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NVIC NO. 03-17  
February 16, 2017

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 03-17

Subj: GUIDELINES ON QUALIFICATION FOR NATIONAL AND STCW  
ENDORSEMENTS FOR SERVICE AS MASTER AND CHIEF MATE ON  
OFFSHORE SUPPLY VESSELS

Ref: (a) International Convention on Standards of Training, Certification and Watchkeeping  
for Seafarers, 1978, as amended (STCW), incorporated into regulations at 46 CFR  
11.102

1. PURPOSE. This Navigation and Vessel Inspection Circular (NVIC) provides guidance on qualification for and renewal of national and STCW endorsements for service as Master and Chief Mate on offshore supply vessels (OSVs).
2. ACTION. The Coast Guard will use this NVIC and 46 CFR Part 11 to establish whether mariners are qualified to hold national officer and STCW endorsements authorizing service as Master or Chief Mate on OSVs. Officers in Charge, Marine Inspection (OCMIs) should bring this NVIC to the attention of the maritime industry within their zones of responsibility.
3. DIRECTIVES AFFECTED. National Maritime Center (NMC) Policy Letter 7-00 is cancelled.
4. BACKGROUND/DISCUSSION.
  - a. The International Maritime Organization (IMO) amended the STCW Convention and STCW Code on June 25, 2010. These amendments entered into force for all ratifying countries, including the United States, on January 1, 2012.
  - b. The Convention is not self-implementing; therefore, the U.S., as a signatory to the STCW Convention, initiated regulatory changes to ensure full implementation of the amendments to the STCW Convention and STCW Code. The U.S. implements these provisions under the Convention and under the authority of the United States Code, Titles 5, 14, 33, and 46. The Coast Guard published a final rule in the Federal Register on

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December 24, 2013 (78 FR 77796) that implements the STCW Convention and STCW Code, including the 2010 amendments. This rule also made changes to qualification requirements for national endorsements, including those for service on OSVs. This rule became effective on March 24, 2014. The Coast Guard is publishing this NVIC to provide guidance on complying with these regulations and is cancelling previous policy. Accordingly, this NVIC cancels NMC Policy Letter 7-00.

- c. The Coast Guard recognizes the operations of offshore supply vessels and that some requirements applicable to other classes of vessels may not apply to OSVs. Using the authority described in 46 CFR 11.201(l); 11.301(f); 11.305(c); 11.307(c); 11.311(c); 11.313(c); 11.493(e); and 11.495(e) the Coast Guard has modified some of the requirements for merchant mariner credentials that will be limited to service on OSVs. This NVIC provides guidance on endorsements for service on OSVs.
  - d. The Coast Guard is extending the period during which mariners may qualify for STCW endorsements as Chief Mate and Master limited to service on OSVs under previous policies until January 1, 2018. Mariners may continue to qualify for national endorsements as Chief Mate and Master limited to service on OSVs under previous regulations and policies until March 24, 2019. Additional guidance is provided in Enclosures (1), (2), (5), and (6).
5. **DISCLAIMER.** This guidance is not a substitute for applicable legal requirements, nor is it itself a regulation. It is not intended to, nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and is issued for guidance purposes to outline methods of best practice for compliance to the applicable law. You can use an alternative approach if the approach satisfies the requirements of the applicable statutes and regulations.
6. **ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.**
- a. The development of this NVIC and the general policies contained within it have been thoroughly reviewed by the originating office, and are categorically excluded (CE) under current USCG CE # 33 from further environmental analysis, in accordance with Section 2.B.2. and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series). Because this NVIC implements, without substantive change, the applicable Commandant Instruction or other federal agency regulations, procedures, manuals, and other guidance documents, Coast Guard categorical exclusion #33 is appropriate.
  - b. This NVIC will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this NVIC must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), DHS and Coast Guard NEPA policy, and compliance with all other environmental mandates.
7. **DISTRIBUTION.** No paper distribution will be made of this Change Notice. An electronic version will be located at <http://www.uscg.mil/hq/cg5/nvic>.

8. RECORDS MANAGEMENT CONSIDERATIONS. This NVIC has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with the Federal Records Act (44 U.S.C. 3101 et seq.), NARA requirements, and the Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not create significant or substantial change to existing records management requirements.
9. FORMS/REPORTS. None.
10. REQUEST FOR CHANGES. All requests for changes and questions regarding implementation of this NVIC and/or requests for changes should be directed to the Mariner Credentialing Program Policy Division (CG-MMC-2), at (202) 372-2357 or [MMCPolicy@uscg.mil](mailto:MMCPolicy@uscg.mil). To obtain approval for an OSV training and assessment program, please contact the NMC at [IAskNMC@uscg.mil](mailto:IAskNMC@uscg.mil) or (888) 427-5662.

P. F. THOMAS  
Rear Admiral, U. S. Coast Guard  
Assistant Commandant for Prevention Policy

- Encl: (1) Qualification Requirements for National and STCW Endorsements for Service as Master on Offshore Supply Vessels of Less Than 1,600 GRT/3,000 GT
- (2) Qualification Requirements for National and STCW Endorsements for Service as Chief Mate on Offshore Supply Vessels of Less Than 1,600 GRT/3,000 GT
  - (3) Assessment Guidelines for Master or Chief Mate of Vessels of 500 GT or More and Less Than 3,000 GT Limited to Service on Offshore Supply Vessels
  - (4) Record of Assessment for Master or Chief Mate of Vessels of 500 GT or More and Less Than 3,000 GT Limited to Service on Offshore Supply Vessels
  - (5) Qualification Requirements for National and STCW Endorsements for Service as Master on Offshore Supply Vessels of 1,600 GRT/3,000 GT or More
  - (6) Qualification Requirements for National and STCW Endorsements for Service as Chief Mate on Offshore Supply Vessels of 1,600 GRT/3,000 GT or More
  - (7) Assessment Guidelines for Master or Chief Mate of Vessels of 3,000 GT or More Limited to Service on Offshore Supply Vessels
  - (8) Record of Assessment for Master or Chief Mate of Vessels of 3,000 GT or More Limited to Service on Offshore Supply Vessels
  - (9) Qualification Requirements for National and STCW Endorsements for Service on Offshore Supply Vessels that are also Inspected as Tank Vessels and/or Miscellaneous Cargo Vessels

**QUALIFICATION REQUIREMENTS FOR NATIONAL AND STCW  
ENDORSEMENTS FOR SERVICE AS MASTER ON OFFSHORE SUPPLY VESSELS  
OF LESS THAN 1,600 GRT/3,000 GT**

1. GENERAL. This enclosure provides guidance to qualify for national and STCW endorsements for service as Master on offshore supply vessels (OSVs) of less than 1,600 Gross Register Tons (GRT) and/or 3,000 Gross Tons (GT).
  
2. NATIONAL ENDORSEMENT.
  - a. Sea service. As is specified in 46 CFR 11.493(a), to qualify for a national endorsement as Master (OSV) of Less Than 1,600 GRT/3,000 GT, a mariner must have at least 24 months of total service as mate, chief mate, or master of ocean, near coastal, and/or Great Lakes on self-propelled vessels of more than 100 GRT. Service on inland waters may substitute for up to 50 percent of the required service. At least one-half of the required experience must be served as chief mate (service as master will meet this requirement). For purposes of qualifying for this endorsement, “chief mate” is as defined in 46 CFR 10.107, the deck officer next in rank to the master and upon whom the command of the vessel will fall in the event of incapacity of the master.
  
  - b. When evaluating sea service on vessels that are measured under both GRT and GT, the GT may be used for all international voyages, and for domestic voyages when the vessel is manned in accordance with the GT.
  
  - c. Training. To qualify for a national officer endorsement of Master (OSV) of Less Than 1,600 GRT/3,000 GT, mariners must provide evidence of successful completion of the following training:
    - 1) First Aid and CPR (46 CFR 11.201(i)). If this training was completed more than 1 year before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and
  
    - 2) Basic and Advanced Firefighting (46 CFR 11.201(h)(2)(v)). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence for Advanced Firefighting and Basic Training as specified in 46 CFR 11.302(b) and 11.303(b).
  
  - d. Examination.
    - 1) Mariners holding the following national officer endorsements (for the same route) are considered to have already met the examination requirement for a national endorsement as Master (OSV) of Less Than 1,600 GRT/3,000 GT near coastal or oceans:
      - A) Chief Mate of Self-Propelled Vessels of Unlimited Tonnage;
  
      - B) Chief Mate (OSV) of Less Than 1,600 GRT/3,000 GT; or

C) Chief Mate (OSV) of Less Than 10,000 GRT/GT.

e. Scope of endorsement.

- 1) National officer endorsements as Master (OSV) of Less Than 1,600 GRT/3,000 GT are issued for either near coastal or oceans routes. The service requirements are the same for both near coastal and oceans endorsements. The route on an endorsement will be based on the professional examination the mariner passed to qualify for the endorsement. When applying for an endorsement, mariners should indicate whether they are seeking a near coastal or an oceans endorsement.
- 2) Mariners may increase the scope of a national officer endorsement that is limited to near coastal waters to oceans routes by successfully completing a limited professional examination or a course approved for this purpose. The scope of the limited examination is described in the *Deck and Engineering Guide for the Administration of Merchant Marine Examinations*; this guide is available at the National Maritime Center web site: <http://www.uscg.mil/nmc/>. No additional service or training is required to increase the scope of the national officer endorsement from near coastal to oceans service.

3. STCW ENDORSEMENT.

- a. As specified in 46 CFR 11.311(c), the Coast Guard may exempt an applicant from meeting any individual knowledge, understanding, and proficiency required in Section A-II/2 of the STCW Code. Under this authority, mariners may qualify for an STCW endorsement as Master that will be limited to service on OSVs of Less Than 3,000 GT by providing the evidence highlighted below:

- 1) Service. Meeting the service requirements for an endorsement in 46 CFR 11.311(a)(1) as follows:

- A) At least 36 months of service as officer in charge of a navigational watch (OICNW) on vessels operating in oceans, near-coastal waters, and/or Great Lakes; or
- B) At least 24 months service as OICNW on vessels operating in oceans, near-coastal waters, and/or Great Lakes with not less than 12 months of this service as Chief Mate.

Service on inland waters that are navigable waters of the United States may be substituted for up to 50 percent of the total required service. Experience gained in the engine department on vessels may be creditable for up to 3 months of the service requirements;

- 2) Standard of competence. Meeting the standard of competence in Section A-II/2 of the STCW Code (incorporated by reference, see 46 CFR 11.102) as applicable to OSVs of less than 3,000 GT. The assessment guidelines in Enclosure (3) may be used for this purpose; and

- 3) Training. Completion of the following approved training specified in 46 CFR 11.311(a)(3):
  - A) Advanced Stability;
  - B) Advanced Meteorology, if the endorsement will be valid for oceans service;
  - C) Leadership and Managerial Skills;
  - D) Search and Rescue;
  - E) Management of Medical Care (an approved course for Medical Care Person in Charge will also meet this requirement);
  - F) Electronic Chart Display Information Systems (ECDIS), to be valid for vessels with this equipment;
  - G) Automatic Radar Plotting Aids (ARPA), to be valid for vessels with this equipment;
  - H) Global Maritime Distress and Safety System (GMDSS), to be valid for vessels with this equipment;
  - I) Basic Training (46 CFR 11.302). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and
  - J) Advanced Firefighting (46 CFR 11.303). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.303(b).
- b. To remove the limitation to OSVs, mariners must meet all requirements for an endorsement without a limitation in 46 CFR 11.311 that were not met when applying for the OSV limited endorsement. These requirements may be found in NVIC 11-14 and will include completion of the following:
  - 1) All assessments from NVIC 11-14 for any task identified in Enclosure (3) of this NVIC as specific to OSVs;
  - 2) Approved training for Advanced Shiphandling; and
  - 3) Approved training for Advanced Meteorology, if the mariner's endorsement limited to service on OSVs is for near coastal routes.
- c. The scope of a mariner's STCW endorsement (near coastal or oceans) will be determined by the mariner's national officer endorsement and the assessments completed to qualify for the endorsement. To qualify for an STCW endorsement valid for oceans, mariners must hold or qualify for a national officer endorsement authorizing service as Master for

oceans, and complete all assessments for an oceans endorsement. Enclosure (3) includes all assessments the mariner must complete in order to qualify for an STCW endorsement for Master (OSV) for oceans, and specifies the assessments that do not need to be completed for a near coastal endorsement.

