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## Cargo and Passenger Vessel BOARDING CHECKLIST

IMO NO:	VESSEL NAME:	DATE/TIME:
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LOCATION:	INSPECTOR NAME:
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Copies of:	Ship Particulars Y / N	SMC Y / N	Minimum Manning Y / N
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**3.1: VESSEL CREWING**  
 Ref: SOLAS, Ch. V and V/14, reg. 13; IMO Resolution A.1047 (27) Principles of Minimum Safe Manning, ISM Code, par. 6.2; 46 CFR 15.415

<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Additional officers onboard.</li> <li>Training facilities and hiring measures to attract/retain crew.</li> </ul>	
<b>Accepted Standard</b>	Vessel is crewed in accordance with the requirements of the vessels' flag state. Crew members should be certified in accordance with STCW 2010 for the position they are filling.	
<b>Below Standard (risk indicator)</b>	Example: Crewing does not meet IMO Principles of Safe Manning (evidenced by itinerary or by interviewing captain).	

**3.2.1: COMMUNICATIONS: English Proficiency**  
 Ref: STCW Code A-II/1 & A-III/1 deck & eng. officers; 33 CFR 26.07 maintain radio listening watch; 33 CFR 161.12(b) VTS.

<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Crew proficient in English.</li> <li>English is used on the bridge when the pilot is embarked.</li> </ul>	
<b>Accepted Standard</b>	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.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>Officers not proficient enough in English to perform duties.</li> <li>No procedures to determine English proficiency.</li> </ul>	

**3.2.2: COMMUNICATIONS: Common Language**  
 Ref: SOLAS, Ch. II-1, reg. 26 ('96 amendments); ISM Code par. 6.6

<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Officers and crew easily communicate and share information.</li> <li>Manuals/ placards are in both common language and English.</li> </ul>	SMS Language: Common Language:
<b>Accepted Standard</b>	A common spoken and written working language is designated on board vessels with multi-national crews. All manuals, instructions, and placards on vessels with multi-national crews are printed in the designated common language understood by all crewmembers.	
<b>Below Standard (risk indicator)</b>	Example: Crew has language difficulties when communicating with each other or with the operating company.	

<b>3.3.1: FITNESS: Work Hours/Fatigue</b>		
Ref: STCW Code A-VIII/1; 46 CFR 15.705, 15.710 & 15.1111 (US only)		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Short contracts offered (4 months senior officer, 6 months junior officers, less than 9 months ratings).</li> <li>• Extra officers onboard.</li> <li>• Company has written policies and procedures to allow master/CE to schedule operations to ensure crew stays within work/rest hour requirements.</li> </ul>	
<b>Accepted Standard</b>	Records reflect actual hours worked or rested and are within STCW requirements. ((Crew manages hours with watch changes during pilotage as needed.))	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Officers fatigued.</li> <li>• Work/rest hours incomplete or not posted.</li> <li>• Hours logged monthly rather than daily.</li> </ul>	
<b>3.4.1: TRAINING: Training Program</b>		
Ref: STCW A-I/14 and A-I/1, par. 6; ISM Code, par. 6.3 and 6.5 (Review vessel training manual, logbooks)		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Promotion from within dedicated crew pool.</li> <li>• Mentoring program in place.</li> <li>• Training includes performance reviews with benchmarks for additional training.</li> </ul>	Training program should include shipboard management training consistent with the International Safety Management (ISM) code and STCW 2010.
<b>Accepted Standard</b>	Comprehensive training program includes Familiarization, Refresher and Job-Specific training.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• SMS does not track crew training and certificates.</li> <li>• Company relies only on manning agency for crew training.</li> <li>• Onboard training is just required drills and safety meetings.</li> </ul>	
<b>3.4.2: TRAINING: Familiarization</b>		
Ref: STCW A-I/14 and A-VI/1; ISM Code, par. 6.3		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Officer turn over notes emailed to the relief/company prior to turn over.</li> <li>• Senior relief personnel overlap time onboard.</li> <li>• Familiarization checklists are logical, easy to use, and include interactive (free text) elements.</li> <li>• If alternative fuels are used, training includes the specific hazards of that fuel.</li> </ul>	Period of handover overlap for senior officers:
<b>Accepted Standard</b>	Familiarization includes all STCW requirements (duties and responsibilities during all normal and emergency situations, and vessel arrangement familiarization, including escape routes from work and sleeping spaces) and operator's SMS requirements in a language understood by crew member.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• SMS does not designate a crewmember responsible for familiarization training.</li> <li>• Insufficient time allotted for training.</li> </ul>	

