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Floating roof tank fire scenarios

The purpose of this bulletin is to provide industry guidance on the WorkSafe Major Hazard Facilities (MHF) team's expectations in relation to floating roof tanks and fire scenarios.

The MHF team consider a scenario where a floating roof has sunk and a full tank surface fire has developed to be **credible**. While the most likely fire scenario for a floating roof tank is a rim seal fire, incidents have occurred worldwide where the floating roof has sunk and a full surface tank fire has developed. An operator's Safety Assessment should consider this scenario, including its causes and consequences.

The Safety Assessment should consider this both where the floating roof tank is operated by the organisation conducting the Safety Assessment and where the floating roof tank is operated by another operator in an adjacent or nearby facility. Modelling may need to be carried out as part of the Safety Assessment to fully understand the consequences of the scenario, in order to prepare a specific emergency response plan for the scenario.

Typical design standards and codes used in industry for the fire suppression and protection systems associated with floating roof tank compounds only consider rim seal fires. The MHF team consider these codes and standards to represent a minimum standard only.

The Health and Safety at Work Act 2015 and the Major Hazard Facilities Regulations 2016 may require a higher standard, including fire suppression and protection systems designed to combat a full surface tank fire scenario on a floating roof tank.

The Act and Regulations require controls to be in place that reduce risk so far as is reasonably practicable and these controls will be both preventative and mitigative. Operators should therefore consider whether upgrade or replacement of their fire protection and suppression systems represents a practicable step to reduce risk.