- d. Mariners holding an STCW endorsement as Chief Mate valid for service on offshore supply vessels of Less Than 3,000 GT who are raising the grade of their endorsement to Master on Vessels of 3,000 GT or More Limited to Service on OSVs for the same route will not be required to submit management level assessments, and will not need additional training other than the following (if not completed previously):
  - 1) Leadership and Managerial Skills (46 CFR 11.311 (a)(3)(iv));
  - 2) ECDIS, to be valid for vessels with this equipment (46 CFR 11.311(a)(3)(vii));
  - 3) ARPA, to be valid for vessels with this equipment (46 CFR 11.311(a)(3)(viii));
  - 4) GMDSS, to be valid for vessels with this equipment (46 CFR 11.311(a)(3)(ix)).
- e. Operational-level training and assessments are not required if the mariner holds or has previously held any STCW 95 endorsement as Officer in Charge of a Navigational Watch (OICNW) valid on vessels of 500 GT or more (46 CFR 11.301(g)(4)). Mariners who have not held an STCW endorsement as OICNW for 500 GT or More issued after 1997 must also meet the requirements for qualification as OICNW.

#### 4. GRANDFATHERING.

- a. As is specified in 46 CFR 11.491(b), mariners who hold endorsements as Master (OSV) for not more than 500 GRT/3,000 GT based on the statutory limits on OSVs before October 15, 2010, will have the GRT of their endorsements increased to 1,600 GRT on their next credential transaction.
- b. Mariners who hold STCW endorsements as Master limited to near coastal domestic voyages will have the limitation to domestic voyages removed on their next credential transaction. The limitation to near coastal waters will remain, unless the mariner meets all requirements to increase the scope of the endorsement from near coastal waters to oceans. The limitation to service on OSVs will also remain, unless the mariner meets the requirements for an endorsement that is not trade-restricted.
- c. Mariners who began their service or training before March 24, 2014, may continue to qualify under previous regulations and policy as follows:
  - 1) Mariners may qualify for a national officer endorsement as Master (OSV) of Less Than 1,600 GRT/3,000 GT Near Coastal until March 24, 2019, by holding a national endorsement as Master Less Than 500 GRT based on service and/or training that began before March 24, 2014. No further service, examination or training is required.

- 2) Mariners may qualify for an STCW endorsement as Master that is limited to service on near coastal OSVs of less than 3,000 GT until December 31, 2017, by holding a national endorsement as Master Less Than 500 GRT or Master (OSV) and providing evidence of completion of the following approved training:
    - A) Basic Training, if this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence;
    - B) Advanced Firefighting, if this training was completed for another endorsement it need not be re-taken. Holding an endorsement that required this training will be satisfactory evidence that the training was completed;
    - C) Bridge Resource Management;
    - D) Leadership and Managerial Skills;
    - E) ECDIS, to be valid for vessels with this equipment;
    - F) ARPA, to be valid for vessels with this equipment; and
    - G) GMDSS, to be valid for vessels with this equipment.
  - d. To remove a trade restriction from an STCW endorsement as Master limited to OSVs of less than 3,000 GT mariners must meet all requirements for an STCW endorsement as Master of Vessels of 500 GT or More and Less Than 3,000 GT in 46 CFR 11.311 that were not met previously.
5. RENEWAL OF ENDORSEMENTS.
- a. To renew a national officer endorsement, mariners must meet the applicable requirements in 46 CFR 10.227.
  - b. To renew an STCW endorsement as Master, mariners must meet the applicable requirements in 46 CFR 10.227 to renew their national endorsement and provide evidence of:
    - 1) Completion of approved or accepted training for:
      - A) Leadership and Managerial Skills (46 CFR 11.311(b)(1)); and
      - B) ECDIS, to be valid on a vessel with this equipment (46 CFR 11.311(b)(2));
    - 2) Maintaining the standard of competence in standard of competence for Basic Training (46 CFR 11.302(b)) and Advanced Firefighting (46 CFR 11.3031(b)); and
    - 3) Seafarers serving as Lifeboatman must also provide evidence of maintaining the standard of competence for Proficiency in Survival Craft (46 CFR 12.613) or Proficiency in Survival Craft-Limited (46 CFR 12.615), as appropriate.



**QUALIFICATION REQUIREMENTS FOR NATIONAL AND STCW  
ENDORSEMENTS FOR SERVICE AS CHIEF MATE ON OFFSHORE SUPPLY  
VESSELS OF LESS THAN 1,600 GRT/3,000 GT**

1. GENERAL. This enclosure provides guidance to qualify for national and STCW endorsements for service as Chief Mate on offshore supply vessels (OSVs) of less than 1,600 GRT/3,000 GT.
2. NATIONAL ENDORSEMENT.
  - a. Sea service. As is specified in 46 CFR 11.495(a), to qualify for a national endorsement as Chief Mate (OSV) of Less Than 1,600 GRT/3,000 GT, a mariner must have at least 12 months of total service as mate, chief mate, or master of ocean, near coastal, and/or Great Lakes on self-propelled vessels of more than 100 GRT. Service on inland waters may substitute for up to 50 percent of the required service.
  - b. When evaluating sea service on vessels that are measured under both GRT and GT, the GT may be used for all international voyages, and for domestic voyages when the vessel is manned in accordance with the GT.
  - c. Training. To qualify for a national officer endorsement of Chief Mate (OSV) of Less Than 1,600 GRT/3,000 GT, mariners must provide evidence of successful completion of the following training:
    - 1) First Aid and CPR (46 CFR 11.201(i)). If this training was completed more than 1 year before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and
    - 2) Basic and Advanced Firefighting (46 CFR 11.201(h)(2)(v)). This training must have been completed within the past 5 years, or if it was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b) and 11.303(b).
  - d. Examination. All mariners must successfully complete the full examination for this endorsement (46 CFR 11.903(a)(28)).
  - e. Scope of endorsement.
    - 1) National officer endorsements as Chief Mate (OSV) of Less Than 1,600 GRT/3,000 GT are issued for either a near coastal or oceans route. The service requirements are the same for both near coastal and oceans endorsements. The route on an endorsement will be based on the professional examination the mariner passed to qualify for the endorsement. When applying for an endorsement, mariners should indicate whether they are seeking a near coastal or an oceans endorsement.
    - 2) Mariners may increase the scope of a national officer endorsement that is limited to near coastal waters to oceans routes by completing a limited professional examination or a course approved for this purpose. No additional service or training is required to

increase the scope of the national officer endorsement from near coastal to oceans service.

3. STCW ENDORSEMENT.

- a. As specified in 46 CFR 11.313(c), the Coast Guard may exempt an applicant from meeting any individual knowledge, understanding, and proficiency required in Section A-II/2 of the STCW Code. Under this authority, mariners may qualify for an STCW endorsement as Chief Mate that will be limited to service on OSVs of less than 1,600 GRT/3,000 GT by providing the evidence highlighted below:
  - 1) Service. Meeting the service requirements for an endorsement in 46 CFR 11.313(a)(1). Mariners must provide evidence of 12 months of service as OICNW on vessels operating in oceans, near-coastal waters, and/or Great Lakes. Service on inland waters that are navigable waters of the United States may be substituted for up to 50 percent of the total required service. Experience gained in the engine department on vessels may be creditable for up to 1 month of the service requirements;
  - 2) Standard of competence. Meeting the standard of competence in Section A-II/2 of the STCW Code (incorporated by reference, see 46 CFR 11.102) as applicable to OSVs of less than 3,000 GT. The assessment guidelines in Enclosure (3) may be used for this purpose; and
  - 3) Training. Completion of the following approved or accepted training specified in 46 CFR 11.313(a)(3):
    - A) Advanced Stability;
    - B) Advanced Meteorology, if the endorsement will be valid for oceans service;
    - C) Leadership and Managerial Skills;
    - D) Management of Medical Care (an approved course for Medical Care Person in Charge will also meet this requirement);
    - E) Search and Rescue;
    - F) Electronic Chart Display Information Systems (ECDIS), to be valid for vessels with this equipment;
    - G) Automatic Radar Plotting Aids (ARPA), to be valid for vessels with this equipment;
    - H) Global Maritime Distress and Safety System (GMDSS), to be valid for vessels with this equipment;

- I) Basic Training (46 CFR 11.302). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and
  - J) Advanced Firefighting (46 CFR 11.303). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.303(b).
- b. To remove the limitation to OSVs, mariners must meet all requirements for an endorsement without a limitation to service on OSVs in 46 CFR 11.313 that were not met when applying for the OSV limited endorsement. These requirements may be found in NVIC 11-14 and will include completion of the following:
- 1) All assessments from NVIC 11-14 for any task identified in Enclosure (3) of this NVIC as specific to OSVs;
  - 2) Approved training for Advanced Shiphandling; and
  - 3) Approved training for Advanced Meteorology, if the mariner's endorsement limited to service on OSVs is for near coastal routes.
- c. The scope of a mariner's STCW endorsement (near coastal or oceans) will be determined by the mariner's national officer endorsement and the assessments completed to qualify for the endorsement. To qualify for an STCW endorsement valid for oceans, mariners must hold or qualify for a national officer endorsement authorizing service as Master for oceans, and complete all assessments for an oceans endorsement. Enclosure (3) includes all assessments the mariner must complete in order to qualify for an STCW endorsement for Master (OSV) for oceans, and specifies the assessments that do not need to be completed for a near coastal endorsement.
- d. Operational-level training and assessments are not required if the mariner holds or has previously held any STCW 95 endorsement as Officer in Charge of a Navigational Watch (OICNW) valid on vessels of 500 GT or more (46 CFR 11.301(g)(4)). Mariners who have not held an STCW endorsement as OICNW for 500 GT or More issued after 1997 must also meet the requirements for qualification as OICNW.
4. GRANDFATHERING.
- a. As is specified in 46 CFR 11.491(b), mariners who hold endorsements as Chief Mate (OSV) for not more than 500 GRT/3,000 GT based on the statutory limits on OSVs before October 15, 2010, will have the GRT of their endorsements increased to 1,600 GRT on their next credential transaction.
  - b. Mariners who hold STCW endorsements as Chief Mate limited to near coastal domestic voyages will have the limitation to domestic voyages removed on their next credential transaction. The limitation to near coastal waters will remain, unless the mariner meets all requirements to increase the scope of the endorsement from near coastal waters to

oceans. The limitation to service on OSVs will also remain, unless the mariner meets the requirements for an endorsement that is not trade-restricted.