<b>3.4.3: TRAINING: Drills</b>		
Ref: SOLAS, Ch. III, reg. 19 and reg. 30 (p/v only); ISM Code, par. 8.2 and 8.3; 46 CFR 199.180 (US only)		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Work hours and fatigue considered when scheduling drills and training.</li> <li>• Drills combined when appropriate to reduce paperwork and manage crew workloads.</li> <li>• Drills scheduled at different times of the day.</li> <li>• Drills are realistic and include aspects of past accident reports.</li> </ul>	Refer to WA AIS recommended drills
<b>Accepted Standard</b>	Drills meet SOLAS, flag state and ISM requirements. Drills evaluated and reviewed by all crew at conclusion of the drill.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• No drill records or drill records show drill accomplished in unrealistic timeframe.</li> <li>• Drill matrix confusing or lacking specificity.</li> <li>• Unrealistic drill scenarios.</li> </ul>	
<b>4.1: SAFETY PROGRAM/MEETINGS</b>		
Ref: ISM Code, par. 3.2, 5.1 and 6.4, 46 CFR Subchapter B – US flag		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Accident prevention and job risk analysis training conducted.</li> <li>• Risk analysis program includes instruction, training, and forms.</li> <li>• Fleetwide dissemination of lessons learned.</li> <li>• ‘Toolbox’ meeting before current and upcoming jobs.</li> <li>• If alternative fuels are used, specific safety measures, key risk factors, and exposure first aid of each fuel is discussed.</li> </ul>	
<b>Accepted Standard</b>	Has safety program with monthly meetings and entire crew represented.	
<b>Below Standard (risk indicator)</b>	Example: Safety meetings are informal, have no follow up on identified issues, or don’t involve the entire crew.	
<b>4.4: POLLUTION PREVENTION</b>		
Ref: STCW A-VIII/2, part. 11; ISM Code par. 3.2; 33 CFR part 151		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Receipts show all waste oil and solid waste materials sent ashore.</li> <li>• ISO 14001.</li> <li>• Incinerator use is well documented with spare equipment on hand.</li> </ul>	Oil Record Book: Sat / Unsat Garbage Log: Sat / Unsat
<b>Accepted Standard</b>	Complete waste oil handling, garbage management, VGP program in place and fully implemented with regular training.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Pollution prevention program poorly organized (lack of ORB/garbage receipts).</li> <li>• Program incomplete or not followed (Leaks, pooled oil, evidence of poor maintenance or housekeeping).</li> </ul>	
<b>4.8.1: CONTINGENCY PLAN FIELD DOCUMENT - Vessel Received Field Document</b>		
REF: WAC 173-182		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Field Document is posted in several locations and deck officers are trained in its proper use.</li> <li>• Field document in NTVRP, voyage plan, or OTP.</li> </ul>	Field Doc. onboard Y / N
<b>Accepted Standard</b>	Field Document understood by master and posted in a conspicuous location.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Field Document not onboard.</li> <li>• Master unaware of Field Document.</li> </ul>	

