



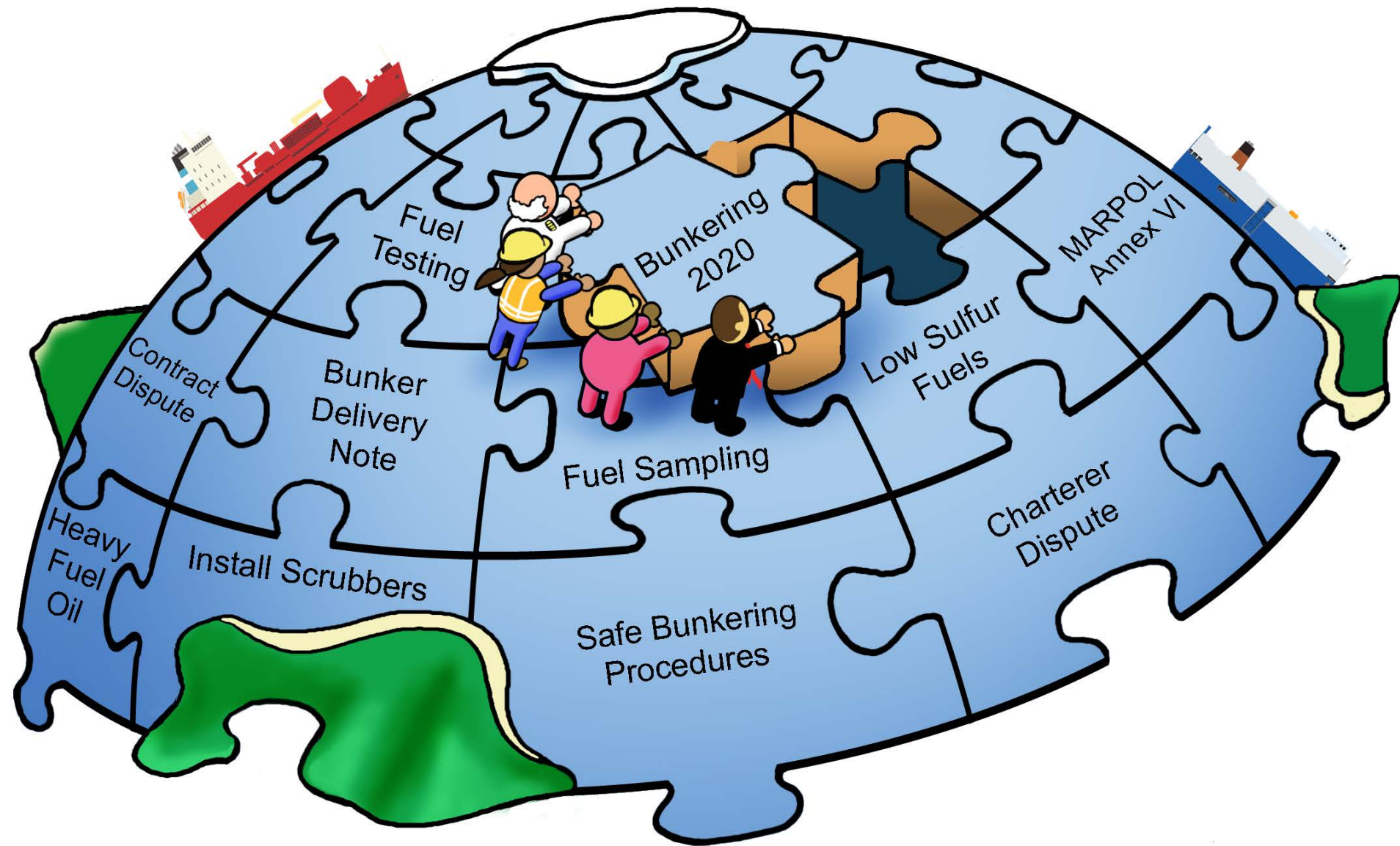
**THE
AMERICAN
CLUB**



BUNKER FUELS— TECHNICAL & OPERATIONAL CONCERNS

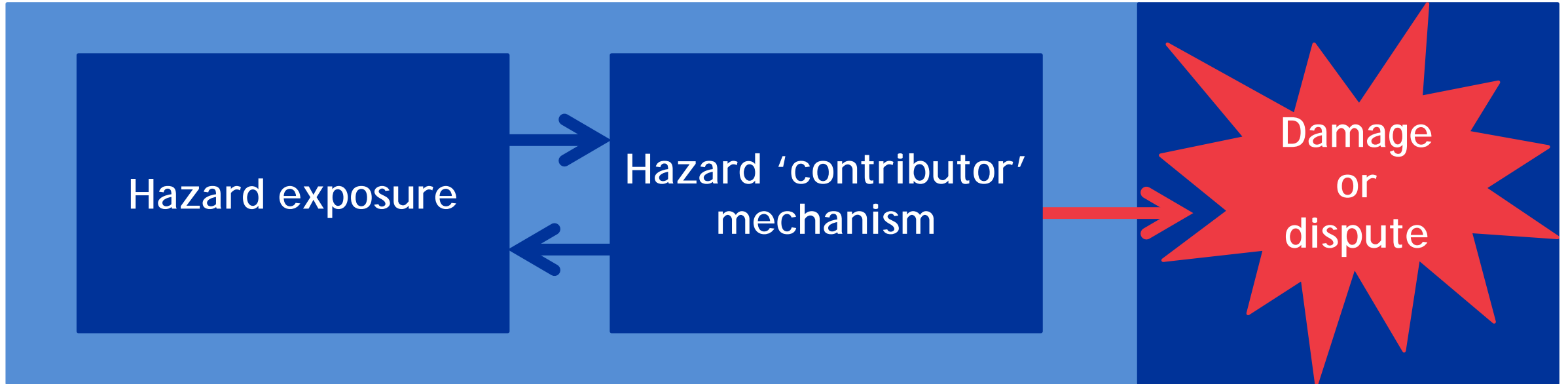
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Bunkering issues 2020 and beyond



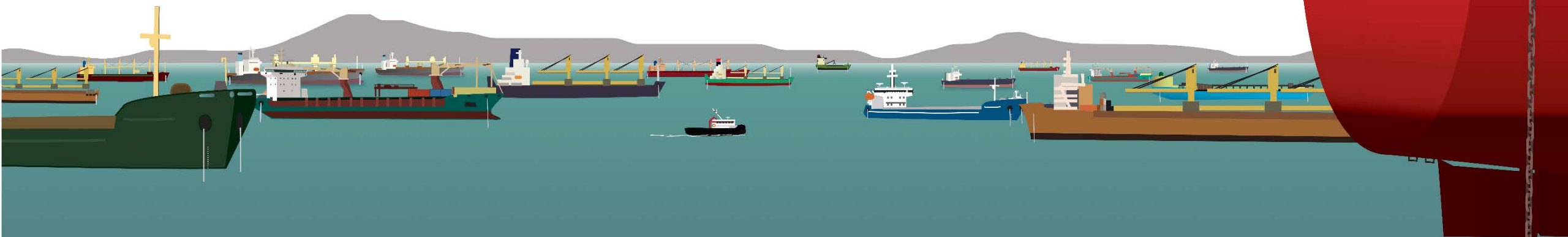
Profiling bunkering risks

Mapping risks, exposures and loss prevention best practices



Primary risks at shipboard level for bunker

- Oil spill during transfer of bunker
- Non-compliance with required standards of delivered bunker
- Shortage of delivered bunker
- Contamination of delivered bunker
- Timely payment by charterers for bunker



As 1 January 2020 0.05% sulphur cap approaches...

- 2020 bunkering requirements have implications for safety, the environment, shipboard procedures, bunker contracts & charter parties
- Where are we now?
- What is most critical with just over 7 months before mandatory implementation?
- American Club compendium for 2020 and beyond



Where are we right now on sulphur cap compliance?

- Oil majors working to meet global bunker demand
- Owners working to acquire reliable supply
- Carriage ban on high sulphur fuels as of March 2020
- MEPC 74 meets in mid-May 2019
- Onboard fuel sampling guidance preparation
- Fuel Oil Non-Availability Reporting (FONAR)
- Considerations regarding open loop scrubber systems



Regulatory compliance regime for sulphur cap

- Port State control enforcement will be strict
- No transition period allowed
- Prohibition to carriage of non-compliant fuels (March 2020)
- Bunker delivery note (BDN) must state sulphur content
- IAPP certificate issued by flag State states vessel uses fuel not exceeding applicable sulphur limit



