1. Purpose
   * 1. Initial Purge of Condensate Skid: V-720, V-730, HE-735, V-740, E- 742, V-745, V-750, V-785, H-080, V-730-130, HTR-750, E-735, E-751, V-750-110, V-750-115, ET-750-100, HE-750-140, V-774-100-200-300, P-782 and 783 and P-787 and 788.
     2. Purge gas used will be natural gas or nitrogen. If natural gas will be used, a suitable spot to source the system must be selected. Tie in natural gas or nitrogen at a low point drain between SDV-700 and PCV-705.
     3. The facility is based in Pennsylvania.
2. References
   * 1. MJV-CGP-10-0297, 0298, 0300, 0301, 0301B, 0301C, 0301D, 0302A, 0302B, 0302C, 0303, 0304, 0306, 0305A, 314A, 315, 316 and 317.
     2. Majorsville Cause & Effect Matrix.
     3. Vendor Manuals.
     4. CNX SPCC Plan.
     5. MS-SWP-0222 and MS-SWP-0223 for start-up and shutdown of electric pumps.
     6. Due to the extensive amount of ancillary equipment involved in this process, not all limits are listed in the above tables. Please refer to P&ID’s MJV-CGP-10-302A, 302B and 302C for any limits not included above.
3. Precautions

Before starting the purge, confirm the pressure in the condensate treating area is at zero psig. Do not go above 125 psig. Due to the MAOP V-750, operator is unable to purge with pressures exceeding 125 psig.

1. Special Equipment
   * 1. CNX Resources Standard PPE
     2. Calibrated personal four-gas monitor
2. Operator Requirements
   * 1. CNX Resources Site Hazard Training
     2. Complete CNX Midstream Risk Assessment or JSA. File accordingly.
     3. Document the event in the shift logs.
3. Procedure
   * 1. Safe Work Practice
        1. Complete CNX Risk Assessment or JSA. File accordingly.
        2. Complete hot work permit, blowdown tracker, and non-conformance.
     2. Valve Line-Up
        1. All PSV’s throughout the wet skid should be in the locked and open position.
        2. All instrumentation shall be lined up and functional including all manual site glasses and gauges.
        3. Operator close all high point vents and low point drains on all vessels throughout the wet skid.
        4. Operator close 6” manual block valve on slug catcher condensate line located upstream of SDV-700 slug catcher condensate outlet valve.
        5. Operator place SDV-700 in HAND in the closed position from Scada.
        6. Operator to open PCV-705 to 100% from Scada.
        7. Operator to open 6” ball valve downstream of PVC-705.
        8. Operator to open 6” ball valve on the (1) inlet and (1) outlet of F-715 A and B.
        9. Operator close 2” ball valve on recycle line inlet of V-720.
        10. Operator open 6” ball valve on the (1) outlet of V-720.
        11. Operator close fuel gas line to V-720.
        12. Operator open 3” ball valve upstream and downstream of PCV-724.
        13. Operator put PCV-724 in hand at 0% from Scada.
        14. Operator open SDV-725 from Scada.
        15. Operator verify LCV-720 is closed from Scada.
        16. Operator close 6” bypass ball valve on V-720.
        17. Operator open 6” inlet and outlet valves on V-730.
        18. Operator close 6” bypass ball valve on V-730.
        19. Operator close XV-730 from Scada.
        20. Operator set TCV-735 to 100% in order to direct flow to inside tube side of E-735 from Scada.
        21. Operator open (2) 3” ball valves inlet and outlet of E-735 shell side.
        22. Operator open (2) 2” ball valves inlet and outlet of FCV-740 from Scada.
        23. Operator open FCV-740 to 100%.
        24. Operator close 2” bypass ball valve FCV-740.
        25. Operator open air bypass SDV on SDV-740 to force open the valve.
        26. Operator open 1” ball valve inlet and outlet of PCV-740B of V-740 flash drum.
        27. Operator close 1” bypass ball valve on V-740 flash drum.
        28. Operator place PCV-740B in AUTO at desired pressure from Scada.
        29. Operator close LCV-740A from Scada.
        30. Operator open LCV-740B from Scada.
        31. Operator open (4) 3” ball valves on the outlet of V-740.
        32. Operator open 3” ball valve at Y connection feed to V-745 and V-750-100.
        33. Operator open (3) 3” ball valves on inlet and outlet of TCV-742.
        34. Operator set TCV-742 to 50% from Scada.
        35. Operator close 2” bypass valve around TCV-742.
        36. Operator open 3” ball valve on inlet and outlet of E-742.
        37. Operator close 3” bypass ball valve on E-742 shell side.
        38. Operator open 3” ball valves (2) on inlet and outlet of AC-746.
        39. Operator close 3” bypass ball valve on AC-746.
        40. Operator open 4” inlet ball valve to V-745 cool feed.
        41. Operator open 4” inlet ball valve to V-745 warm feed.
        42. Operator open 6” inlet ball valve from E-745 vapor line.
        43. Operator open 4” outlet ball valve from V-745 to E-745.
        44. Operator open 4” vapor line ball valve from V-745 to VRU-785 A and B.
        45. Operator open 3” ball valve on inlet and outlet of FCV-745-103.
        46. Operator open FCV-745-103 to 100%.
        47. Operator close 2” bypass ball valve FCV-745-103.
        48. Operator open 3” outlet ball valve from AC-746 to V-780 surge drum.
        49. Operator open 2” ball valve at Y connection feed to V-745 and V-750-100.
        50. Operator open 2” ball valves on inlet and outlet of FCV-750-140.
        51. Operator close 2” bypass ball valve to FCV-750-140.
        52. Operator to open FCV-750-140 to 100% from Scada.
        53. **NOTE:** Fuel gas pressure is needed to regulate the following:
            1. SDV-740-140.
            2. LCV-750-130.
            3. SDV-750-120.
        54. Operator open all valves on the inlet and outlet of tube and shell side of HE-750-140.
        55. Operator close 2” bypass ball valve on the tube side of HE-750-140.
        56. Operator open 2” ball valve on inlet and outlet of V-750-130.
        57. Operator adjust PCV-750-150 to fully open.
        58. Operator open (2) 3” ball valves on the outlet from V-750-110 to VRU-785 A and B.
        59. Operator open 2” outlet ball valve on V-750-110 to V-750-115.
        60. Operator open (2) 2” ball valves between V-750-115 and V-740.
        61. Operator open 1” ball valve on inlet and the outlet of LCV-750-115.
        62. Operator open (3) 3” ball valves on inlet and outlet of E-751.
        63. Operator open 3” ball valve on inlet and outlet of V-780.
        64. Operator close 3” bypass ball valve on V-780.
        65. Operator open 4” ball valve on V-780 to P-787 and P-788.
        66. Operator close 3” inlet ball valve of SDV-780.
        67. Operator to open 4” inlet ball valves to P-787 and P-788.
        68. Operator to open 3” outlet ball valves on P-787 and P-788.
        69. Operator to close 3” recycle valve from P-787 and P-788 to V-780.
        70. Operator to close 3” inlet ball valve to mole sieve dryer skid on outlet of P-787 and P-788.
        71. Operator open (3) 3” ball valves at Y connection to bypass mole sieve dryers.
        72. **NOTE:** Refer to mole sieve dryer purge procedure MS-SWP-0173.
        73. Operator close 6” ball valve on outlet of NGL dry product filters.
        74. Operator close 3” ball valves on inlet and outlet of LCV-780.
        75. Operator close 2” bypass ball valve of LCV-780.
        76. Operator place LCV-780 in hand at 0% from Scada.
        77. Operator open (2) 6” ball valves on the inlet to the measurement skid.
        78. Operator open 3” ball valve on inlet of V-720 and tank farm.
        79. Operator close 6” ball valve inlet of MarkWest measurement line.
        80. Operator close 6” bypass ball valve to MarkWest measurement line.
        81. Operator open 2” inlet ball valve to SDV-797.
        82. Operator open 2” choke valve on the outlet of PCV-797.
        83. Operator open 2” ball valve outlet of PCV-797.
        84. Operator places SDV-797 in hand 100% open from Scada.
        85. Operator places PCV-797 in hand 100% open from Scada.
        86. Operator open 2” inlet ball valve to SDV-798
        87. Operator open 2” choke valve on the outlet of PCV-798.
        88. Operator close 2” ball valve outlet of PCV-798.
        89. Operator place SDV-798 in HAND 100% open from Scada.
        90. Operator place PCV-798 in HAND 100% open from Scada.
     3. Continuous Purging