<b>5.1.1: BRIDGE OPERATING PROCEDURES/EQUIPMENT - Equipment/Organization</b>		
Ref: 33 CFR 164.35 – 164.43; SOLAS Ch. V, reg. 12		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• 2 full ECDIS.</li> <li>• Additional gyro.</li> <li>• Certified integrated bridge system.</li> </ul>	
<b>Accepted Standard</b>	Equipment appears well maintained. Meets U.S./International standards. Clearly written Captain's standing orders and night orders.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Required equipment not functioning.</li> <li>• Captain's standing orders unclear.</li> <li>• Bridge appears messy, dirty, or unkempt.</li> </ul>	
<b>5.1.2: BRIDGE OPERATING PROCEDURES/EQUIPMENT - Charts/Publications</b>		
Ref: SOLAS Ch. V, reg. 20; 33 CFR 164.33; 46 CFR 97.05-5 (US only)		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Company makes chart updates easier for vessel (Automatic ECDIS updates).</li> <li>• Company provides access to charts beyond planned route.</li> </ul>	
<b>Accepted Standard</b>	Charts and publications corrected, up-to-date and records maintained. (If Engine Power Limitation is in use, there are two sets of maneuvering characteristics posted.)	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Charts or publications for voyage missing or not up to date.</li> <li>• If publications kept on computers: inability to access charts or pubs in event of computer failure.</li> </ul>	
<b>5.1.4: BRIDGE OPERATING PROCEDURES/EQUIPMENT - Voyage Planning</b>		
Ref: STCW A-VIII/2, part 2, IMO Res A.893(21)		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Voyage plan includes risk assessments, detailed information on waypoints, or procedures for LOP or LOS.</li> <li>• Planned route posted at ECDIS, notes for next watch include the risks noted on the voyage plan.</li> </ul>	
<b>Accepted Standard</b>	Berth to Berth Voyage plan meets all listed elements of IMO guidelines.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Voyage plan appears to be auto filled with same information for each waypoint description.</li> <li>• Sections of plan are not filled out.</li> <li>• Old plan used without updates.</li> </ul>	
<b>5.1.5: BRIDGE OPERATING PROCEDURES/EQUIPMENT - Pilot Coordination</b>		
Ref: STCW A-VIII/2, part 3-1; 33 CFR 164.11(k); RCW 88.16.155		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• If power limitation is used, vessel specific procedures for overriding the power limitation are discussed with pilots.</li> </ul>	
<b>Accepted Standard</b>	Master discusses all elements of pilot card and voyage plan with pilot. Only English used on bridge.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Master lacks English skills for meaningful exchange.</li> <li>• No pilot card used for exchange.</li> <li>• No policy to notify Pilot of events on bridge, such as watch change.</li> </ul>	