5. RENEWAL OF ENDORSEMENTS.

- a. To renew a national officer endorsement, mariners must meet the applicable requirements in 46 CFR 10.227.
- b. To renew an STCW endorsement as Chief Mate, mariners must meet the applicable requirements in 46 CFR 10.227 to renew their national endorsements and provide evidence of:
  - 1) Completion of approved or accepted training for:
    - A) Leadership and Managerial Skills (46 CFR 11.313(b)(1)); and
    - B) ECDIS, to be valid on a vessel with this equipment (46 CFR 11.313(b)(2));
  - 2) Maintaining the standard of competence for Basic Training as specified in 46CFR 11.302(b) and Advanced Firefighting as specified in 46 CFR 11.303(b); and
  - 4) Seafarers serving as Lifeboatman must also provide evidence of maintaining the standard of competence for Proficiency in Survival Craft (46 CFR 12.613) or Proficiency in Survival Craft-Limited (46 CFR 12.615), as appropriate.

## **Assessment Guidelines for Master or Chief Mate of Vessels of 500 GT or More and Less Than 3,000 GT Limited to Service on Offshore Supply Vessels**

### **Standard of Competence**

Every candidate for an STCW endorsement as Master or Chief Mate of Vessels of 500 GT or More and Less than 3,000 GT Limited to Service on Offshore Supply Vessels must provide evidence of having achieved the required standard of competence as specified in Table A-II/2 of the STCW Code (46 CFR 11.311(a)(2) and 11.313(a)(2)) as applicable to offshore supply vessels (OSVs). The table below is adopted from Table A-II/2 of the STCW Code to assist the candidate and assessor in the demonstration of competency.

### **Practical Skill Demonstrations**

These assessment guidelines establish the conditions under which the assessment will occur, the performance or behavior the candidate is to accomplish, and the standards against which the performance is measured.

### **Qualified Assessors**

A shipboard Qualified Assessor (QA) who witnesses a practical demonstration may sign the appropriate blocks and pages in the Record of Assessment in Enclosure (3) or an equivalent record. All assessments must be signed by a QA approved by the Coast Guard in accordance with 46 CFR 10.405. In order to facilitate the transition to this new requirement, the Coast Guard will accept assessments that have been demonstrated in the presence of and signed by an assessor who has not been Coast Guard approved until December 31, 2017, provided that the assessor meets the professional requirements in 46 CFR 10.405(a)(3) to assess competence for the specific endorsement. Assessors must be in possession of the level of endorsement, or other professional credential, which provides proof that he or she has attained a level of experience and qualification equal or superior to the relevant level of knowledge, skills, and abilities to be assessed (46 CFR 10.405(a)(3)). In the interim, the Coast Guard will accept assessments signed by mariners who hold an appropriate national endorsement and have at least 1 year of experience as Master on vessels at least 200 GRT or 500 GT. After December 31, 2017, QAs must be approved by the National Maritime Center to conduct the assessment (46 CFR 10.405). Qualified military personnel need not be approved QA's and may continue to sign assessments after December 31, 2017.

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

## Notes

The following notes are used in the “Task No.” column of the assessment table that follows:

- Note 1* The assessment is not required for an endorsement limited to near coastal waters. These assessments must be completed to remove the near coastal limitation.
- Note 2* The assessment is the same or equivalent to one for an endorsement that is not trade-restricted, and need not be repeated to remove the limitation to OSVs.
- OSV* The assessment is specific to OSVs, and another assessment of the knowledge, understanding, and proficiency (KUP) is needed for an endorsement that is not limited to OSVs or to remove the limitation to OSVs. The identically numbered assessment(s) in NVIC 11-14 for an endorsement as Master or Chief Mate of Vessels of 500 GT or More and Less than 3,000 GT that is not limited to service on OSVs may be used for an endorsement that will not be limited to OSVs.
- ARPA* Not required for mariners serving exclusively on vessels not fitted with an Automatic Radar Plotting Aid (ARPA); a limitation will be added to the endorsement indicating that it is not valid for service on vessels equipped with ARPA.
- ECDIS* Not required for mariners serving exclusively on vessels not fitted with an Electronic Chart Display and Information System (ECDIS); a limitation will be added to the endorsement indicating that it is not valid for service on vessels equipped with ECDIS.
- Course* The KUP is demonstrated by the successful completion of the specified Coast Guard approved or accepted course.

Numbering gaps in the sequence of assessments are intentional to allow easy correlation to corresponding assessments for endorsements that are not limited to service on OSVs.

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

**Assessment Guidelines for Master or Chief Mate on Vessels of 500 GT or More and Less Than 3,000 GT Limited to Service on Offshore Supply Vessels**

Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
1.1.A Create a voyage plan <i>Note 2</i>	Plan a voyage and conduct navigation	Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks, taking into account <ol style="list-style-type: none"> <li>.1 The General Provisions on Ships' Routing</li> <li>.2 Restricted waters</li> <li>.3 Meteorological conditions</li> <li>.4 Ice</li> <li>.5 Restricted visibility</li> <li>.6 Traffic separation schemes</li> <li>.7 Vessel traffic service (VTS) areas</li> <li>.8 Areas of extensive tidal effects</li> <li>.9 Ship Reporting Systems and VTS procedures</li> </ol>	On a vessel or in a navigation laboratory, and provided with chart catalogs, charts, nautical publications, and vessel particulars,	the candidate creates a voyage plan for a coastwise voyage of at least 600 nautical miles, a segment of which must be at night and in restricted waters.	The candidate's plan: <ol style="list-style-type: none"> <li>1. Considers and utilizes:               <ol style="list-style-type: none"> <li>a. The condition of the vessel, equipment, operational limitations, draft and maneuvering characteristics;</li> <li>b. Any special characteristics of the cargo and its stowage;</li> <li>c. Crew member competency and rest status;</li> <li>d. Up-to-date vessel certificates and documents;</li> <li>e. Up-to-date charts of proper scale, and the latest notices to mariners and radio navigational warnings;</li> <li>f. Up-to-date coast pilots, sailing directions, and other information sources appropriate for the voyage;</li> <li>g. Relevant routing guides;</li> <li>h. Up-to-date tide and current tables and atlases;</li> <li>i. Weather information;</li> <li>j. Weather routing services;</li> <li>k. Vessel reporting systems, VTS and environmental protection measures;</li> <li>l. Vessel traffic density for the route;</li> <li>m. Pilotage requirements and information exchange; and;</li> <li>n. Port information, including emergency response capability; and</li> </ol> </li> </ol> <p align="right"><i>Continued on next page</i></p>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>1.1.A <i>Cont'd</i></p> <p>Create a voyage plan</p> <p><i>Note 2</i></p>					<p style="text-align: center;"><i>Continued from previous page</i></p> <p>2. Contains:</p> <ul style="list-style-type: none"> <li>a. Courses plotted on the appropriately scaled charts noting the ETA at each way point, including the final way point;</li> <li>b. Courses and distances between way points which were correctly calculated and indicated on the charts;</li> <li>c. The most direct route that avoids all hazards to navigation by a margin of safety of 3.0 nm, where possible;</li> <li>d. Areas of all required speed changes;</li> <li>e. Minimum under keel clearances in critical areas; positions requiring a change of machinery status;</li> <li>f. Waypoints of all course changes;</li> <li>g. Methods and frequency of position fixing;</li> <li>h. Positions and radio hailing frequencies or channels where port authorities, pilots and VTS services must be notified are noted on the relevant chart;</li> <li>i. State of the tide and currents at the port of departure for the times of departure and transit were determined; and</li> <li>j. A contingency plan for alternative actions in cases of emergency.</li> </ul>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
1.2.A Great circle sailing <i>Note 1</i> <i>Note 2</i>	Plan a voyage and conduct navigation	Voyage planning and navigation	On a vessel or in a navigation laboratory, given a latitude and longitude of departure and latitude and longitude of arrival at least 3,000 nm apart, and using a calculator (non-programmable or programmable), sight reduction tables, and/or U.S. Pub. No. 9 Tables.	the candidate calculates the great circle route between the point of departure and the point of arrival.	The candidate's great circle route contains the: <ol style="list-style-type: none"> <li>1. Initial course, which is within <math>\pm 1.0^\circ</math> of the assessor's solution;</li> <li>2. Total distance, which is within 1.0 nm of the assessor's solution;</li> <li>3. Position of the vertex, which is within 1 nm of the assessor's position; and</li> <li>4. Positions of points along the great circle at intervals of <math>5.0^\circ</math> (300 nm), which are within 1.0 nm of the assessor's solution.</li> </ol>
1.2.B Mercator sailing initial course and total distance <i>Note 1</i> <i>Note 2</i>	Plan a voyage and conduct navigation	Voyage planning and navigation	On a vessel or in a navigation laboratory, given the latitude and longitude of departure and arrival at least 1,000 nm apart, using a calculator (non-programmable or programmable), sight reduction tables, and/or U.S. Pub. No. 9 Tables,	the candidate calculates the Mercator course and distance between the point of departure and the point of arrival.	The candidate's: <ol style="list-style-type: none"> <li>1. Initial course is within <math>\pm 1.0^\circ</math> of the assessor's solution; and</li> <li>2. Total distance is within 1.0 nm of the assessor's solution.</li> </ol>

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1.2.C Mercator sailing final position <i>Note 1</i> <i>Note 2</i>	Plan a voyage and conduct navigation	Voyage planning and navigation	On a vessel or in a navigation laboratory, given a latitude and longitude of departure and a course and distance for a passage of at least 1,000 nm, using a calculator (non-programmable or programmable), and/or Publication Number 9 Tables,	the candidate calculates the final position using Mercator sailing.	The candidate's final position is within $\pm 1.0$ nm of the assessor's solution.
2.1.A Meridian transit (other than sun) <i>Note 1</i> <i>Note 2</i>	Determine position and the accuracy of resultant position fix by any means	Position determination in all conditions by celestial observations	On a vessel at sea, with a celestial body other than the sun at upper transit and a clear horizon,	the candidate measures the altitude of the body as it crosses the meridian of the observer and calculates the latitude of the vessel.	The candidate's latitude is calculated at meridian passage and must be within $\pm 1.0$ nm of the assessor's solution.  <b>NOTE:</b> The assessor may permit the use of an Ex-Meridian to compensate for weather, cloud cover, or other reason that the assessor deems necessary.

