WASHINGTON STATE
Department of Ecology
Spill Prevention, Preparedness, and Response Program
Prevention Section
P.O. Box 47600, Olympia, WA 98504-7600
Office Phone: (360) 407-7455, Fax (360) 407-7288 or toll free 1-800-664-9184

WASHINGTON STATE GUIDANCE ON
ACCEPTED INDUSTRY STANDARDS
FOR CARGO & PASSENGER VESSELS

The following accepted industry standards apply to all CARGO and PASSENGER vessels 300 gross tons and larger while operating in Washington State waters under Washington Administrative Code (WAC) 317-31-210.

I. OPERATING PROCEDURES

BRIDGE WATCH PROCEDURES
Employ a Bridge Resource Management (BRM) system that is consistent with STCW '95 and includes the following elements:

1. Formal underway watch conditions for open sea transits, coastal and restricted waters navigation, and restricted visibility conditions.
2. Watch composition for each condition.
3. Procedures for navigation with a pilot embarked.
4. Procedures for bridge team response to emergencies.
5. Clear delegation of duties, responsibilities and authority between bridge team members, including a clear policy for determining when the master has assumed control of the vessel from the deck watch officer or the state-licensed pilot.
6. Procedures for both internal and external communication for each watch condition.
7. On-going monitoring and correction of the voyage plan and recording of significant deviations from the plan in the bridge log.
8. It is recommended all Deck Officers in the fleet have formal Bridge Resource Management training.

BRIDGE OPERATING EQUIPMENT/ ORGANIZATION
Ensure that bridge navigation equipment is well maintained and meets U.S. and international standards. It is recommended that the Captain's standing orders and night orders are written in the working language.

HELMSMAN AND LOOKOUT
Ensure that the SMS watch composition requirements include a separate lookout in restricted/congested waters or in restricted visibility. It is recommended that lookouts are assigned no other duties and the helmsman is not relied upon as a principal lookout when steering or on autopilot.

PILOT/MASTER EXCHANGE OF INFORMATION
Employ a pilot card and procedures to facilitate coordination and communication with the pilot. The Master's English language skills should be adequate to communicate clearly with the pilot. All elements of the pilot card and the voyage plan should be agreed upon with the pilot and charts updated with any changes made.

SAFETY PATROLS/ROUNDS
While in Washington waters a safety round of the vessel should be conducted once per watch in port, at anchor or underway. The Master should designate spaces on the vessel to be visited during the rounds in standing orders or other instructions to watchstanders. The primary purpose of safety rounds is to detect and report fires, flooding and/or unsafe conditions.

ANCHOR WATCH

While anchored in Washington waters a licensed Deck Officer with sufficient English proficiency should be on the bridge at all times and continuously monitoring the vessel's position and the VHF radio.

GROUND TACKLE READINESS

When safe and practicable, ensure that vessel anchors are clear and ready to let go while transiting Washington waters.

While transiting the Columbia River, ensure a person is standing by the anchor.

VOYAGE PLANNING

Ensure a documented voyage planning system is used for the entire transit through Washington waters. It is recommended that the Safety Management System voyage planning requirements be compared with IMO Guidelines for Voyage Planning, Resolution A.893(21) adopted on 25 November 1999.

CHARTS AND PUBLICATIONS

Ensure that all charts and publications covering the transit through Washington waters are onboard and currently corrected.

ENGINE ROOM CREWING

Ensure that the engine room/engine control room is manned by two licensed engineers and one rating while maneuvering in Washington waters.

ENGINEERING WATCH PRACTICES

Employ engineering watch practices that are consistent with STCW '95 and address, at a minimum, the following:

1. Formal underway watch conditions for open sea transits and coastal and restricted waters transits.
2. Watch composition for each condition.
3. Procedures for taking over and performing a watch under various conditions and in various waters.
4. Procedures for engineering responses to emergencies.
5. Clear delegation of duties, responsibilities and authority between watch members.
6. Procedures for both internal and external communications for each watch condition.
7. Inspection, maintenance and operation of the propulsion, steering and power generating systems that meet international and federal requirements and manufacturers' recommendations.

NAVIGATION EQUIPMENT ERROR CHECKS

Ensure that all radars, gyrocompasses, magnetic compasses and compass repeaters in use are properly calibrated and checked for errors at least once per watch while underway in Washington waters.

ELECTRICAL SYSTEMS

Ensure that standby and emergency generators are proven operational and ready no more than 12 hours prior to transiting Washington waters. Ensure fuel changeovers are completed safely before critical maneuvering situations and that a minimum of two generators are online during maneuvering.

FUEL OIL SYSTEMS

Ensure that the fuel oil system is checked or made ready no more than 12 hours prior to transiting state waters. This should include:

- Backup fuel service and booster pumps tested or verified in standby mode and ready for immediate use;
- Settler and service tanks are full with adequate clean fuel for the entire transit through state waters and at required operating temperature;
- Viscosity/temperature controls set and heaters ready; and
- Fuel changeovers are completed safely before critical maneuvering situations.