<b>5.1.6: BRIDGE OPERATING PROCEDURES/EQUIPMENT – Bridge Resource Management (BRM)</b>		
Ref: STCW A-VIII/2, part 3-1 (B-VIII/2 recommended)		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Master uses arrivals and departures as an opportunity to mentor junior officers.</li> <li>• Company offers additional BRM training opportunities.</li> <li>• Procedures specifically address BRM use in different watch conditions.</li> </ul>	
<b>Accepted Standard</b>	Bridge Resource Management (BRM) system consistent with STCW 2010 is in place and used.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• BRM principles are not incorporated in bridge procedures.</li> <li>• Master appears complacent about BRM; no mention of BRM principles in standing orders.</li> <li>• No end of passage review to discuss BRM strengths, weaknesses or suggest improvements.</li> </ul>	
<b>5.3.2: EMERGENCY PREPAREDNESS - Emergency Procedures</b>		
Ref: SOLAS, Ch. III, reg. 8 and 37 ('96 amendments); ISM Code, par. 8; 33 CFR 164.25(d); 46 CFR 97.13 (US only)		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Emergency checklists tabbed and easy to locate and use.</li> <li>• Procedures include emerging issues (hazmat/battery fires)</li> <li>• If alternative fuels are used, spill response procedures include specific guidelines for that fuel.</li> </ul>	
<b>Accepted Standard</b>	Station bill and procedures for most common emergencies. Checklists kept on bridge or engine room as appropriate, used during drills, and readily accessible to watch officer.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Minimum Station Bill covering only Fire &amp; Boat.</li> <li>• Emergency checklists missing or difficult to locate.</li> <li>• Emergency procedures lack corresponding checklist and drill.</li> <li>• Emergency checklists difficult to use.</li> </ul>	
<b>4.5: PLANNED MAINTENANCE SYSTEM (PMS)</b>		
Ref: SOLAS, Ch. III, reg. 20 & 52 (lifesaving appliances); ISM Code, par. 10; 33 CFR Table 96.250(j)		
<b>Exceed Standard</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• PMS accredited by class.</li> <li>• Computerized spare part inventory.</li> <li>• PMS includes risk management strategy for planned and unplanned maintenance, prioritization of work, spare parts, documentation, and up-to-date certification.</li> <li>• If alternative fuels used: <ul style="list-style-type: none"> <li>○ PMS includes audits of the leak detection system and the emergency isolation valves.</li> <li>○ PMS tracks planned and unplanned maintenance of fuel leak detection equipment.</li> </ul> </li> </ul>	
<b>Accepted Standard</b>	Established planned/preventive maintenance system with detailed record keeping.	
<b>Below Standard (risk indicator)</b>	<p>Example:</p> <ul style="list-style-type: none"> <li>• PMS inadequate or not followed.</li> <li>• PMS does not identify and test critical equipment and technical systems.</li> <li>• PMS fails to investigate technical difficulties or determine underlying causes.</li> <li>• PMS fails to include permit-to-work systems or lock out tag out systems.</li> </ul>	

<b>5.4: OIL TRANSFER PROCEDURES</b>		
Ref: 33 CFR 155.720, 155.730, 155.750, 156.150 and 151.25; WAC 317-40.		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• WAC 317-40 incorporated in SMS.</li> <li>• If alternative fuels are used, pre bunkering checklist includes testing of fuel detection and tank monitoring equipment.</li> </ul>	
<b>Accepted Standard</b>	SMS Oil Transfer Procedures/checklists exceed CFR minimum standards. ((OTP includes internal transfers.))	
<b>Below Standard (risk indicator)</b>	Example: Oil Transfer Procedure does not meet CFR requirements.	
<b>6.2 ENGINEERING WATCH PRACTICES</b>		
Ref: STCW A-III/1.4 and B-VIII/2, part 3-2. STCW 6/circ 7 20 May 2005		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Toolbox meetings used to mentor junior engineers.</li> <li>• Written procedures to ensure engine crew stays within workhour/rest hour standards.</li> </ul>	
<b>Accepted Standard</b>	Engine room Resource Management (ERM) system in place and fully utilized.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Engine room emergency procedures not written in crew's common language.</li> <li>• Emergency checklists not in ECR or difficult to locate.</li> <li>• Night orders not posted in the engine room.</li> </ul>	
<b>6.3.4: ENGINEERING OPERATING PROCEDURES - Fuel Oil Systems</b>		
Ref: SOLAS, Ch. II-1, reg. 15		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Automated fuel changeover system.</li> <li>• Purifier room exceptionally clean.</li> <li>• If alternative fuels are used, vessel has CCTV monitoring for the machinery space and bunker monitoring station.</li> </ul>	
<b>Accepted Standard</b>	Backup pump and fuel system inspected or tested ready for immediate use no more than 12 hours before transiting WA waters. ((Vessel has records of lube oil system maintenance and, if engine power limitation is used, an onboard management manual is kept in the ECR.))	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Purifier room oily/unclean.</li> <li>• Fuel oil system is not on pre-arrival/departure checklist.</li> <li>• Fuel oil system not tested/inspected prior to WA transit.</li> </ul>	
<b>6.3.7: ENGINEERING OPERATING PROCEDURES - Cooling Water (CW) System</b>		
<b>Exceed Standard</b>	Example: Coolers checked prior to departure and debris (trash/jellyfish/seaweed) cleared if needed.	
<b>Accepted Standard</b>	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. ((records of maintenance for CW system))	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Cooling water system not included in pre arrival/departure checklists.</li> <li>• Evidence of leaks/drips (scaling along flanges for saltwater system; reddish tint near flanges for freshwater system).</li> <li>• Patches or long-term use of a temporary repair in CW piping.</li> <li>• Primary and back-up circulating and CW pumps not lined up or untested.</li> </ul>	

