

Application of Activity Specific Operating Guidelines in Reality

POSH & Swire Pacific Offshore

Activity Specific Operating Guidelines

- MTS DP Operations guidance
- IMO MSC Circular 645
- IMO MSC Circular 1580
- OCIMF DP Assurance Frame work
- IMCA Guidelines
- Client's inhouse Compliance
- Vessel Owner/Manager inhouse Compliance

Activity Specific Operating Guidelines

- Guidelines on the operational, environmental and equipment performance limits.
- An ASOG should be developed for every activity and location.
- A central component in the ASOG is proven knowledge of black out recovery time.
- A decision support tool;
- ASOG defines either a critical activity mode (CAM) or task appropriate mode (TAM) of operation.
- ASOG is vessel specific document
- Understood and agreed by all stakeholders

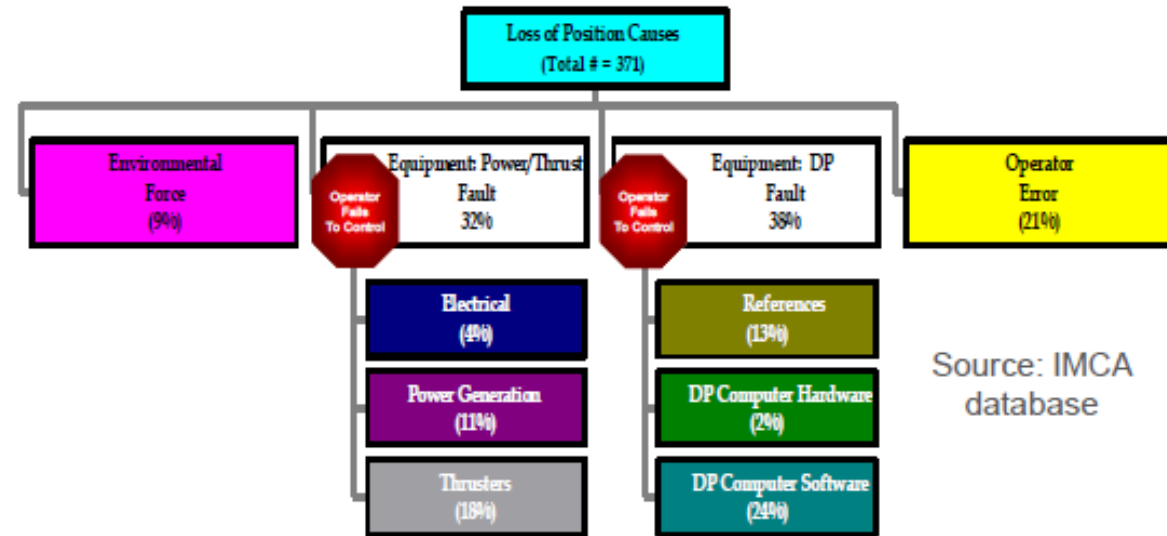
ASOG in reality

- Is it a Checklist or poster on bridge?
- Is it a document with reams of pages?
- Is it a copy-paste function from one vessel to another?
- Does one size fit all types of operation/location?
- Challenges in understanding of ASOG?
- Unilateral changes to document accepted?

ASOG
WHY,
WHAT
and
How

- Why -> Recognizing and mitigating risk
- What -> Safe operating conditions
- How -> Planning and preparing specific activities in concurrence with all stakeholders

ASOG Learning from Incidents



- Reported incidents from 1994 to 2003 – total 371
- Attention to human factors would mitigate most incidents
- Applying lessons from published learnings would improve most FMEAs

ASOG



Risk

Do not ERASE, Evaluate and Mitigate



ASOG

- **Activity Specific Operating Guidelines.**
 - Activity Specific Operating Guidelines (ASOG) are generally presented in tabulated format and set out the Operational, environmental and equipment performance limits considered necessary for safe DP operations while carrying out a specific activity. The table also sets out various levels of operator action as these limits are approached or exceeded. The ASOG will vary depending on the activity and are unique to that activity.
- **Critical Activity Mode of Operation.**
 - Critical Activity Mode of Operation (CAMO) is generally a tabulated presentation of how to configure the vessel's DP system, including power generation and distribution, propulsion and position reference systems, so that the DP system, as a whole, delivers the intent of the vessel's DP Class notation. The CAMO table also sets out the operator actions should a required configuration not be met.
- **Task Appropriate Mode of Operation.**
 - Task Appropriate Mode is the configuration that the vessel's DP system may be set up and operated in, accepting that a single failure could result in exceeding the worst case failure and could result in blackout or loss of position.

