

The following are the steps that must be taken in the case of exceeding control chart limits. The steps are listed in order of priority, although charts should be studied simultaneously to determine the cause(s) of a problem. In the case of multiple alarms, contact the TMC for guidance, but note that except for severity adjustments (enacting a severity adjustment may occur at the same time as an action for a different alarm), the actions for alarms are not cumulative (in other words, only the most severe action is required in the case of multiple alarms in addition to a possible severity adjustment). The laboratory always has the option of removing any stand and/or engine from the system.

- Exceed EWMA stand/engine action limit for precision
 - Special K no longer applies for the parameter.
 - Immediately conduct one additional calibration test in the offending stand/engine with no Shewhart severity alarms (all parameters). Precision requirements are waived until the next reference test.
 - Reduce the reference interval for the next scheduled reference test in the stand/engine by fifty percent (50%).
- Exceed Shewhart stand/engine action limit for precision
 - Special K no longer applies for the parameter.
 - Reduce the reference interval for the next scheduled reference test in the stand/engine by fifty percent (50%).
- Exceed Shewhart stand/engine warning limit for precision
 - Special K no longer applies for the parameter.
 - Reduce the reference interval for the next scheduled reference test in the stand/engine by twenty-five percent (25%). (round down)
- Exceed Shewhart stand/engine action limit for severity
 - First check the status of the precision alarms. Under certain circumstances, Special K may not be utilized.
 - Immediately conduct an additional calibration test in the offending stand/engine. However, if a EWMA severity action alarm existed in the stand/engine prior to the reference test, and the alarm is in the direction of the EWMA severity action alarm, then an additional calibration test need not be run as long as the test result is within the Special K control chart limit.
 - If there are two (2) or more operationally invalid tests during the attempt to calibrate an existing stand/engine, then two (2) operationally valid calibration tests, with no Shewhart severity alarms (all parameters), are required to calibrate the stand/engine.