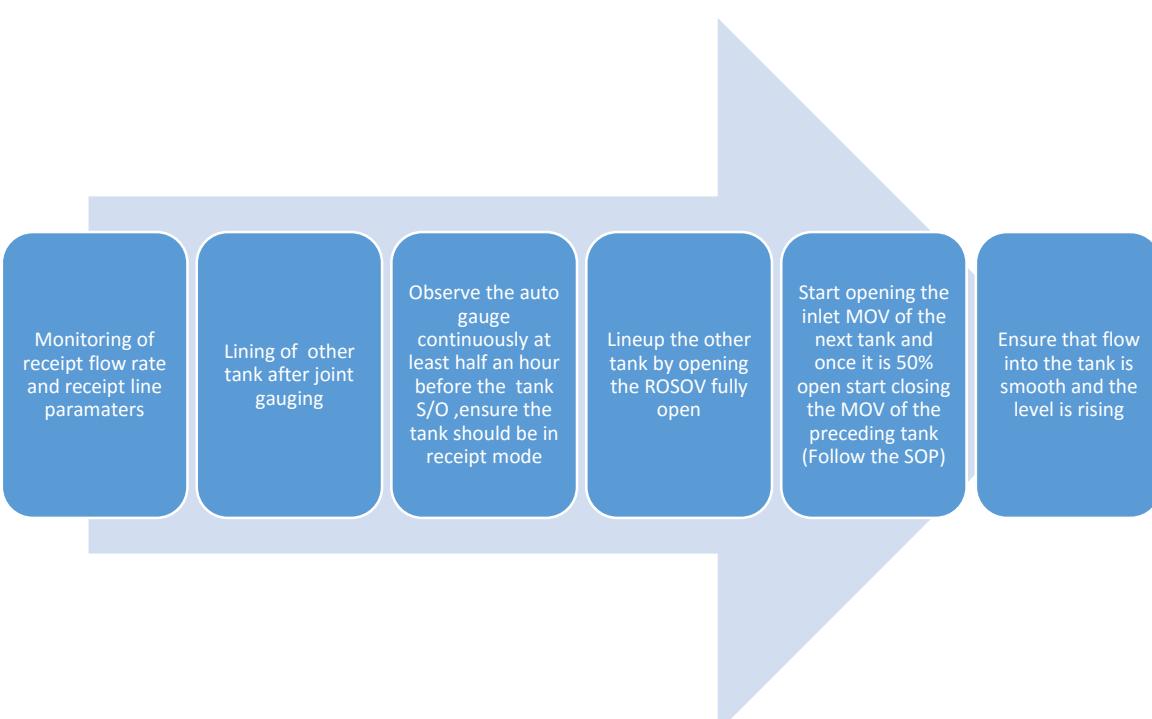
OPERATIONS INCHARGE

IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 1 of 3
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/05
TITLE	SWITCH OVER OF TANK FOR THE SAME PRODUCT	

Process: To provide guidelines for switch over of tank for the same product at Suryapet station.

Existing IMS Document no: QMI/OSP/05

Clause	Elements
4.4.1 a	<p>Inputs to perform the process PLC regarding the tank dips and Status of manifold and ROSOV, Status report from electrician, Monitoring of receipt line and mainline parameters, man power, SOP for tank S/O, status reports from field.</p> <p>Output of the process: Switch over of tank for the same product.</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"> 1. Line up the other tank for switch over after joint gauging. 2. Observe the Auto gauge continuously at least half an hour before the expected time of desired level. 3. Ensure the tank is in receipt mode 4. Line-up the other tank by opening the ROSOV fully open

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 2 of 3
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/05
TITLE	SWITCH OVER OF TANK FOR THE SAME PRODUCT	

	<p>5. Start opening the inlet MOV of the next tank and once it is 50% open start closing the MOV of the preceding tank (Follow the SOP)</p> <p>6. Keep monitoring the receipt flow and auto gauge of following tank.</p> <p>7. Record the tank S/O time in shift log book.</p> <p>Performance indicators: Safe and smooth tank switch.</p>
4.4.1 d	<p>Resource: Manpower, Station PLC, Power</p>
4.4.1 e	<p>Roles and Responsibilities: Shift In Charge</p>
4.4.1 f	<p>Risks:</p> <ol style="list-style-type: none"> 1. Improper coordination during tank switch over 2. Improper monitoring of receipt line parameters 3. Accident & Incident due to not use of proper PPE <p>Opportunities:</p> <ol style="list-style-type: none"> 1. Proper utilization of tank capacity 2. Innovation in operations 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	<p>Documents to be maintained:</p> <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Tank gauge cum check list IMF/OSP/03
4.4.2 b	<p>Documents to be retained:</p> <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Tank gauge cum check list IMF/OSP/03

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 3 of 3**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/05

TITLE

SWITCH OVER OF TANK FOR THE SAME PRODUCT

Risk	Risk rating	Action Plan
Improper Co-ordination	H	<ul style="list-style-type: none"> Shift in charge to ensure proper co-ordination with man power.
Improper monitoring of receipt line parameters	H	<ul style="list-style-type: none"> Shift in-charge to ensure all safety measures before tank switch over
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 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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 1 OF 5
	INTEGRATED MANAGEMENT INSTRUCTION	DOCUMENT NO.: IMP/OSP/06
TITLE	PIG RECEIVING AND LAUNCHING at SBS	

Process: To provide guidelines for operation of Booster pumps.

