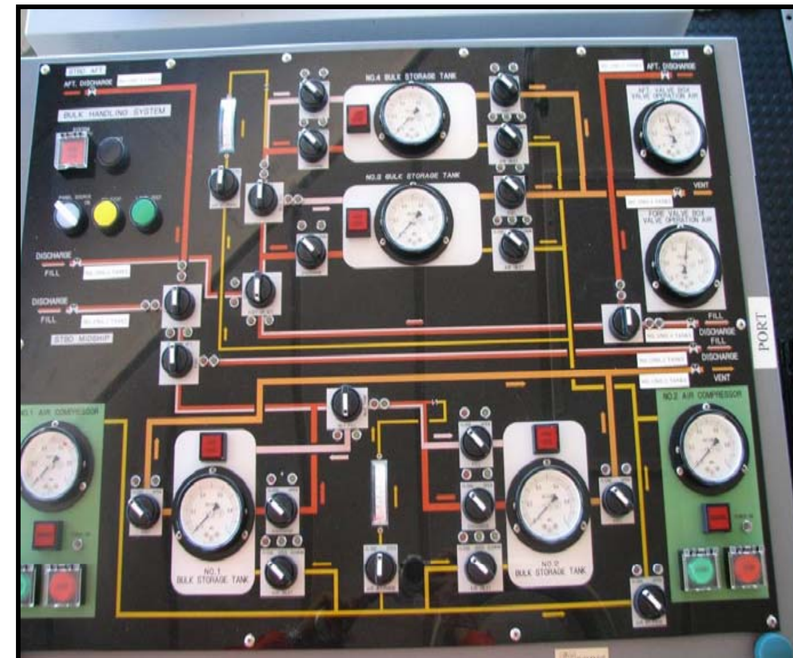
Support Vessel Incident

Vent Line Cap Strikes Man in the Face

P Dodd, December 4, 2008

Support Vessel Incident – 4 July 08

- Location
  - Support vessel on standby approx 2 km from MODU, located on North West Shelf
- Incident:
  - 5″ Camlock vent line cap struck man on the side of the face
- Background:
  - Chief Engineer (IP) attempted to fluff Pod 1 bulk storage tank, but no dust plume was observed over the side
  - Maintenance had been conducted on Pod 3 tank to clear bulk storage line



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Vent Line Location

- Chief Engineer went down from the bridge to the deck and went over to Pod 1 vent line with Chief Mate to investigate

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Pod 1 Vent Line

- C. Engineer identified that vent line rubber hose was not on the correct vent line (hose had been fitted to a different fill/discharge line as part of earlier maintenance work)
- Confusion between C. Engineer and C. Mate over pod tank being pressured
- C. Engineer & C. Mate went to check if there was pressure in the vent line

Vent line normally has a rubber hose from here to direct dust from tanks overboard

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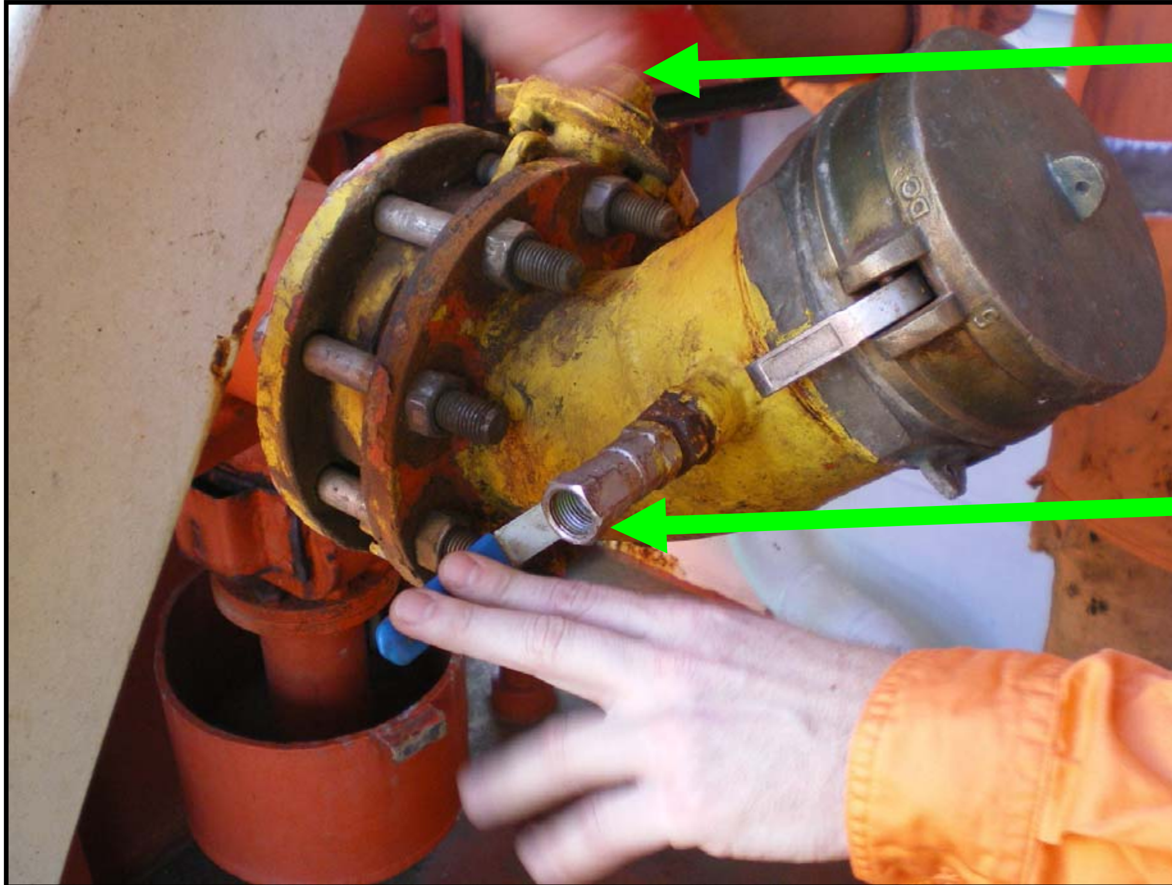
Position of Men