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2.1.B Star identification <i>Note 1</i> <i>Note 2</i>	Determine position and the accuracy of resultant position fix by any means	Position determination in all conditions by celestial observations	On a vessel or onshore with a suitable horizon, or in a navigational laboratory, using a star finder or navigational publication, such as Pub. 249, and given the times of observation, altitudes and azimuths of three unknown stars,	the candidate identifies the three stars.	The candidate accurately identifies the three stars within 20 minutes.
2.1.C Star/planet selection <i>Note 1</i> <i>Note 2</i>	Determine position and the accuracy of resultant position fix by any means	Position determination in all conditions by celestial observations	On a vessel or onshore with a suitable horizon, or in a navigational laboratory, given the time of observation,	the candidate identifies the best three stars or planets to obtain a fix.	The candidate's identification is completed within 20 minutes and the bodies identified by the candidate: <ol style="list-style-type: none"> <li>1. Are the three brightest available; and</li> <li>2. Have the greatest crossing angles possible between each other when plotted.</li> </ol>

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2.2.A GPS routing  <i>Note 1</i> <i>Note 2</i>	Determine position and the accuracy of resultant position fix by any means	Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks: Routing in accordance with the General Principles on Ship's Routing	On a vessel, on a simulator, or in a navigation laboratory, using a GPS receiver which meets IMO standards, and given a port of departure and a port of arrival at least 2,000 nm apart in a generally east-west direction, with at least three legs, which include both rhumb line and great circle legs,	the candidate enters the waypoints and route for the voyage into the GPS.	The candidate's: <ol style="list-style-type: none"> <li>1. Way points are correctly determined entered, and saved;</li> <li>2. Route is correctly entered and saved; and</li> <li>3. Great circle or rhumb line legs are correctly designated.</li> </ol>
3.1.A Amplitude of celestial body  <i>Note 1</i> <i>Note 2</i>	Determine and allow for compass errors	Ability to determine and allow for errors of the magnetic and gyro-compasses	On a ship underway, with a celestial body other than the sun on either the visible horizon or the celestial horizon,	the candidate takes a compass bearing of the body.	The candidate takes the bearing when repeater is level and notes: <ol style="list-style-type: none"> <li>1. Time of the reading;</li> <li>2. Compass bearing (magnetic and/or gyrocompass);</li> <li>3. Determined true bearing of the body;</li> <li>4. Compass error as determined by comparing the true bearing to the compass bearing; and</li> <li>5. Calculates a solution that is within <math>\pm 1.0^\circ</math> of the assessor's solution.</li> </ol>

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3.2.A Write a standing order for compasses <i>Note 2</i>	Determine and allow for compass errors	Knowledge of the principles of magnetic and gyro-compasses	On a vessel, or in a navigational laboratory, when asked to write a standing order regarding onboard compasses,	the candidate writes a standing order regarding the onboard compasses.	The candidate's standing order includes: <ol style="list-style-type: none"> <li>1. Comparison of magnetic and gyrocompasses;</li> <li>2. Frequency of comparisons and error determination are increased when near navigational hazards;</li> <li>3. Comparison of master gyro and slaves;</li> <li>4. Listing all slave compasses to be checked including the emergency steering stand; and</li> <li>5. Effect of magnetic objects near magnetic compass.</li> </ol>
3.3.A Operation and care of gyrocompass <i>Note 2</i>	Determine and allow for compass errors	Understanding of systems under the control of the master gyro and a knowledge of the operation and care of the main types of gyro-compasses	On a vessel, or in a navigational laboratory, when asked to write an instruction regarding onboard compasses,	the candidate writes an instruction for the watch standing officers regarding the onboard compasses.	The candidate's instruction includes: <ol style="list-style-type: none"> <li>1. Systems affected by a malfunction of the master gyrocompass;</li> <li>2. How a malfunction of the master gyrocompass manifests itself in each system;</li> <li>3. Location of instructions for starting the master gyrocompass and simulating the procedure;</li> <li>4. Location of instructions for shutting down the master gyrocompass and simulating the procedure;</li> <li>5. Procedures to follow in the event of a master gyrocompass malfunction;</li> <li>6. Procedures to follow in the event of a disconnect of system requiring input from the master gyrocompass; and</li> <li>7. Routine maintenance procedures including replacement of the sensitive element and any lubrication needed.</li> </ol>

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4.1 Search and Rescue <i>Course Note 2</i>	Co-ordinate search and rescue operations	A thorough knowledge of and ability to apply the procedures in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual	This KUP is demonstrated by successful completion of the approved <i>Search and Rescue</i> course specified in 46 CFR 11.311(a)(3)(v) and 11.313(a)(3)(v).		
5.1 Operate ARPA Controls and functions <i>Course ARPA Note 2</i>	Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	An appreciation of system errors and thorough understanding of the operational aspects of navigational systems  Evaluation of navigational information derived from all sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the ship	These KUPs are demonstrated by successful completion of the approved ARPA course specified in 46 CFR 11.311(a)(3)(viii) and 11.313(a)(3)(viii) or if the mariner holds an STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ARPA.		

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
5.2.A Blind pilotage planning <i>Note 2</i>	Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	Blind pilotage planning  Evaluation of navigational information derived from all available sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the ship	On a vessel, or in a navigational laboratory,	the candidate writes a standing order regarding navigation in restricted visibility.	The candidate's standing order includes: <ol style="list-style-type: none"> <li>1. Conditions constituting restricted visibility;</li> <li>2. Informing the Master;</li> <li>3. Traffic considerations;</li> <li>4. Following the appropriate rules of the road;</li> <li>5. Safe speeds;</li> <li>6. Engineroom alert level (SBE, etc.);</li> <li>7. Appropriate signals being used;</li> <li>8. Posting of lookouts;</li> <li>9. Operation and use of radar and other electronic surveillance devices available; and</li> <li>10. Positioning of vessel in the seaway.</li> </ol>
5.3.A Plan and execute a passage <i>Note 2</i>	Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	The interrelationship and optimum use of all navigational data available for conducting navigation	On a vessel or a simulator, using radar and/or ARPA, with multiple targets displayed on the 12 mile scale, in congested coastal waters with reduced visibility, while transiting a traffic separation scheme, in the presence of current, and with a course change of not less than 30° in the route,	the candidate plans and executes a passage through the area of transit, using the principles of bridge resource management (BRM).	The candidate's plan and passage includes: <ol style="list-style-type: none"> <li>1. Assigning BRM roles;</li> <li>2. Monitoring the vessel's progress;</li> <li>3. Communicating clearly and effectively;</li> <li>4. Controlling passage for safe navigation and collision avoidance; and</li> <li>5. Ensuring that all team members use all relevant navigational data.</li> </ol>

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6.1 ECDIS licensing and updating <i>Course ECDIS Note 2</i>	Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making	Management of operational procedures, system files and data, including manage the procurement, licensing and updating of chart data and system software to conform to established procedures	This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.311(a)(3)(vii) and 11.313(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.		
6.2 Update ECDIS system version <i>Course ECDIS Note 2</i>	Maintain the safety of navigation through use of ECDIS and associated navigation systems to assist command decision making	Management of operational procedures, system files and data, including system and information updating, including the ability to update ECDIS system version in accordance with vendor's product development	This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.311(a)(3)(vii) and 11.313(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.		

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6.3 ECDIS system configure and backup <i>Course ECDIS Note 2</i>	Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making	Management of operational procedures, system files and data, including create and maintain system configuration and backup files	This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.311(a)(3)(vii) and 11.313(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.		
6.4 Create and maintain ECDIS log files <i>Course ECDIS Note 2</i>	Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making	Management of operational procedures, system files and data, including create and maintain log files in accordance with established procedures	This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.311(a)(3)(vii) and 11.313(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.		

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<p>6.5 Maintain ECDIS route plan files <i>Course ECDIS Note 2</i></p>	<p>Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making</p>	<p>Management of operational procedures, system files and data, including create and maintain route plan files in accordance with established procedures</p>	<p>This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.311(a)(3)(vii) and 11.313(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.</p>		
<p>6.6 ECDIS track history and alarms <i>Course ECDIS Note 2</i></p>	<p>Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making</p>	<p>Management of operational procedures, system files and data, including use ECDIS log-book and track history functions for inspection of system functions, alarm settings and user responses</p>	<p>This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.311(a)(3)(vii) and 11.313(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.</p>		

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6.7 ECDIS playback and route planning <i>Course ECDIS Note 2</i>	Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making	Use ECDIS playback functionality for passage review, route planning and review of system functions	This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.311(a)(3)(vii) and 11.313(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.		
7.1.A Forecast weather for next 24 hours <i>OSV</i>	Forecast weather and oceanographic conditions	Ability to understand and interpret a synoptic chart and to forecast area weather, taking into account local weather conditions and information received by weather fax	On a vessel, or in a laboratory, given synoptic surface and 500 mb weather charts for the previous 24-hour period, and temperature, pressure and wind readings for the previous 8 hours,	the candidate determines the weather to be encountered during the next 24-hour period.	The candidate's determinations of expected wind, sea, and weather conditions (e.g. types and amount of cloud cover, rain, and fog) are correct when compared with the movement of the systems and fronts during subsequent 24-hour period.
7.2.A Identify fronts <i>OSV</i>	Forecast weather and oceanographic conditions	Knowledge of characteristics of weather systems, including tropical revolving storms and avoidance of storm centers and the dangerous quadrants	On a vessel, or in a laboratory, when asked to describe the characteristics of tropical storms,	the candidate describes the characteristics of tropical storms.	The candidate correctly describes tropical storms of differing magnitudes and actions to maintain the safety of navigation and minimize any risks to the vessel.

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7.3.A Ocean currents <i>OSV</i>	Forecast weather and oceanographic conditions	Knowledge of ocean current systems	On a vessel, or in a laboratory when asked to describe the anticipated effects of set and drift,	the candidate describes the anticipated effects of set and drift in regards to leeway, increased or decreased fuel consumption, voyage (or voyage leg) duration and potential traffic.	The candidate's description includes: 1. Long distance voyages where large current systems will affect the navigation and operation of the vessel; and 2. Short distance voyages or voyage legs where small current systems will affect the navigation and operation of the vessel.
7.4.A Calculate height of tide <i>Note 2</i>	Forecast weather and oceanographic conditions	Ability to calculate tidal conditions Use all appropriate nautical publications on tides and currents	On a vessel, or in a laboratory, given a zone time at a subordinate location, and using an appropriate nautical publication,	the candidate correctly calculates the height of the tide.	The candidate's calculation is within $\pm 0.5$ feet of the assessor's solution.
7.4.B Calculate tidal current <i>Note 2</i>	Forecast weather and oceanographic conditions	Ability to calculate tidal conditions Use all appropriate nautical publications on tides and currents	On a vessel or in a laboratory, given a zone time at a subordinate location, and using an appropriate nautical publication,	the candidate correctly calculates the tidal current.	The candidate's calculation is within $\pm 0.5$ knots and $\pm 5^\circ$ of the assessor's solution.

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7.4.C Calculate time for desired height of tide <i>Note 2</i>	Forecast weather and oceanographic conditions	Ability to calculate tidal conditions  Use all appropriate nautical publications on tides and currents	On a vessel or in a laboratory, given a desired height of the tide at a subordinate location, and using an appropriate nautical publication,	the candidate correctly calculates the time period when the tidal rise creates a temporary situation where there is sufficient depth of water for the vessel to safely transit a given area where the chart datum indicates insufficient depth of water for the transit.	The candidate's calculation is within $\pm 5$ minutes of the assessor's solution.  <b>NOTE:</b> At the assessor's discretion, the candidate may calculate the time period when the tidal drop creates a temporary situation where there is insufficient depth of water for the vessel to safely transit a given area where the chart datum indicates sufficient depth of water for the transit.
8.1.A Beaching a vessel <i>OSV</i>	Respond to navigational emergencies	Precautions when beaching a ship	On a vessel or in a laboratory, when asked to identify the precautions to be observed when beaching a vessel,	the candidate describes the precautions to be observed.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Ideal conditions, such as:               <ol style="list-style-type: none"> <li>a. Weather;</li> <li>b. Material of which the beach is made;</li> <li>c. Slope of the beach; and</li> <li>d. Trim of the vessel;</li> </ol> </li> <li>2. Effects of weather and current after beaching; and</li> <li>3. Precautions to take after beaching such as:               <ol style="list-style-type: none"> <li>a. Preparations to keep from being driven further ashore;</li> <li>b. Preparations for refloating;</li> <li>c. Damage assessment;</li> <li>d. Effects of ballast; and</li> <li>e. Vessel Soundings.</li> </ol> </li> </ol>