Existing IMS Document no: **IMP/OSP/06**

Clause	Elements
4.4.1 a	<p>Inputs to perform the process Pumping plan from VDS</p> <p>Output of the process: Safe starting of Booster Pumps</p>
4.4.1 c	<p>4.1 Carryout out following checks 4.2 to 4.5 to start pumping operation.</p> <p>4.2 AT SUBSTATION:</p> <ul style="list-style-type: none"> 4.2.1 Ensure selection/line up of appropriate DOL/VFD breaker. 4.2.2 Check the voltages at 6.6 KV breaker and 440 V incoming breaker are within ($\pm 10\%$) limit. 4.2.3 Ensure that PCV breaker is switched on. 4.2.4 Put Motor breaker of selected pumps in service position and ensure DC supply is ON. 4.2.5 Ensure 6.6 KV capacitor feeder is in service position with DC supply on and close the breaker. 4.2.6 Ensure that the selected pumps suction and discharge MOVs are in remote and feeder is ON. <p>4.3 LINEUP OF SURYAPET STATION:</p> <ul style="list-style-type: none"> 4.3.1 Open the MOV-1603 & MOV-1613. Ensure HOV-59 is in close position. Line up the Basket filters (101A or 101B or both) by opening either side HOVs. 4.3.2 Ensure that HOVs on either side of selected Turbine Flow meter (1603 or 1604) are open. 4.3.3 Ensure either side HOVs of PCVs are open and By pass Globe Valve is closed. 4.3.4 Keep the stop switch of PCV in released position and reset the PCV. 4.3.5 Open Suryapet Station Limit MOVs 1601 & 1615.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 2 OF 5

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/06

TITLE

PIG RECEIVING AND LAUNCHING at SBS

4.4 AT THE PUMP HOUSE:

- 4.4.1 Selected pump motor bearing oil level and color to be checked. Always keep the bearing oil bath topped up.
- 4.4.2 Release Local STOP button.
- 4.4.3 Open the suction MOVs of the pump to be operated and prime the pump by proper venting.

4.5 IN THE CONTROL ROOM:

- 4.5.1 Select DOL/VFD mode of operation appropriately.
- 4.5.2 Reset the batch in the flow computer/ PLC, if necessary.
- 4.5.3 Select the PCV in MANUAL mode.
- 4.5.4 In case of DOL operation, open suction PCV -1603 and discharge PCV-1602.
- 4.5.5 In case of VFD operation, open suction PCV-1603 (PCV 1602 automatically opens to 100%).
- 4.5.6 If PCV-1601 is used for controlling the suction pressure ensure that HOV- 42 is open.

4.6 START PUMPS AS PER FOLLOWING GUIDELINES:

- 4.6.1 Confirm flow rates to be pumped from Vizag/Vijayawada.
- 4.6.2 Take clearance from the Shift In charge at Vizag Control Room and inform Shift engineers at Vijayawada & Secunderabad Control Room. Fill the format IMF/OSP/05 i.e. Format for 'Checks Before Starting Pumps'.
- 4.6.3 Give START command to selected pump.
- 4.6.4 In case of DOL operation, operate PCV suitably to control flow, line pressure, and suction pressure and discharge header pressure as specified in KEY PARAMETERS.
- 4.6.5 In case of VFD operation, enter the required flow rate in VFD control system.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 3 OF 5

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/06

TITLE

PIG RECEIVING AND LAUNCHING at SBS

4.6.6 Heart cut can be started after stabilization of pressure. Conversely, if required, heart cut can be started first and pumps can be started after that as it is easier to control discharge header pressure and motor currents.

4.6.7 Monitor Pump and Motor Bearing Temperature and motor currents every hour.

4.6.8 Check vibration of pumps every hour.

4.7 For shutdown of Suryapet, follow below mentioned guidelines:

4.7.1 After informing Vizag, Vijayawada & Secunderabad Control Room, stop heart cut operation. While stopping heart cut, in case of DOL operation, monitor discharge header pressure as it will go up. Operate discharge PCV 1602 to control the same. In case of VFD operation enter the changed flow rate in VFD control system.

4.7.2 Stop the Pump Motors once required back pressure of 15 kg/cm² is developed at GRS. Inform Shift engineers at Vizag, Vijayawada & Secunderabad Control Room.

4.8 For Emergency Shutdown of Suryapet Pumps follow below mentioned guidelines:

4.8.1 In case of any emergency like leaks/burst /fire etc either within SBS or on Pipeline ROU it is required to take shut down of pumping operation. If the situation is such that sharing / providing information to other station is not practicable or when the reaction time is limited then it is advisable to go for ESD. In other exigencies it may advisable to inform the other stations to prepare for shutdown and shut down can be taken by stopping/tripping the pumps at Suryapet.

4.8.2 Inform to Vizag, Vijayawada & Secunderabad Control Room engineers after the shut down is taken.

4.9 As deemed fit by the shift in charge ; some set alarms may have to be temporarily bypassed in PLC due to suspected malfunctioning.

This will be done strictly based on urgent requirements and the same to be logged in PLC by Pass register (IMF/OPN/07) for the intimation of the concerned maintenance officer in charge / next shift engineer.