2. C. Mate cracked open butterfly valve to check for air

1. C. Engineer (IP) opened bleed off valve and stood to the side to avoid potential air flow from valve

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Vent Cover Projectile

3. Camlock vent cap blew off and struck the man on the side of the face

Pressure unknown but max system pressure up to 5 bar (75 psi)

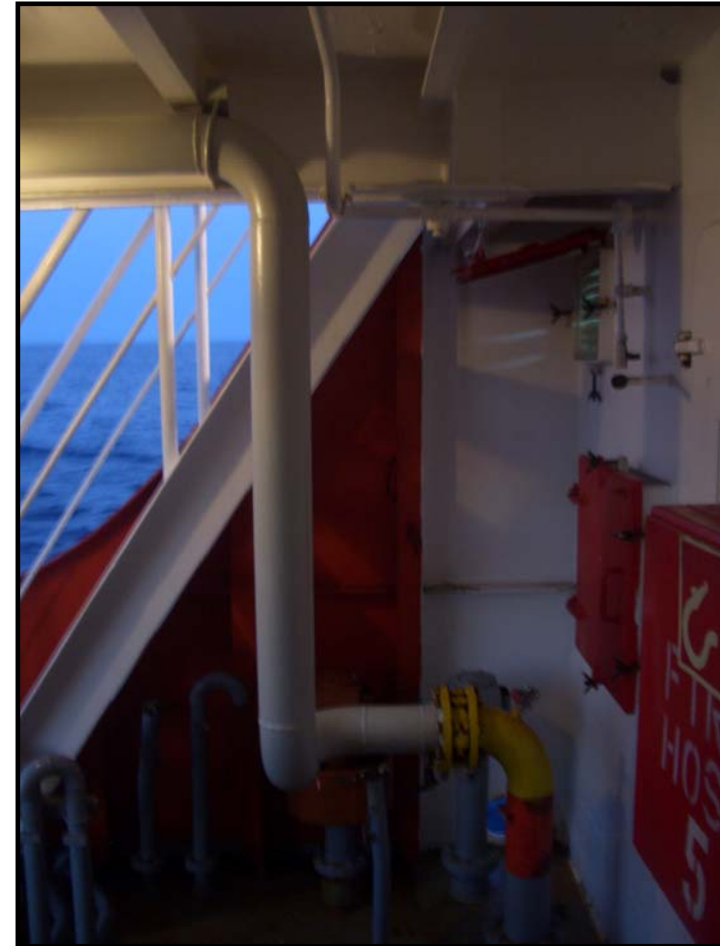
4. Vent cap continued on upwards and struck beam above and ended in the winch house

Support Vessel Incident

- **Consequences:**
  - IP transferred to Rig => Helo to Karratha (with Shorebase Paramedic) => RFDS to Perth that night
  - Received surgery to fractured cheek bone – plates installed to rebuild face
  - Currently recovering – still has blurred vision in right eye
- **Contributing Factors:**
  - Inadequate engineering design
    - Valve cam lock cap not designed to hold pressure
    - Position of vent outlet (angle of outlet, location of valves)
  - Management of change not followed
    - Variation to "standard procedure" - vent line hose missing
    - No Stepback/JHA used – no recognition of requirement
  - Lack of Hazard Awareness
    - IP positioned himself in front of cam lock cap
    - Failed to remove valve cap before opening valve
    - 5″ air line butterfly valve opened up under pressure

