

The New Zealand Society for

RISK MANAGEMENT Inc.

www.risksociety.org.nz

The Society gratefully acknowledges the support of our hosts for this event:

Opus International Consultants Ltd, Christchurch City Council, KPMG and Mighty River Power



Lessons from the Edge

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Navigatus

¹
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Introduction

- ▶ Rena - Recap
- ▶ Rena – the work place environment
- ▶ Approach
- ▶ Lessons
- ▶ Thoughts



CS Rena – Event Recap



October 5th

CS Rena – Event Recap

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Interactive map – Maritime New Zealand

www.maritimenz.govt.nz/Environmental/Marine-oil-spill-risk-assessment/Interactive-map.asp

Bonjour iPad in Bus iPhone World Clock NZ Risk Society MetService AKL Wikipedia Kiwi Web Space Telecom WiFi WebDrive Caf  NET Air NZ iGoogle

Fairpl... Automati... Message... Bosun's... Automati... Data Exch... www.mar... Maritime... Shack by... Interactiv

Interactive map

Legislation, regulations and conventions

Requirements for vessels, installations and ports

Oil and oily waste

Chemicals and their risk

Sewage discharge

Garbage disposal in the marine environment

Marine dumping

Marine oil spill risk assessment

- 2010 Summary Results
- Interactive Map

Responding to spills and pollution

Biosecurity

Publications and forms

Protecting our environment - for students

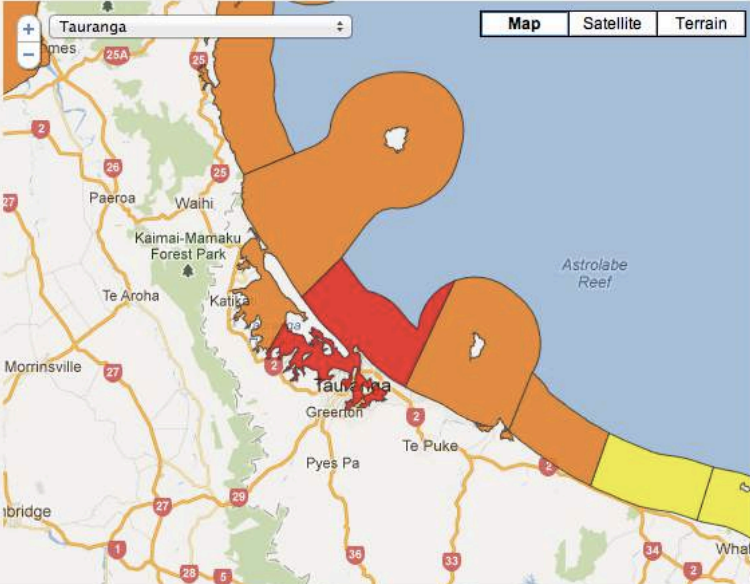
Reporting discharges and spills

Secure resources for councils


The interactive map below incorporates 20km coastal 'cells' that form the basis for an assessment of the environmental and social sensitivity to oil spills and the calculated risk associated with current vessel activity and associated movement of oil. The colours reflect the resulting level of risk (a combination of the calculated likelihood of oil being present and the impact of that oil).

Navigate the map by dragging with the mouse. Use the zoom controls to view specific areas of the map or click on the port or regional links to quick-zoom in to a particular area. Clicking a particular coastal cell will open detailed risk and environmental information for that cell.


