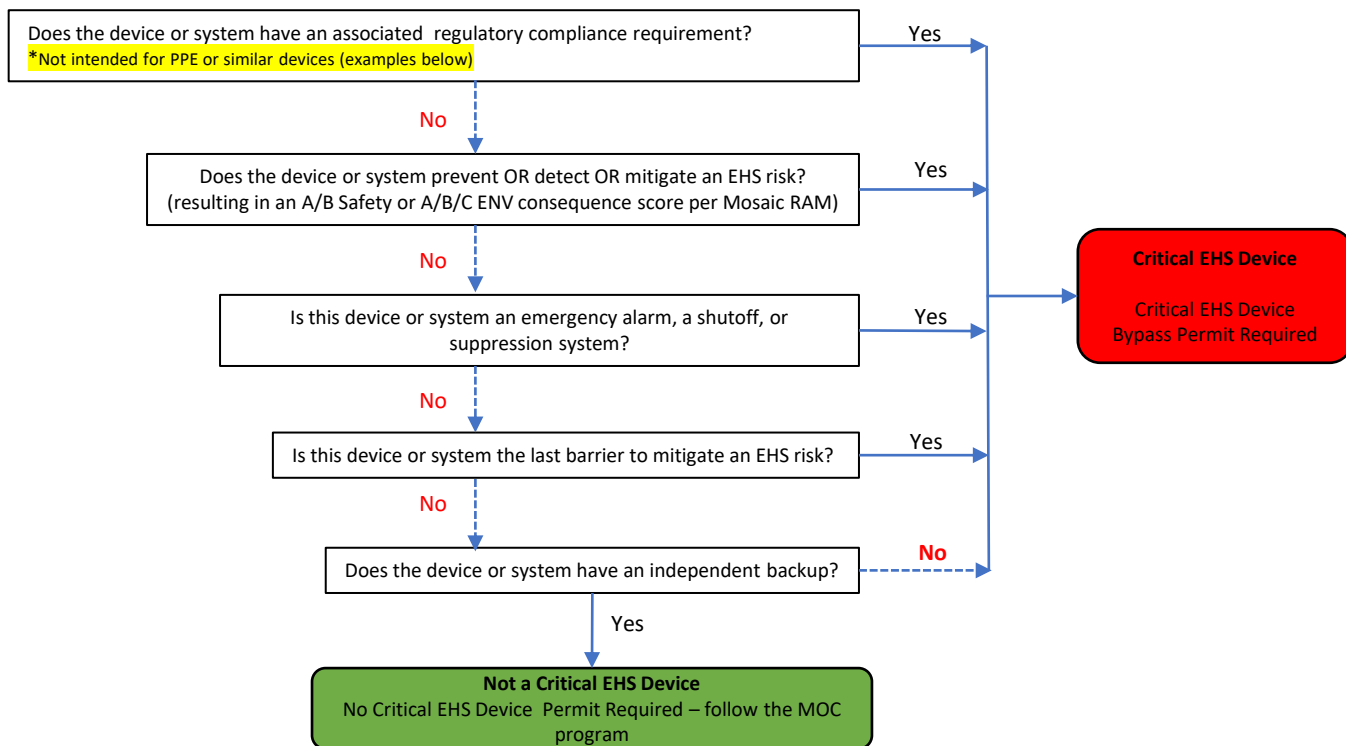




Mosaic Critical EHS Device Decision Tree



Critical EHS Devices -- any device or system that ensures any process condition is contained and maintained within it's designed safety limits, and if it fails or malfunctions may lead to serious injury or death OR may result in an environmental incident.

Safety -- would result in an A/B Safety consequence per the Mosaic RAM

Environmental -- would result in an A/B/C environmental consequence per Mosaic RAM

Safety examples that ARE CEHSDs include (but not limited to):

- Fire suppression systems
- Pressure relief devices
- Zero speed switches – where malfunction or operation in bypass could result in fire
- Shaft hoist control
- Automatic fire suppression system
- High level alarm, connected to an interlock system
- Belt conveyor emergency stops

Safety examples that are NOT CEHSDs include (but not limited to):

- High level alarm – Not connected to an interlock system.
- Bucket elevator limit switch or conveyor zero speed switch designed for production upset
- An independent pressure relief valve with redundancy
- * SCBAs, escape respirators, AEDs, or Fire extinguishers

Note: All associated control system programming logic qualify as a "device" and can require a Critical EHS Device Bypass Permit or formal MOC for any modifications

Environmental examples that ARE CEHSDs include (but not limited to):

- Pressure relief devices
- Zero speed switches – where malfunction or operation in bypass could result in enviro release
- All parametric monitoring systems for air compliance
- High level alarms for registered petroleum storage tanks and mineral acid tanks
- Pressure switch alarms on clay lines
- Oxygenation compressors at outfalls
- ISCO flow measurement devices

Environmental examples that are NOT CEHSDs include (but not limited to):

- Manual PH readings