

**[Summary of Paper delivered by Henning Christiansen at NOGSAC/NOPSA's  
Fourth HSR Forum 27 & 28 February, 2006]**

A Floating Production Storage and Offtake ["FPSO"] facility is a vessel [hence under the Navigation Act] which **produces oil and gas** [hence under the Petroleum (Submerged Lands) Act].

However, in early 2005, the Federal Government made an amendment to the Petroleum (Submerged Lands) Act, to *expressly exclude* the application of the Navigation Act 1912 to an FPSO whilst it is on-location.

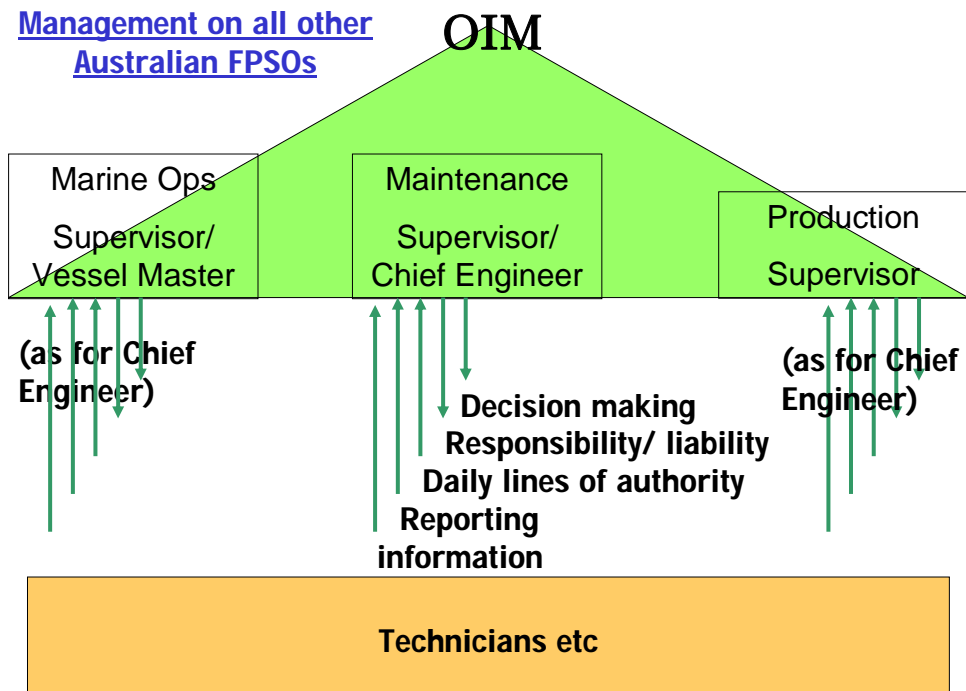
The National Oil & Gas Safety Advisory Committee in August 2005 produced an Out-of-Session Paper entitled "*Navigation Act 1912 & Petroleum (Submerged Lands ) Act 1967 Interface.*"

We respect the preliminary work done by the Commonwealth on this, however, to focus only on the question of which Act applies at any given time would be to ignore the statutory obligations on Certificate-holders, particularly Masters and Chief Engineers as well as the practical consequences of the human-element in decision-making and lines-of-command as a fundamental part of the Safety Case/Safety-Management-System or Safe-system-of-work.

Yet the simplistic exclusion effected by the PSLAct amendment has the consequence of permitting unsafe outcomes that can now arise because whilst on-location there is now no legislative support for the statutory obligations & responsibilities that arise at-disconnect .....many of them requiring exercise of maritime decision-making authority whilst on-location so as to be in-place for disconnect.

**The changed legislation permits an operator to adopt a flawed management-design which takes no account of such human elements and as a result we believe an FPSO adopting such a design to be inherently unsafe, making the objectives of Marine Orders, as well as the Safety Case, undeliverable and failing to provide the Safe-system-of-work to which employees are entitled.**

FPSOs come in many shapes and sizes but until recently all in Australia have the same management team whilst on-location as they have when they disconnect and sail away under the Navigation Act.



Lets designate those who are part of the management team with the colour **GREEN**...

Lets designate those who are not of the management team with the colour **ORANGE**...

Despite the recent legislative amendment, when the FPSO disconnects, the Navigation Act 1912 suddenly **does** apply, not just to the vessel but, more importantly, to the persons who must now bear the statutory responsibilities and obligations of ensuring that before he/she decides to sail the vessel, that the requirements of the Navigation Act 1912 and all of Marine Orders are/**were** complied with.

This is reliably done if the at-disconnect position of Chief Engineer, and the on-location position with matching duties/responsibilities and authority, are held by the same position within the organizational structure of the facility's management.

- In respect of Chief Engineers this is done on all disconnectable FPSOs currently in Australia.
- In respect of the vessel's Master this is also done on all disconnectable FPSOs currently in Australia except one [FPSO Cossack Pioneer];

...on that one FPSO the organizational structure has recently been radically changed such that the person with the at-disconnect position, duties, responsibility and obligations of Master NO

LONGER has commensurate position, duties and responsibility whilst on-location.