Map Satellite Terrain



What's new



The Good Oil - Issue #27
19 September 2012

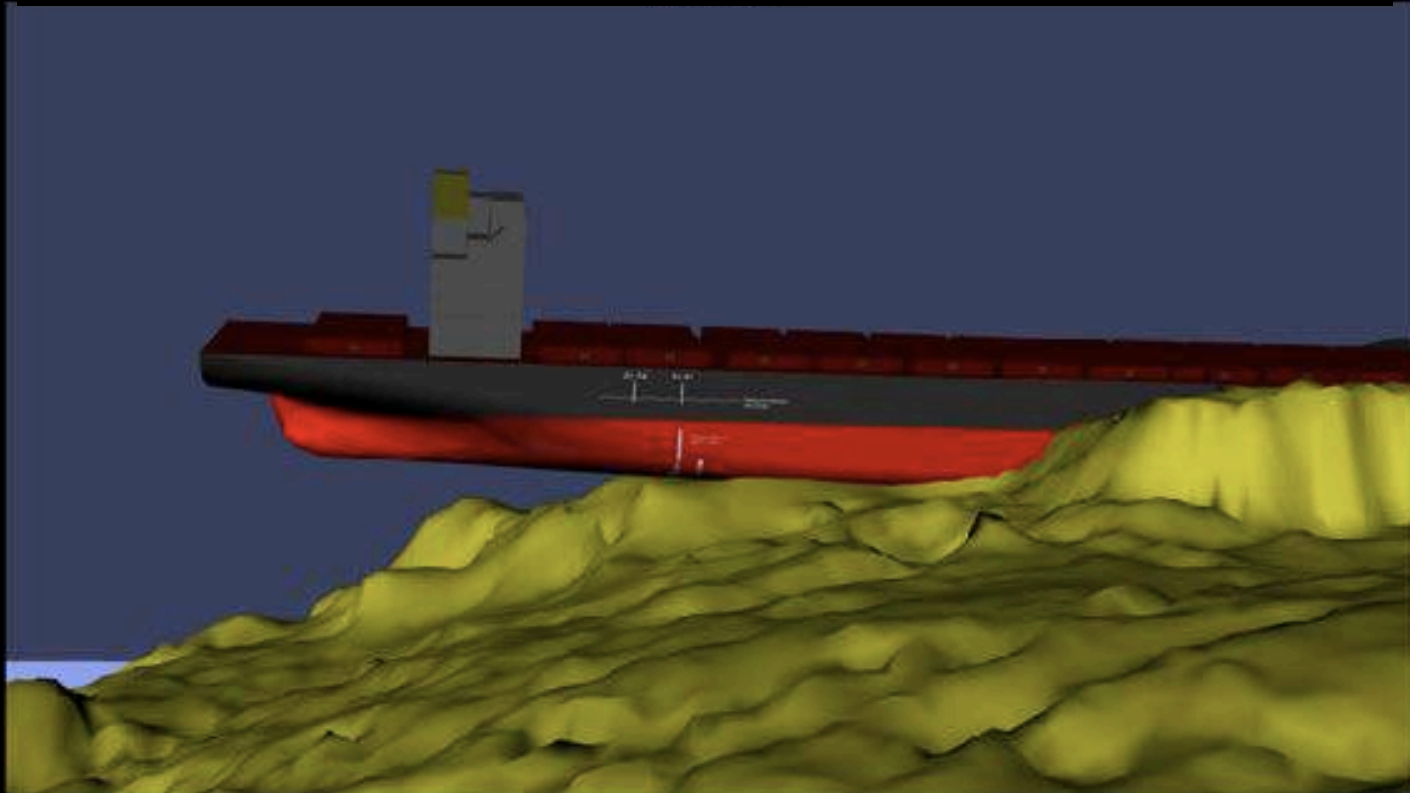


New marine oil spill risk assessment tools
14 September 2010



October 12th
Rolls to Starboard
Containers coming adrift

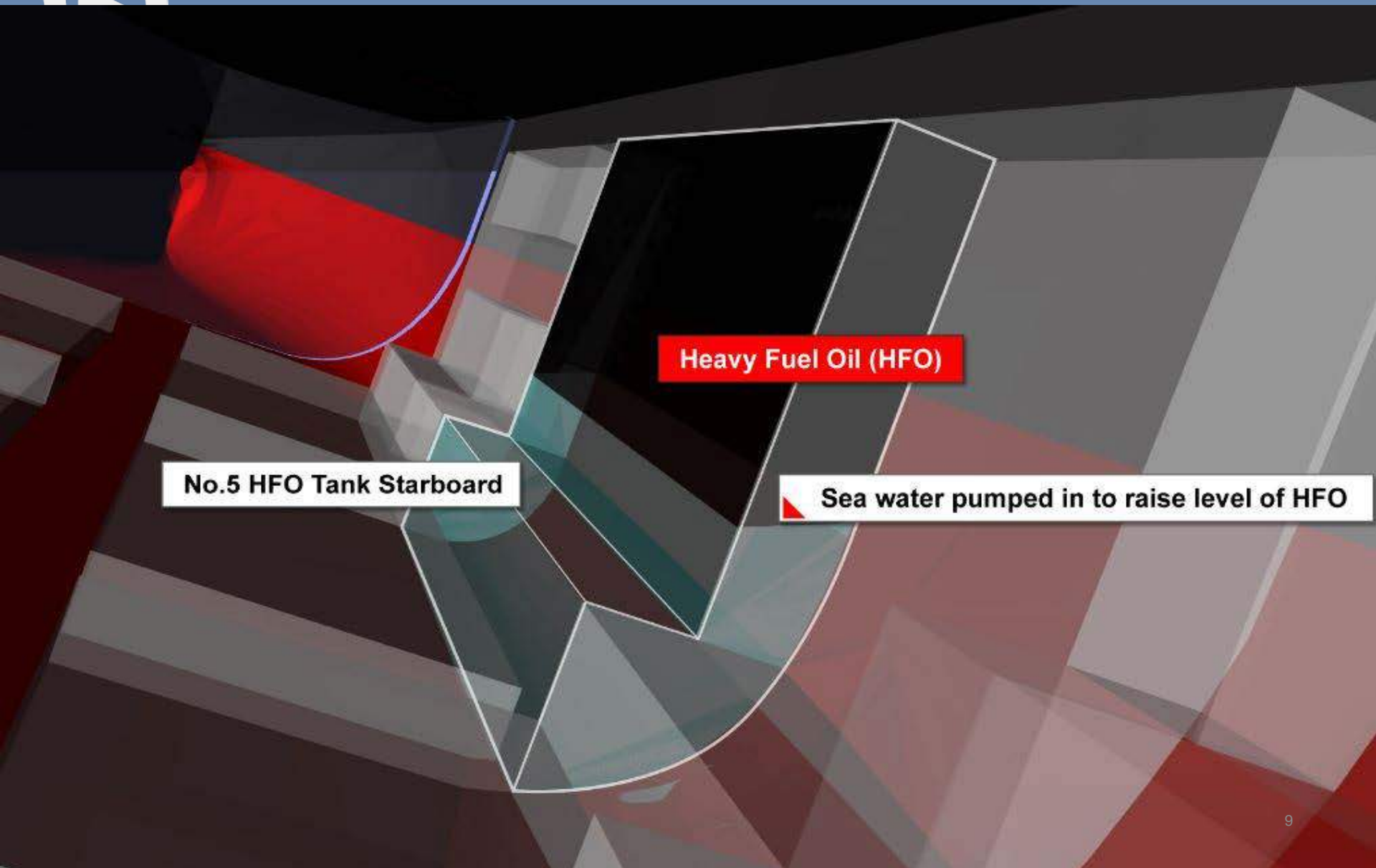




This graphic shows the stern of the Rena and the area of buckling. The



Fuel removal



No.5 HFO Tank Starboard

Heavy Fuel Oil (HFO)

Sea water pumped in to raise level of HFO

Oil Removal











Heavy lift capability















Safety Officer Role

Tasks:

1. Develop an SMS for the Rena Recovery
2. Be the Salvor's Safety Office

- ▶ Extremely hazardous
- ▶ Culture clash (within team / between orgs)
- ▶ Language(s)
- ▶ Regulators
- ▶ The sea - unforgiving
- ▶ The money men!



Hazards – We had a few!!!

- ▶ Physical
- ▶ Mental
- ▶ Imperatives
- ▶ Navigational
- ▶ Culture clash / behaviours
- ▶ Language
- ▶ Disconnects (cost approval)
- ▶ Overseers

Oil - Slip Hazards!