Focal areas for bunkering at operational level

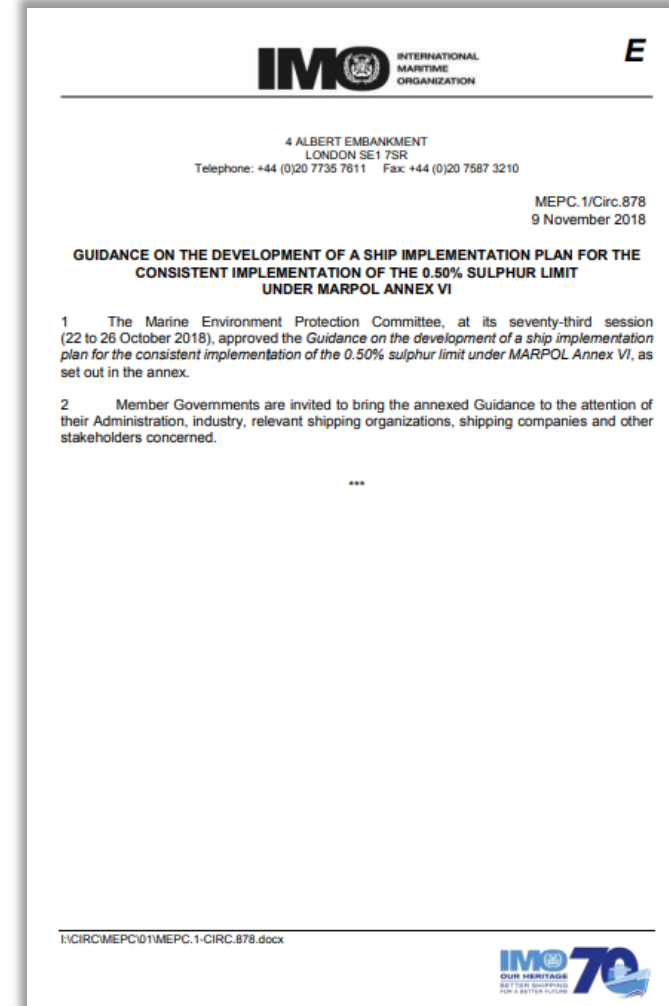
BIGGEST CHALLENGE...PLANNING!

- Shipboard procedures for transitional period
- Shipboard procedures for implementation
- Best practices for bunker operations
 - ✓ fuel oil sampling
 - ✓ fuel oil testing- sulphur & possible contaminants
 - ✓ proper documentation



Ship implementation plan for 0.05% sulphur cap

- Appendix 1 to the Annex of MEPC.1/Circ.878
- Prior to 1 January 2020, implementation plan consistency in change over preparation
- Consider key factors such as:
 - ✓ risk assessment & mitigation plan (new fuels impact)
 - ✓ fuel oil system modifications & tank cleaning
 - ✓ fuel oil capacity & segregation capability
 - ✓ procurement of compliant fuel
 - ✓ fuel oil changeover plan
 - ✓ documentation & reporting