The organizational structure was amended to eliminate the positions of First Engineer, First Mate and Master so, whilst there are still 3 Deck Officers employed on the vessel [most apparently possessing a Class 1 Deck Certificate], all 3 are employed as “Second Mate/Technician”.

Consequently, during the 360-days p.a. spent waiting for a cyclone emergency to cause them to disconnect & sail, **none** are employed in a position with the responsibilities and lines of authority equivalent to Master, and the complement on the vessel is being conditioned to look for those things from NON-maritime positions in the day-to-day organizational structure of the FPSO.

The entire complement is effectively being retrained to

- report through a contrary structure to a different position,
- retrained to handle operational tasks [even in Deck department matters] through a contrary structure to a different position and
- retrained to coordinate emergency response through a contrary structure to a different position.

Unlike other FPSOs, on this existing FPSO the “Second Mate/Technician”, who’s Certificate of Competency will be relied on in an emergency disconnect, is **not** even part of the FPSO’s Management Team.

Yet if a cyclone approaches, one of these “Second Mates/Technicians” at the bottom of the chain-of-command up to that point, is expected at disconnect to bear the responsibilities and statutory obligations of Master, to disconnect and command the sailing of the vessel to safety.

In ATSB Reports on maritime emergencies/casualties in recent years we note the very great emphasis laid on developing and maintaining seamless/practiced ‘Bridge Resource Management’ in relation to normal operational duties as well as emergency response. We do not see how this can be fulfilled by upending the lines of authority and handing over responsibilities in the teeth of a cyclone to persons who for the last year have been employed as “Second Mate/Technician”.

We believe the throwing of statutory responsibility to a “Second Mate/Technician” in the face of an emergency, and in such a manner as to break every existing FPSO-organisational-structure line-of-authority and reporting-practice, is inherently **unsafe**.

If the Safety Case for this existing FPSO relies on a Master in time of emergency then it is our professional opinion that this reliance can only be given genuine effect by integrating the job-description of Master [with the normal responsibilities and lines of authority of that Master] within the Management-team of the normal on-location FPSO-organizational-structure. This is what is done on this existing FPSO with the Chief Engineer; he holds overlapping job-descriptions as Maintenance Team Leader whilst on-location and as Chief Engineer whilst disconnected.

The Institute is concerned not only over the SAFETY implications of this designed malfunction of Management at cyclone-disconnect, but also concerned over the professional and legal liability that the “Second Mates/Technicians” are exposed to should there be a maritime incident or casualty.

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However, these developments on one existing FPSO are exceeded by the proposals for a new disconnectable FPSO, [Woodside’s FPSO “Nganhurra”for ENFIELD] to be located within 21 km of the NINGALOO MARINE PARK, which is intended by the operator to have two entirely **different** job-structures *without* such *common* positions / decision-making responsibilities.

**The job-structure for this new proposed FPSO has been designed on an extraordinary [ *experimental* ] basis so that there is a breakdown of operational and safety management responsibility which occurs at the most critical time...  
i.e. when threatened by cyclone...**

**how can this constitute a competent Safety Case/-Management-System or Safe-system-of-work ?**

**When threatened by cyclone** the management team of the FPSO who have made all the decisions up till then, are proposed to hand over management responsibility to two of 15 Technicians, who up till then have not had a position of management responsibility.

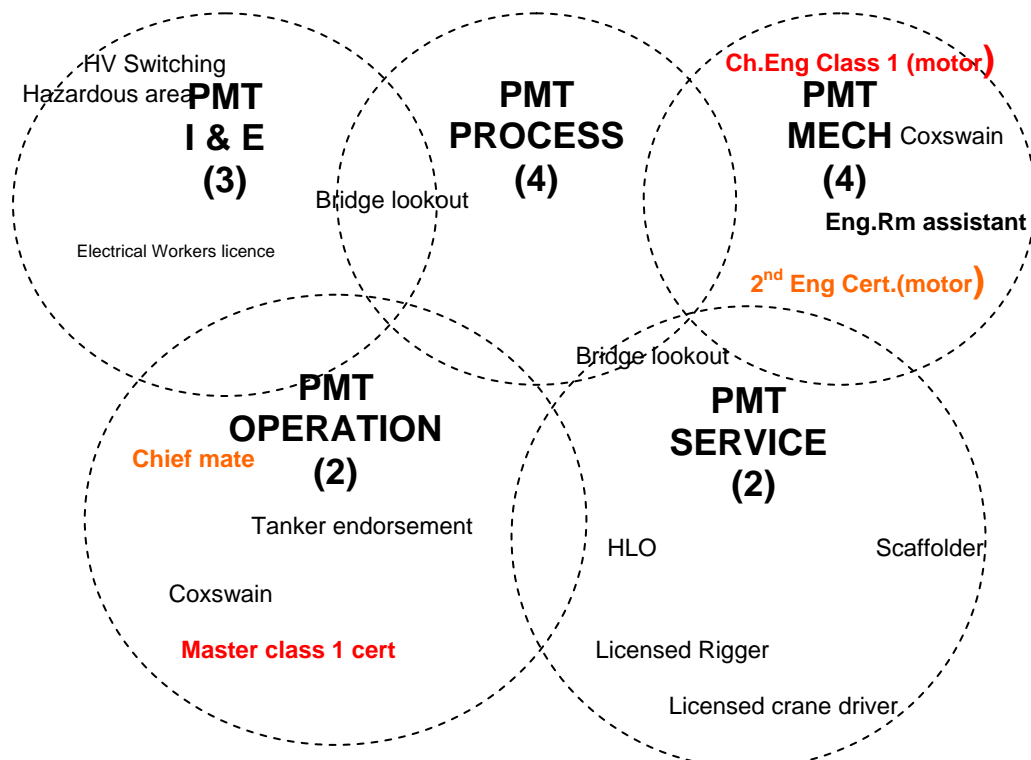
Then these two suddenly become the Vessel-master and the Chief Engineer pursuant to the Navigation Act .....expected to take control and operate the vessel to disconnect from the oil-well and flee the cyclone.