<b>6.3.8: ENGINEERING OPERATING PROCEDURES - Start/Control Air System</b>		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Control and start air system components tracked electronically.</li> <li>Automatic drain valves.</li> <li>Annual gauge calibration date marked on component.</li> <li>Additional (3<sup>rd</sup>) emergency start air compressor run off of emergency generator.</li> </ul>	
<b>Accepted Standard</b>	Control and start air system tested or inspected to verify they are operational no more than 12 hours prior to transiting state waters.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>Start air system not on pre-arrival/departure checklist.</li> <li>Control and Start air system not verified as fully functional for maneuvering.</li> </ul>	

<b>6.1 MACHINERY AND SPACES</b>		
Ref: SOLAS, Ch. I, reg. 11; SOLAS, Ch. III, regs. 20 and 36 ('96 amendments); ISM Code, par. 10.		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Clean and well maintained.</li> <li>Compliance program in place (i.e. tagging overboard valves or anonymous reporting).</li> <li>If alternative fuels are used, piping for alternative fuel system is clearly labeled and enhanced ventilation is in place to respond to leaks (example: exhaust blowers with ability to increase flow rates)</li> </ul>	
<b>Accepted Standard</b>	Condition appears to be commensurate with age and service.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>Equipment not functioning or in poor condition.</li> <li>Excessive oil leaks.</li> <li>Poor housekeeping (oiled rags).</li> </ul>	

## Option checklist items for use on Expanded Inspections (either individually or as whole)

<b>3.3.2: FITNESS: Alcohol and Drug Use/Policy ((Optional – for use on expanded inspection))</b>		
Ref: RCW 90.56.540 (.06 BAC); 33 CFR 95.020 (.04 BAC); 46 USC 2302.		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Policy of no alcohol or illegal drug use onboard.</li> <li>• Instructions for calibrating testing equipment are available if the equipment is kept onboard</li> <li>• Onboard random testing.</li> </ul>	
<b>Accepted Standard</b>	Written alcohol policy per CFR or similar, or U.S. Policy posted on board.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Evidence of alcohol or illegal drug use onboard.</li> <li>• No policy posted onboard.</li> </ul>	
<b>3.4.4: TRAINING: Job-Specific Training ((Optional – for use on expanded inspection))</b>		
Ref: STCW A-I/14, A-II/1 (OIC nav) and A-III/1 (OIC eng)		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Company has formal method to track crew training needs.</li> <li>• Crew receives feedback and additional mentoring if needed.</li> </ul>	
<b>Accepted Standard</b>	Comprehensive on-the-job specific training program.	
<b>Below Standard (risk indicator)</b>	Example: No job specific training program in place.	
<b>4.2: SAFETY/ENVIRONMENTAL MANAGEMENT SYSTEM ((Optional – for use on expanded inspection))</b>		
Ref: SOLAS, Ch. IX; 33 CFR 96.390. ISM Code, Guideline 6 –Resources and Personnel		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Company has additional safety or environmental programs in place.</li> <li>• Officers have a role in improving SMS</li> </ul>	Date of last external audit: Date of last internal audit:
<b>Accepted Standard</b>	Functioning SMS program in place which includes training, awareness, documentation, and auditing	
<b>Below Standard (risk indicator)</b>	Example: Inadequate or incomplete record keeping.	
<b>4.3: MANAGEMENT OVERSIGHT ((Optional – for use on expanded inspection))</b>		
Ref: ISM Code, par. 12; 33 CFR table 96.250(I) (US only)		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Management makes unannounced inspections of vessel(s), including check-rides.</li> <li>• Management ensures any inspections or trainings do not interfere with work hour/rest hour for crew.</li> <li>• Company has formal guidance on reporting non-conformities, near-miss, accidents, and hazardous conditions.</li> </ul>	Date of last visit: Inspected by:
<b>Accepted Standard</b>	Management visits once per quarter to review operations, inspect the vessel, and talk with senior officers.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Rare/infrequent visits to vessel by management.</li> <li>• SMS has no formal means for crew to report issues.</li> <li>• No process to inform crew on audit results or corrective actions taken.</li> </ul>	



