

2015 GREEN4SEA Forum Athens

Welcome to the USA: A “Green” Regulatory Compliance Guide

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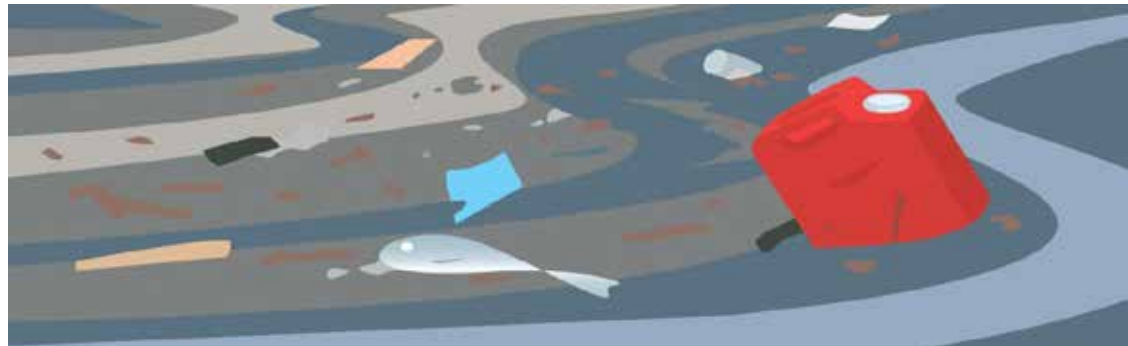
Overview

- Realities of marine pollution in the USA.
- USCG port State control and marine pollution.
- History of oily water separator violations in USA.
- Range of environmental requirements for shipowners.
- Human Element.
- Foreseeable trends and risks.



The realities for marine pollution in the US

- 80% of marine environmental pollution comes from land.
- Significant contribution from *non-point source pollution*.
 - ü fertilizers, herbicides & pesticides from storm run off and soils from erosion prone areas
 - ü septic tank systems
 - ü airborne contaminants collected by precipitation
 - ü motor vehicles & mechanical equipment
 - ü heavy metal and tar residues from roads, etc.



The realities for marine pollution in the US (cont.)

- Ships are easy *point source pollution* targets for authorities.
- Criminal prosecutions and civil fines are severe.
- Environmental regulations stretch well beyond oil pollution since the Oil Pollution Act, 1990:
 - ü oil pollution from bunkers & bilges
 - ü garbage, sewage, noxious substances
 - ü invasive species from ballast water
 - ü air pollution— NO_x , SO_x and CO_2
 - ü “holistic” set of pollutant sources



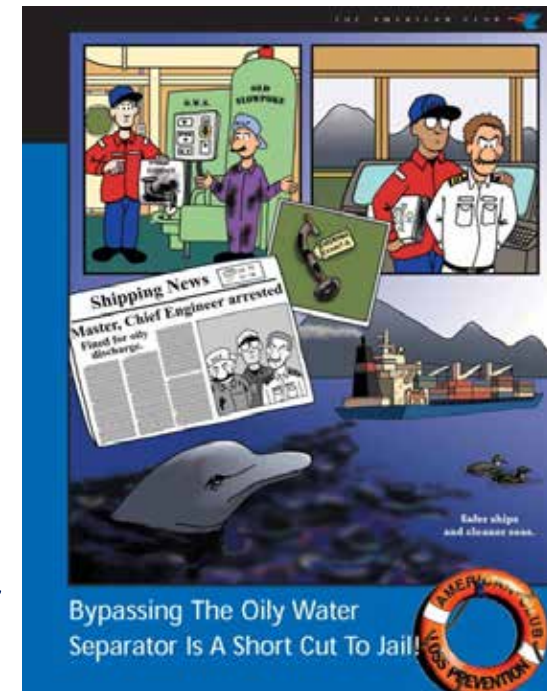
USCG port State control and pollution

- 2010: 3rd place, 11%
- 2011: 2nd place, 23%
- 2012: 1st place, 23%
- 2013: 2nd place, 18%