If these two Technicians are impeded in their responsibility by this breakdown of operational and safety management responsibility or by the [ poor] decisions made by the Management-team prior to this point [as to machinery availability/maintenance, water-tight integrity and seaworthiness etc] then it is too late to rectify them.

Potential consequences include the sinking/break-up of the FPSO, spillage of millions of litres of crude oil, loss of life and collision with another vessel (e.g. WA fishing vessel) during cyclone.

## Org Structure Statutory Qualifications

The employer's proposal shows the 15 proposed TECHNICIAN positions



All our concerns in respect of the problems for the existing FPSO, above, apply equally to the organizational structure proposed for this new project; they

propose to have 2 of these “Second Mates/Technicians” who are not in a position of Management responsibility yet at cyclone disconnect one of them must become the master of the vessel and assume management of the vessel and all personnel.....again dismantling the operational & emergency-response management structure *as a cyclone emergency approaches*.

In a further radical departure

- No position of Chief Engineer whilst on-location,
- instead employs only 2 persons holding Marine Engineer Certificates of Competency, but NOT employed in a management-team position within the organizational structure with responsibilities equivalent.
- As a result neither can assure the engineering and personnel outcomes which at disconnect as Chief Engineer they are legally responsible to satisfy themselves about before they take a vessel away!

The statutory responsibilities of Chief Engineer are a responsibility of a prescribed job-description with competencies and engineering management-level responsibilities consistent with STCW95

such that the position has authority to

- plan & direct maintenance,
- direct operational staff,
- make decisions regarding all propulsion and associated engineering systems
- maintain standard watchkeeping arrangements.

These statutory responsibilities can NOT be vested in a position that, whilst said to require possession of a Class 1 Marine Engineer Certificate, is not actually employed in a position with authorities/responsibilities equivalent to the authorities of Chief Engineer...

Of the 4 positions said to be Mechanical Technicians, only 2 positions will be required to hold qualifications as Marine Engineers, and the job descriptions include a statement that the one of these 2 Technicians who is to become the Chief Engineer at disconnect is to:-

“...Maintain Engineroom machinery in a state of readiness for a planned or unplanned sea going voyage ensuring there are always sufficient quantities of fuel & lubes onboard.  
Oversee any maintenance on the main propulsion machinery including the steering gear and any other equipment that could effect the seaworthiness of the vessel.  
Maintenance planning skills with direct involvement in maintenance planning for main propulsion machinery...”

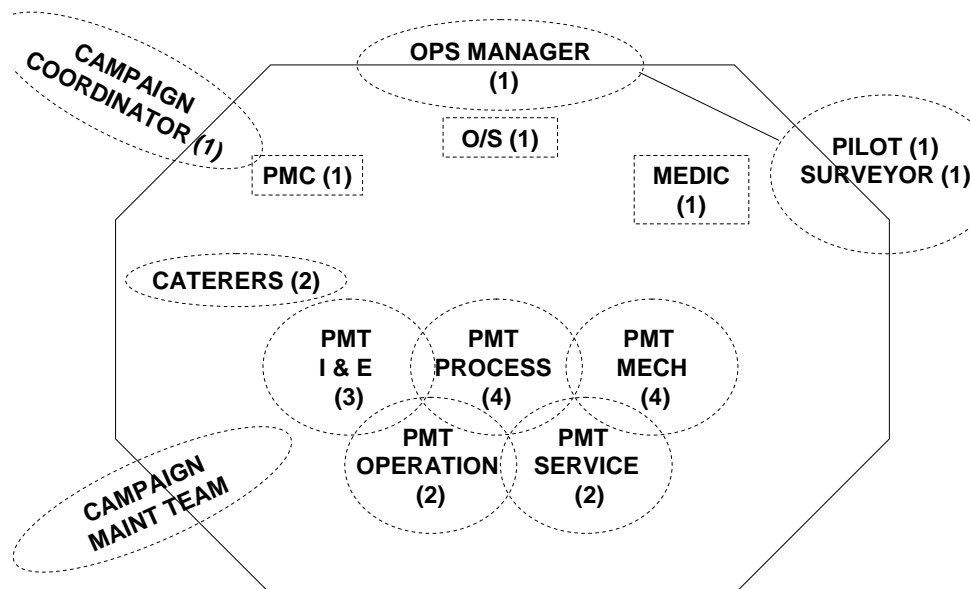
...yet neither of these 2 Technicians is vested with planning/decision-making/management-authority in these areas.