**NOTE:** If continuous purging is preferred or necessary, proceed with this section C. If step-up and stepdown purging is preferred or necessary, proceed with section D below.

* + - 1. Slowly increase wet skid pressure to 100-120 psig by using low point drain between SDV-700 and PCV-705.
      2. Operator continue to check for leaks throughout the plant especially at the areas where piping may have been opened for maintenance.
      3. Operator should monitor gas detectors and fire eyes during this process.
      4. After pressure is verified to be 100-120 psig throughout the wet skid, operator will open (2) 1-½” gate valves on P-787 and P-788 to high pressure flare and leave open until any and all present oxygen has been purged from the system.
      5. Operator to maintain 100-120 psig during the continuous purge process by regulating purge gas at low point drain between SDV-700 and PCV-705.
      6. After all present oxygen has been purged from the wet skid, operator will close low point drain between SDV-700 and PCV-705.
      7. Operator to close (2) 1-½” gate valves on P-787 and P-788 to high pressure flare.
      8. **NOTE:** To verify that oxygen is completely purged, operator to crack high point vent and check for oxygen on all vessels.
    1. Step-Up and Stepdown Purging
       1. Slowly increase wet skid pressure to 50-120 psig by using low point drain between SDV-700 and PCV-705.
       2. After the gas pressure is verified to be 50 psig throughout the wet skid, operator to close low point drain between SDV-700 and PCV-705.
       3. Operator opens (2) 1-½” gate valves on P-787 and P-788 to high pressure flare.
       4. After pressure has been blow down, repeat all steps above for 100 psig purge test and 120 psig thereafter.
       5. **NOTE:** To verify that oxygen is completely purged, operator to crack high point vent and check for oxygen on all vessels.

By signing below I acknowledge that I safely completed the above referenced task, thereby following the prescribed steps in the procedure.

Print Name:

Signature:

Date:

1. Revisions

**Revision (3) Date May 27, 2016**

**Revision (4) Date October 14, 2020**

Reformatted to match new standard format.

**Revision (5) Date August 1, 2022**

Added section 7.

Revised per approver review.