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8.2.A Grounding a vessel <i>OSV</i>	Respond to navigational emergencies	Action to be taken if grounding is imminent, and after grounding	On a vessel, or in a laboratory, when asked to identify the precautions to be observed to minimize grounding damage,	the candidate describes the appropriate steps to minimize grounding damage.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. All watertight doors be closed, the hull be checked, the bilges and tanks be sounded, and all spaces below the waterline be visually inspected where possible;</li> <li>2. The vessel be anchored in order to hold it until the grounding force is calculated and the float plan is complete;</li> <li>3. Ballast and fuel be transferred as necessary;</li> <li>4. The radio room or GMDSS station, satellite terminals, and other automatic distress transmitters of the vessel position be notified as necessary;</li> <li>5. Communications with the engine room be established and the sea suction be switched if necessary;</li> <li>6. Type of bottom on which the vessel grounded is determined; and</li> <li>7. The threat of oil pollution is determined.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
8.3.A Refloating a grounded vessel <i>OSV</i>	Respond to navigational emergencies	Refloating a grounded ship with and without assistance	On a vessel or in a laboratory, when asked to describe the precautions to be observed when refloating a grounded vessel, with and without assistance,	the candidate describes the appropriate steps to prepare for refloating a grounded vessel.	The candidate's description includes: 1. Determining the: a. Depth of water around the vessel; b. Effects of tide and current; c. Time and height of the next high tide; d. Best placement of assist boats (if available); e. Structural integrity of the hull; f. Vessel stability, stress, and grounding forces; and g. Effect of de-ballasting or cargo removal; 2. Maintaining constant radio communications with assist boats; 3. Displaying proper day and night signals; 4. Obtaining continuous update of weather forecasts; 5. Determining the effectiveness of assist boats; and 6. The crew remains away from towing lines before pulling starts.
8.4.A Prepare for a collision <i>OSV</i>	Respond to navigational emergencies	Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause	On a vessel or in a laboratory, when asked to describe actions to prepare for a collision or on a simulator during a simulation of an imminent collision,	the candidate gives or describes the proper commands to prepare for a collision.	The commands described or given include: 1. Closing all watertight doors; 2. Broadcasting appropriate radio messages; 3. Sounding of danger, maneuvering, and vessel emergency signals, as required; 4. Alerting the engine room; and 5. Directing the vessel crew to take appropriate steps to lessen the force of impact.

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8.5.A Damage control <i>Note 2</i>	Respond to navigational emergencies	Assessment of damage control	On a vessel of at least 50 GRT at sea, on a simulator, or in a laboratory, during a simulation of a vessel casualty resulting in structural damage,	the candidate correctly identifies the type and scale of the presented vessel casualty damage and promptly identifies and takes proper action to safely minimize the effects of the damage.	The candidate's actions ensure that : <ol style="list-style-type: none"> <li>1. Communications are effective and comply with established procedures; and</li> <li>2. Decisions and actions maximize safety of persons.</li> </ol>
8.6.A Emergency steering <i>Note 2</i>	Respond to navigational emergencies	Emergency steering	On a vessel of at least 50 GRT underway, on a simulator, or in a laboratory, during a simulation of the vessel suffering a steering casualty that cannot be corrected by switching steering motors,	the candidate gives the proper commands to operate the emergency steering system.	The commands given by the candidate include: <ol style="list-style-type: none"> <li>1. Having crew man the aft steering room;</li> <li>2. Establishing communications with the steering engine room;</li> <li>3. Switching steering control from the bridge to the steering engine room; and</li> <li>4. Appropriate helm orders to be followed and courses to be steered.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
8.7.A Emergency towing <i>OSV</i>	Respond to navigational emergencies	Emergency towing arrangements and towing procedure	On a vessel, or in a laboratory, when asked to describe emergency towing arrangements and towing procedures,	the candidate describes the proper decisions to be made and steps to be taken to prepare the vessel for emergency towing.	The candidate's commands include: 1. Preparing to receive a towing line; or 2. Deploying the emergency towing gear; or 3. Ordering that the anchor and chain be lowered to the water (or into the water as directed by the towing vessel) and: a. Ensuring the chain will not pay out until the towing vessel requests additional chain; and b. Lowering a messenger to the water line in case it is needed.
9.1.A Maneuver alongside another vessel <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including maneuvers when approaching pilot stations and embarking or disembarking pilots, with due regard to weather, tide, head reach and stopping distances	On a vessel of at least 50 GRT or on a simulator using the model of a vessel of at least 200 GRT or 500 GT, when approaching a smaller vessel that will come alongside,	the candidate maneuvers to bring the other vessel alongside.	The candidate: 1. Determines: a. The direction and force of wind and sea; b. Which side the boat will come alongside; c. The heading needed to make a lee; and d. How the presence of other traffic affects the vessel's safe approach; 2. Maneuvers and slows the vessel to make a lee and allow the boat to safely come alongside; and 3. Ensures that the boat is away before resuming normal maneuvering.

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9.2.A Counter set and drift <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all representative conditions, including handling ship in rivers, estuaries and restricted waters, having regard to the effects of current, wind and restricted water on helm response	On a vessel of at least 50 GRT or on a simulator using the model of a vessel of at least 200 GRT or 500 GT, while transiting restricted waters for at least 30 minutes,	the candidate pilots the vessel.	The candidate: 1. Determines the intended track of the vessel; 2. Determines the force and direction of the wind and current; 3. Sets courses to counter the effect of wind and current to maintain the ship on the intended track; and 4. Uses the proper speed and rudder orders to maintain the ship on the intended track (in the deepest water) during turns around points and bends in the river.
9.3.A Constant radius turn <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including application of constant-rate-of-turn techniques	On a vessel of at least 50 GRT or on a simulator using the model of a vessel of at least 200 GRT or 500 GT, in an exercise with a turn of at least 50°,	the candidate completes the turn while maintaining a constant radius of turn throughout the maneuver.	The candidate: 1. Determines the radius of the turn; and 2. Applies the correct amount of rudder to maintain the constant radius of turn with no more than two adjustments of less than 5.0° each.
9.4.A Maneuver in shallow water <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including maneuvering in shallow water, including the reduction in under-keel clearance caused by squat, rolling and pitching	On a vessel of at least 50 GRT or on a simulator using the model of a vessel of at least 200 GRT or 500 GT,	the candidate sets the speed to prevent the vessel from touching bottom.	The candidate: 1. Determines the under keel clearance; 2. Determines the maximum speed allowable to keep the vessel from squatting and touching bottom; and 3. Sets the speed of the vessel to keep the vessel on an even trim while on straight courses and during turns.

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9.5.A Canal effect <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in representative conditions, including interaction between passing vessels and between own vessel and nearby banks (canal effect)	On a vessel of at least 50 GRT or on a simulator using the model of a vessel at least 200 GRT or 500 GT, in a channel no more than three times the vessel's beam, with under keel clearance of no more than 110% of draft and meeting a vessel on the opposite course,	the candidate passes the other vessel close aboard.	The candidate: 1. Agrees on a passing arrangement with the approaching vessel; and 2. Applies appropriate rudder direction and amount to: a. Anticipate and react to the pressure of interacting bow waves and bank effect; b. Anticipate and react to the pressure of the interacting stern suction and bank effect; and c. Remain in the channel.

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9.6.A Dock vessel <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including berthing and unberthing under various conditions of wind, tide and current with and without tugs  Use of propulsion and maneuvering systems	On a vessel of at least 50 GRT or on a simulator using the model of a vessel of at least 200 GRT or 500 GT, in clear visibility, with a wind speed of less than 15 knots and a current of less than 3 knots,	the candidate demonstrates docking a vessel without tug assistance or the use of dynamic positioning.	The candidate demonstrates docking a vessel to a pier under the supervision of the Master. Actions include: 1. Planning: Determining the: <ol style="list-style-type: none"> <li>a. Depth of water at the berth for the state of the tide;</li> <li>b. Strength and direction of the current for the route to the berth and at berth;</li> <li>c. Direction and speed of the wind;</li> <li>d. Appropriate side to berth on; and</li> <li>e. Appropriate courses and maneuvers for the approach to the berth;</li> </ol> 2. Approaching: Approaching the dock at the angle required by the wind and current, and at a speed that allows the vessel to maintain its heading and allows it to be stopped before allusion; 3. Docking: <ol style="list-style-type: none"> <li>a. Using the engines and lines, as necessary, to stop the vessel or move it into final position;</li> <li>b. Properly running out the mooring lines; and</li> <li>c. Taking in all slack lines until the vessel lies secure alongside.</li> </ol>
9.7.A Turn vessel short around <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including ship and tug interaction	On a vessel of at least 50 GRT or on a simulator using the model of a vessel of at least 200 GRT or 500 GT,	the candidate turns the vessel short around.	The candidate completes a 180° turn in two lengths of the vessel.

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9.8.A Anchoring an OSV <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including choice of anchorage; anchoring with one or two anchors in limited anchorages and factors involved in determining the length of anchor cable to be used	On a vessel or in a laboratory, when asked to describe how to anchor an OSV,	the candidate describes anchoring an OSV.	The candidate's description includes: 1. Planning: a. Depth of water; b. Type of bottom; c. Wind and current; d. Bottom obstructions; e. Room to swing; f. Place to anchor; g. Courses and maneuvers to the anchor site; h. Desired final heading; i. Expected weather for the time at anchor; and j. Whether tug assistance will be required. 2. Approach: the vessel does not pass windward of or up-current of any anchored ship or hazard to navigation; 3. Placement: a. Approach anchor site at a safe speed ; b. Check the vessel position using multiple sources; c. Ensure the engines are used appropriately to stop the vessel off the ground and then gain minimum sternway; d. Drop the anchor as the vessel begins to gain sternway; and e. Slowly pay out a length of chain 5-7 times the water depth. 4. Fetching up: allow the vessel to fetch up on the chain, within the desired area and at the appropriate distance from other vessels.

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9.9.A Dragging anchor <i>OSV</i>	Maneuver and handle a vessel in all conditions	Maneuvering and handling a ship in all conditions, including dragging anchor; clearing fouled anchors	On a vessel or in a laboratory, when asked how to determine if an OSV is dragging anchor,	the candidate describes all precautions to determine if the vessel is dragging anchor.	The candidate's description includes; <ol style="list-style-type: none"> <li>1. Setting the GPS anchor watch function;</li> <li>2. Setting the VRM and EBL of the ARPA or radar on prominent fixed objects;</li> <li>3. Taking frequent visual bearings on fixed objects approximately 90° apart; and</li> <li>4. Constructing a swing circle on a chart.</li> </ol>
9.10 Drydocking an OSV <i>Course Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including dry-docking, both with and without damage	This KUP is demonstrated by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.311(a)(3)(ii) and 11.313(a)(3)(ii).		