<b>4.6: BALLAST TANK AND CARGO HOLD INSPECTION /SURVEY ((Optional – for use on expanded inspection))</b>		
Ref: 46 CFR 91.40 (US Only)		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• Problem areas are photo documented and scheduled for repair or re-exam on a schedule less than one year.</li> <li>• Training for crew on corrosion, deformation, and fractures.</li> <li>• Company provides safety equipment and equipment to record findings (intrinsically safe camera, drone).</li> </ul>	Last Inspection: Inspected by: Location:
<b>Accepted Standard</b>	Ballast tanks and cargo holds are inspected at least annually to detect potential structural failures, cracks, coating integrity, and excessive corrosion. Company has written procedures for tank or hold inspections performed by crew which includes risk assessment and enclosed space work permitting.	
<b>Below Standard (risk indicator)</b>	Example: No plan for safety of crew or ship when performing these inspections.	
<b>4.7: ULTRASONIC GAUGING ((Optional – for use on expanded inspection))</b>		
Ref: 46 CFR 91.40 and 40-3(D), (E) (US Only); SOLAS Ch. XI, reg. 2.		
<b>Exceed Standard</b>	Example: Ultrasonic gauging for vessels under 15 years of age.	Last Inspection: Inspected by: Location:
<b>Accepted Standard</b>	Ultrasonic gauging of hull & tanks performed every 3 years or less or IACS Enhanced Hull Survey program.	
<b>Below Standard (risk indicator)</b>	Example: Ultrasonic gauging of hull and tanks not performed when required.	
<b>5.1.3: BRIDGE OPERATING PROCEDURES/EQUIPMENT - Equipment Error Checks ((Optional – for use on expanded inspection))</b>		
Ref: SOLAS Ch. V, reg. 19-2 (steering gear); STCW A-II/1, A-II/2, and VIII/2 part 3-1; 33 CFR 164.25		
<b>Exceed Standard</b>	Example: Equipment checked before approaching land, traffic lanes, pilot station, or other dangerous waters	
<b>Accepted Standard</b>	Radars, compass (gyro and magnetic), and repeaters checked at least once per watch for errors.	
<b>Below Standard (risk indicator)</b>	Example: Checks are not recorded or are incomplete.	
<b>5.1.7: BRIDGE OPERATING PROCEDURES/EQUIPMENT - Helmsman and Lookout ((Optional – for use on expanded inspection))</b>		
Ref: STCW A-VIII/2, part 3-1; 46 CFR 15.1109		
<b>Exceed Standard</b>	Example: Helmsman and lookout are included in the bridge team briefing and debriefing.	
<b>Accepted Standard</b>	Lookouts are assigned no other duties and the helmsman does not serve as lookout.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Failure to assign a lookout in restricted/ congested waters.</li> <li>• Deck log does not indicate when additional lookout should be assigned to bridge, such as in restricted visibility.</li> </ul>	
<b>5.2.1: DECK PROCEDURES - Ground Tackle Readiness ((Optional – for use on expanded inspection))</b>		
Ref: ISM, STCW, and 33 CFR 164.11		
<b>Exceed Standard</b>	Example: Anchor brake and associated equipment is considered critical equipment in the PMS.	
<b>Accepted Standard</b>	Anchors cleared and ready to drop before sea buoy, if safe to do so.	
<b>Below Standard (risk indicator)</b>	Example: No crew assigned to stand-by anchor, or crew is not on bow for stand-by anchor duty.	