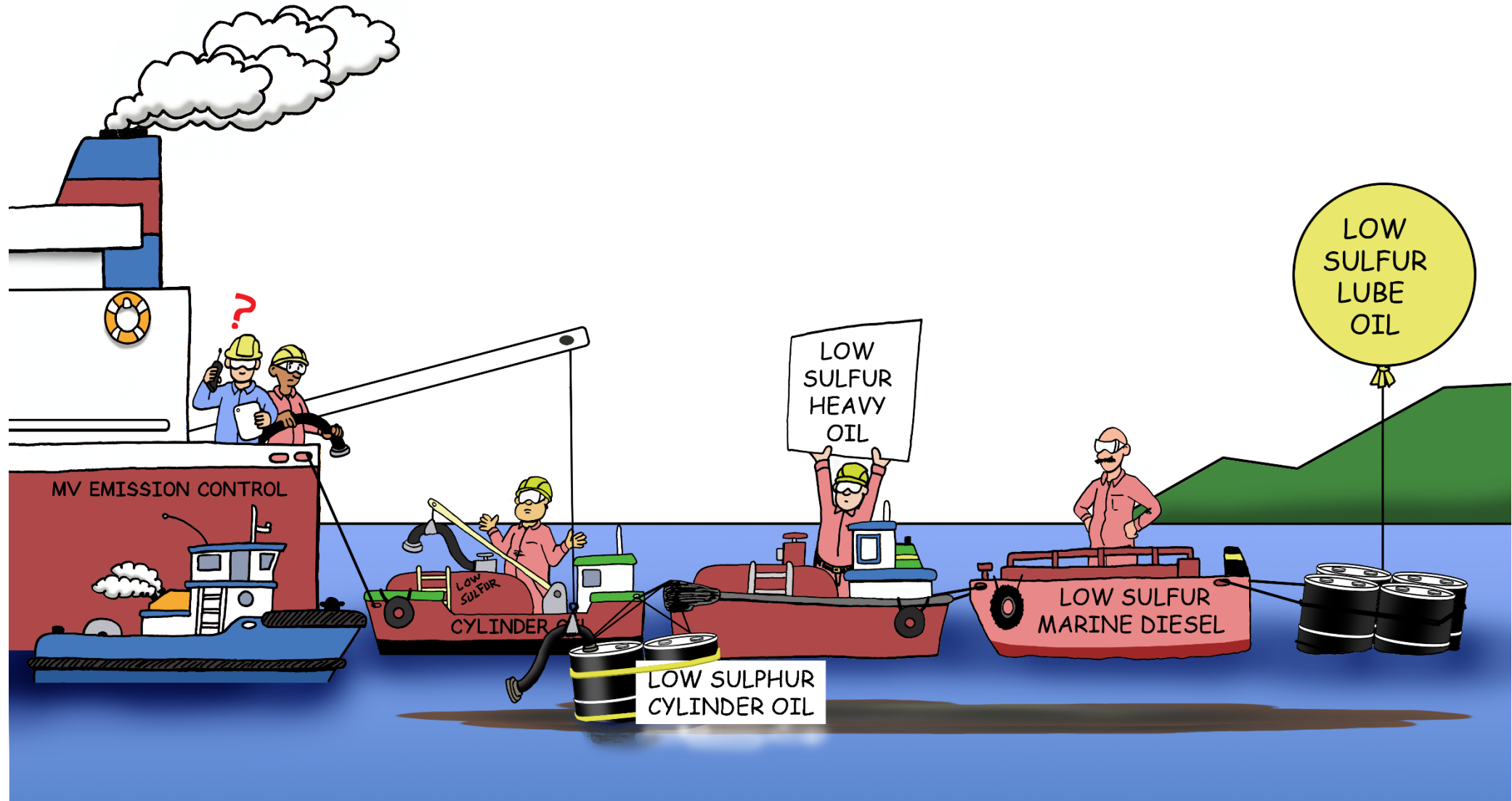


Transitional period shipowners should be prepared for change over

- Changeover implementation plan is strongly recommended
- Ensure procedures are well in place
- Ensure any and all documentation of compliance with change over
- Established & implement plan if compliant fuels are not available



Bunkering is easy!!





Fuel contamination is a global risk

2001	Singapore	10 Ships
2004	Fujairah	20 Ships
2007	Nigeria	13 Ships
2007	Gabon	4 Ships
2007	Angola	4 Ships
2007	Panama	Unknown
2013	Panama	Unknown
2018	Houston	100 Ships
2018	Panama	Unknown



- Plus numerous sporadic individual cases
- 1990's styrene contamination

What governs fuel oil quality?

- ISO 8217 international fuel standard
- MARPOL 73/78, Annex VI
- EU Directive 2005/33 EC
- Local regulations (e.g. California, China, Singapore, etc.)



