

# BI-02A.49 Fuel shut off specifications are detailed for mobile equipment

*(Accountable - Engineering Manager (Site) (Unassigned))*

## Expectations

Sites should include design requirements for fuel shut in their specifications provided to OEMs/Suppliers and site maintainers to prevent any unwanted conditions arising during filling, operation (including abnormal operations/incidents) or maintenance of the mobile plant.

## Specify

Design requirements for fuel shut off:

- Ensure that fuel can be removed from a fuel fire - fuel tanks shall have provisions to stop fuel flow from the tank e.g. a manual valve
- Provide a way of stopping an engine if other methods fail
- Non-pressure fast fill points - e.g. non pressure fast fill points that are provided by the OEM rather than from an aftermarket supplier
- Be accessible from the outside of the mobile equipment
- After confirmation by risk analysis - systems that shut off fuel flow in the event of a fire suppression system deployment
- Siting of components so that a system upset cannot cause a siphoning event of flammable liquids (particularly near hot components)
- That optimise placement of items so that fire safety / prevention is achieved at a higher priority than operator/maintainer ergonomics
- Be clearly identified and labelled with instructions for operation as close as is practical to the valve

- Minimize the time required to shut down the engine by positioning the shut off valve after all supply (lift) pumps and filters
- For mechanical fuel injection pumps, the valve shall close both the supply and return lines
- Automatic close down for electrically controlled valves on machine shut down.

Reference: Section 4.7 of ISO 19296 Mining - Mobile machines working underground - Machine Safety First edition 2018-11

## **Implement**

Pre and post delivery inspections confirm mobile plant meets nominated specifications.

## **Monitor**

Detailed maintenance inspections are conducted and any issues arising are tracked and reported upon to senior site engineering personnel.

Field devices provide monitoring capacity to provide local and off-machine status data related to system health.