**TITLE: - SOP for Running changeover of sources at Barauni LPG Pumping station**

|  |  |  |
| --- | --- | --- |
| **SL. NO.** | **ACTIVITY** | **RESPONSIBILITY** |
| **A** | **Changeover of delivery towards Motihari & Muzaffarpur from Ex-Paradip to Ex-Barauni** | Shift-in-charge |
| 1 | **Lining up of Pumping Ex-Barauni Refinery if EX-Paradip was running through Station Bypass mode:**   * + 1. Give open command to MOV-2126.     2. Ensure ROV-2102 is in open condition.     3. Take any one Strainer (STR-2103/2104) in line of EX-BR.     4. Ensure starting of booster pump (BP1/2/3) from Refinery side before starting the EX-BR     5. Ensure Open status of MOV’s before and after Strainer. (MOV 2127 & 2129 for Strainer 2103; MOV 2128 & 2130 for Strainer 2104)     6. Ensure MFM- 2104 (Normal MFM) is lined up. (MOV 2133, MOV 2135 and MOV 2136 should be open; MOV 2131, MOV2132 and MOV 2134 should be closed).     7. Ensure Opening of MOV-2137 of BR line.     8. Prepare for starting of pumping as per PHBMPL/OPN/SOP/26 & ensure MOV- 2124 & MOV-2125 are in Open status.     9. Gradually open the FCV 2101 after Pump discharge and simultaneously close station bypass valve EX-Paradip (MOV-2101).   **Lining up of Pumping Ex-Barauni Refinery if EX-Paradip was running through Station MLPU’s :**   1. Give open command to MOV-2126. 2. Ensure ROV-2102 is in open condition. 3. Take any one Strainer (STR-2103/2104) in line of EX-BR. 4. Ensure starting of booster pump (BP1/2/3) from Refinery side before starting the EX-BR 5. Ensure Open status of MOV’s before and after Strainer. (MOV 2127 & 2129 for Strainer 2103; MOV 2128 & 2130 for Strainer 2104) 6. Ensure MFM-2104 (Normal) is lined up. (MOV 2133, MOV 2135 and MOV 2136 should be open; MOV 2131, MOV2132 and MOV 2134 should be closed). 7. Ensure Opening of MOV-2137 of BR line and simultaneously closing of MOV 2115. | Shift-in-charge |
| 2 | Inform Durgapur Control Room about changeover at Barauni. | Shift-in-charge |
| 3 | Maintain the rpm of MLPU (MP-1/2/3\*) as per desired pressure and flow. Inform Motihari / Muzaffarpur station about completion of changeover of source.  \*MP3 is soft starter based. FCV 2101 can be throttled to control flow when only MP3 is running. | Shift-in-charge |
| 4 | As soon as the EX-BR line resumes and EX-Paradip shutdown. Inform Durgapur to stop its pump if running and required. | Shift-in-charge |
| 5 | Observe the shutdown pressure at Hathidah T point (PT-2007). | Shift-in-charge |
| 6 | Increase the RPM of MLPU (MP-1/2/3\*) according to Suction pressure availability –OR- to Achieve planned flow rate Ex-BR.  \*MP3 is soft starter based. FCV 2101 can be throttled to control flow when only MP3 is running. | Shift-in-charge |
| **B** | **Changeover of delivery towards Muzaffarpur & Motihari from Ex-Barauni to Ex-Paradip** |  |
| 1 | **Lining up of Pumping Ex-Paradip via station MLPU’s:**   1. Take any one Strainer (STR-2101/2102). 2. Ensure Open status of MOV’s before and after Strainer. (MOV 2103 & 2105 for Strainer 2101; MOV 2104 & 2106 for Strainer 2102) 3. Ensure MFM-2102 (Normal) is lined up. 4. Ensure PCV 2101 is ready for operation and PCV 2101 motor is running. 5. Pump will continue to run as it was EX-BR 6. Ensure opening of MOV-2115. 7. After confirmation of pump start from Durgapur, gradually open the PCV 2101 after MFM 2102 EX-PR. 8. Once EX PR delivery resumes and suction pressure (PT-2106) is maintained above desired level, MOV-2137-EX BR should be closed.   **Lining up of Pumping Ex-Paradip Refinery via Station Bypass :**   1. Station bypass valve MOV 2101 must be ready for operation. 2. Durgapur control room to be informed to start pump,if required. 3. Follow Shutdown SOP for MLPU for stoppage of EX-BR Pumping. 4. After confirmation of start of pump at Durgapur, Station Bypass valve MOV 2101 may be opened. | Shift-in-charge |