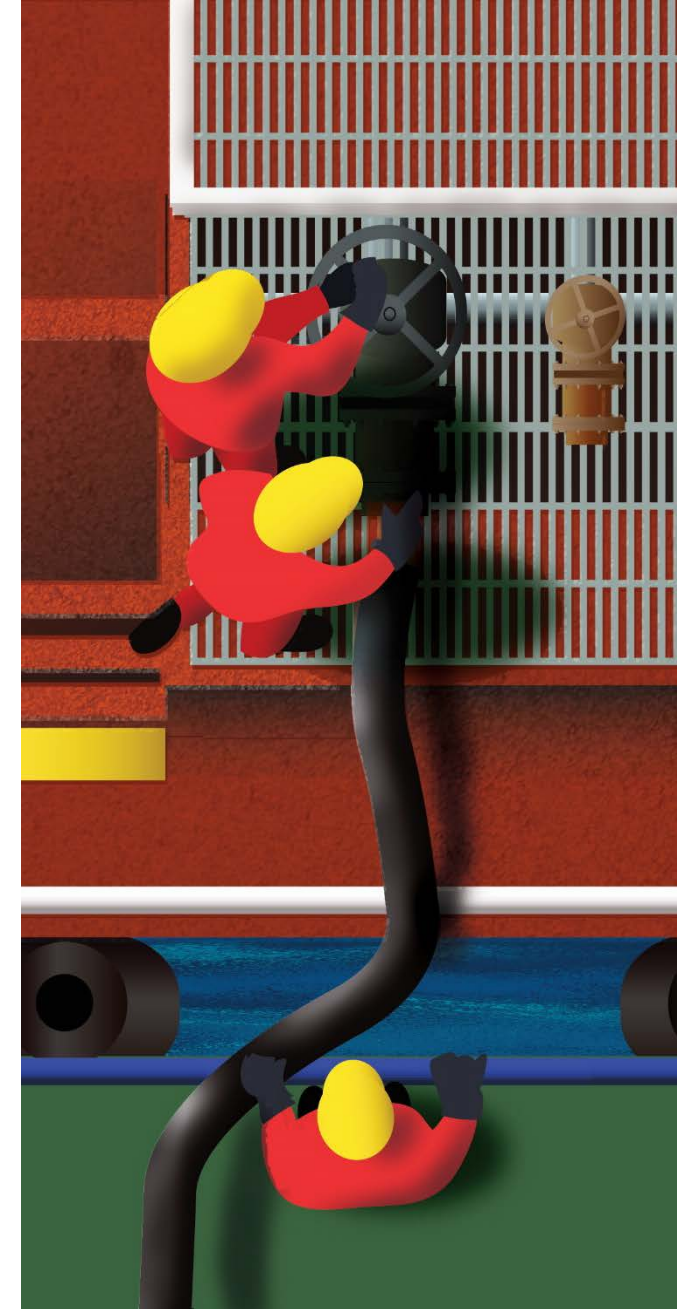
Fuel oil samples

- Every sample witnessed and jointly sealed by supplier & shipowner rep
- Samples to be taken at ship's bunker manifold
- How many samples?
 - 3 MARPOL samples—one kept onboard ship (12 months), sample to suppliers, sample for owner's record
 - 3 test samples for additional testing relevant to ISO 8217—one sample goes ashore for testing, another sample to be kept for any testing beyond ISO 8217 if problematic fuel, sample for suppliers
- If problem arises and sample needs to be taken from ship, owners are in difficult position as fuel not tested at manifold leaving bunker station/barge

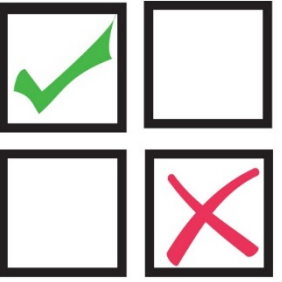


Basic best practices for seafarers during bunkering

- Know the company's bunkering procedures
- Witness all bunkering operations
- Collecting proper samples and evidence as per MARPOL 73/78 Annex VI, Regulation 18
- Beware of unscrupulous suppliers!
 - ✓ density/weight relationship
 - ✓ temperature/volume relationship
 - ✓ Cappuccino effect—introduction of high pressure gas
 - ✓ inter-tank transfers
 - ✓ flow meter & pipework tampering
 - ✓ questionable tank calibration tables
 - ✓ empty tanks- unpumpable fuel
 - ✓ fuel sampling

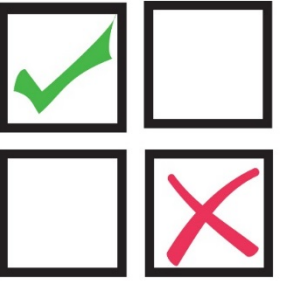


Guideline for bunker sample recording



- Bunkering operation ID number
- Date of bunkering
- Bunker grades—product name, grade & specification (BDN specifications preferred)
- Quantity of bunker (MT)
- Port of bunkering
- Name of supplier
- Bunker barges name(s) & terminal(s) loaded
- Supplier registration with port State authority- MARPOL Annex VI requires port States to maintain register. Use only registered suppliers.
- BDN in compliance with revised MARPOL Annex VI, Regulation 18.5. Bunker delivery must be accompanied by BDN as per Regulation 18.5.

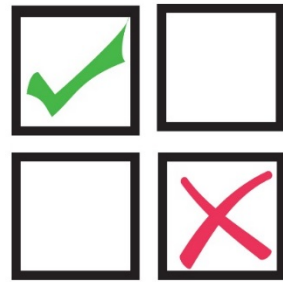
Guideline for bunker sample recording (cont.)



- Every BDN to be accompanied by MARPOL Annex VI fuel sample of a minimum of 400 ml to be retained onboard for at least 12 months with. Sample label shall include:
 - ✓ Location of where sample was taken (preferably the ship's bunker manifold)
 - ✓ Sampling method
 - ✓ Date of bunkering
 - ✓ Name of bunker barge & pier
 - ✓ Receiving ship's name & IMO number
 - ✓ Sample seal number & bunker grade
- Every sample to be sealed by supplier, label to be signed by ship's officer in charge of bunker & supplier's representative. Supplier obligated to do this.



Guideline for bunker sample recording (cont.)