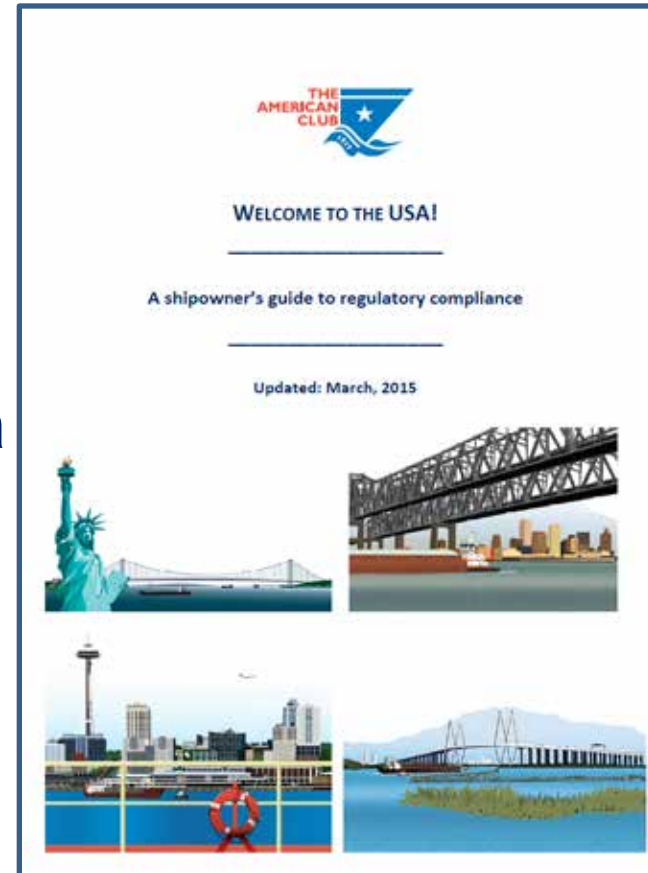
History of OWS violation cases

- First OWS case in USA leading to fines was in 1994. (Holland America Lines).
- Violations have continued through the years with significant fines and jail, e.g.:
 - ü Columbia Shipmanagement, 2013, US\$ 10.4 m
 - ü Pacific International Lines, 2013, US\$ 2.2 m
 - ü Hachiuma Steamship Co., 2014, Chief Engineer sentenced for criminal violations, US\$ 1.8 m
 - ü Marine Managers, Ltd., 2014, Chief Engineer convicted, US\$ 0.9 m
- Violations continue despite the risks to owners, managers and seafarers.



Overview of environmental regulation compliance for USA

- MARPOL 73/78, Annex I-VI.
- Vessel General Permit (VGP).
- California Air Resource Board (CARB).
- North America Emissions Control Area
- Non-Tank Vessel Response Plan.
- Tanker Vessel Response Plan.
- Ballast Water Management.



Human Element

- Management oversight and culture.
- Crew competency.
- Crew selection.
- Training...Training...Training.



Human Element (cont.)

- Environmental e-Learning training and competency tools
 - ü MARPOL Annexes I-V
 - ü VGP and s-VGP

VESSEL GENERAL PERMIT
CHAPTER 3 – DISCHARGE CATEGORIES AND RELATED REQUIREMENTS / DECK RUNOFF AND ABOVE WATER LINE HULL CLEANING

Chapter 3 – Discharge Categories and Related Requirements

Deck Runoff and Above Water Line Hull Cleaning

- This section of the VGP addresses potential pollutants entering the water through on-deck debris, garbage, residue and spill into stack washdown and runoff discharges.
- It requires that:
 1. The vessel's decks must be cleaned of debris, garbage, residue and spills prior to conducting stack washdowns and prior to departing from port.
 2. Machinery on deck must have coatings or drip pans to collect any oily water from machinery and covered hulls.
 3. The drip pans must be oriented to a waste container for proper disposal and/or periodically wiped and cleaned.
 4. The presence of flaking solids, soluble foam, halogenated phenyl compounds, and dioxins/dibenzofurans, or surfactants on deck washdowns must be minimized.
 5. The vessel's topside surface and other above water line portions must be maintained to minimize the discharge of rust, cleaning compounds, paint chips, non-skid material fragments, and other materials associated with exterior topside surface preservation.

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CLEAN SEAS Complying with MARPOL 73/78
WASTE OIL MANAGEMENT - OILY WATER SEPARATORS

Oil collection space

Coalescer Separator

15 PPM Filter

Bilge water 1000 PPM

THE AMERICAN CLUB

OIL FILTRATION SYSTEM OILY WATER SEPARATORS OIL CONTENT MONITOR
MACHINERY SPACE OPERATIONS CARE AND MAINTENANCE OF THE OWS SYSTEM ILLEGAL OPERATIONS

MUTE VOLUME MAIN MENU

Foreseeable trends and risks

- **MLC 2006 compliance**– seafarers with greater leverage.
- **ECA requirements stiffening**– challenge of meeting demand for low sulphur fuel is concern.
- **OWS system violations will continue**– “It will never happen to us” is a dangerous position for any owner to take!
- **Qualified seafarers**– competency is, and will continue to be, a challenge.
- **Unilateral environmental & liability in the USA** – this trend will continue **unabated**.

Ευχαριστώ