| 2 | Inform Durgapur Control Room about changeover at Barauni. | Shift-in-charge |
| 3 | Inform Motihari/Muzaffarpur station about completion of changeover of source. | Shift-in-charge |
| 4 | Observe the mainline pressure at Hathidah T point (PT-2007) as well as at Barauni (PT-2101). | Shift-in-charge |
| **C** | **Changeover of delivery towards Muzaffarpur & Motihari from Ex-Barauni to Ex-Barauni & Ex-Paradip** |  |
| 1 | **Lining up of Pumping EX-Barauni & Ex-Paradip via station MLPU’s:**   1. Take any one Strainer (STR-2101/2102). 2. Ensure Open status of MOV’s before and after Strainer. (MOV 2103 & 2105 for Strainer 2101; MOV 2104 & 2106 for Strainer 2102) 3. Ensure MFM-2102 (Normal) is lined up. 4. Ensure PCV 2101 is ready for operation and PCV 2101 motor is running. 5. Ensure MOV-2138& ROV 2103 are in closed condition. 6. Ensure opening of MOV-2115. 7. suction pressure (PT-2106) to be maintained above desired level. 8. Pump will continue to run as it was running EX-BR. |  |
| 2 | Inform Durgapur Control Room about changeover at Barauni. | Shift-in-charge |
| 3 | Inform Motihari/Muzaffarpur station about completion of changeover of source. | Shift-in-charge |
| 4 | Observe the mainline pressure at Hathidah T point (PT-2007) as well as at Barauni (PT-2101). | Shift-in-charge |
| **D** | **Changeover of delivery towards Muzaffarpur & Motihari from Ex-Paradip to Ex-Barauni& Ex-Paradip** | Shift-in-charge |
| 1 | **Lining up of Pumping Ex-Barauni & EX-Paradip through Station MLPU’s if EX-Paradip was running through Station MLPU’s :**   1. Give open command to MOV-2126. 2. Ensure ROV-2102 is in open condition. 3. Take any one Strainer (STR-2103/2104) in line of EX-BR. 4. Ensure starting of booster pump (BP1/2/3) from Refinery side before starting the EX-BR 5. Ensure Open status of MOV’s before and after Strainer. (MOV 2127 & 2129 for Strainer 2103; MOV 2128 & 2130 for Strainer 2104) 6. Ensure MFM-2104 (Normal) is lined up. (MOV 2133, MOV 2135 and MOV 2136 should be open; MOV 2131, MOV2132 and MOV 2134 should be closed). 7. Ensure Opening of MOV-2137 of BR line. 8. suction pressure (PT-2106) to be maintained above desired level. 9. Pump will continue to run as it was running EX-PR. 10. Observe the pressure at Hathidah T point (PT-2007).   **Lining up of Pumping Ex-Barauni & EX-Paradip via station MLPU’ if EX-Paradip was running through Station Bypass mode :**   * + 1. Take any one Strainer (STR-2101/2102) in line EX-PR.     2. Ensure Open status of MOV’s before and after Strainer. (MOV 2103 & 2105 for Strainer 2101; MOV 2104 & 2106 for Strainer 2102)     3. Ensure MFM-2102 (Normal) is lined up.     4. Ensure PCV 2101 is ready for operation and PCV 2101 motor is running.     5. Ensure MOV-2138& ROV 2103 are in closed condition.     6. Ensure opening of MOV-2115.     7. Prepare for starting of pumping as per PHBMPL/OPN/SOP/26 & ensure MOV- 2124 & MOV-2125 are in Open status.     