**A system-of-work that allocates responsibility without allocating necessary authority is not a SAFE system-of-work.....**

**nor can it assure the outcomes needed under Nav.Act Safety-Management-System.....**

**nor under the PSLAct Safety Case.**

### Integrated Team Organisational Structure



In addition to the 15 “Technicians” the employer proposes to have the following management positions for this new FPSO:

- An Operations Manager; [mostly ashore] and
- An Operations Superintendent [at 1.1.1 in the job descriptions]
- A Production/Maintenance Coordinator [at 1.1.2 in the job descriptions]; and
- A Campaign Maintenance Coordinator [part shore-based] [at 1.1.9 in the job descriptions]

None of these **management team** positions is proposed to require possession of a maritime Certificate of Competency.

**Yet this management team will make all the decisions in all the equivalent Chief Engineer & Master areas of responsibility whilst on-location.**

**Then when a cyclone is imminent they will divest themselves of all responsibility by thrusting it upon one Technician whom is then said to be Chief Engineer and on another Technician whom is then said to be Master.**

In fact the attempt to assign some few elements, of a Chief Engineer’s statutory responsibilities, to these “Technician” positions is NOT consistent with the **STCW95 [table A-III/2] Code** description of a Chief Engineer’s **management-level** authority/responsibility for all marine engineering operations, maintenance and personnel elements of the SMS under Marine Orders 58.

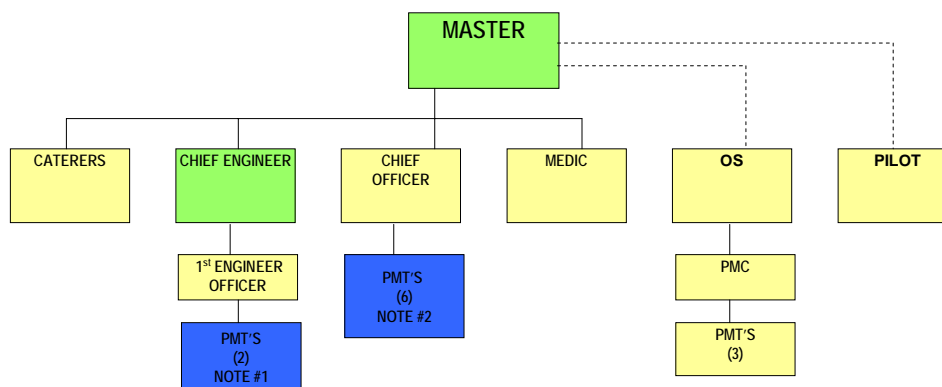
In simple terms, whilst the facility is on-location, these “Technician” do not have the authority/responsibility within the proposed job-structure to **ensure** the tasks and objectives **nominally** assigned to them....

... because the decision-making responsibility in all these areas has expressly been placed in the hands of Operational and Maintenance management positions that as Technicians they have NO authority over.

And this is where you see the total breakdown of the management system at a time of cyclone disconnect.....when the management responsibility held by the Operations Superintendent, Production Maintenance Coordinator and Campaign Maintenance Coordinator stops.....

**Disconnected Organisational Structure**

VOYAGE D (Unplanned disconnect)



**KEY**

  NOTE #1 :- Personnel who have undertaken a Training Course & have a valid STC. They must be deemed competent by Chief Engineer

  NOTE #2 :- Personnel who have undertaken a Training Course & have a valid STC. They must be deemed competent by the Master

\* Co. WILL CONTACT MARINE PROVIDER TO DISPATCH SUPPLEMENTARY PERSONNEL ASAP

when suddenly 2 humble Technicians become Chief Engineer and Master ...no matter what poor decisions were taken in their areas by the management team that just stepped-down! (see position of the previous Management Team!!!)

The other two **Mechanical Technician** positions do not require Marine Engineer qualifications yet at disconnect are proposed to fulfill a function as “Eng. Rm. Assistant”. ....such use of these two persons is subject to:-

“...NOTE #1 :- Personnel who have undertaken a Training Course & have a valid STC. They must be deemed competent by Chief Engineer...”

It is hard to see how an unspecified “Training Course” together with the Fire-fighting/First-Aid/Lifeboat skills involved in the Safety Training Certificate can possibly constitute Marine Engineering competencies to satisfy Marine Orders Part 3.

And if it does not satisfy Part 3 it is then a breach of Section 16 of the Nav.Act. Furthermore, **during the period on-location prior to disconnect there is NO Chief Engineer employed on the FPSO** with the management-level responsibility/authority to make any decision required to be made under the Navigation Act against the liability/ responsibility/authority of a Chief Engineer position.