Performance indicators:

Safe starting of Booster Pumps

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 4 OF 5
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/06
TITLE	PIG RECEIVING AND LAUNCHING at SBS	

4.4.1 d	Resource: Manpower Electricity
4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	<p>Risks:</p> <ol style="list-style-type: none"> 1. Improper coordination 2. Safety negligence 3. Wrong feedback 4. Improper monitoring of operational parameters <p>Opportunities:</p> <ol style="list-style-type: none"> 1. Proper utilization of equipment 2. Innovation in operations 3. Close monitoring of operational 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	<p>Documents to be maintained:</p> Shift log book IMF/OPN/01 PLC by pass register IMF/OPN/07 Checks before starting pumps/receipt at SBS IMF/OSP/05
4.4.2 b	<p>Documents to be retained:</p> Shift log book IMF/OPN/01 PLC by pass register IMF/OPN/07 Checks before starting pumps/receipt at SBS IMF/OSP/05

Risk	Risk rating	Action Plan
Improper monitoring of operational parameters	H	<ul style="list-style-type: none"> • Shift in-charge to ensure all safety measure before start of the job • Shift officer to ensure proper feedback from field before start of any activity
Wrong feedback	H	

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 5 OF 5

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/06

TITLE

PIG RECEIVING AND LAUNCHING at SBS

How to find the RISK/ opportunity for individual process

a) **Analysis of individual interested party**

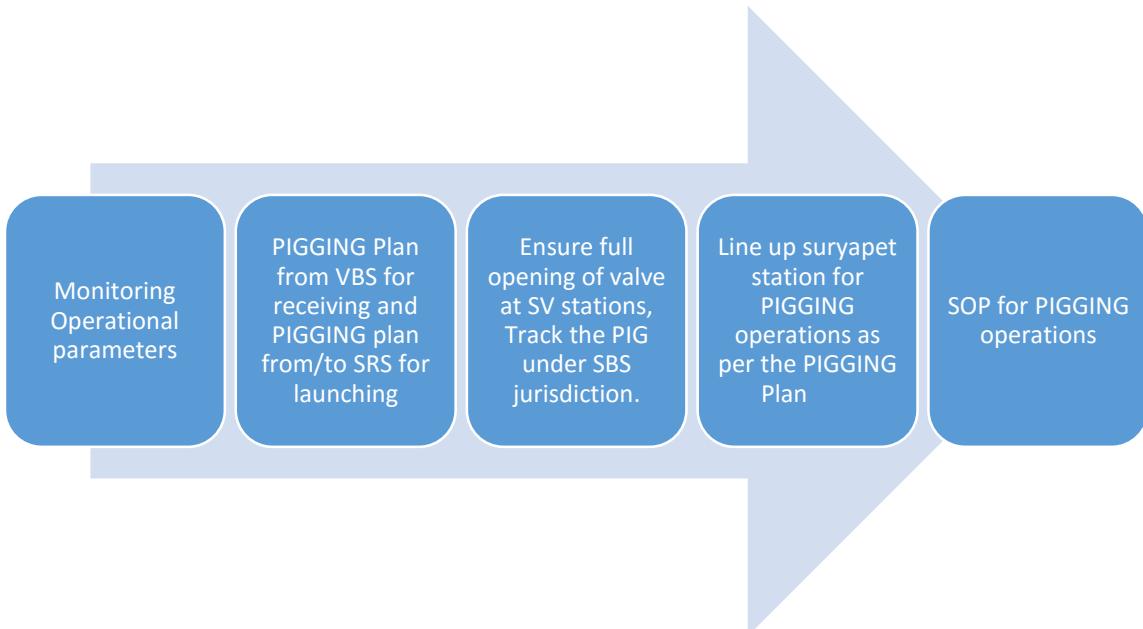
Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H-High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Unsafe environment	H	YES	Inspection by Officer In-charge		
Contract workmen	Safe Operations	Unsafe environment	H	YES	Inspection by Officer In-charge		

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	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.: IMP/OSP/07
TITLE	PIG RECEIVING AND LAUNCHING at SBS	

Process: To provide guidelines for PIG receiving and launching at Suryapet Booster station

Existing IMS Document no: QMP/OSP/07

Clause	Elements
4.4.1 a	<p>Inputs to perform the process PIGGING plan from VBS & SRS, monitoring of operational parameters, man power, SOP for PIGGING, Tracking the PIG, status of valves from SV stations by S/G for full opening of the valve.</p> <p>Output of the process: PIG receiving and launching operation at Suryapet Booster Station</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p>  <pre> graph TD A[Monitoring Operational parameters] --> B[PIGGING Plan from VBS for receiving and PIGGING plan from/to SRS for launching] B --> C[Ensure full opening of valve at SV stations, Track the PIG under SBS jurisdiction.] C --> D[Line up suryapet station for PIGGING operations as per the PIGGING Plan] E[SOP for PIGGING operations] --> D </pre>
4.4.1 c	<p>Criteria & methods: Ensure that all the SV station valves are in full open condition before PIGGING operations.</p> <p>1. Follow below instructions for PIG Receiving</p> <ul style="list-style-type: none"> a) Open MOV-1602 and 8" HOV of Receiver two hours before pig arrival time. b) Even during station bye pass to enable pig receipt close MOV-1604 at least 2 hours before pig arrival.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 2 OF 4**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/07

TITLE

PIG RECEIVING AND LAUNCHING at SBS

- c) Close MOV-1603 in case of station receipt/pumping and ensure receipt thru' pig barrel by bypassing MOV 1603 in PLC and log it in PLC bypass register.
- d) After pig receiving, open MOV-1603 or MOV-1604; isolate the receiver barrel by closing MOV-1602 and 8" HOV.
- e) Depressurize the barrel and drain the barrel into sump tank
- f) Log the details in IMF/OPN/08 - Pigging report.

2. Follow below guidelines for PIG launching

- a) Pig Launching cannot be done during station by pass and can be possible only during pumping operation.
- b) After placing the PIG in the barrel, open the kick off line and pressurize the barrel. Bypass MOV 1613 in PLC and log it in PLC bypass register if SBS pump is running. Open MOV-1614 fully and Close MOV 1613 and launch the pig.
- c) On receiving the confirmation about PIG launching Open MOV-1613.
- d) Close MOV-1614 and 8" kicker line.
- e) Depressurize the barrel and drain the barrel into sump tank.
- f) Log the details in IMF/OPN/08 - Pigging Report.