22 Degrees



22 Degrees



22 Degrees



22 Degrees





22 degrees (large spaces)



Dark, Twisted, Slippery,
Jagged, Broken @ 22 Degrees







Mitigating / Controlling Risk



Isolate
Minimise
Protect

Physical
Procedural
Training
Control
Information



Complexity



Hazards

Uncertainty

Unknowns

Limited
control



Complexity





Limited Controls



Tides and swell – decks awash





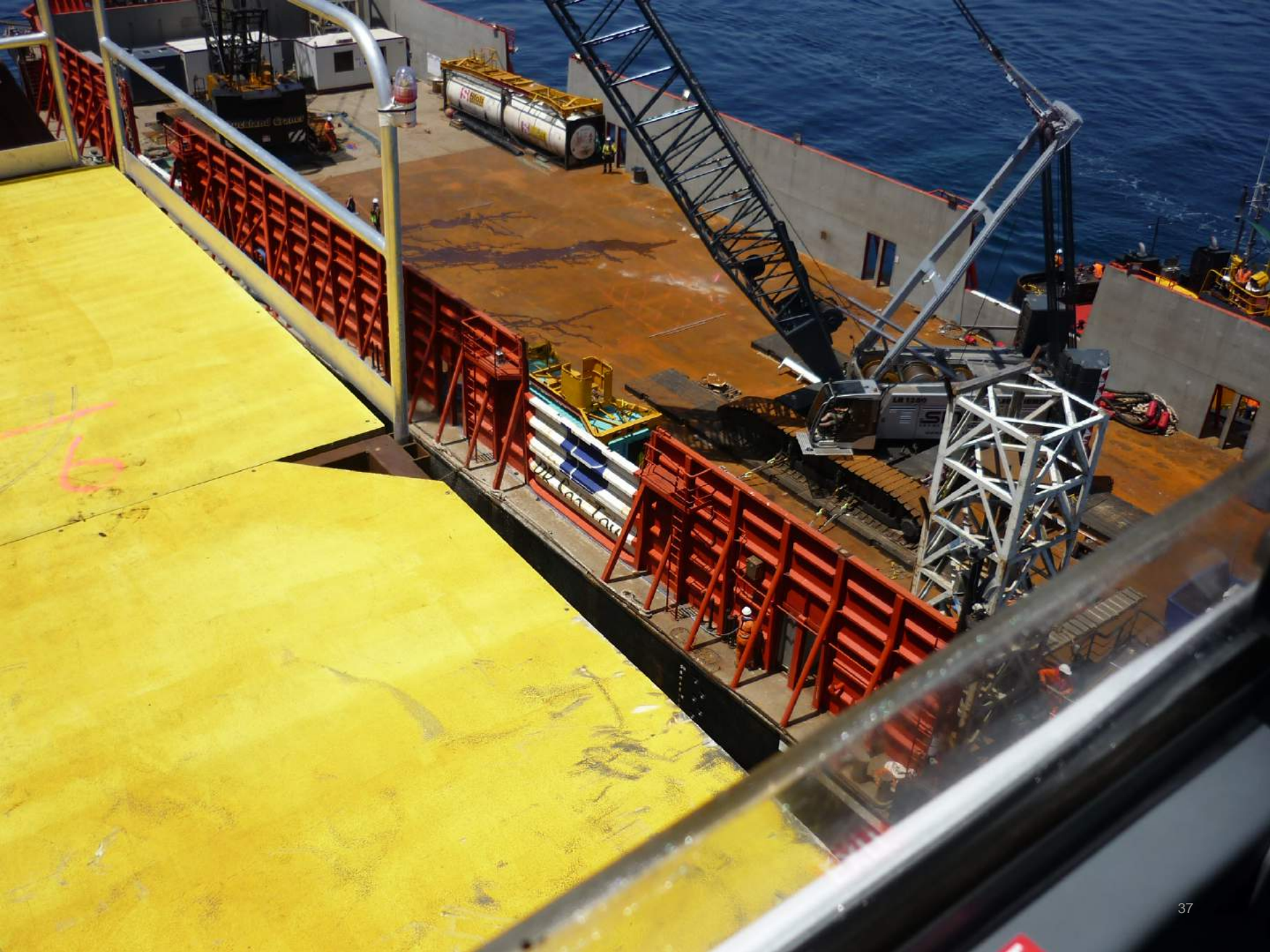
Complex Mitigations





Complex Mitigations







Culture Clash?