- **A breach of Section 16** of the Nav.Act [and Paragraph 1.2.1 of (Issue 6) of Marine Orders Part 3] which provides that it is an offence for any person to “...perform duties of...a qualified master, officer or seaman of any designation...if that person is not a qualified master, officer or seaman of that designation...”
- **Unsafe** because in an emergency disconnect the Technician who has just been declared to be the Chief Engineer cannot give an instruction to one of the 9 other “Technicians” and be confident that he/she will
  - a) understand the instruction; and
  - b) accept the instruction, and the sudden notional change in status of the Technician issuing the instruction; and
  - c) be capable of responsibly carrying out the instruction whilst making decisions appropriately dealing with any developments that may be normal/understood by a qualified Marine Engineer / Deck Officer / Rating
- **Unsafe** professionally because it :-
  - a) May expose the Marine Engineer / Deck Officer giving the instruction to OH&S or legal liability for sending an unqualified person to do a task in an emergency; and
  - b) May expose the Marine Engineer / Deck Officer giving the instruction to action by AMSA against their Certificate of Competency pursuant to item 11 DEALING WITH CERTIFICATES

of Marine Orders Part 3 for relying on an unqualified person to do a task in an emergency.

**We do not see that the Navigation Act permits this ad-hoc arrangement to substitute for Marine Engineers properly qualified pursuant to Marine Orders Part 3, nor do we consider such to be a safe system of work.**

We believe the above proposals do not properly do justice to the requirements on Masters and Chief Engineers of Marine Orders Part 28 (Operations Standards & Procedures) which apply immediately at disconnect **but are effectively retrospective in application because they require the Master and Chief Engineer to have done a range of things on a daily basis so as to be operationally prepared.**

Amongst Marine Orders Part 28's obligations are that:-

- o 3.2.1 the company must ensure that its vessel is manned in compliance with the Manning Certificate and that all seafarers hold valid qualifications pursuant to Marine Orders Part 3; and
- o 3.2.2 the company must instruct the Master to ensure that seafarers new to the vessel are trained in their routine as well as emergency duties; and
- o 3.3 the Master [and this is the responsibility of a prescribed **job-description**, it is **not** a responsibility of someone who has a Class 1 Deck Certificate but is **not actually employed in the capacity of Master**] must take certain steps as seafarers arrive who are new to the vessel [e.g 3.3 of Marine Orders Part 28] which can only be done at the time the new employee first comes to the vessel, regardless that at that time the PSLAct may be the applicable legislative instrument.
- o 5 Watchkeeping Arrangements: the Master and Chief Engineer and watchkeepers must apply the standards regarding watchkeeping in Appendix 1 and the guidance regarding watchkeeping in Appendix 2.
- o Appendix 4 requires that:-
  - The "...normal watchkeeping arrangements..." are in place; and
  - The Officer in charge of the Engineering Watch [includes UMS-Watch] is responsible for the start/stop of the engineering plant/machinery, to take plant/machinery out of service, to isolate it, is required to log all maintenance performed, is required to test-run before returning it to service, and to document plant/machinery running hours.
  - The Officer in charge of the Engineering Watch is not to hand over to a person for any reason [qualifications, fitness for duty or not having been properly inducted into the normal watchkeeping arrangements] not felt able to competently assume responsibility.

Can the position which at disconnect is to be responsible for:-

- the mechanical integrity of the ship-systems/propulsion/etc to escape the cyclone;
- the Marine Orders Part 28 (operations-standards) of his/her department;
- Marine Orders Part 58 (ISM-Code) for Safety Management Systems of normal operation, and of operations and emergency-response;
- ensuring the vessel is not lost through any failure of marine systems of either hardware or marine-personnel or operational-systems

...achieve these safety objectives if he/she was not the Maintenance Supervisor in charge of the self-same plant/people/systems when the FPSO was on-location under the PSLAct?

In particular it is impracticable for the at-disconnect Chief Engineer to be responsible for the maintenance and availability of machinery when the **Process Maintenance Coordinator** or **Campaign Maintenance Coordinator** may have decided to take particular machinery out of service or relied on the redundancy of marine plant to **not** immediately perform maintenance and return the machinery to service.

**As a result an FPSO may be on-location, and therefore exposed to a cyclone emergency disconnect, with machinery in an out-of-service condition such that a Chief Engineer would have properly refused to leave port...yet as he/she is employed as a “Technician” without authority over these matters until the disconnect, the proposed organizational structure appears to give him/her no capacity to deliver on the statutory obligations thrust upon him/her at disconnect.**

**Equally important, however, is that neither the at-disconnect Chief Engineer nor the at-disconnect Master can have the human-resources/man-management system to deliver on the statutory Nav.Act/Marine Orders requirements for ensuring the existence and daily use of good watchkeeping practice, clear chains-of-command and responsibility. Thus this system does not appear to deliver the requirements of the Safety Case and that these few marine-qualified “Technicians”, who have been without management responsibility until now, MAY NOT at disconnect, be able to sail this vessel to safety.**