8. Gradually open the FCV 2101 after Pump discharge and simultaneously close station bypass valve EX-Paradip (MOV-2101).     9. suction pressure (PT-2106) to be maintained above desired level.     10. Observe the pressure at Hathidah T point (PT-2007).     11. Now Line through process EX-BR to start.     12. Give open command to MOV-2126.     13. Ensure ROV-2102 is in open condition.     14. Take any one Strainer (STR-2103/2104) in line of EX-BR.     15. Ensure starting of booster pump (BP1/2/3) from Refinery side before starting the EX-BR     16. Ensure Open status of MOV’s before and after Strainer. (MOV 2127 & 2129 for Strainer 2103; MOV 2128 & 2130 for Strainer 2104)     17. Ensure MFM- 2104 (Normal MFM) is lined up. (MOV 2133, MOV 2135 and MOV 2136 should be open; MOV 2131, MOV2132 and MOV 2134 should be closed).     18. Ensure Opening of MOV-2137 of BR line.     19. Pump will continue to run as it was EX-PR.     20. suction pressure (PT-2106) to be maintained above desired level.     21. Observe the pressure at Hathidah T point (PT-2007). | Shift-in-charge |
| 2 | Inform Durgapur Control Room about changeover at Barauni. | Shift-in-charge |
| 3 | Inform Motihari/Muzaffarpur station about completion of changeover of source. | Shift-in-charge |
| 4 | Observe the mainline pressure at Hathidah T point (PT-2007) as well as at Barauni (PT-2101). | Shift-in-charge |
| **E** | **Changeover of delivery towards Muzaffarpur & Motihari from Ex-Paradip &Ex-Barauni to Ex-Paradip** |  |
| 1 | **Lining up of Pumping EX-Paradip via station MLPU’ if EX-Paradip & EX-Barauni was running through Station MLPU’s :**   1. Simply**,** We shouldensure closing ofMOV-2137-EX BR. 2. Pump will continue to run as it was before. 3. suction pressure (PT-2106) to be maintained above desired level.   **Lining up of Pumping EX-Paradip via station bypass if EX-Paradip & EX-Barauni was running through Station MLPU’s :**   1. Station bypass valve MOV 2101 must be ready for operation. 2. Durgapur control room to be informed to start pump, if required. 3. Follow Shutdown SOP(PHBMPL/OPN/SOP/27) for MLPU for stoppage of Pumping. 4. After confirmation of start of pump at Durgapur, Station Bypass valve MOV 2101 may be opened. | Shift-in-charge |
| 2 | Inform Durgapur Control Room about changeover at Barauni. | Shift-in-charge |
| 3 | Inform Motihari/Muzaffarpur station about completion of changeover of source. | Shift-in-charge |
| 4 | Observe the mainline pressure at Hathidah T point (PT-2007) as well as at Barauni (PT-2101). | Shift-in-charge |
| **F** | **Changeover of delivery towards Muzaffarpur & Motihari from Ex-Paradip &Ex-Barauni to Ex-Barauni** |  |
| 1 | **Lining up of Pumping EX-Barauni via station MLPU if EX-Paradip & EX-Barauni was running through Station MLPU’s :**   1. Simply**,** We shouldensure closing ofMOV-2115-EX PR. 2. Pump will continue to run as it was before. 3. suction pressure (PT-2106) to be maintained above desired level. | Shift-in-charge |
| 2 | Inform Durgapur Control Room about changeover at Barauni. | Shift-in-charge |
| 3 | Inform Motihari/Muzaffarpur station about completion of changeover of source. | Shift-in-charge |
| 4 | Observe the mainline pressure at Hathidah T point (PT-2007) as well as at Barauni (PT-2101). | Shift-in-charge |

|  |  |  |
| --- | --- | --- |
| RECORDS GENERATED : | 1) | SHIFT LOGBOOK SHEET |
|  | 2) | SHIFT HANDING OVER REGISTER |
|  |  |  |