



## **WORKBOATS**

# **The History and Development of the US Coast Guard Policy for Dynamically Positioned Offshore Supply Vessels**



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# The History and Development of the US Coast Guard Policy for Dynamically Positioned Offshore Supply Vessels



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# Presentation

- Background
- Regulatory Analysis
- Nuts & Bolts
- Gulf of Mexico Practices
- Risk Based Approach
- USCG Policy
- Formula for Compliance
- Conclusions/Lessons

# Background

- Spring 2001 Article in MSO Morgan City Newsletter:
  - Using a DP system, without being moored to the rig, is not in compliance with 33 CFR 156
- Industry Response
  - Discussion
  - White Paper
- USCG Reply
  - Propose seeking of Equivalency Determination

# Regulatory Analysis

- **Misapplication?** Part 156 is limited in its applicability to Navigable Waters of the United States and the Contiguous Zone, however . . .
  - Part 155 requires vessels subject to US laws to conduct oil transfer operations consistent with the requirements for U.S. waters and the CZ (Part 156)
- Inquiries to the OCMI Morgan City resulted in recommendation that industry seek USCG determination of DP equivalency to “moorings”
- Feedback from OOC and OMSA sought establishment of a District Policy granting equivalency for vessels meeting certain standards

# Regulatory Analysis

- USCG article did not reveal complete/accurate understanding of DP systems
- References to Mooring system are nebulous and in terms of the mooring function, not specific hardware
- Conclusion of most Industry participants was that article was erroneous in its assertion

# Nuts & Bolts

- International Maritime Organization (IMO) Circular 645
  - 3 Group Designations
  - Increased Redundancy/Segregation of Equipment
  - Intended for station keeping of drilling, construction and dive vessels
    - Not intended to address close-in operations (vessel-to-vessel, vessel-to-facility)

# Gulf of Mexico Practices

- IMO Guideline recommends risk analysis by operator and customer as means for establishing optimum DP Group for environment and mission
- Deepwater Floating Facilities increasingly dependent on DP vessels as only option

# Gulf of Mexico Practices

- OMSA Poll of DP Vessel Operators:
  - Most vessel DP systems not certified to IMO or Class Society rules
  - Most vessels engage in Oil/HazMat transfers in DP mode
  - Half of vessels incorporate DP elements into their Oil Transfer Procedures
  - Half of vessel operators have conducted some level of risk-analysis associated with their DP operations
    - Others have “borrowed” practices or equipment configurations that were developed through other companies risk analysis

# Risk Based Approach

- Floating Facilities less tolerant of vessel contact
- Back down system in deepwater expensive, complex, and introduce new hazards to personnel
  - Significant stored energy
  - Vessel position and orientation constrained
- Manual “Joystick” operation emerged as advantageous
  - Addition of automatic position keeping prompted consideration of DP systems

# Risk Based Approach

- IMCA Study
  - North Sea DP vessels
  - Collision incidents increased, despite more vessels meeting IMO DP-2 or DP-3 criteria
  - Exposed significant shortcoming of IMO Guideline
    - Does not address Close-In Operations
- Operator Studies
  - ABS
  - Vessel operators (Masters)
  - Risk Engineers
  - DP equipment providers
  - Regulatory specialists

# USCG Policy

- End in Mind?
  - Improving safety or filling a perceived gap in regulations
  - Fixing what was not broken
- Participation of OMSA and OOC essential to flush issues and drive the process
- USCG likes to reference IMO or other International Standards when appropriate
- Industry had to help USCG recognize
  - ...shortcomings of IMO guideline and formulate appropriate supplemental guidance
  - ...that there was no *one-size-fits-all answer*

# USCG Policy

- Several false starts
  - 300 ft water depth
  - Over-reliance on IMO Guideline
  - Requirements for formal approval of DP systems
  - Link to FPSOs by USCG Headquarters
- Final Policy reconciled these and other issues
  - DP-2 or better per IMO or Class Society
  - Alternative USCG Requirements
  - Quick Disconnect Fitting

# USCG Policy

- Alternative USCG Requirements
  - Nicknamed DP-2 “minus”
  - Recognizes best practices of GoM operators
  - Emphasizes Risks of Close-In operations
  - Relaxes some redundancies for computers, control systems and sensors
- Self-Policing, but USCG will
  - ...spot check compliance at routine inspections
  - ...check compliance following pollution incident
- Class Societies *may* be used at owner’s option

# Formula for Compliance

- Know how your vessels fit the IMO criteria and the USCG Policy
  - IMO, Class Society, or USCG Alternative
  - Maintain documentation that demonstrates criteria (Checklist or Class Society Certificate)
- Consider “DP-Ready” Design & Construction
- Develop DP Operating Procedures and Personnel Training Per Policy
  - May be part of Oil Transfer Procedures
  - Reconcile DP Procedures with your customers’ marine operating Procedures

# Conclusions/Lessons

- Once published, regulatory opinions take on life of their own, regardless of their validity
  - Absence of regulation creates a “void that must be filled”
- Trade Associations essential to Process
  - Must have support and participation of knowledgeable membership
  - Plus appropriate consulting services as needed to research issues and foster compromise
- USCG favors alignment with IMO or other recognized standards
- Vessel Operators can be their own worst enemy

# Questions?