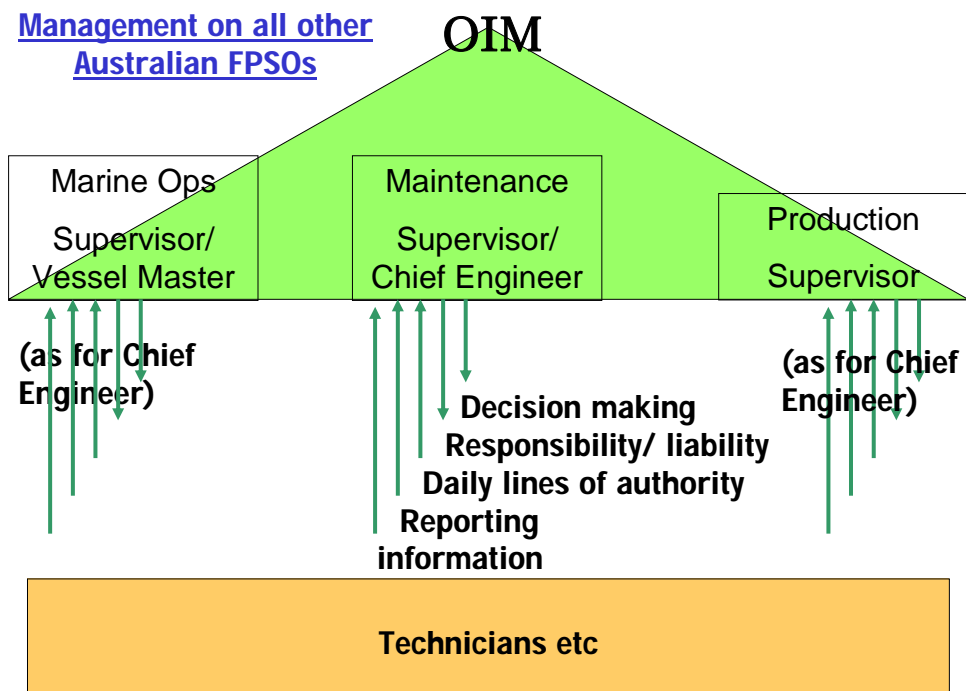
To assess the impact of such undermining of the ability for the Master and Chief Engineer to safely disconnect and safely sail in an emergency we commend the examination of the ATSB investigation reports generally, but in particular **“Departmental Investigation #113: into the damage sustained by the Australian Tanker OSCO STAR during tropical cyclone Justin, 9 March 1997** which we provide copies of as illustration.

- The account of events (Narrative; pages 5-14 ) shows that even with Chief Engineer (holding a Marine Engineer Class 1 Certificate of Competency pursuant to Marine Orders Part 3) normally in charge of maintenance and operation of all machinery, a First Engineer (similarly qualified) as his second-in-command and 2 other qualified Marine Engineers, the Cyclone and related engineering emergencies narrowly missed claiming the OSCO STAR and all lives onboard:-
  - Loss of main-engine lubrication caused overheating of bearing surfaces in the main engine which could easily have caused an explosion had the mixture of oil-mist and air in the crankcase been within the explosive-range; such an explosion would destroy the main-engine and most of the engine-room, and killed anyone within it. Even if the hull was not damaged by the explosion,

propulsion would have been permanently lost.

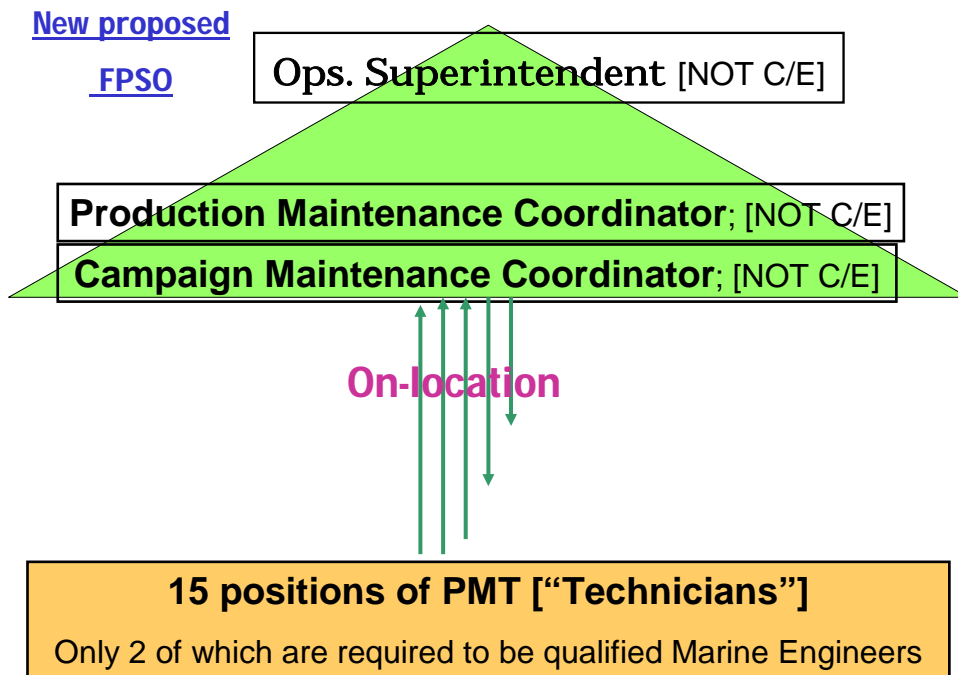
- o Without propulsion a ship in a major storm will turn side-on to the storm and then be swamped, founder and sink.
  - o In Cyclone Justin, several times propulsion actually failed.
- In the middle of the storm, fault-finding the marine-systems and resolving them swiftly, allowing the propulsion to be operated once again, was the primary safety device...and these Marine Engineers achieved this...however they were aided by the fact that they had been continuously-responsible for the operation and maintenance of all this machinery prior to the emergency and the Chief Engineer in charge of them before the emergency was the same Chief Engineer in charge of them now during the emergency.
- The account of events (Narrative; pages 5-14) shows that even with Chief Engineer, a First Engineer and 2 other qualified Marine Engineers, they were subject to fatigue [hours of work/rest] in dealing with this prolonged emergency condition.
- The Comment and Analysis (pages 17-39) shows that misjudgments can be made about strength of a cyclone, predicted path etc. No one can guarantee that they will not find themselves affected by a cyclone as was OSCO STAR.
- Comment and Analysis (pages 17-39) shows that the Marine Engineers were required to exercise a high level of marine engineering skills and responsibilities as part of an experienced well-oiled-team under the responsibility/authority of a Chief Engineer [consistent with Marine Orders]. It is AIMPE's view that the efficacy of this team and capacity to deliver the ISM-Code/Safety-Management-System outcomes would have been undermined/eroded/hampered had the normal operation & maintenance not been consistent with those same arrangements.

