



FUELS INDUSTRY
Association of South Africa

NATREF 2024

2024



WHAT WENT WELL

1. INCIDENTS:

- No process safety incidents with severity greater than minor recorded during shutdown activities

2. PDAs

- Effective risk identification – no associated process safety incidents for high-risk tasks

3. MOCs

- Effective risk identification (HAZOPs) – no associated process safety incidents



FACTORS CONTRIBUTING TO POSITIVE OUTCOME

1. Focused PSF rollout during Bootcamp (pre-S/D)
2. Focused HAZID & awareness: Characteristics of frequently encountered hazardous substances identified to inform risk analysis (e.g.)
 - Hydrogen
 - Low MIE (minimum ignition energy): Control of Ignition Sources
 - Detection
 - H₂S
 - Relative density to air
 - Flammability
 - Detectors and warning lights: PSCE



FACTORS CONTRIBUTING TO POSITIVE OUTCOME

Process Safety Fundamentals: Non-negotiables SHUTDOWN FOCUS



Life Saving Rules





FACTORS CONTRIBUTING TO POSITIVE OUTCOME

3. Focused Retraining on Critical Procedures

- REF-200-019 - Work on Flare Systems
- O-200-034 - Process Isolation Procedure
- REF-200-002 - Working in Areas which contain H₂S CO and Nitrogen
- REF-200-016 – Touch & Tag

4. Focus on Fundamentals during Risk Studies – Problem Solving 101

- Emphasis on definition of problem statement. The WHY.
- Definition of scope of activities
- Understanding the nature of the beast (the tiger in the cage)
- ONLY then, proceed with risk studies



FACTORS CONTRIBUTING TO POSITIVE OUTCOME

5. Focused Assurance Activities

- MOCs
 - Audit of action closeout required for PSM approval for implementation (pre-S/D)
 - Audit of action closeout required for PSSR (during S/D, pre-startup)
- PDAs
 - Quality & Consistency check on PDAs conducted for S/D (pre-S/D)
- HAZOPs
 - Audit of action closeout required for PSM approval for implementation (pre-S/D)
- PSF Audits
 - Aligned with planned activities (during S/D)
 - Focus on high risk tasks



WHAT DID NOT GO WELL

1. PSSRs

- Scheduled too early by Ops – Cat1s should be the exception - multiple equipment not installed at the time of scheduling
- PSSRs were being called for pre-punch: placed strain on support functions and disciplines who were attempting to complete the jobs but were required to attend the PSSRs instead

2. PDAs

- Required to be completed before S/D and only under exceptional conditions during S/D
- Continued well into the S/D.
- Placed strain on all resources involved

3. Installation / Removal Of Spades

- Spade installation in locations resulting in ability to drain line effectively (investigation in progress)

4. Completeness Of Box-up

- 2 Process Safety incidents during the S/D when the one team believed it was the responsibility of the other to execute a task.
- Defining clear responsibilities between teams to ensure that the risks are minimized
- Fostering collective ownership of outcomes: Team vs my department



FUELS INDUSTRY
Association of South Africa

Thank You

2024