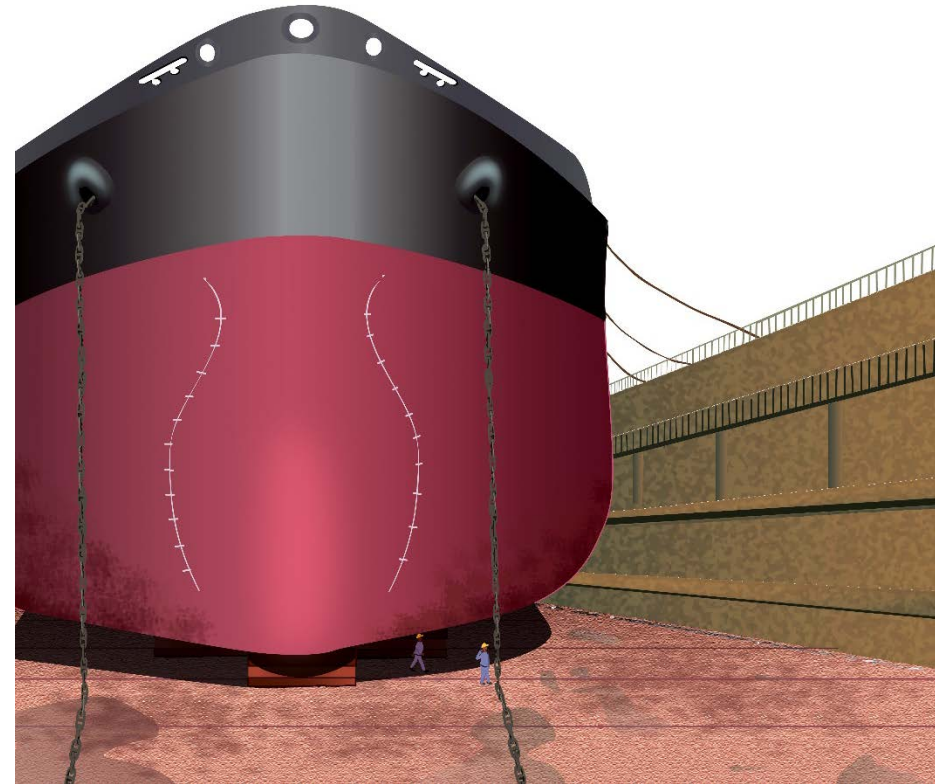
- Supplier's MARPOL sample to be taken by a manual valve setting or automatic continuous drip sampler
- Any notifications issued in non-compliance with the required bunkering as set out by MARPOL Annex VI requirements, should be referred to on the BDN!
- Sample bottle seal numbers are to be specified
- MARPOL Annex VI sample is to be retained onboard and not to be used for commercial disputes. Sample is to handed over to port or flag State authorities upon request.
- Sulphur content (% m/m) to be stated on BDN
- Indicate which tanks bunker is stored & quantity
- Date of 'substantial' consumption to be recorded
- Date of disposal of any samples after minimum of 12 months retained

Sample case study front end costs

- Permanent repair costs **US\$ 350,000**
- Delay to the vessel **10 days**
- Towage and tugs **US\$ 250,000**

Legal cost and loss of use not included in the above

Additional costs likely unrecoverable!



Best practices if you've got shortage

- Immediately notify the parties concerned and appoint an independent surveyor if not already attending
- Check all tank gauging, check and re-check both pre and post bunkering calculations making sure the list/trim corrections have been correctly applied
- Verify correct temperatures and densities have been used
- Issue letter of protest for each incident and have it acknowledged by the barge
- Write up a detailed statement of facts leading to the short delivery

Best practices if you've got shortage (cont.)

- Preserve any evidence e.g. if you suspect froth on the surface of the fuel / too many bubbles on the sounding tape then taking photographs would be prudent
- The success of a claim will largely depend on the nature and the quality of evidence gathered at the time the supply is made. If there is detailed contemporaneous written evidence, the ship operator will be in a much stronger position
- It may be necessary for full disclosure of the supplier's stock movement reports to ensure that the original supplied quantity tallied with the quantity at the time of opening gauge

Best practices if you've got shortage (cont.)