Support Vessel Incident

- Actions:
  - Immediate Alert sent across vessel fleet
  - Fit dedicated rubber hoses to vent line (interim measure)
  - Implement engineering solutions
    - Re-route vent line to ensure outlet away from personnel operating valves
  - Revise dry bulk handling procedure to cover management of trapped pressure
  - Distribute findings and learning to all Santos operations
    - Safety Alert
    - Safety management visits to all Santos operated vessels and offshore rigs
    - All vessel dry bulk handling systems reviewed
  - Re-induct vessels with emphasis on Hazard Awareness and use of Safety Tools
  - Improve HSE interaction with vessel crews
    - Expand rig HSE practices to include vessels



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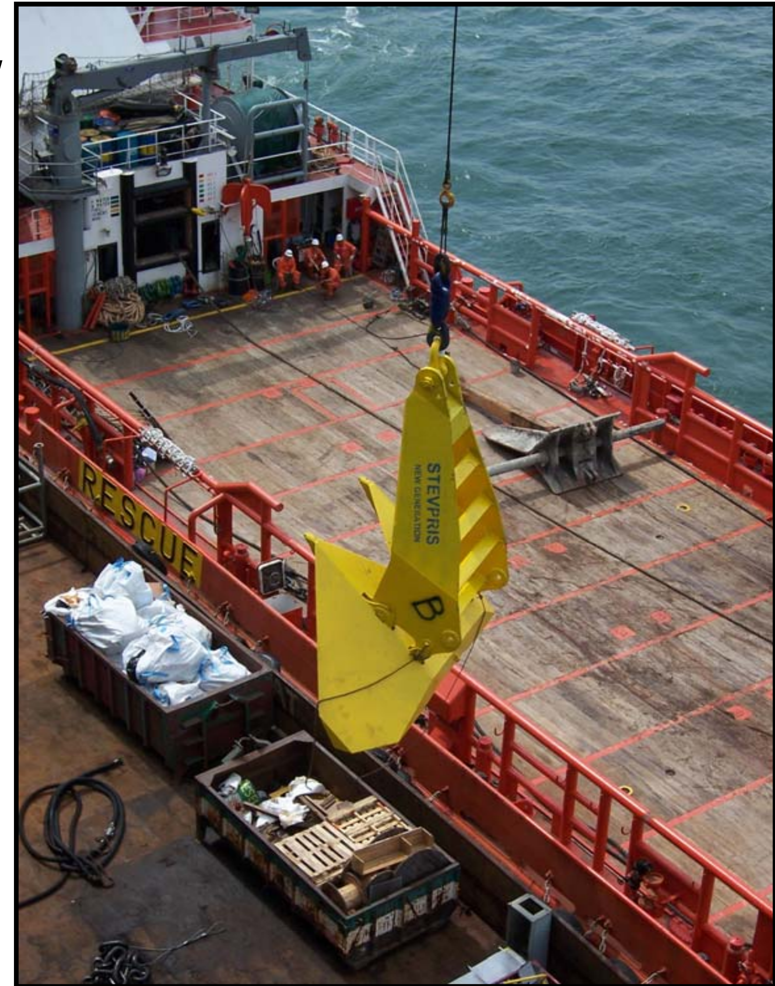
Support Vessel Management Issues

- Number of serious incidents, near misses on vessels in 2008
  - 4 "recordables" vs 6 on rig operations (TRCFR 17 cf 8 on rigs)
- Limited prevailing influence
  - Minimal daily influence from Operator cf rig operations
  - EHS statistics counted within 500 m from rig only
- Communication challenges
  - Vessel - rig - shorebase
- Safety behaviour / culture / leadership issues
  - "Can do" attitude
    - For example, Chief Engineer – 30 yrs experience
  - Hazard identification / risk assessment
  - Reporting – incidents and near misses
  - Use of accepted safety tools
    - JSAs, Stepback, Toolbox meetings, STOP, PTW etc
  - Not as advanced as rig personnel

Support Vessel Initiatives

- Focus on communication
- Improve EHS induction process for all crew
  - Individual inductions for vessel masters
- Management vessel visits – both Santos and vessel operator
  - Reinforcing expectations
  - Hazard observation tours
- Greater crew interaction with rig
  - Formal daily calls between vessel and rig
  - Attendance at safety meetings
  - Participation in hazard observation programme
  - Santos rig personnel focus
- Safety leadership training
- Vessel Daily Reports
  - Improved EHS focus on reporting
- Reinforce Shorebase EHS expectations



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Questions

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