Incident: Electric shock on marine coring vessel
June 4th 2016
Incident Classification

Incident: Electric Shock from Breaker Box mounted to Container
Date: 06/04/2016

Actual Outcome

- People: Severity 0
- Asset: Severity 0
- Reputation: Severity 0
- Community: Severity 0

Potential Outcome

- People: C4
- Asset: B2
- Reputation: B3
- Community: B0

Classification: Medium potential incident C4 (people)
**SEQUENCE OF EVENTS**

**Electric shock Incident**
**Breaker Box**
*Actual Severity: no injuries*
*Potential Severity: 2 fatalities*

**Conditions**
*Rough Seas: Water splashed to the front of lab container on back deck*

- Crew was box coring off back deck
- Crew reported non working lab A/C unit
- HSSE Advisor went to check, touched the exterior of breaker box, and received a small tingle
- Shell HSSE, Captain and Party Chief advised of an electrical issue
- While waiting for electrician to come to investigate the situation, the HSSE explained the situation to a Surveyor
- Surveyor understood the A/C was “in short”, reached out to the breaker box to turn it off to avoid a bigger problem. He received too a slight “vibration” (electric current)
- Electrician arrived at the lab cabin, and shut the breaker box off. He found a burnt circuit breaker and a copper strip.
- **Medic onboard evaluated both employees who had no injuries**
WHAT HAPPENED

Waves crashing over the vessel

Lab container

Internal view of damaged breaker box

Damaged circuit breaker

Burnt copper plug
Container after repairs (11th April)

Figure 7: Laboratory container after incident

A/C properly mounted

All electricals moved inside container
Breaker box labelled
1) Project Manager / Vessel master approval for new container on board (missing barrier)
   - **Immediate cause:** Improper arrangement and placement AC and breaker box (~5m from outboard of ship exposure to seas)
   - **Root Cause:** Inadequate standards, specifications and/or design criteria

2) Non-attendance of regular maintenance of container (failed barrier)
   - **Immediate cause:** Breaker box is not weather proofed
   - **Root cause:** Inadequate assessment of exposures

3) Lack of risk analysis / Failure to follow procedure (failed barrier)
   - **Immediate cause:** Both employees checked and touched the breaker box without authority
   - **Root cause:** Failure to follow organizational roles and responsibilities
Prior to commencing a Metocean data collection campaign it was agreed to replace the EBS container with a ‘fit for purpose’ container.

This container is fit for offshore operations and its deployment was a direct response to learnings from the electric shock incident. Inspected and certified 19th May, 2016.