

Mysterious Acronyms

AKA – What can bite my butt offshore, and what are the barriers to stop it happening ?

Forum Question -

How many know what MAHs, SCEs, Verification, ICP, PS's & Assurance mean, and how they're related ?

Why is it important ?

- Everyone onboard an installation, no matter their role, should know the hazards associated with their work environment.
- All areas of a platform have specific hazards that have potential to kill people.
- Knowledge gives an appreciation of surroundings, and why we carry out certain tasks in our work that help protect us and our workmates.
- Having the knowledge means we can highlight critical anomalies which we see, which previously we wouldn't have appreciated meant anything to our safety.

What type of event can **kill** multiple people offshore ?

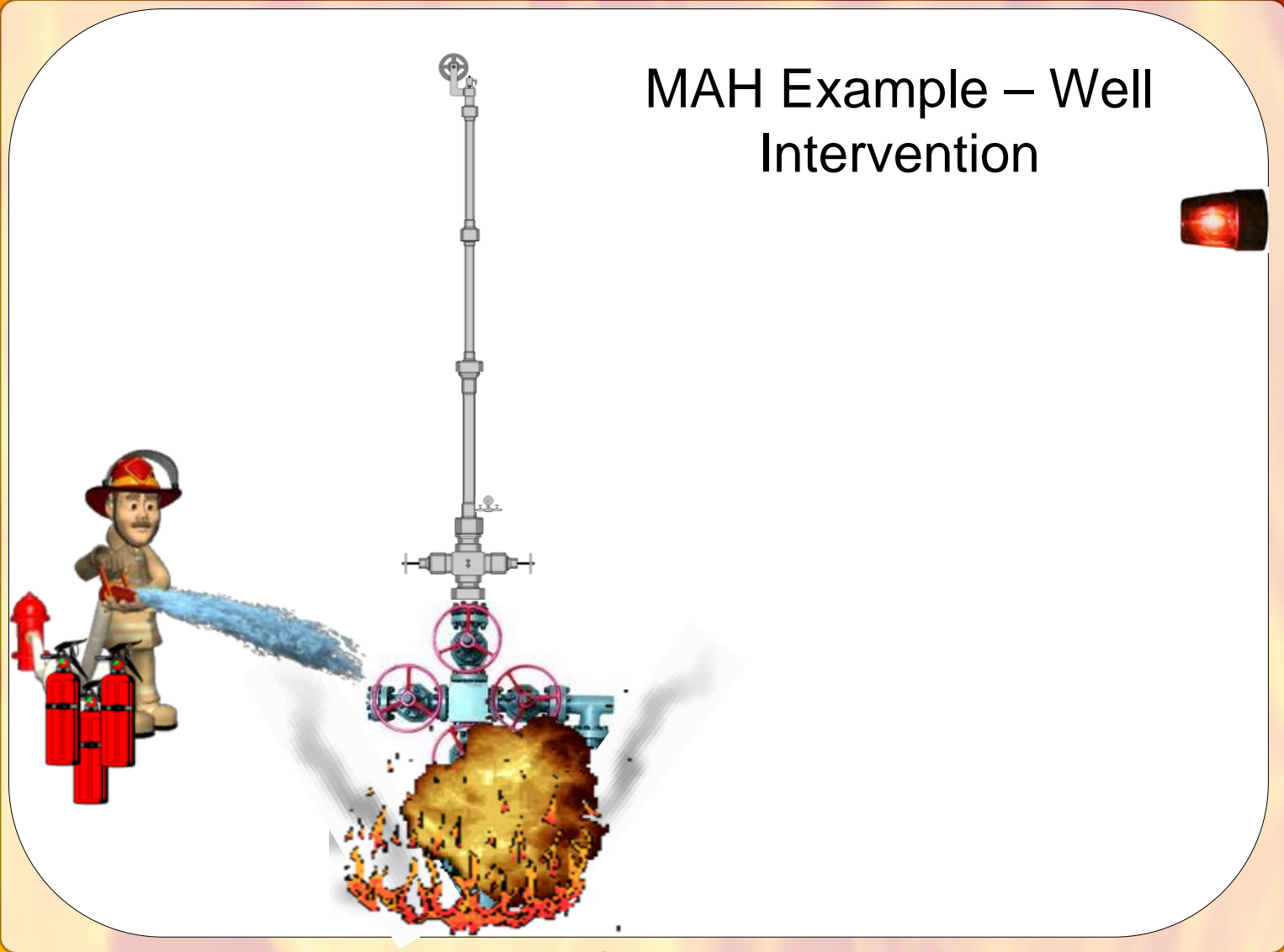
- Helicopter crash.
- Ship collision with platform or rig.
- Structural failure due to adverse weather.
- Gas / oil release followed by fire or explosion.
- Structural failure following explosion.
- Failure of lifting equipment.
- Failure of well control.
- Pipeline failure.
- Etc, etc, etc.
- Platforms have their own specific events.