3. List of tools required for pigging

- a. Tool box with 36" ring / spanner.
- b. O-ring for band lock (QOC) 22" & 18".
- c. CAF Gaskets.
- d. Grease tin.
- e. Small rods / pipes.
- f. Wooden sleeper (small).
- g. Half cut drum.
- h. Hammer.
- i. Torchlight with spare batteries.
- j. Pig hook.
- k. Scrapper Pig.
- l. Cotton waste rust line.
- m. F-rods

Performance indicators:

Safe and smooth PIGGING operation.

4.4.1 d

Resource:

Manpower
Electricity

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 3 OF 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMP/OSP/07
TITLE	PIG RECEIVING AND LAUNCHING at SBS	

4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	<p>Risks:</p> <ol style="list-style-type: none"> 1. Improper coordination 2. Safety negligence 3. Wrong feedback 4. Improper monitoring of operational parameters 5. Accident & Incident due to not use of proper PPE <p>Opportunities:</p> <ol style="list-style-type: none"> 1. Proper utilization of equipment 2. Innovation in operations 3. Close monitoring of operational parameters 4. Strict follow of all SOPs 5. Proper handling of equipment during maintenance
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	<p>Documents to be maintained:</p> <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Maintenance Log Book (IMF/OPN/02) 4. PLC by-pass register (IMF/OPN/07) 5. Critical behavior check list for PPE observation (IMF/OPN/12)
4.4.2 b	<p>Documents to be retained:</p> <ol style="list-style-type: none"> 1. Shift Log Book (IMF/OPN/01) 2. Operations Log Book (IMF/OSP/01) 3. Maintenance Log Book (IMF/OPN/02) 4. PLC by-pass register (IMF/OPN/07) 5. Critical behavior check list for PPE observation (IMF/OPN/12)

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE: 01/01/2018
SHEET: 4 OF 4**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMP/OSP/07

TITLE

PIG RECEIVING AND LAUNCHING at SBS

Risk	Risk rating	Action Plan
Improper monitoring of operational parameters	H	<ul style="list-style-type: none"> Shift in-charge to ensure all safety measure before start of the job Shift officer to ensure proper feedback from field before start of any activity
Wrong feedback	H	
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	Unsafe environment	H	YES	Inspection by Officer In-charge		
Contract workmen	Safe Operations	Unsafe environment	H	YES	Inspection by Officer In-charge		

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE:01/01/2018
SHEET: 1 of 3

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/08

TITLE

Guidelines for operating sump tank.

Process: To provide guidelines for operating sump tank.

Existing IMS Document no: QMI/OSP/08

Clause	Elements
4.4.1 a	<p>Inputs to perform the process Sump tank dips, Density of sample taken at before start of operations, Monitoring of receipt line parameters, man power, SOP for sump tank operations, status reports from field. Output of the process: Sump tank operations</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p> <pre>graph LR; A[Lining up of sump tank (MS/HSD)] --> B[Checking of sump tank starting sample (Density and Sulphur)]; B --> C[Observe the auto gauge continuously at least half an hour before the tank S/O ,ensure the tank should be in receipt mode]; C --> D[consultation with VDS after checking/recording density of the product being pumped]; D --> E[Pumping of sump tank product to mainline/tank (Follow the SOP)];</pre>
4.4.1 c	<p>Criteria & methods:</p> <ol style="list-style-type: none">1. Lining up of sump tank (MS/HSD)2. Checking of sump tank starting sample (Density and Sulphur)3. Observe the auto gauge continuously at least half an hour before the tank S/O, ensure the tank should be in receipt mode

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE

ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE:01/01/2018
SHEET: 2 of 3

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/08

TITLE

Guidelines for operating sump tank.

- | | |
|--|---|
| | <ol style="list-style-type: none">4. consultation with VDS after checking/recording density of the product being pumped5. Pumping of sump tank product to mainline/tank (Follow the SOP) |
|--|---|

Performance indicators:

Safe and smooth operation without compromising in the quality of product.

4.4.1 d **Resource:**

Manpower, Electricity, Sample bottles

4.4.1 e **Roles and Responsibilities:**

Shift In Charge

4.4.1 f **Risks:**

1. Improper checking/recording the density and other parameters of product
2. Improper co-ordination with field
3. Accident & Incident due to not use of proper PPE

Opportunities:

1. Proper utilization equipment
2. Innovation in operations
3. Close monitoring of all parameters of sample (i.e. before and after pumping of product)
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)
2. Operations Log Book (IMF/OSP/01)
3. Quality register (IMF/OSP/02)

4.4.2 b **Documents to be retained:**

1. Shift Log Book (IMF/OPN/01)
2. Operations Log Book (IMF/OSP/01)
3. Quality register (IMF/OSP/02)

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 2
REVISION NO.: 00
EFFECTIVE DATE:01/01/2018
SHEET: 3 of 3**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/08

TITLE

Guidelines for operating sump tank.

Risk	Risk rating	Action Plan
Improper Co-ordination	H	<ul style="list-style-type: none"> Shift in charge to ensure proper co-ordination with man power.
Improper checking/recording the density and other parameters of product	H	<ul style="list-style-type: none"> Shift in-charge to ensure density and other parameters should be proper before pumping the sump tank product
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

