



LEARNING FROM INCIDENT

Reinforced Thermo-Plastic (RTP) Line Rupture Incident

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What Happened?

- On 2nd April, 2015 during wax cleaning operations, a continuous attempt was made to recover a stuck foam pig within an RTP oil transfer line using high pressure pump.
- While applying pressure of approximately 110 bar the line ruptured adjacent to a grayloc connection point next to a public road.
- No injury occurred and minimal impact to environment were reported as the line had been flushed with water and only residual wax remained. The line was also disconnected from the process line during the activity. At least one member of the public had their vehicle impacted by wax as they passed the incident site.

SEVERITY :

Actual - Asset 3

Potential – People 4B, Asset 3C ,Environment 1B,
Reputation 1A



Ruptured at
interface of
grayloc
connection



Why it happened?

- Rupture resulted from significant and cyclic deformation leading to rapid failure of the wire armour reinforcement of the RTP line
- Some root causes include:
 - Design- not accounted for future pigging operations
 - Management of change (MOC) – lack of recognition on the need
 - Boundary conditions – failure to confirm
 - Risk Awareness – lack of consideration of impact of high DP
 - Supervision and communication – lack of effective team coordination and unclear accountabilities and responsibilities

Lack of risk awareness – What are the lessons learned?

- Key risks were missed / underestimated . It is essential that when conducting complex activities that a thorough risk assessment involving suitably independent and experienced / qualified personnel is completed to ensure the potential for missing or underestimating risk elements is minimised
- REMEMBER **PAUSE** - What has changed? (**P**eople **A**ctivities **U**nexpected events **S**cope **E**xposures)



The End