This is the normal/appropriate management-structure every other FPSO in Australia uses to provide overlapping responsibilities/authority and liability...



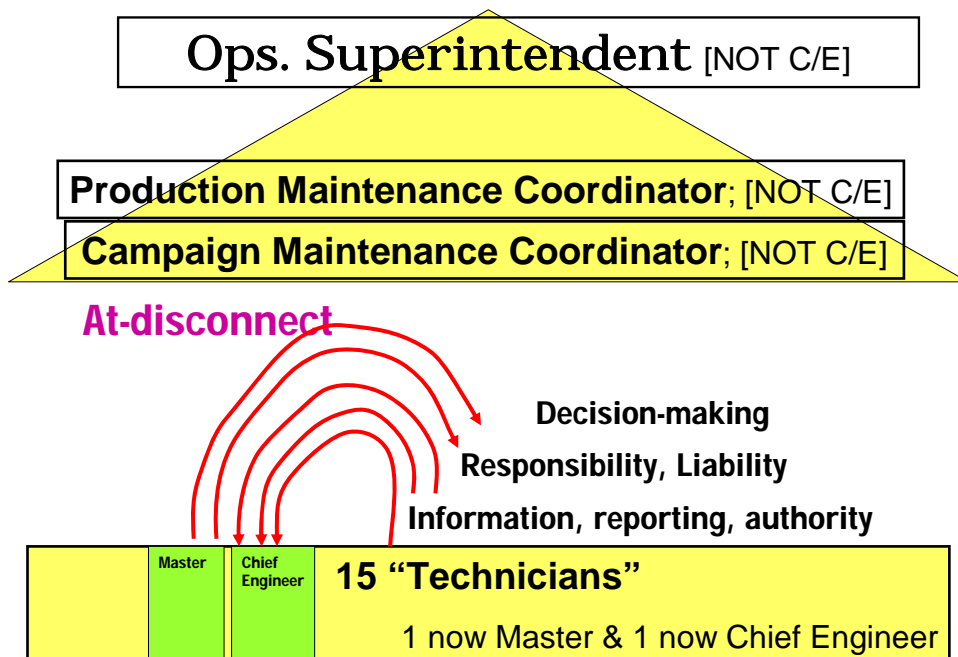
Using a similar style of graphic the proposed new FPSO will have 2 different structures:

1: The On-Location structure with the area in **Green** representing the Management Team..... Which applies for about 98% of the year, **with**



Technicians at the bottom and with management of every aspect of the vessel vested in non-marine personnel, this structure is then proposed to be abandoned when a cyclone is approaching, and

2: The Cyclone-Disconnect structure with the area in **Green** representing the Management Team..... two of the Technicians are to up-turn the organizational structure and somehow empower an alternative model which is un-familiar to the NON marine-qualified persons on board.



**That is exactly the worst possible time to have a major discontinuity of operational management and emergency-response management.**

**We believe that :-**

- **where the position which in an emergency-disconnect is to be statutorily responsible as Chief Engineer on the vessel is a “Technician” without commensurate/overlapping authority under the day-to-day organizational structure proposed; and**
- **where the position which in an emergency-disconnect is to be statutorily responsible as Master on the vessel is a “Technician” without commensurate/overlapping authority under the day-to-day organizational structure proposed.**

**then the requirements of Marine Orders Part 28 (Operations-Standards) are not deliverable**

and:

**the Safety Case<sup>1</sup> and ISM-Code<sup>2</sup>/Nav.Act/Marine Orders Part 58 requirements for a safe-system-of-work or SMS<sup>3</sup> are not deliverable.**

**3. Other Legal/Professional consequences**

We further note that it would appear to be professional suicide for qualified Deck and Engineer Officers to accept appointment as a “Technician” on FPSOs under these circumstances as to do so would expose them to liability yet deny them the organizational structure required to deliver on their statutory obligations.

