

- **Calculated Risk** - The condition and the consequences are known prior to event occurring and a decision was made to run under known conditions and accept the risk.
 - Business/orders require continued operations
 - Number of spare parts
 - Trying to make it to outage
 - running with defect
 - Didn't have an exact spare - had to make modifications
 - Planned on making repairs during an outage, but had to band-aid the problem until addition parts, or a longer shutdown is available

- **Lack of Knowledge/Not Trained** - Unaware of the condition leading to or consequences of an event. Lacking skill to perform task.
 - New Hires
 - New Position
 - New Equipment
 - Has not happened before

- **Circumstances Prevented Timely Response** - Insufficient time and/or resources to address a known issue.

- **Poor Communication** - Situation is not communicated to the correct individual(s) that could have influenced the outcome.
 - Temporary operating procedures not communicated to all shifts
 - Crew fails to report issue to leadership
 - Leadership failed to communicate issues to crew
 - Poor shift-to-shift or department-to-department communication-information **filtered properly**

- **Failed to Follow Procedures** - Written procedure in place, training documented, and employee aware of condition, risk and consequences.
 - Disregard for established procedures
 - An interlock was jumped out without proper notification for repairs
 - An installed spare was started up and the original was not shut down (Both pumps necessary) and no one is informed
 - A transmitter is left out of service and no work orders are written to repair it

- **Inadvertent Error** - Accidental operation of equipment or controls.
 - Cockpit Error
 - Operated wrong valve or equipment
 - Pushed wrong button