Human performance for process safety

Joelle Mitchell
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• **National Offshore Petroleum Safety and Environmental Management Authority**
  – Safety, Integrity, Environment
  – Commonwealth waters
• **Offshore Petroleum and Greenhouse Gas Storage Act**
  – Associated Regulations.
• NOPSEMA webpage – nopsema.gov.au
  – HSR handbook
  – Accredited HSR training course providers.
HEALTH AND SAFETY REPRESENTATIVES

The legislative framework for offshore petroleum safety makes clear provision for workforce representation. The following guides and resources are provided to give an understanding of this role, how it operates and sources of training that are available.

HSR Handbook

NOPSEMA has updated their HSR Handbook, to make the HSR’s role even easier. Most of the changes are as a result of minor legislative changes over the last few years, and are mainly around changes in terminology.

Training for HSRs

When personnel have been chosen by their designated offshore work groups to represent them as HSRs, they will be required to attend a NOPSEMA accredited HSR training course.

Clause 30 of Schedule 3 to the Offshore Petroleum and Greenhouse Gas Storage Act 2009 (OPGSS Act) states that: “A health and safety representative for a designated work group must undertake a course of training relating to occupational health and safety that is accredited by NOPSEMA for the purposes of this clause.”

The employer of the HSR must permit the representative to take such time off work, without loss of remuneration or other entitlements, as is necessary to undertake the training.

Accredited HSR training course providers

See the list of accredited training providers currently accredited to provide health and Safety Representative training courses to meet Clause 30 of Schedule 3 to the OPGSS Act.

Training providers seeking to become a NOPSEMA accredited provider of HSR training courses

The accreditation process comprises three main elements: review of the developed training material; review of the training provider’s organisation and personnel structures; followed by on-site visit of the training premises. The main elements necessary for accreditation are:

- training course material conforms to the endorsed Course outline - Health and Safety Representative training for the offshore oil and gas industry - Rev 1 - March 2012 (PDF 1.1MB)
- confirmation of Registered Training Organisation (RTO) status
- experience in OHS and Training Health and Safety Representatives
- knowledge of the Offshore Petroleum Industry

If the initial accreditation process is successful, there are follow up surveillance audits to provide ongoing verification.
Human Performance
Human factors

Organisation

Individual

Job

Error Prevention

Desired Performance

Human Reliability

Human Error

Error Management

Event

Near Miss
What about process safety?

• Where does human performance have an impact?
• Major accident event control measures
  – Hardware
  – Procedure
• How can HSRs contribute?
Opportunities for HSR contribution include:

- Hazard Identification Workshops
- HAZOP
- Constructability reviews
- Procedure development & revision
- JSA/JHA development & review
- Management of change
- Prestart & toolbox talks.
What is the consequence of error within a task?

Maintenance work:
- Safety critical equipment
- Process plant

Control room operations

Inspections & testing

Mid-activity handover.
How can things go wrong?

• “Drift towards failure” / “Incubation period”
• Incremental procedure deviations
• Gap between “work as planned” and “work as done”
• Risk not identified or managed.
• Why do they happen?
• Real work context:
  – Limited resources
  – Multiple pressures
  – Competing goals
• “Satisficing”
  – Subconscious decision-making strategy (heuristic)
  – Search alternatives until an acceptability threshold is met.
What are the consequences?

Organisation

Individual

Job

Human Reliability

Desired Performance

Human Error

Event

Near Miss
• Satisficing is a practical necessity
• The gap will always exist
• How do we manage it?
  – Acknowledge it
  – Monitor it
  – Revise out-dated procedures
  – Use frontline risk assessment tools when deviations are perceived as necessary.
Up Next: Breakout Sessions

• Human performance materials for HSRs
  – Peter Burston, Woodside

• Case study
  – Dave Chaplin & Nick Webster, NOPSEMA

• Safety critical task analysis
  – Nicole Gray, The Keil Centre

• Evolution of emergency medical response
  – Darren Nelson & Geraldine Atkins, Careflight.
Questions?