<b>5.2.2: DECK PROCEDURES - Anchor Watch ((Optional – for use on expanded inspection))</b>		
Ref: STCW A-VIII/2, par. 51; 33 CFR 164.19		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Rating assigned to roam deck and report to OOW condition of vessel and anchor chain position.</li> <li>HSC Anchoring SOC is readily available and adhered to.</li> </ul>	
<b>Accepted Standard</b>	A licensed deck officer is standing watch on the vessel's bridge and monitoring the vessel's position while anchored in state waters.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>Bridge is left unattended for any period while anchored (such as during bathroom or coffee break).</li> <li>Electronic equipment alarms not enabled.</li> </ul>	
<b>5.2.3: DECK PROCEDURES - Safety Patrol ((Optional – for use on expanded inspection))</b>		
Ref: STCW A-VIII/2, part 4, par. 90 (in port); SOLAS, Ch. II-2, reg. 40 (p/v only). (Verify by checking logs, standing orders)		
<b>Exceed Standard</b>	Example: Monitoring devices such as cameras and motion sensors are used in addition to rounds.	
<b>Accepted Standard</b>	Safety patrol rounds of the vessel are conducted hourly while in port or at anchor and at least once per watch while underway	
<b>Below Standard (risk indicator)</b>	Example: Safety patrol rounds not required on a regular schedule, are incomplete, or not recorded.	
<b>5.3.1: EMERGENCY PREPAREDNESS- Emergency Towing ((Optional – for use on expanded inspection))</b>		
Ref: SOLAS, Ch. II-1, reg. 3-4 ('96 amendments).		
<b>Exceed Standard</b>	Example: Readily deployable emergency towing package.	
<b>Accepted Standard</b>	Emergency towing plan meets IMO Guidelines and drills are conducted twice annually.	
<b>Below Standard (risk indicator)</b>	Example: Emergency towing drills are not conducted twice annually or lack realism such as heavy weather or loss of power.	
<b>5.5: STABILITY CALCULATIONS &amp; CARGO PLANNING ((Optional – for use on expanded inspection))</b>		
Ref: SOLAS, Ch. VI, reg. 7 ('96 amendments); 46CFR78.17-22, 97.11-12		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Stability known by all deck officers.</li> <li>Frequent updates of load/discharge operation.</li> <li>Record (paper or electronic) of stress verifications.</li> </ul>	
<b>Accepted Standard</b>	Vessel Master and Chief Officers prepare, update, and monitor stability plans for all cargo loading and unloading operations.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>Incomplete/inadequate pre-load plan prepared.</li> <li>Dangerous cargo manifest not readily available or not completed prior to loading or departure.</li> </ul>	Plan Elements: transverse stability, longitudinal hull stress, sheer forces, bending moments, and ballasting.
<b>6.3.2: ENGINEERING OPERATING PROCEDURES - Engine Room (E/R) Crewing ((Optional – for use on expanded inspection))</b>		
Ref: STCW A-VIII/2, part 3-2		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>Procedures in place to ensure engineering officers do not exceed work hours during long maneuvering periods.</li> <li>Emergency procedure checklists posted or easily found and known by engineers.</li> <li>Additional engineering officer onboard.</li> </ul>	
<b>Accepted Standard</b>	Engine Room and/or Control Room manned by two Engineers and one rating while in WA waters.	
<b>Below Standard (risk indicator)</b>	Example: ER unattended during maneuvering.	

