NSD Supply Valve Open Position Fault Timer

The Non-Stop Driller PLC program (PLC Software Version 1.0.0.1.C.2) computes the fault time for valves V1 and V2 based on the ramping parameters set by the user. The V1 fault timer works correctly, but the V2 fault timer results in the fault time being too short during ramping functions. When the system is connected to longer piping, the error becomes more pronounced. When the fault timer expires and the valve has not reached the fully open position, an error is received and the valve movement is stopped. Initiating a new valve open request will begin the valve movement again from its current position.

Recommendations

1. A software release will be distributed to correct the issue, including instructions for downloading the program update. The PLC software version for the update is PLC Software Version 1.0.0.1.C.3.

2. If the fault is received erroneously, operations can be continued by re-sending the valve open request. The valve will continue its ramping function from where it stopped during the previous request. This can be repeated until the valve reaches its full open position.

   a. It is expected that the request would not be required more than three times.

   b. If the request is required more than three times, user should verify system conditions to ensure there is not another issue preventing the valve from reaching the full open position.

   c. Troubleshooting tips are included in the NSD documentation that would be appropriate for this condition.