You now have a basic understanding of what MAHs are or :

‘MAJOR ACCIDENT HAZARDS’



MAH Example – Well Intervention



What we don't want !!!!!

How do we stop this example happening, or if it does how to we minimise the impact to personnel onboard ?

Barriers to MAHs Occuring



Design

Safety Critical Systems

Inspection

Testing

Maintenance

Verification

Training

Procedures

Well Intervention Barriers ?

- BOPs (Blow Out Preventers).
- Certified temporary equipment.
- Pressure testing on rig up and test of BOPs.
- Competent specialist personnel.
- Procedures agreed by Technical authority.
- PTW system.
- F&G systems.
- ESD systems.
- Passive fire protection.
- Critical valves on Xmas trees.
- Emergency Response Procedures.
- Ex rated equipment in hazardous areas.
- Blast walls.

These safety systems meant to stop a MAH occurring, or escalating, are called :

'SAFETY CRITICAL
ELEMENTS'

or 'SCEs'

All well and good having safety systems (SCEs), but how do we know these systems will work correctly if required in a real event ?

PMRs – Preventative Maintenance Routines

- Leak off testing of well valves.
- Checks on gas heads.
- Checks on flame heads.
- Checks on fusible loops.
- Comprehensive and inhibited testing of ESD system.
- Routines to trigger recertification of equipment onshore.
- Inspection of structure including blast walls.
- Inspection of PFP.
- Temporary equipment checks triggered by PMRs.
- Etc, etc, etc

These routines are there to assure us that the safety systems are functional, thus this is called :

'ASSURANCE'

But we aren't independent and could let things slip, or accept issues when we shouldn't, thus causing a situation where things could go wrong.

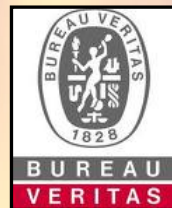
Independent Competent Person - ICP



DET NORSKE VERITAS



LLOYDS REGISTER



BUREAU VERITAS



AMERICAN BUREAU OF
SHIPPING

Double check by an independent authority of SCEs should mean our systems remain robust, and available when required.

These checks carried out by
the ICP on our SCEs is called
VERIFICATION

Question

- How do we, and the ICP know that the SCEs are operating to an acceptable standard during verification or PMRs ?