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.11.A Emergency vessel handling <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including:  Management and handling of ships in heavy weather  Means of keeping an unmanageable ship out of trough of the sea  Lessening drift and use of oil	On a vessel or in a laboratory, when asked to describe handling a vessel in heavy weather,	the candidate describes handling a vessel under heavy weather conditions	The candidate's description includes:  1. Defining the following and, as appropriate, suggesting methods to prevent or minimize damage: a. Weather routing; b. Wavelength; c. Wave period; d. Period of encounter; e. Roll period; f. Synchronous rolling; g. Synchronous pitching; h. Panting; i. Slamming; j. Heavy pitching; k. Pooping; and l. Broaching;  2. Describing how to: a. Turn in heavy seas; b. Detect heavy slamming; c. Turn a disabled vessel to avoid broaching or reduce drifting; d. Use oil to break seas; e. Avoid heavy longitudinal stresses when pitching; and f. Avoid racing the propeller; and  <i>Continued on next page</i>

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9.11.A <i>Cont'd</i> Emergency vessel handling <i>OSV</i>					<p style="text-align: center;"><i>Continued from previous page</i></p> 3. Describing the characteristics of vessels in heavy weather, including: <ol style="list-style-type: none"> <li>a. Speed of drift;</li> <li>b. Angle of drift; and</li> <li>c. When hove to with the seas on the bow or quarter.</li> </ol>
9.11.B Assisting a ship or aircraft in distress <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including:  Assisting a ship or aircraft in distress	On a vessel or in a laboratory, when asked to describe actions to be taken when assisting a ship or aircraft in distress,	the candidate describes the possible actions to be taken when assisting a ship or aircraft in distress.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Reporting systems, such as AMVER:                             <ol style="list-style-type: none"> <li>a. Preparing departure, arrival, and daily reports;</li> <li>b. Actions to be taken when instructed to assist; and</li> <li>c. Actions to be taken to request assistance;</li> </ol> </li> <li>2. Emergency towing to prevent a ship from grounding on a lee shore by other than a salvage tug;</li> <li>3. Medical emergency communications;</li> <li>4. Contacting contracted doctors ashore;</li> <li>5. Medical assistance from nearby ships with doctors aboard;</li> <li>6. Taking aboard survivors of ship and aircraft casualties;</li> <li>7. Relaying sea and weather conditions to aircraft needing assistance; and</li> <li>8. Relaying navigational information to aircraft and ships needing assistance.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.11.C Towing operations <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including: Towing operations	On a vessel or in a laboratory, when asked to describe towing operations,	the candidate describes onboard towing arrangements.	The candidate's description includes: 1. Required notifications and permissions, and arrangements for: a. Vessel owners; b. Cargo owners; c. Charterers; d. Coastal states; and e. Flag states; 2. Preparations: a. Required emergency towing arrangements of tankers equal or greater than 20,000 DWT; b. Onboard vessel to be towed; c. Onboard vessel to do towing; and d. Communications between towed and towing vessels; and 3. Procedures: a. Towing vessel's approach to disabled vessel; b. Passing messengers; c. Paying out towing cable; d. Securing towing wire to towing vessel; e. Securing towing wire to disabled vessel's anchor chain; f. Prevention of kinking and chafing; g. Taking on weight of tow; h. Determination of speed of tow; i. Emergency slipping of the tow; and j. Termination of tow at destination.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.12.A Maneuver to launch rescue boats <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including precautions in maneuvering to launch rescue boats or survival craft in bad weather	On a vessel or in a laboratory, when asked to describe maneuvering to launch rescue boats or survival craft in bad weather,	the candidate describes the precautions in maneuvering to launch rescue boats or survival craft in bad weather.	The description includes: <ol style="list-style-type: none"> <li>1. Methods to provide a calm area for the launch of survival craft and rescue boat in adverse conditions, including:                             <ol style="list-style-type: none"> <li>a. Creating a lee;</li> <li>b. Round turns to knock down adverse wave conditions; and</li> <li>c. Use of light oil;</li> </ol> </li> <li>2. The procedures for launching a rescue boat; and</li> <li>3. The limitations that may make the launching of rescue boats unduly hazardous to the ship's crew and/or the survivors such as:                             <ol style="list-style-type: none"> <li>a. Sea height;</li> <li>b. Own ship's movements;</li> <li>c. Potential piracy;</li> <li>d. Limitations of equipment available; and</li> <li>e. Limitations of personnel available.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.13.A Taking on survivors from rescue craft <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including methods of taking on board survivors from rescue boats and survival craft	On a vessel or in a laboratory, when asked to describe taking on board survivors from rescue boats and survival craft,	the candidate the methods of taking on board survivors from rescue boats and survival craft.	The description includes: 1. Methods to provide a calm area for the recovery of survival craft and rescue boat in adverse conditions, and the procedures to bring survivors aboard from survival craft, including: a. Creating a lee; b. Round turns to knock down adverse wave conditions; and c. Use of light oil; 2. The limitations that may make the launching of rescue boats unduly hazardous to the ship's crew and/or the survivors such as: a. Sea height; b. Own vessel's movements; c. Potential piracy; d. Limitations of equipment available; e. Limitations of personnel available; f. The use of gangways, cargo nets, and other rescue devices available to the candidate; and g. Concerns about contents of baggage being brought aboard; <p style="text-align: right;"><i>Continued on next page</i></p>

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9.13.A <i>Cont'd</i> Taking on survivors from rescue craft <i>OSV</i>					<p style="text-align: center;"><i>Continued from previous page</i></p> 3. Care of survivors including: <ol style="list-style-type: none"> <li>a. Hypothermia;</li> <li>b. Dehydration;</li> <li>c. Exposure to sun, salt, water for extended periods;</li> <li>d. Starvation;</li> <li>e. First aid; and</li> <li>f. Preparations for disembarkation; and</li> </ol> 4. Reporting procedures, including: <ol style="list-style-type: none"> <li>a. Notifications to company;</li> <li>b. Notifications to regulatory agencies;</li> <li>c. Nav alerts about drifting vessels and other possible survivors; and</li> <li>d. Preparation and submission of reports.</li> </ol>
9.14.A Maneuvering and propulsion characteristics <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including ability to determine the maneuvering and propulsion characteristics of common types of ships, with special reference to stopping distances and turning circles at various draughts and speeds	On a vessel or in a laboratory, when asked to describe the maneuvering and propulsion characteristics of common types of vessels,	the candidate describes or selects the answer that correctly describes the maneuvering and propulsion characteristics of common types of vessels.	The description includes: <ol style="list-style-type: none"> <li>1. Maneuvering characteristics of vessel propulsion systems, including:                             <ol style="list-style-type: none"> <li>a. Slow-speed diesels;</li> <li>b. Medium-speed diesels;</li> <li>c. High-speed diesels;</li> <li>d. Gas turbines; and</li> <li>e. Stopping distances and turning circles at various drafts and speeds for different vessel types.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.15.A Reducing wake damage <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including importance of navigating at reduced speed to avoid damage caused by own ship's bow wave and stern wave	On a vessel or in a laboratory, when asked to describe avoiding damage caused by own bow and stern waves,	the candidate describes navigating at reduced speed to avoid damage caused by own bow and stern waves.	The description includes: 1. Generation of bow and stern waves; 2. Effects that bow and stern waves have on: a. The open ocean; b. Man-made structures such as piers and breakwaters that are close to or in the water; c. Banks, mud flats, and other geologic structures; d. People onshore or in the water; e. Vessels moored alongside piers; and f. Vessels at anchor or moving in a channel; 3. How to moderate bow and stern waves to minimize or eliminate injury or damage; and 4. Precautions to take to eliminate or minimize damage to the candidate's ship, at anchor or tied up alongside to a pier or jetty from another vessel's bow or stern wave.
9.16.A Ice navigation <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including practical measures to be taken when navigating in or near ice	On a vessel or in a laboratory, when asked to describe navigating in or near ice,	the candidate describes appropriate ice navigation procedures.	The candidate's description includes: 1. Where to obtain information about ice that may be located on or in the vicinity of the intended track; 2. Precautions to follow when navigating near ice; and 3. Precautions when navigating in thick ice.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.16.B Ice accumulation <i>Note 2</i>	Maneuver and handle a vessel in all conditions	Maneuvering and handling a vessel in all conditions, including practical measures to be taken when in conditions of ice accumulation on board	On a vessel or in a laboratory, when asked to describe the practical measures to be taken when in conditions of ice accumulation on board,	the candidate describes appropriate procedures.	The candidate's description includes: 1. Master's obligation to report conditions that are causing severe ice accumulations; 2. Danger of reduced stability; 3. Other dangers of ice accumulation; 4. Damage to exposed surfaces and equipment conditions that cause ice accumulation to the ship's topside, superstructure, and rigging; and 5. Precautions to be followed.
9.17.A Traffic separation schemes <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including use of, and maneuvering in and near, traffic separation schemes and in vessel traffic service (VTS) areas	On a vessel or in a laboratory, when asked to describe the use of traffic separation schemes and VTS areas and maneuvering in and near them,	the candidate describes procedures for operating in VTS areas.	The candidate's description includes: 1. Expected behavior of vessels entering, transiting, and exiting a traffic separation scheme by quoting Rule 10 of the current COLREGS; 2. Relevance of the remaining rules of the road when transiting a traffic separation scheme; and 3. Reporting requirements of a VTS including: a. Information required to be initially reported; b. Location and/or times where the reports must be made; and c. Information reported when exiting the VTS.
10.1.A Diesel engines <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	On a vessel, or in a laboratory, when asked to describe the operating principles of the diesel engines fitted on OSVs,	the candidate describes diesel engine operation.	The candidate's description includes the general properties of diesel engines found on OSVs, in generally accepted engineering terms, including: 1. General diesel engines operating properties; 2. Two and four-stroke diesel cycles; 3. High-speed diesel engines; and 4. Medium-speed diesels.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
10.1.B Remote operation <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	On a vessel of at least 50 GRT at sea,	the candidate demonstrates remote operation within safe limits.	The candidate's demonstration includes remote start-up and shut-down procedures, response to alarms, and adherence to manufacturer's operating manual.
10.1.C Propeller and propeller shaft <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	On a vessel or in a laboratory, when asked to describe propellers and propeller shafts,	the candidate describes the operating principles of propellers and propeller shafts.	<p>The candidate's description includes:</p> <ol style="list-style-type: none"> <li>1. Propellers and propeller shafts, including: <ol style="list-style-type: none"> <li>a. Types of propellers, including variable pitch;</li> <li>b. Parts of a propeller;</li> <li>c. Attachment to propeller shaft;</li> <li>d. Pitch;</li> <li>e. Slip;</li> <li>f. Efficiency;</li> <li>g. RPM vs. ship's speed; and</li> <li>h. Operational precautions for variable pitch propellers;</li> </ol> </li> <li>2. Calculating slip and ship's speed given RPM, slip, and pitch; and</li> <li>3. Propeller shaft, including: <ol style="list-style-type: none"> <li>a. Supporting arrangement;</li> <li>b. Transmission of propeller thrust to hull;</li> <li>c. Transmission of rotational energy to propeller; and</li> <li>d. Stern tube bearing.</li> </ol> </li> </ol>

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10.1.D Bridge control <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	On a vessel or in a laboratory, when asked to describe the operating principles of bridge control,	the candidate describes operating principles of bridge control.	The candidate's description includes the general properties of bridge control, in generally accepted engineering terms: <ol style="list-style-type: none"> <li>1. Control of the main engine from:                             <ol style="list-style-type: none"> <li>a. The bridge;</li> <li>b. Machinery space;</li> <li>c. Local control; and</li> <li>d. Change-over of control station procedures;</li> </ol> </li> <li>2. Control of variable-pitch propellers;</li> <li>3. Control-system indicators and alarms:                             <ol style="list-style-type: none"> <li>a. In the engine-room;</li> <li>b. On the bridge; and</li> <li>c. Locally; and</li> </ol> </li> <li>4. Bow and stern thrusters:                             <ol style="list-style-type: none"> <li>a. Operations;</li> <li>b. Indicators and alarms;</li> <li>c. Bridge control; and</li> <li>d. Local control.</li> </ol> </li> </ol>
10.2.B Distillation and fresh water systems on OSVs <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe the freshwater systems on OSVs,	the candidate describes OSV freshwater systems.	The candidate describes domestic-water systems on OSVs.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
10.2.C Pumps and pumping systems on OSVs <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe pumps and pumping systems,	the candidate describes operating principles of pumps and pumping systems on OSVs.	The candidate's description includes: 1. Applications and characteristics of centrifugal pumps; 2. Head, including: a. Defining head; b. Defining suction head and its significance; c. Defining discharge head and its significance; and d. Head losses and their significance; 3. Bilge and ballast systems; and 4. Cross connections such as the engine room emergency bilge system and the main circulating pump.
10.2.D Steering gear <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel or in a laboratory, when asked to describe steering gear,	the candidate describes operating principles of steering gear.	The candidate's description includes the general design and operation of different systems, including: 1. Variable delivery hydraulic pumps; 2. Hydraulic ram-type steering gear; 3. Rotary-vane type steering gear; 4. Control systems including: a. Telemotor control systems; b. Electric control systems; and c. Emergency control; and 5. Testing steering gear.