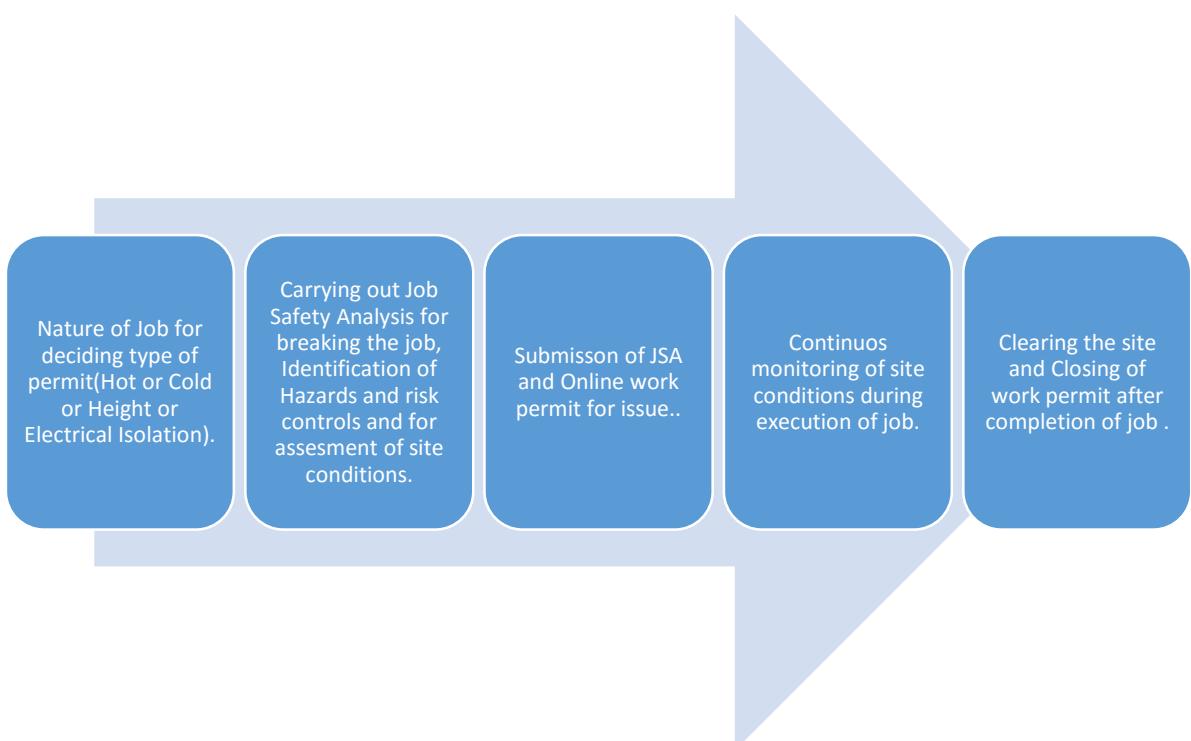
Interested party involved in process	Expectation of the parties	Risk/ opportunity	Seriousness of Risk (RATE H-High, M=Medium, L-Low)	Is Risk has taken care in earlier version?	If yes, reference?	If not include here or Improvement required	Action Plan
Shift- In-charge	Checking/recording of all the parameters	Improper checking/recording the density and other parameters of product	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

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	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/09
TITLE	Guidelines for issue of Hot, Cold, Height & Electrical Isolation work permits	

Process: To provide guidelines for issue of Hot, Cold, Height & Electrical Isolation work permits to carry out M & R jobs of equipment.

Existing IMS Document no: QMP/OSP/09

Clause	Elements
4.4.1 a	<p>Inputs to perform the process: Nature of job for deciding type of permit(Hot or Cold or Height or Electrical Isolation), Site Conditions for carrying out job, Available PPE .</p> <p>Output of the process: Execution of job in safely manner.</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p>  <pre> graph TD A[Inputs] --> B[Activity] B --> C[Criteria] </pre> <p>The flowchart illustrates the process flow. It starts with a box labeled "Inputs to perform the process" (which includes "Nature of job for deciding type of permit(Hot or Cold or Height or Electrical Isolation)" and "Site Conditions for carrying out job, Available PPE"). An arrow points from this box to a large box labeled "Process activities: Activity involved to perform the process". From this large box, five smaller blue boxes represent specific activities: "Nature of Job for deciding type of permit(Hot or Cold or Height or Electrical Isolation)", "Carrying out Job Safety Analysis for breaking the job, Identification of Hazards and risk controls and for assessment of site conditions.", "Submission of JSA and Online work permit for issue..", "Continuos monitoring of site conditions during execution of job.", and "Clearing the site and Closing of work permit after completion of job .". Finally, an arrow points from the "Process activities" box down to a box labeled "Criteria & methods".</p>
4.4.1 c	<p>Criteria & methods:</p> <ol style="list-style-type: none"> Nature of job for deciding type of permit (Hot or Cold or height or Electrical Isolation). Carrying out Job Safety Analysis for breaking the job, Identification of Hazards, Risk Control measures and for assessment of site conditions.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 2 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/09
TITLE	Guidelines for issue of Hot, Cold, Height & Electrical Isolation work permits	

	<p>3. Submission of JSA and Online Work Permit for issue.</p> <p>4. Continuous monitoring of Site Conditions during execution of job.</p> <p>5. Clearing the site and closing of work permit after completion of job.</p> <p>Performance indicators: Risk Control Measures, Usage of PPE.</p>
4.4.1 d	Resource: Manpower, PPE(Safety belts, Hand Gloves, Goggles, Safety helmets, Ear Plugs, Gas Mask, Dust mask etc.).
4.4.1 e	Roles and Responsibilities: Shift In Charge, Officer In-Charge, Location In-Charge, Terminal In-Charge & Fire and Safety officer of Terminal (For Hot Work Permits)
4.4.1 f	<p>Risks:</p> <ol style="list-style-type: none"> Improper identification of risks. Deviation from Risk Control Measures during execution of job. Deviation from OISD-105. Accident & Incident due to not use of proper PPE. <p>Opportunities:</p> <ol style="list-style-type: none"> Safe and Secure execution of job 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:
	<ol style="list-style-type: none"> Cold work permit (IMF/OPN/03) Hot work permit (IMF/OPN/04) Working at Height Permit (IMF/OPN/09) Electrical Isolation & Energization Permit (IMF/OPN/10) Job Safety Analysis.
4.4.2 b	Documents to be retained:
	<ol style="list-style-type: none"> Cold work permit (IMF/OPN/03) Hot work permit (IMF/OPN/04) Working at Height Permit (IMF/OPN/09) Electrical Isolation & Energization Permit (IMF/OPN/10) Job Safety Analysis.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 3 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/09
TITLE	Guidelines for issue of Hot, Cold, Height & Electrical Isolation work permits	