<b>6.3.3: ENGINEERING OPERATING PROCEDURES - Steering Gear Flat ((Optional – for use on expanded inspection))</b>		
Ref: SOLAS, Ch. V, reg. 19-2; 33 CFR 164.11(t) and 164.25		
<b>Exceed Standard</b>	Example: Video monitoring of flat from Engine Control Room (ECR) / bridge or hourly rounds made while at anchor or moored.	
<b>Accepted Standard</b>	Tests conducted per CFR and hourly rounds made while underway in WA waters. ((Connections properly greased)).	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• System malfunctioning or vessel failed to conduct CFR required testing (alarms, swing and operate pumps).</li> <li>• Poor housekeeping. Evidence of leaks. Unsecured or excessive stored material.</li> <li>• Emergency exit blocked.</li> </ul>	
<b>6.3.5: ENGINEERING OPERATING PROCEDURES - Lube Oil Systems ((Optional – for use on expanded inspection))</b>		
Ref: SOLAS, Ch. II-1, reg. 15		
<b>Exceed Standard</b>	Example: Records of lube oil analysis.	
<b>Accepted Standard</b>	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. ((records of maintenance for lube oil system and purifier))	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• Back-up lube oil pump untested. Evidence of leaks/drips from lube oil system piping/flanges/couplings.</li> <li>• Lube oil system not on pre arrival/departure checklists.</li> </ul>	
<b>6.3.6: ENGINEERING OPERATING PROCEDURES - Fuel and Lube Oil Strainers</b>		
Ref: SOLAS, Ch. II-1, reg. 15		
<b>Exceed Standard</b>	Example: Strainers throughout machinery space are maintained and free of residual oil.	
<b>Accepted Standard</b>	Strainers cleaned within 12 hours prior to entry/departure. ((records of maintenance for automatic self-cleaning strainers))	
<b>Below Standard (risk indicator)</b>	Example: Evidence of strainers unclean/clogged or not maintained. Residual oil or soaked pads in the strainer containment.	
<b>6.3.1: ENGINEERING OPERATING PROCEDURES – Electrical Systems</b>		
Ref: STCW A-VIII/2, part 3-2		
<b>Exceed Standard</b>	Example: <ul style="list-style-type: none"> <li>• The following conducted annually: <ul style="list-style-type: none"> <li>○ Thermographic survey of the electrical system.</li> <li>○ Automation testing (including float switches etc.).</li> <li>○ Inspection of junction boxes on motors.</li> </ul> </li> <li>• If alternative fuels are used (ammonia in particular) electrical system designed to meet spark-proof standards.</li> </ul>	EDG on standby confirmed? Y/N
<b>Accepted Standard</b>	All generators tested and proven plus two main generators online for maneuvering.	
<b>Below Standard (risk indicator)</b>	Example: <ul style="list-style-type: none"> <li>• No annual insulation testing of high voltage equipment (MEGGER testing).</li> <li>• Vessel maneuvers on only one generator.</li> <li>• No lock out tag out system.</li> <li>• Generator inoperable.</li> </ul>	

<b>7.1: DECK ((Optional – for use on expanded inspection))</b>		
Ref: SOLAS, Ch. I, reg. 11 and Ch. II-1, reg. 3-1 ('96 amendments), 46 CFR Subchapter B – US flag		
<b>Exceed Standard</b>	Example: Excellent condition. All deck tank vents are labeled correctly for the tanks they are servicing. Deck containment well maintained.	
<b>Accepted Standard</b>	Deck areas are well maintained, and all oil, garbage and debris are cleaned up promptly.	
<b>Below Standard (risk indicator)</b>	Example: Serious deterioration of hull, piping, fittings and/or structural members. Leaks from hatch cover hydraulics. Deck containment heavily eroded.	
<b>8.1: ACCOMMODATION ((Optional – for use on expanded inspection))</b>		
Ref: ILO 147 Convention; 46 CFR subpart 92.20 (US only)		
<b>Exceed Standard</b>	Example: Excellent condition.	
<b>Accepted Standard</b>	Accommodation spaces are well maintained and in sanitary condition. Equipment should be maintained in compliance with international and U.S. requirements.	
<b>Below Standard (risk indicator)</b>	Example: Crew spaces not clean, equipment broken. ILO-147 violations. Insufficient food aboard.	