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10.2.E Remotely operate steering gear <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel of at least 50 GRT at sea,	the candidate remotely operates the steering gear.	The candidate's demonstration includes remote start-up and shut-down procedures, switching over, response to alarms, and adherence to manufacturer's operating manual.
10.2.F Generators, alternators, and electrical distribution <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel or in a laboratory, when asked to describe generators, alternators, and electrical distribution,	the candidate describes operating principles of generators, alternators, and electrical distribution.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Direct-current (D.C.) and alternating current (A.C.) systems, including:                             <ol style="list-style-type: none"> <li>a. Advantages and disadvantages;</li> <li>b. Operation of generators;</li> <li>c. Purpose and use of inverters and rectifiers;</li> <li>d. Functioning of motors; and</li> <li>e. Distribution systems;</li> </ol> </li> <li>2. Safety precautions, including:                             <ol style="list-style-type: none"> <li>a. Circuit breakers and fuses; and</li> <li>b. Lock out, tagging procedures;</li> </ol> </li> <li>3. Batteries, including:                             <ol style="list-style-type: none"> <li>a. Characteristics of lead-acid and alkaline batteries;</li> <li>b. Safety precautions; and</li> <li>c. Battery maintenance;</li> </ol> </li> <li>4. Emergency generators and lighting systems; and</li> <li>5. Reading a navigational-light circuit.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
10.2.G Air conditioning and ventilation on OSVs <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe air conditioning and ventilation,	the candidate describes operating principles and controls of air conditioning and ventilation systems fitted on OSVs.	The candidate's description includes operating principles and controls of refrigeration and ventilation systems.
10.2.H Sewage treatment plants <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel or in a laboratory, when asked to describe sewage treatment plants,	the candidate describes operating principles of sewage treatment plants.	The candidate's description includes: 1. U. S. regulations and International Conventions; and 2. Operation of a chemical and biological sewage treatment plant.
10.2.I Oily water separators and oil filtering equipment <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel or in a laboratory, when asked to describe oily water separators and oil filtering equipment,	the candidate describes the operating principles of oily water separators and oil filtering equipment.	The candidate's description includes: 1. U. S. regulations and International Conventions; and 2. Construction, operation, and limitations of: a. Oily-water separators; b. Oil filtering equipment; c. Metering equipment; and d. Monitoring and control.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
10.2.J Deck machinery on OSVs <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe deck machinery fitted on OSVs,	the candidate describes operation and limits of the deck machinery fitted on OSVs.	The candidate's description includes the operation and limits of: 1. Anchor windlasses; 2. Mooring winches; 3. Cargo and crane winches; and 4. Lubrication of deck machinery.
10.2.K Hydraulic systems on OSVs <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe hydraulic systems,	the candidate describes basic operating principles of hydraulic systems.	The candidate's description includes basic principles of OSV hydraulic system(s): 1. Identifying and describing the main parts of a hydraulic system; 2. Cleanliness of the hydraulic fluid; and 3. Effects of air in the hydraulic system.
10.3.A Engineering terms <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	General knowledge of marine engineering terms	On a vessel, or in a laboratory, when asked to define engineering terms,	the candidate defines the specified terms.	The candidate correctly defines: 1. <i>Mass</i> ; 2. <i>Force</i> ; 3. <i>Work</i> ; 4. <i>Power</i> ; 5. <i>Energy</i> ; 6. <i>Pressure</i> ; 7. <i>Stress</i> ; 8. <i>Strain</i> ; 9. <i>Heat</i> ; 10. <i>Indicated power</i> ; 11. <i>Shaft power</i> ; and 12. <i>Thrust</i> .

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10.3.B Fuel consumption <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	General knowledge of marine engineering terms	On a vessel, or in a laboratory, when asked to describe fuel consumption,	the candidate describes factors affecting fuel consumption.	The candidate's description includes defining fuel consumption as a function of: 1. Displacement; 2. Distance; 3. Speed; 4. Sea state; 5. Hull condition; 6. Propeller condition; 7. Calculating daily consumption at service speed; 8. Fuel required for a voyage; and 9. Speed for a specific consumption on a daily and voyage consumption basis.
11.1.A International regulations for cargo operations <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Knowledge of and ability to apply relevant international regulations, codes and standards concerning the safe handling, stowage, securing and transport of cargoes	On a vessel, or in a laboratory, when asked to describe international regulations, codes and standards for the safe handling, stowage, securing and transport of cargoes,	the candidate describes international regulations, codes and standards applicable to OSVs of 500 GT or more and less than 3,000 GT.	The candidate's description includes the general obligations of the vessel owner and the vessel Master, regarding the carriage of goods by sea, including: 1. Loadline Convention; 2. Code of Safe Practice for Cargo Stowage and Securing; 3. Company guides and instructions regarding cargo stowage; 4. Information provided in the shipboard cargo securing manual; and 5. Certificates required for inspection by a port state control officer.

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11.2 Effect of cargo on trim and stability <i>Course Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Knowledge of the effect on trim and stability of cargoes and cargo operations	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.311(a)(3)(ii) and/or 11.313(a)(3)(ii).		
11.3 Stability calculations <i>Course Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Use of stability and trim diagrams and stress calculating equipment, including automatic data-based (ADB) equipment, and knowledge of loading cargoes and ballasting in order to keep hull stress within acceptable limits	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.311(a)(3)(ii) and/or 11.313(a)(3)(ii).		
11.4.A Container stowage and securing on OSVs <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	On a vessel, or in a laboratory, when asked to describe stowage and securing of containers on board OSVs,	the candidate describes proper stowage and securing of containers on OSVs.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. General stowage;</li> <li>2. General lashing and securing; and</li> <li>3. Lashing and securing safety.</li> </ol>

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<b>Task No./Name</b>	<b>STCW Competence</b>	<b>STCW Knowledge, Understanding, and Proficiency</b>	<b>Performance Condition</b>	<b>Performance Behavior</b>	<b>Performance Standard</b>
11.4.B Stowage and securing of heavy lift cargoes <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	On a vessel or in a laboratory, when asked to describe the stowage and securing of heavy lift cargoes,	the candidate describes the proper stowage and securing.	The candidate's description includes: 1. Use of shoring on decks below, and special supports for awkward shaped loads; 2. Vessel stability considerations; and 3. Pre and post-lift inspections.
11.4.C Deck cargo stowage and securing on OSVs <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	On a vessel, or in a laboratory, when asked to describe the stowage and securing of deck cargoes on board an OSV,	the candidate describes proper stowage and securing of deck cargoes, including pipe, on board an OSV.	The candidate's description includes: 1. General stowage instructions; 2. General lashing and securing; 3. Lashing and securing safety; and 4. The consequences of improper lashing and/or securing.
11.5.A Care of cargo during carriage <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel or in a laboratory, when asked to describe care of cargo,	the candidate describes care of cargo during carriage.	The candidate's description includes preventing damage to and contamination of cargo.

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11.5.B Safe use of cargo handling gear <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel or in a laboratory, when asked to describe the safe use of cargo handling gear,	the candidate describes safe use of cargo handling gear.	The candidate's description includes the: <ol style="list-style-type: none"> <li>1. Applicable national laws and regulations, and other requirements;</li> <li>2. Procedures for protecting personnel from accidents;</li> <li>3. Locating elements of the ship's rigging plan; and</li> <li>4. Hazards of fumigation.</li> </ol>
11.5.C Develop a loading plan for an OSV <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel, or in a laboratory, when given a list of cargo to be loaded and discharged and given vessel stability data and/or software for an OSV,	the candidate develops a loading plan for the OSV.	The candidate's plan takes into account the following: <ol style="list-style-type: none"> <li>1. Carriage requirements of each cargo loaded;</li> <li>2. Potential damage that may occur to each cargo that is loaded or unloaded and how to prevent that damage;</li> <li>3. Precautions to prevent and/or contain leakage of liquid cargo;</li> <li>4. Precautions to prevent pilferage and/or contamination of cargo; and</li> <li>5. Minimizing the risk of injury or death to:                             <ol style="list-style-type: none"> <li>a. Vessel personnel;</li> <li>b. Maritime workers;</li> <li>c. Visitors; and</li> <li>d. Other personnel expected to attend the transfer.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.5.D Inspect cargo running gear <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel or in a laboratory, when given a sampling of loose gear, line and wire rope,	the candidate examines the gear provided and reports the results to the assessor.	The candidate examines the gear and reports to the assessor on the use, safe working load, condition and maintenance of the following: 1. Wire ropes; 2. Fiber line; 3. Cargo blocks; 4. Shackles; and 5. Chain.
11.6.A Properties of oil and chemical cargoes <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	General knowledge of tankers and tanker operations	On a vessel or in a laboratory, when asked to describe oil and chemical cargo	the candidate describes, in general terms, the basic properties of oil and chemical cargo.	The candidate's description includes defining general terms and concepts such as: 1. <i>Reid Vapor Pressure (RVP)</i> ; 2. <i>Flashpoint</i> ; 3. <i>Flammable</i> ; 4. <i>Upper flammable limit</i> ; 5. <i>Lower flammable limit</i> ; and 6. <i>Auto-ignition temperature</i> .
11.6.C Oil and chemical tanker operations <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	General knowledge of tankers and tanker operations	On a vessel or in a laboratory, when asked to describe oil and chemical tanker operations,	the candidate describes, in general terms, tanker operations.	The candidate's description includes: 1. Ballasting; 2. Inert gas systems; 3. Tank cleaning; 4. Discharge of oil and chemical cargo; and 5. Gas freeing.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.6.D Basic concepts of carriage of liquefied gases <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	General knowledge of tankers and tanker operations	On a vessel, or in a laboratory, when asked to describe the carriage of liquefied gases aboard OSVs,	the candidate describes, in general terms, basic concepts of the carriage of liquefied gases.	The candidate: 1. Defines: a. <i>Liquefied gas</i> ; and b. <i>Boiling point</i> ; and 2. Describes the loading, carriage, and discharging of liquefied gases.
11.8.A Develop garbage plan <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Ability to establish procedures for safe cargo handling in accordance with the provisions of the relevant instruments such as IMDG Code, IMSBC Code, MARPOL 73/78 Annexes III and V and other relevant information	On a vessel or in a laboratory using particulars and information of a specific vessel,	the candidate develops a garbage plan for the vessel.	The candidate's plan includes: 1. Identification of garbage types and segregation of garbage by type; and 2. Detailed instructions for: a. Collection of garbage; b. Discharge of garbage; c. Accidental discharge of garbage; d. Recording of the collection and discharge of garbage; and e. Reporting collection and discharge of garbage.
11.8.B Loading of packaged dangerous goods <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Ability to establish procedures for safe cargo handling with the provisions of the relevant instruments such as IMDG Code, IMSBC Code, MARPOL 73/78 Annexes III and V and other relevant information	On a vessel or in a laboratory, when asked to describe safe cargo handling in accordance with the provisions of the relevant regulations, conventions and good practice,	the candidate identifies and describes general concepts of the loading of packaged dangerous goods.	The candidate's description includes basic concepts of the loading of packaged dangerous goods: 1. Defining the following from the IMDG Code: a. <i>Dangerous goods</i> ; and b. <i>Packaged form</i> ; 2. Reporting of incidents involving dangerous goods; 3. Stowage requirements for three items from Chapter 7.1 of the IMDG Code specified by the assessor.