If it is the view of an FPSO operator to rely on the Nav.Act Certificate of Competency of a person in an emergency, but to NOT place such person in the equivalent position of responsibility whilst under the PSLAct connected to the riser, then this UNSAFE arrangement also:-

- **places the person’s Certificate of Competency at-risk** of AMSA investigation and revoking of their Certificate [pursuant to Marine Orders Part 3 (seagoing qualifications) if they fail in their safe performance of their statutory duties/responsibilities.....for example because stand-by machinery had been permitted to be unavailable for service, or because Bridge-Resource-Management principles for Deck department or engineering department had not been maintained or because not having been in charge of the department’s planning and execution when on the riser, the person could not now deliver outcomes to ensure marine engineering operational systems/standards/command-structure were maintained.
- **Implies that without normal watchkeeping arrangements being maintained under the control of a position/authority of Chief Engineer then, *contrary to Marine Orders Part 3*, service whilst on-**

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<sup>1</sup> Safety Case is that required under the Petroleum (Submerged Lands ) Act 1967

<sup>2</sup> ISM-Code is the International Management Code for the Safe Operation of Ships and for Pollution Prevention set out in IMO Resolution A.741(18) as amended by MSC.104(73) and reproduced in Appendix 1 of Marine Orders Part 58

<sup>3</sup> SMS is the Safety Management System required by the ISM-Code and Marine Orders Part 58 Appendix

location is **not** qualifying sea service and Marine Engineers will no longer be able to Revalidate their Certificate of Competency based on that service.

- **Breaches OH&S duty-of-care** as it appears to put employees [who are Marine Engineers] in an unsafe position by not resourcing them so they can, at disconnect, fulfill their responsibilities under the Nav.Act and Marine Orders.

On the basis that the necessary organizational support for their statutory/legal liability has been withdrawn, is the best professional advice for all “Second Mates/Technicians” on any FPSO operating under this regime for each of them to resign their position immediately and seek employment on an FPSO where their statutory responsibilities at disconnect are integrated into the management-team at all times including whilst on-location?

Similar questions would arise for all Marine Engineers and Deck officers employed as “Technicians” who might contemplate employment on the basis of the proposed new organizational structure.

#### **4. Suggested findings/determinations for AMSA/NOPSA to consider and adopt;**

We propose that NOPSA and AMSA should (singly or jointly) conclude that the safety objectives can only be properly achieved if a number of elements of the Navigation Act are applied to personnel/management-systems at all times so that they are in-place when a disconnect is suddenly required:-

- A. That the position in the organizational structure that at disconnect is to be Chief Engineer pursuant to the Nav.Act must be the same position which whilst on-location was responsible under the PSLAct for the **availability/ reliability/ maintenance/operation of all propulsion plant, power-generation and machinery on-location; and**
- B. That the position in the organizational structure that at disconnect is to be Chief Engineer pursuant to the Nav.Act **in charge of a Safety Management System and command-structure to deliver the outcomes described by the Nav.Act and Marine Orders [Parts 3, 9, 28, 58 at a minimum]** must whilst on-location be the same position which has similar responsibilities/authorities under the PSLAct for the safety-system and command-structure to deliver the outcomes described by the PSLAct; and
- C. Necessarily a similar position should be in place for those other positions which at disconnect are to be First Engineer and Second Engineer(s) in a marine structure to deliver the safety outcomes required; the propulsion plant, power-generation and machinery must be operated and maintained by them and, in order that these systems are in place for an emergency disconnect, the normal watchkeeping arrangements of Marine Orders Part 28 must be continued where such propulsion

plant, power-generation and machinery was operated on-location; and

- D. That the position in the organizational structure that at disconnect is to be Master pursuant to the Nav.Act in charge of a Safety Management System and command-structure to deliver the outcomes described by the Nav.Act and Marine Orders [Parts 3, 9, 28, 58 at a minimum] must whilst on-location have similar responsibilities/authorities under the PSLAct to ensure a seamless transition in case of emergency.
- E. Necessarily a similar position should be in place for those other positions which at disconnect are to be First Mate and Second Mate(s) in a marine structure to deliver the safety outcomes required.
- F. That the AMSA-issued Minimum Safe Manning Certificate constitutes a requirement to at all times have on the [disconnectable] FPSO appropriately-qualified and experienced seafarers employed in each of the positions named in that Certificate, under the on-location organizational structure performing [to the extent those duties are capable of being performed whilst on location] the duties of the positions named and exercising the authorities and chains-of-command in the same areas on-location as they would be required to exercise at disconnect.

James Mallows  
Director Professional Standards

Henning Christiansen  
Federal Secretary