Risk	Risk rating	Action Plan
Improper Identification of risks	H	<ul style="list-style-type: none"> Officer in charge, Shift In-Charge and Safety Officer has to visit job execution site jointly for proper identification of risks.
Deviation from Risk Control Measures during execution of job	H	<ul style="list-style-type: none"> Shift in charge, Office In-Charge and Safety Officer has to ensure nil deviations from risk control measures during execution of job.
Deviation from OISD-105.	H	<ul style="list-style-type: none"> Shift in charge, Office In-Charge and Safety Officer has to ensure nil deviations from OISD-105 in identification of nature of job and other activities.
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, Officer In-Charge, Safety officer	Safe execution of job	Improper Identification of risks	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge, Officer In-Charge, Safety officer	Safe execution of job	Deviation from Risk Control Measures during execution of job	H	YES	Vigilant Shift in charge	NA	NA

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 2 REVISION NO.: 00 EFFECTIVE DATE: 01/01/2018 SHEET: 4 of 4
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/09
TITLE	Guidelines for issue of Hot, Cold, Height & Electrical Isolation work permits	

Shift- In-charge, Officer In- Charge, Safety officer	Safe execution of job	Deviation from OISD- 105.	H	YES	Vigilant Shift in charge	NA	NA
Shift- In-charge, Officer In- Charge, Safety officer	Safe execution of job	Accident & Incident due to not use of proper PPE	H	YES	Inspection by Officer In-charge	NA	NA

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 02
REVISION NO.: 00
EFFECTIVE DATE: 01/08/2018
SHEET: 1 of 3**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/10

TITLE

Procedure for two pump operations at SBS

Process: To provide guidelines for two pump operations at SBS.

Existing IMS Document no: NA

Clause	Elements
4.4.1 a	<p>Inputs to perform the process Requirement of high flow rate towards SRS Output of the process: Meeting the high flow rate demand towards SRS.</p>
4.4.1 b	<p>Process activities: Activity involved to perform the process</p> <ul style="list-style-type: none">Min 550 kl/he inlet flow is available at SBS and DRA dosing is on at SBSLine up of both pumping side flow metersEnabling two pump operation bit in PLC and making both pumps ready for operationReady of capacitor bank.starting first pump in vfd and increasing the speed to full RPM.Giving start command to second pump. First pump will shift to DOL and second pump will start in VFD.
4.4.1 c	<p>Criteria & methods:</p> <ol style="list-style-type: none">1. <u>Availability of min. flow rate of 550 kl/hr in inlet of SBS.</u>2. <u>DRA dosing to be in running condition</u>3. <u>Both flow meters of pumping side to be made online</u>4. <u>Enabling two pump operation bit in station PLC.</u>5. <u>Readiness of both pumps for operation</u>6. <u>Readiness of capacitor bank for maintaining power factor.</u>7. <u>Starting the first pump in VFD and increasing its speed gradually to full RPM.</u>8. <u>Giving start command to second pump this will enable transferring of first pump to DOL and starting the second pump in VFD</u>9. <u>Close monitoring of all critical parameters vis pump vibrations, temperature, VFD and DOL parameters.</u>

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

	HINDUSTAN PETROLEUM CORPORATION LIMITED VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE	ISSUE NO: 02 REVISION NO.: 00 EFFECTIVE DATE: 01/08/2018 SHEET: 2 of 3
INTEGRATED MANAGEMENT INSTRUCTION		DOCUMENT NO.: IMI/OSP/10
TITLE	Procedure for two pump operations at SBS	

	Performance indicators: Safe and smooth operations
4.4.1 d	Resource: Manpower, Station PLC, VFD-PLC Integration
4.4.1 e	Roles and Responsibilities: Shift In Charge
4.4.1 f	Risks: <ol style="list-style-type: none"> Non availability of min.flow in inlet of SBS Discharge pressure going beyond the limits(> 68 kg/cm²g) Improper monitoring of pump parameters Opportunities: <ol style="list-style-type: none"> Safe and Secure operations Strict follow of SOP
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: <ol style="list-style-type: none"> Shift Log Book (QMF/OPN/01) Operations Log Book (QMF/OSP/01)
4.4.2 b	Documents to be retained: <ol style="list-style-type: none"> Shift Log Book (QMF/OPN/01) Operations Log Book (QMF/OSP/01) Monitoring sheet

Risk	Risk rating	Action Plan
Non availability of Min.Flow in inlet of SBS	H	<ul style="list-style-type: none"> Shift in charge to ensure minimum flow rate of 550 kl/hr is available at inlet of SBS.

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA- VIJAYAWADA- SECUNDERABAD PIPELINE**

**ISSUE NO: 02
REVISION NO.: 00
EFFECTIVE DATE: 01/08/2018
SHEET: 3 of 3**

INTEGRATED MANAGEMENT INSTRUCTION

DOCUMENT NO.: IMI/OSP/10

TITLE

Procedure for two pump operations at SBS

Discharge Pressure going beyond the limits	H	<ul style="list-style-type: none"> • Discharge pressure is maintained within approved range.
Improper monitoring of pump parameters	H	<ul style="list-style-type: none"> • Shift in-charge has to ensure proper monitoring of all pump and motor parameters are regularly monitored.