Example

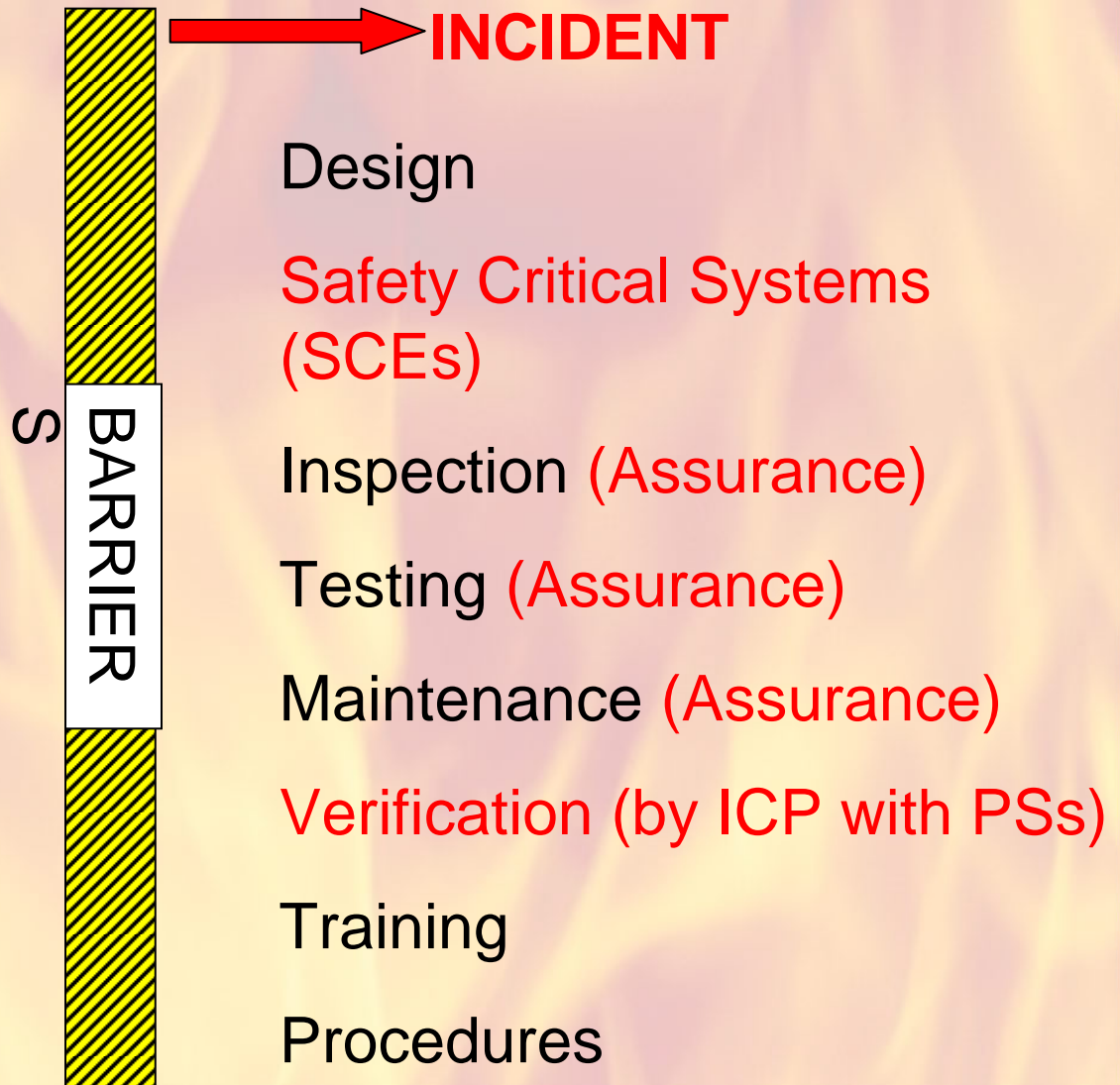
- Main riser ESDV closes in 30 seconds.
- Main riser ESDV closes in 20 seconds.
- Main riser ESDV closes in 15 seconds.
- Main riser ESDV closes in 10 seconds.
- Main riser ESDV closes in 5 seconds.

Which is right ?????

Performance Standards or PS's

- Allowable time for ESDVs to close.
- Allowable leak rate for critical valves.
- Allowable fire pump test criteria.
- Flame, gas or heat detectors trigger ESD system properly.
- Blowdown systems operating in acceptable period after initiation.
- Lifeboats lower at a set rate of descent.
- Foam systems generate foam in a set time after triggering.
- Etc, etc, etc

Review and Summary



Questions





Thanks for Listening