It is recommended detailed written procedures specific to the vessel for fuel changeover are created and the Chief Engineer is trained in any unusual requirements.

LUBE OIL SYSTEMS

Ensure primary and back-up lube oil systems, including pumps, piping, valves, coolers, and switching mechanisms, are tested or inspected to verify they are operational no more than 12 hours prior to transiting Washington waters.

OIL STRAINERS

Ensure that all fuel and lube oil strainers are cleaned and ready for use no more than 12 hours prior to transiting state waters.

COOLING WATER SYSTEMS

Ensure that all cooling water primary and back-up circulating systems, including pumps, lines, valves, and heat exchangers and controls tested or inspected to verify they are operational no more than 12 hours prior to transiting state waters.

CONTROL/START AIR SYSTEMS

No more than 12 hours prior to transiting state waters, ensure that control and starting air system tanks are full, all primary and back-up air compressors have been tested or inspected to verify they are operational, and condensate in the system has been properly drained.

STEERING GEAR FLAT

Ensure that primary and back-up steering systems are tested no more than 12 hours prior to transiting state waters.

For vessels without remote monitoring systems:

Because your vessel is not equipped with a remote monitoring system, it is recommended the steering gear flat is inspected hourly while the vessel is underway in Washington waters.

STABILITY CALCULATIONS AND CARGO PLANNING

Ensure that Master and Chief Officer prepare, update, and monitor cargo plans. Stability calculations should consider transverse stability, longitudinal hull stress, sheer forces, bending moments, and ballasting. It is recommended that updates be reviewed and coordinated with terminal personnel responsible for cargo operations.

OIL TRANSFERS

Ensure that:

1. All bunkering operations in Washington waters comply with chapter 317-40 WAC, Bunkering Operations.
2. Ships possess and use written Oil Transfer Procedures (OTP) meet the requirements of 33 CFR 155.720 for all transfers of oil within the vessel, and to or from the vessel.
3. The OTP is written in a language or languages understood by personnel engaged in the transfer operation.
4. The OTP includes each product transferred; number of persons required; duties by title; assignments for tending the moorings; and describes the transfer system with a line diagram.
5. The OTP includes procedures for: team training, emptying the discharge containment system, emergency shutdown; communications; topping off tanks, ensuring valves closed when completed; reporting discharges to water.
6. The OTP provides for periodic review and training in the policies and practices as required.

EMERGENCY PROCEDURES

It is recommended written procedures, checklists, and drills are established for the following emergencies:

1. Collisions and allisions
2. Groundings and strandings
3. Hull breach, structural failure, and foundering
4. Loss of propulsion
5. Loss of steering
6. Loss of electrical power
7. Gyrocompass malfunction
8. Emergency towing

9. Loss of bridge throttle control (if equipped)
10. Heavy weather

EMERGENCY PROCEDURE CHECKLISTS

It is recommended emergency checklists are developed using written emergency procedures. Each checklist should be a short, bulleted list of the critical initial actions intended to take control of the emergency. It is recommended these checklists be kept on the bridge or in the engine room, as appropriate, and readily accessible to the watch officer. Officers should be trained to use these checklists during drills.

EMERGENCY TOWING

For vessels built 2010 or later:

Ensure vessels have an IMO compliant emergency towing plan and that crew members are trained to deploy and use emergency towing equipment. Training on the emergency towing procedures should be conducted at least twice per year. Refer to International Maritime Organization (IMO) Resolution MSC.256 (84) (adopted on 16 May 2008) and MSC 1/ Circ. 1255 (27 May 2008), Guidelines for Owners/Operators on Preparing Emergency Towing Procedures, for detailed information.

For vessels built before 2010:

It is recommended vessels have an IMO compliant emergency towing plan and that crew members are trained to deploy and use emergency towing equipment. Training on the emergency towing procedures should be conducted at least twice per year. Refer to International Maritime Organization (IMO) Resolution MSC.256 (84) (adopted on 16 May 2008) and MSC 1/ Circ. 1255 (27 May 2008), Guidelines for Owners/Operators on Preparing Emergency Towing Procedures, for detailed information.

EMERGENCY TOWING DRILLS

It is recommended that training on the vessel's emergency towing procedures be conducted at least twice each year. The reviews or drills should train crew members on the emergency towing plan and how to safely deploy and use emergency towing equipment.

II. PERSONNEL POLICIES

VESSEL CREWING

Ensure that the vessel is crewed in accordance with the requirements of the flag state and crew members are certified in accordance with STCW '95 for the position they are filling. When addressing the manning requirements of each vessel the company should consider:

- The trade the vessel is engaged in;
- The workload on the crew; and
- The skills required by the crew for the safe execution of the tasks they are expected to perform in normal operations *and* in emergencies.

WORK HOURS/FATIGUE

Ensure that vessel crew members are rested at least ten hours per day except in an emergency. The ten hours may be divided into no more than two periods, but at least six hours of rest each day must be consecutive and uninterrupted. In an emergency, vessel crew members may be rested less than ten hours, but not less than six consecutive hours, per day, and for no more than two consecutive days. All crew members must have at least 70 hours of rest per seven-day period in all cases. Records of work/rest hours should be kept up to date for all watchstanders. It is recommended that work hours for the Master, Chief Engineer and other non-watchstanders are maintained.