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, refere nce?	If not include here or Improvement required	Action Plan
Shift- In-charge	Safe Operations	Non availability of Min. Flow in inlet of SBS	H	NA	NA	Yes	Yes
Shift- In-charge	Safe Operations	Discharge pressure going beyond the limits	H	NA	NA	Yes	Yes
Shift- In-charge	Safe Operations	Improper monitoring of pump parameters	H	NA	NA	Yes	Yes

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA-VIJAYAWADA-SECUNDERABAD PIPE LINE

LIST OF FORMS

Department/Section: Operations - Suryapet

SI No	Form No.	Form Title	IMP / IMI No.	Retention Period
1	IMF/OPN/01	Shift log book	IMP/OSP/01	2 years
2	IMF/OPN/02	Maintenance log book	IMP/OSP/01 IMP/OSP/02	1 year
3	IMF/OPN/03	Cold work permit	IMP/OSP/01	1 year
4	IMF/OPN/04	Hot work permit	IMP/OSP/01	1 year
5	IMF/OPN/05	Certificate for Thermometer calibration	IMP/OSP/01 IMI/OPN/01	1 year
6	IMF/OPN/06	Certificate for Hydrometer calibration	IMP/OSP/01 IMI/OPN/02	1 year
7	IMF/OPN/07	PLC by-pass register	IMI/OSP/06	1 year
8	IMF/OPN/08	Pigging report	IMP/OSP/01	
9	IMF/OPN/09	Working at heights permit	IMI/OSP/01	1 year
10	IMF/OPN/10	Electrical Isolation & Energization Permit	IMI/OSP/01	1 year
11	IMF/OPN/12	Critical behavior check list for PPE observation	IMI/OSP/09	1 year
12	IMF/OSP/01	Operations log book	IMP/OSP/01	2 years
13	IMF/OSP/02	Quality control register	IMI/OSP/01 IMI/OSP/04	1 year
14	IMF/OSP/03	Tank cum gauge cum check list	IMI/OSP/05	1 year
15	IMF/OSP/04	Sample label	IMP/OSP/05	Upto batch formation
16	IMF/OSP/06	Interface Log Sheet	IMI/OSP/04	1 year
17	IMF/ROW/01	Daily line walkers' report	IMP/OSP/01	1 year
18	IMF/ROW/02	Daily security guards' report	IMP/OSP/01	1 year

Signature of Department Head

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA-VIJAYAWADA-SECUNDERABAD PIPELINE
OPERATIONS LOG SHEET - 01

IMF/OSP/01
Rev: 00

DATE

LINE FILL AS OF 0:00 HRS

VDS	RDS	VBS	SBS	SRS
0	181	349	460	572

HRS	LINE PRESSURES								FLOW TOWARDS SBS			SBS RECEIPT				SRS RECEIPT			LINE SAMPLE				
	VBS	SV-9	SV-10	SV-11	SV-12	SV-13	SV-14	SV-15	SRS	BATCH / PROD	CUM. QTY.	FLOW	BATCH / PROD	TK NO.	DIP	CUM. TR QTY.	CUM. FC CITY.	FLOW	BATCH / PROD	CUM. QTY.	FLOW	NAT. DENS.	TEMP.
1:00																							
2:00																							
3:00																							
4:00																							
5:00																							
6:00																							
7:00																							
8:00																							
9:00																							
10:00																							
11:00																							
12:00																							
13:00																							
14:00																							
15:00																							
16:00																							
17:00																							
18:00																							
19:00																							
20:00																							
21:00																							
22:00																							
23:00																							
24:00																							

SHIFT DETAILS

SHIFT	VDS	RDS	VBS	SBS	SRS
I					
II					
III					

MOT	HYDRA. PR.	EQUIPMENT OFFLINE

PUMP RUNNING DETAILS

REASON	DAY'S	CUMM.
SLP		
OTHERS		
TOTAL		

Sump Tank Level: _____

PRODUCT RECEIPT / PUMPING DETAILS

PROD	RECEIPT	PUMPING		
	DAY'S	CUMM.	DAY'S	CUMM.
NSO				
SKO				
MS				
TOTAL				

Date **Time** **Shift**

**HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA - VIJAYAWADA - SECUNDERABAD PIPELINE
OPERATIONS LOG SHEET - 02**

IMF/OSP/01
Rev: 00

CHECK LIST AT THE END OF SHIFT

1. Product in Main Line :HSD (EIII/EIV)/MS(EIII/EIV)/SKO/Interface
 2. Product in Station :HSD (EIII/EIV)/MS(EIII/EIV)/SKO/Interface
 3. Product in Receipt Line:HSD (EIII/EIV)/MS(EIII/EIV)/SKO/Interface
 4. Product in Filter 101A :HSD (EIII/EIV)/MS(EIII/EIV)/SKO/Interface
 5. Product in Filter 101B :HSD (EIII/EIV)/MS(EIII/EIV)/SKO/Interface
 6. Product in MP1 :HSD (EIII/EIV)/MS(EIII/EIV)/SKO/Interface
 7. Product in MP2 :HSD (EIII/EIV)/MS(EIII/EIV)/SKO/Interface