- The barge outturn figure showing the delivered fuel quantity will be recorded on the bunker delivery note for invoice purposes. In case of a short fuel delivery a note of protest must be issued and the same reflected in the ship's Oil Record Book
- The BDN should not be endorsed as presented but should be signed and endorsed only with the soundings and ship's volumes

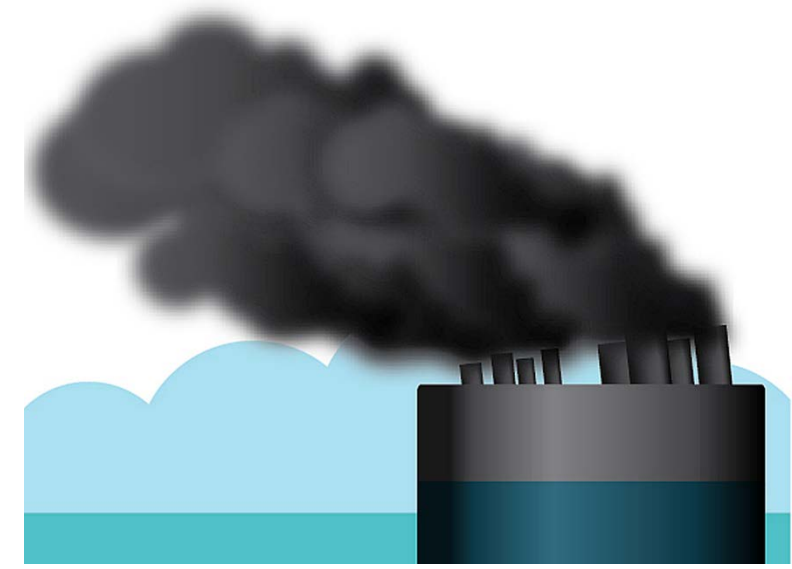
American Club Compendium on Bunkering

- Bunkering risk profile post-2020
- Industry experts guidance on relevant bunker risk issues
- Animations for seafarers focused on bunkering
- Focus on those issues relevant to hull & machinery as well as P&I risks
- Targeted for release in Summer 2019



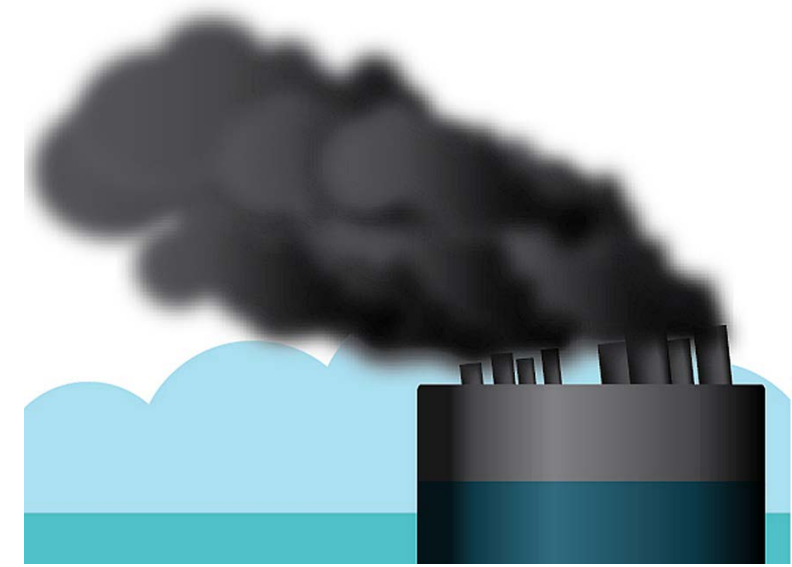
Summary

- There will be no delay in implementation
- Change over and implementation plans should be prepared!
- Following procedures for bunkering and creating documentation trail is imperative with notifications of non-compliance & letters of protest where prudent
- Recommend fuel testing beyond ISO 8217
- Recommend to use LSFO now if possible to clear tanks of HSFO contents—price difference will be US\$ 180-200 per ton
- All oil majors claiming they have sufficient capacity of 0.5% LSFO



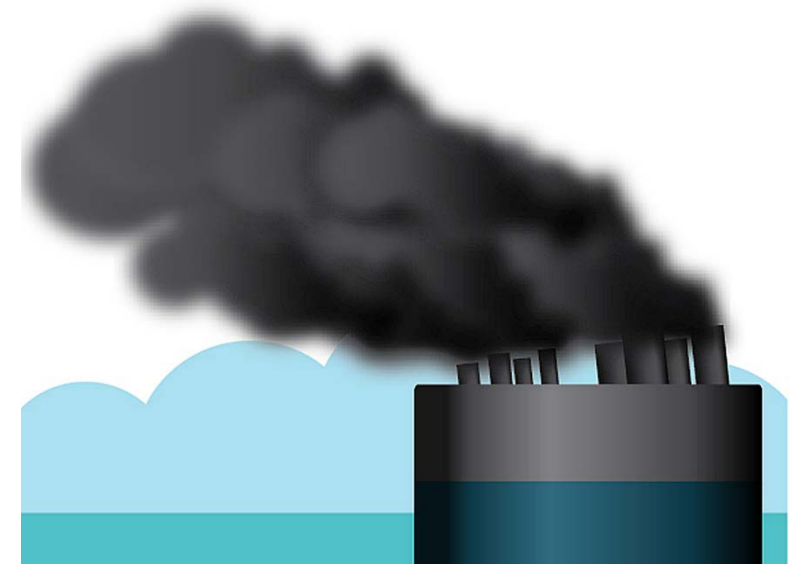
Summary (cont.)