Shaft line – Isolated locations





Working at Height





Working at Height





On-reef support capability



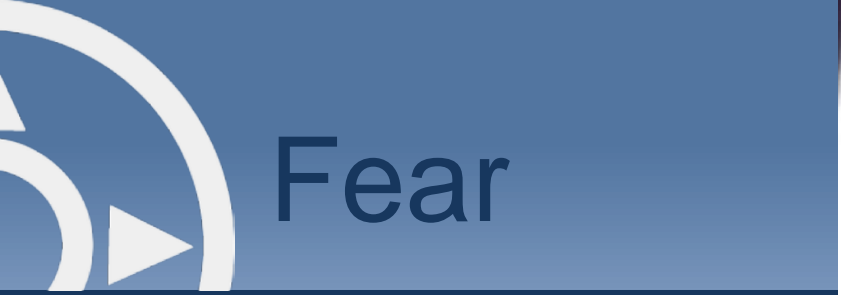
Crane Falls / Swinging hooks





Fatigue











Safety Management

- ▶ Awareness
- ▶ Acceptance
- ▶ Care of self
- ▶ Expertise
- ▶ Briefing and Pass-port
- ▶ Plans
 - Evac
 - Tsunami
 - Cyclone
- ▶ Training / Briefings / Direction



Risk – ALARP?



MV "RENA"

Gangway

CHECK IN/OUT BOARD

NAME	COMPANY	TIME IN	TIME OFF	NAME	COMPANY	TIME IN	TIME OFF
CHRIS	SS	0735	✓	REMO	SS	0820	✓
MATT	SS	0735	✓	ALEX	SS	0820	✓
OLU	SS	0735	✓	PIET	SS	0820	✓
RUDI	SS	0800	✓	Russell	ISS	0845	✓
Apple	SS	0835	✓	Scott	ISS	0845	✓
Walter	SS	0835	✓	Daniel	ISS	0845	✓
Danny	SS	0835	✓	Adam	ISS	0845	✓
Ken	SS	0835	✓	Bell	ST JOHN	1051	✓
DAVE	TP	0800	✓	Liam	"	1051	✓
Sammy	TP	0800	✓	Tony	"	1051	✓
TECHUK	SS	0800	✓	Andy	"	1051	✓
MARK	SS	0800	✓	Riech	SS	1300	✓
TIM	SS	0850	✓	Geraint	NW	1300	✓
FRANK	SS	0850	✓				
C2	SS	0850	✓				
GRADY	SS	0850	✓				

← (1) CHOPPER LIFT JACKET KEPT ONBOARD FOR EMERG MEDICAL E.VAC

DATE
FRI 18th Nov



Safety Management

- ▶ Safety Passport
 - Hazard Briefing Document



Key Hazards:

- 22 degree list to Starboard
- Broken ship (bent twisted metal, groaning)
- Oil on decks
- Loose objects and rubbish on decks
- Slippery cross passages with limited holds
- Starboard working deck awash at times
- Partial power and limited lighting below
- Helicopter transfer to a small platform
- Boat transfer may be under difficult sea conditions
- Temporary cables and hoses on decks
- Heavy difficult crane operations
- Higher priority salvage activity in hand
- Changing conditions and situation (different each day)
- Possibly rapidly changing circumstances
- Emergency situations may occur at any time

Do:

1. Obtain your Safety Passport prior to transfer
2. Report to the onboard Salvage Master
3. Log ON and OFF on the Visitors Board
4. Ensure you are escorted at all times
5. DO EXACTLY AS INSTRUCTED
6. IF IN DOUBT; STOP, ASK
7. TAKE REAL CARE



Safety Management

- ▶ Safety Passport
 - Hazard Briefing Document
- ▶ Specific Briefing Documents
 - Small Boats
 - Helo Ops
- ▶ Specific Plans
 - Cyclone
 - Tsunami
 - Fire
- ▶ Multi-Agency Evacuation Plan



Summary

- ▶ Hazard rich environment
- ▶ Acceptance of risk
- ▶ Skill and expertise (onboard)
- ▶ Plans and robust discussions (ashore)
- ▶ Culture Clash
- ▶ Actual Behaviours

Hazards? We had a few!





Lessons from the Edge

Thank you



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