8. HOV 42 : OPEN / CLOSE

9. Suction-Discharge HOV : OPEN / CLOSE

10. TSV STATUS : OPEN / CLOSE

11. Tanks in custody / To be handed over

12. SVs closed :

13. PLC - SCADA communication : OK / FAILED

14. CAGE KEY BOX SEAL NO. :

15. VFD STATUS :

**MP1 CUM RUNNING HRS
MP2 CUM RUNNING HRS
SUMP PUMP RUNNING HRS**

**RECEIPT QUANTITY IN SHIFT:
QUANTITY CROSSED SBS IN SHIFT :**

REMARKS

Approved by	Issued by
OPERATIONS INCHARGE	IMS COORDINATOR



IMF/OSP/02
Rev: 00

हिन्दुस्तान पेट्रोलियम कार्पोरेशन लिमिटेड/ HINDUSTAN PETROLEUM CORPORATION LIMITED
विशाख विजयवाडा सिंकंदराबाद पाईपलाईन विशाखापटनम/VISAKHA-VIJAYAWADA-SECUNDERABAD PIPELINE
गुणवत्ता नियंत्रण पुस्तिका/QUALITY CONTROL REGISTER

कार्यस्थल/Location:

नमुना संख्या Sample No.□	बैच संख्या Batch No.	एकत्रित नमुने का व्यौरा/Sample collection Details							निपटान व्यौरा/Disposal Details	अभियुक्ति /Remarks			
		उत्पाद Product	नमुने का श्रोत Source of Sample	टैंक संख्या Tank No.	दिनांक Date	मानक घनत्व Standard Density	स्वरूप Appearance (As per Test H-ATF, Test A-IQCM)	समय Time	एकत्रित किया Collected By	दिनांक Date	समय Time	सिल क्रमांक Seal No.	निपटान किया Dispose d by

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



हिन्दुस्तानपेट्रोलियम कार्पोरेशन लिमिटेड
विशाख विजयवाडा सिंकंदराबाद पाईपलाइन विशाखापटनम
HINDUSTAN PETROLEUM CORPORATION LIMITED
VISAKHA-VIJAYAWADA-SECUNDERABAD PIPELINE
टैंक गेज एवम् जाँच सूचि/TANK GAUGE CUM CHECKLIST

Suryapet Booster Station:

टैंक संख्या/ TANK NO:	उत्पाद/PRODUCT :	बैच/BATCH:		
	आरंभ/OPENING	समापन/CLOSING		
सीपीडब्ल्यूडी की ऊँचाई /CPWD Height				
आर एच ओ/R.H.O.				
संशोधन /Correction				
प्राप्त इनेज/Innage Obtained				
सकल इनेज/Total Innage				
प्राप्त बीएस एवम् जल/BS & W Obtained				
संशोधन /Correction				
सकल बीएस एवम् जल/Total BS & W				
टैंक तापमान/Tank Temperature				
नमुना तापमान/Sample Temperature				
घनत्व @ 15 C°/Density @ 15 C, if settling time >24 hrs				
घनत्व @ 15 C°/Density @ 15 C, if settling time <24 hrs				
Upper = Middle=				
Lower=				
Bottom=				
दिनांक/Date				
समय/Time				
विविएसपीएल का प्रतिनिधि/VVSPL Rep.				
साइट एवम् वाल्वो का निरीक्षण/ Inspection of Site and Valves				
Tank inlet and delivery valve isolated				
Whether Inlet DBBV/MOV and ROSOV of other tanks in the same manifold isolated or Not?				
Water drain valve in closed position				
Roof water drain valve in open position				
Whether tank inlet ROSOV working?				
Air pressure at Tank inlet ROSOV				
टैंक घनत्व/Tank Density in TAS				
प्राप्त मात्रा/ Receipt Quantity	Qty. Details	JDE details		
Ambient QTY		XL No.:		
Standard QTY		YL No.:		
Weight (KG)		OV No.:		
पाली प्रभारी/Shift Officer	वीवीएसपीएल/ VVSPL	टेर्मिनल//Ter minal	वीवीएसपीएल / VVSPL	टेर्मिनल /Terminal

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR



हिन्दुस्तान पेट्रोलियम कार्पोरेशन लिमिटेड **IN**
HINDUSTAN PETROLEUM CORPORATION LIMITED
विशाख विजयवाडा सिकन्दराबाद पाईप लाईन
VISAKHA-VIJAYAWADA-SECUNDERABAD PIPE LINE

IMF/OSP/06 Rev: 00

इंटरफेस लॉग शीट/INTERFACE LOG SHEET

दिनांक / DATE:

कार्यस्थल/Location:

I/F TAKEN IN TANK NO:

	उत्पाद Product	चक्र/बैच : : Cycle / Batch	घनत्व : Density @ 15°	टैक संख्या/Tank No.
अगला/Preceding				
पीछा/Following				
डीजी शुरू D.G. Started at :			डीजी बन्द D.G. Stopped at :	

इंटरफेस शुरू समय I/F STARTED AT HRS अंतराल DURATION AT MN
 समाप्ति समय OVER AT HRS अनुमानित मात्रा APPX. QTY KL @ KL/HR

प्रभारी अधिकारी /OFFICER-IN-CHARGE

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR

आईएमएफ/ओएसपी/04::IMF/OSP/04
संसोधन/:REV.00



नमुना पत्र : Sample Label
विविएसपीएल/VVSPL

कार्यस्थल/Location:

उत्पाद/PRODUCT _____ नमुना संख्या/SAMPLE No. _____

दिनांक/ DATE _____ समय/TIME (HRS.) _____

साईकल/बैच संख्या/:CYCLE/BATCH No. _____

श्रोत: Source: _____

बैच का अग्र/मध्य/अंत/ FRONT/MIDDLE-END OF BATCH/

टैंक संख्या/TANK No. _____

अन्य/Any

other: _____

घनत्व/Density @15 Degree C= _____

पाली अधिक्षक (विविएसपीएल) /SHIFT IN-CHARGE (VVSPL)

पाली अधिक्षक (एटीपी/टर्मिन) /SHIFTIN-CHARGE (ATP/Terminal) _____

Approved By	Issued By
OPERATIONS INCHARGE	IMS COORDINATOR