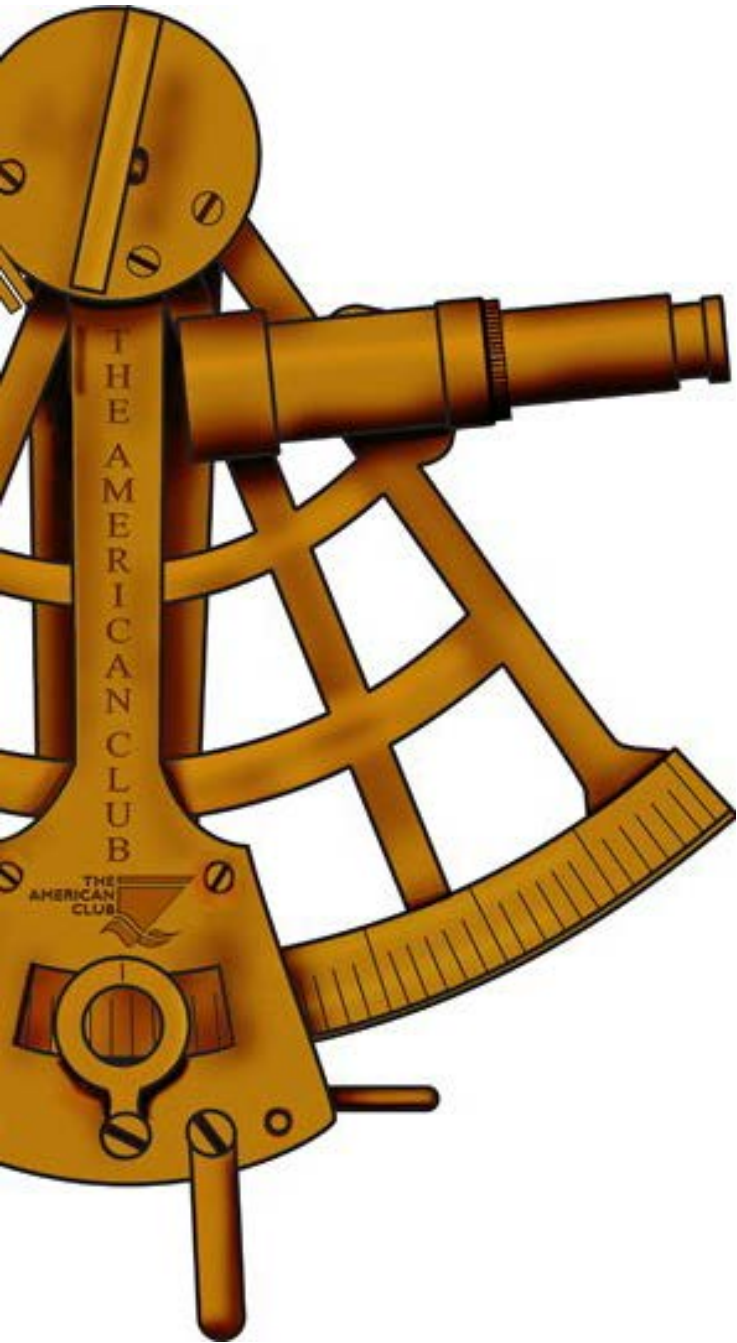
- Recommend that sampling beyond ISO 8217 be conducted at outset
- FTIR Spectroscopy (Infra Red Assessment) testing shows if non-hydrocarbons are present
- If non-hydrocarbons present (e.g. styrene, phenols, chlorinated solvents), then gas chromatography testing should be conducted
- Owners with scrubbers should keep stash of low sulphur gas oil if any problems with scrubbers arise
- Record keeping—Oil Record Book (ORB) and any fuel/bunker record books **MUST BE** consistent



Summary (cont.)

- Change over & implementation plans should be incorporated into the company's SMS now!
- Port State Control will be requesting implementation plan as per Appendix 1 to the Annex of MEPC.1/Circ.878
- Ensure crew is well aware and vigilant of bad bunkering practices and take proper action should they suspect shortages
- Take lot's of samples, make sure they are taken at the manifold, and witnessed particularly when samples are sealed





Σας ευχαριστώ
για την προσοχή
σας!