ASOG

Activity Specific Operating Guidelines (ASOG)					
Condition		GREEN	ADVISORY	YELLOW	RED
Notify Master, Chief Engineer, Client, Deck and Surface Facility		NO	YES	YES	YES
Category	Action	Continue Normal Operations	Inform / Consult / Risk Assess (Consider Ongoing And Upcoming Operations)	Cease Operations, Bring Vessel to Safe Position, Exit 500m Zone. (Default Worksite to 200m On DP; 200m to 500m May Exit On Joystick or Manual)	Cease Operations - Leave 500m Zone / Work Area Immediately
CAMO & Checklists	CAMO	All CAMO conditions complied with	Any impending deviation from CAMO conditions	Any Equipment failure resulting in noncompliance with CAMO	Any Equipment failure resulting in, or likely to result in, loss of a redundant group
	DP Setup, Part A Bridge and Part B Engine Checklists	Completed	Not completed or abnormalities noted during completion	-	-
Weather / Environmental Conditions and Vessel Performance	Weather / Environmental Forecast	Within operating limits	Approaching operating limits	Exceeding operational limits	-
	DRIFT OFF / DRIVE OFF	No discrepancies observed in PRS's and thruster loading as expected	Discrepancies observed in PRS's and/or inexplicable ramp up of thrusters observed	Immediately when recognized by DPO	Unable to bring the vessel under control
	Vessel Footprint / Weather / Environment Related Excursion (From Set point)	No position alarms or warnings	Position excursions, frequent alarms or exceeding position warning limit (> 3m)	Position excursion (> 5m)	Position alarm limit exceeded
	Heading Excursion	No heading alarms or warnings	Heading instability with frequent alarms or exceeding heading warning deviation limit (> 3 degrees)	Heading deviation (> 5 degrees)	Heading alarm limit exceeded
	Maximum Position Change (step)	500m - 200m: <= 50m 200m to worksite: <= 10m	Any other setting	-	-
	Current / Soliton / Riptide	Current < 1.5 knots	Current 1.5knots to 2.0 knots	Current >2.0 knots	Unexpected Solitons / Riptide
	Maximum Heading Change	Step change <= 10 degrees	Step change > 10 degrees	-	-

ASOG

ASOG Table Outline: An ASOG table uses all four columns; green (normal), blue (advisory), yellow (degraded) and red (emergency). Activity Specific Operating Guidelines – Outline

	Green	Blue	Yellow	Red
Definition	Normal operations – all systems fully functional and operating within acceptable performance limits.	Advisory status – approaching performance limits or reportable alarm status. Operations may continue whilst risks are being assessed. A failure has occurred that does not affect DP redundancy.	Reduced status – pre-defined performance limits reached, component or system failure resulting in loss of redundancy. The vessel maintains position although the vessel has lost its redundancy.	Emergency status – pre-defined operational or performance limits exceeded, component or system failure resulting in loss of control or position.

ASOG

ACTIVITY SPECIFIC OPERATING GUIDELINES			
GREEN	ADVISORY	YELLOW	RED
NO	YES	YES	YES
Continue Normal Operations	Inform / Consult / Risk Assess (Consider Ongoing And Upcoming Operations)	Cease Operations, Bring Vessel to Safe Position, Exit 500m Zone. (Default Worksite to 200m On DP) and (200m to 500m may Exit On DP Joystick or Manual)	Cease Operations - Leave 500m Zone / Work Area Immediately

Note: The use of the “Yellow” condition should be limited to deteriorating environmental conditions since any equipment failure will be likely to exceed the limits of the vessel’s CAMO and require the immediate cessation of operations and require the vessel to move to a safe location as further failure / deterioration may result in a condition which exceeds the Worst Case Failure Design Intent.

THANK YOU



Questions!

POSH and SWIRE PACIFIC OFFSHORE