ALCOHOL AND DRUG POLICY

Establish and maintain policies for alcohol use that conform to 33 and 46 CFR, including mandatory post-incident testing. Ensure illegal drugs, as defined in 46 CFR, are strictly prohibited from use or carriage on board the vessel.

TRAINING PROGRAM

The training program should include familiarization, refresher and job-specific training. Records should be kept for each crewmember. It is recommend the company establish and maintain procedures for identifying training required to support the company's Safety Management System. This training should be provided for all appropriate crew members.

FAMILIARIZATION TRAINING

Ensure familiarization training is provided for all joining crew members. The familiarization training should include:

- Duties and responsibilities during all normal and emergency situations.
- Vessel arrangement familiarization, including escape routes from work and sleeping spaces.
- Any specific equipment the crew member will be using or operating.
- All watchkeeping, safety, environmental protection and emergency procedures and arrangements the crew member needs to know to perform assigned duties.

This training should be provided prior to being required to perform those duties. STCW Familiarization training includes all subjects in STCW A-I/14 and STCW A-VI/1.

EMERGENCY DRILLS

Ensure that emergency drills are conducted at least once per month or whenever 25% or more of the vessel crew is replaced. All crew members should participate in a drill evaluation at the conclusion of the drill. Ensure emergency drills meet SOLAS, flag state, and ISM requirements and are properly documented. It is recommended a complete drill schedule include: firefighting, abandon ship, emergency steering, oil spill response, structural failure, main engine failure, electrical power failure, collision, shifting of cargo, cargo jettisoning, flooding, man overboard, entry into enclosed spaces, serious injury, terrorism, piracy, helicopter operations, emergency towing and heavy weather.

ENGLISH PROFICIENCY

Ensure that all officers who are required to communicate with pilots, persons ashore, and other vessels are sufficiently proficient in the English language to accomplish their duties safely. All Deck Officers and Engineering Officers should be sufficiently proficient in English to perform their responsibilities. It is recommended you assess proficiency using IMO Standard Marine Communication Phrases.

COMMON LANGUAGE

Designate a common spoken and written working language on board vessels with multi-national crews.

The company should establish procedures by which the ship's personnel receive relevant information on the Safety Management System in a working language or languages understood by them. The manuals, instructions, and placards on the vessel which the crew need for their duties or in an emergency should be in a language they can understand.

III. MANAGEMENT PRACTICES

MANAGEMENT OVERSIGHT

It is recommended fleet vessels are visited at least quarterly by a representative of the company management, such as a port captain, a port engineer, or the management system's designated person ashore. At a minimum, the management representative should review operating and management issues, inspect the vessel, and consult with the senior officers on the vessel.

SAFETY/ENVIRONMENTAL MANAGEMENT PROGRAM

Ensure a certified safety and environmental protection management system is established and maintained in accordance with the ISM code. It is recommended the company provide Safety Management System documents in the working language to ensure crew members are familiar with program.

SAFETY PROGRAM

Ensure a shipboard safety program is established and maintained. All crew members should attend a monthly safety meeting. It is recommended the program policy and procedures also include measures to mitigate identified risks and to document follow-up actions.

POLLUTION PREVENTION

Ensure a pollution prevention program is established and maintained in compliance with international and U.S. regulations. The pollution prevention program should include waste oil and bilgewater handling, garbage management, and the EPA Vessel General Permit program. Ensure the pollution prevention program's recordkeeping systems are in compliance with international and U.S. standards. It is recommended pollution prevention and waste management practices be included as part of familiarization and refresher training.

PLANNED MAINTENANCE SYSTEM

Ensure that the planned maintenance system is consistent with ISM code provisions and includes preventive maintenance and detailed record keeping for all major ship systems. The company should identify equipment and technical systems whose sudden operational failure may result in hazardous situations. The SMS should provide for specific measures aimed at promoting the reliability of such equipment or systems. These measures should include the regular testing of stand-by arrangements and equipment or technical systems that are not in continuous use.

INSPECTION/SURVEY

Ensure that ballast tanks and cargo holds are inspected at least annually to detect potential structural failures, cracks, coating integrity, and excessive corrosion.

ULTRASONIC GAUGING

Ensure a program for ultrasonic gauging or non-destructive testing of vessel hulls and tanks is established and maintained at intervals not to exceed 3 years.

ENGINEERING SPACES

Ensure that engineering spaces are well maintained and all oil, garbage, and debris are cleaned up promptly. Propulsion, steering, and power generating equipment should be inspected, maintained and operated in compliance with international and U.S. requirements, and manufacturers' recommendations.

DECK AREAS

Ensure that deck areas are well maintained and all oil, garbage and debris are cleaned up promptly. Hull and structural inspections should be conducted in compliance with international and U.S. requirements.

ACCOMMODATION SPACES

Ensure that accommodation spaces are well maintained and in sanitary condition. Equipment should be maintained in compliance with international and U.S. requirements.