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11.9.A Conduct cargo transfer meeting <i>Note 2</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Ability to explain the basic principles for establishing effective communications and improving working relationship between ship and terminal personnel	On a vessel or in a laboratory, during an actual or simulated cargo transfer meeting with terminal personnel, under the supervision of the Chief Mate or Master,	the candidate conducts the meeting and demonstrates effective communications.	The candidate: <ol style="list-style-type: none"> <li>1. Uses standard phrases;</li> <li>2. Asks questions and repeating the answers in the candidate's terms;</li> <li>3. Answers questions and confirming that the answer was properly understood;</li> <li>4. Assigns personnel as needed for inspections and other pre-cargo transfer procedures;</li> <li>5. Politely objects to procedures requested from terminal personnel that would be counter to the proper discharge of the vessel or applicable rules and regulations; and</li> <li>6. Acts in a manner that is not culturally offensive to the terminal personnel.</li> </ol>
13.1.A Carriage of dangerous goods on OSVs <i>OSV</i>	Carriage of dangerous goods	International regulations, standards, codes and recommendations on the carriage of dangerous cargoes, including the International Maritime Dangerous Goods (IMDG) Code and the International Maritime Solid Bulk Cargoes (IMSBC) Code	On a vessel, or in a laboratory, when asked to describe the proper stowage and carriage of dangerous cargoes aboard OSVs,	the candidate describes basic concepts for stowage and carriage of dangerous goods aboard OSVs.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Basic concepts used in the stowage and carriage of dangerous goods; and</li> <li>2. Reporting of incidents involving dangerous goods.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
14.1 Vessel construction and stability <i>Course Note 2</i>	Control trim, stability and stress	Understanding of fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.311(a)(3)(ii) and/or 11.313(a)(3)(ii).		
14.2 Effect of flooding <i>Course Note 2</i>	Control trim, stability and stress	Knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and countermeasures to be taken	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.311(a)(3)(ii) and/or 11.313(a)(3)(ii).		
14.3 IMO recommendation for ship stability <i>Course Note 2</i>	Control trim, stability and stress	Knowledge of IMO recommendations concerning ship stability	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.311(a)(3)(ii) and/or 11.313(a)(3)(ii).		

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.1.A Certificates required by international conventions <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  Certificates and other documents required to be carried on board by international conventions, how they may be obtained and their period of validity	On a vessel, or in a laboratory, when asked to identify the certificates required to be carried on board vessels by international conventions,	the candidate identifies certificates that must be carried.	The candidate's description includes the obligation to carry the following: 1. Certificate of Nationality (Ship's Registry); 2. International Tonnage Certificate; 3. Panama and/or Suez Canal Tonnage Certificates; 4. International Load Line Certificate; 5. International Oil Pollution Prevention Certificate; 6. International Sewage Pollution Prevention; 7. License(s) for the ship radio station; and 8. INMARSAT access authorization certificate.
15.1.B Documents required to be carried <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Certificates and other documents required to be carried on board vessels by international conventions, how they may be obtained and their period of validity	On a vessel, or in a laboratory, when asked to identify the documents required to be carried on board vessels,	the candidate identifies the documents that must be carried.	The candidate identifies: 1. Classification Society Certificates for Hull and Machinery, Refrigerating Machinery and Cargo Handling Appliances; 2. Anchor and Chain Cable Certificate; 3. Inflatable Liferaft Inspection Certificates; 4. Stability, Loading, and Ballasting Information; 5. Damage Control Plan and Booklets; 6. Oil Record Book; 7. Official Log Book; Deck, Engine-room and Radio Logbooks; 8. Articles of Agreement with the Crew; 9. Certificates for Competency of Officers and Ratings; 10. Minimum Safe Manning Document; 11. Safety Management Certificate; and 12. Copy of the Document of Compliance.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.1.C Documents required at arrival and departure <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  Certificates and other documents required to be carried on board ships by international conventions, how they may be obtained and their period of validity	On a vessel or in a laboratory, when asked to describe the documents required at arrival or departure,	the candidate describes the documents required.	The candidate's description includes the obligation to carry the following documents required at arrival or departure: <ol style="list-style-type: none"> <li>1. General declaration;</li> <li>2. Cargo declaration;</li> <li>3. Dangerous goods manifest or plan;</li> <li>4. Ship's stores declaration;</li> <li>5. Crew list;</li> <li>6. Passenger list;</li> <li>7. Ship Sanitation Control Exemption Certificate/Ship Sanitation Control Certificate; and</li> <li>8. Maritime Declaration of Health.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.2.A International Convention on Load Lines <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention on Load Lines, 1966, as amended	On a vessel or in a laboratory, when asked to describe the International Convention on Load Lines, 1966, as amended,	the candidate describes important provisions of the Convention.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Safety function of load lines;</li> <li>2. Requirements for a valid International Load Line Certificate;</li> <li>3. Defining the load line marks that may be marked on each side of the vessel; and</li> <li>4. Relationship of vessel draft to its operations under the International Convention of Load Lines in the following operational situations:               <ol style="list-style-type: none"> <li>a. A vessel must comply with the requirements for the zones and areas it is or will be sailing in;</li> <li>b. Applicable load line must never be submerged when the vessel is at sea;</li> <li>c. Determination of the applicable load line when a vessel departs from a port on the boundary between two zones or areas;</li> <li>d. Determination of the applicable load line when a vessel arrives at a port on the boundary between two zones or areas;</li> <li>e. Calculation of fresh water allowance to determine how far the applicable load line may be submerged; and</li> <li>f. Calculation of allowance for fuel and stores from sailing to departure to determine how far the load line may be submerged.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>15.3.A International Convention for the Safety of Life at Sea <i>Note 2</i></p>	<p>Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment</p>	<p>Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Safety of Life at Sea, 1974, as amended</p>	<p>On a vessel or in a laboratory, when asked to describe the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS),</p>	<p>the candidate describes important provisions of SOLAS.</p>	<p>The candidate's description includes the obligations of the Master under SOLAS, including:</p> <ol style="list-style-type: none"> <li>1. Sending danger messages relating to ice, dangerous derelicts, dangers to navigation, tropical storms, ice accretion, unreported wind force 10 or above;</li> <li>2. Sailing at moderate speed when in the area of ice;</li> <li>3. When receiving any signal that a vessel or aircraft is in distress;</li> <li>4. The carriage of navigation equipment and publications;</li> <li>5. Proper manning;</li> <li>6. Testing of steering gear before sailing;</li> <li>7. Placing a placard indicating the changeover of steering gear and use of remote steering;</li> <li>8. Emergency steering gear drills and logging of steering gear tests;</li> <li>9. Logging of steering gear tests;</li> <li>10. The normal obligation of a ship's Master is waived when receiving a distress signal;</li> <li>11. Rights of the Master to requisition a ship which has answered a call for assistance;</li> <li>12. Information required in danger messages; and</li> <li>13. Non-emergency use of international distress signals is prohibited.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.A MARPOL 73/78 <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, as amended,	the candidate describes important provisions of MARPOL.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. The following points concerning the general construction of MARPOL 73/78 and its 6 annexes for:               <ol style="list-style-type: none"> <li>a. Oil;</li> <li>b. Bulk noxious liquid substances;</li> <li>c. Packaged harmful substances;</li> <li>d. Sewage;</li> <li>e. Garbage; and</li> <li>f. Air pollution;</li> </ol> </li> <li>2. Obligation of the countries who are signatory to this convention to apply it to all vessels, even if the vessel is flagged in a country that is not a signatory;</li> <li>3. Which annexes are mandatory when a country becomes a signatory to the convention;</li> <li>4. Which annexes are only mandatory if the country chooses to become signatory to that particular annex;</li> <li>5. Which annexes the United States is signatory to and what replaces any annexes the United States is not signatory to; and</li> <li>6. Exceptions to each annex.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.B MARPOL Annex I <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, As amended	On a vessel or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex I (Oil),	the candidate describes important provisions of MARPOL Annex I.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. No changes should be made to the vessel, except for direct replacement of equipment without the approval of the flag state;</li> <li>2. Master's duty to report an accident or defect that affects the integrity of the vessel;</li> <li>3. International Oil Pollution Prevention (IOPP) certificate:                             <ol style="list-style-type: none"> <li>a. Dates of intermediate and annual surveys;</li> <li>b. Record of construction and equipment;</li> <li>c. Duration of validity; and</li> <li>d. What will invalidate IOPP;</li> </ol> </li> <li>4. Oil record book;</li> <li>5. Master must be provided information regarding cargo loading and distribution to ensure subdivision and stability criteria compliance; and</li> <li>6. All ships over 400 GT and tankers over 150 GT must carry an approved Shipboard Oil Pollution Emergency Plan (SOPEP), the seven parts of which detail the following:                             <ol style="list-style-type: none"> <li>a. General information;</li> <li>b. Preamble;</li> <li>c. Reporting requirements;</li> <li>d. Information required;</li> <li>e. Required contacts;</li> <li>f. Steps to control discharge; and</li> <li>g. Non-mandatory provisions.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.C MARPOL Annex II <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex II (Noxious Liquid Substances in Bulk),	the candidate describes important provisions of MARPOL Annex II.	The candidate's description includes:  1. MARPOL 73/78 Annex II (Noxious Liquid Substances in Bulk); 2. International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk; 3. Categorization of noxious liquid substances; 4. Procedures and Arrangements Manual; 5. Cargo Record Book; 6. Master must be provided information regarding cargo loading and distribution to ensure subdivision and stability criteria compliance; and 7. All ships over 150 GT must carry an approved Shipboard Oil Pollution Emergency Plan (SOPEP).
15.4.D MARPOL Annex III <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex III,	the candidate describes important provisions of MARPOL Annex III.	The candidate's description includes the important points of MARPOL 73/78 Annex III (Packaged Harmful Substances).

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.E MARPOL Annex IV <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex IV,	the candidate describes important provisions of MARPOL Annex IV.	The candidate's description includes the following important points of MARPOL 73/78 Annex IV (Sewage):  1. The United States is not signatory to this Annex, however the following U.S. laws, regulations, and policies apply: a. Federal Water Pollution Act; b. U.S. requirements found in 33 CFR Part 159; and c. Applicable U. S. Coast Guard policy.
15.4.F MARPOL Annex V <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex V,	the candidate describes important provisions of MARPOL Annex V.	The candidate's description includes the following points of MARPOL 73/78 Annex V (Garbage):  1. Applicable requirement when garbage is mixed with other discharges; 2. Provisions for the disposal of garbage, including: a. In special areas; and b. From and within 500 meters of offshore platforms; 3. Use of grinders and comminutors; 4. Special areas and Gulf of Mexico Area limits; 5. Record keeping; and 6. Port state control inspections.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.G MARPOL Annex VI <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex VI,	the candidate describes important provisions of MARPOL Annex VI.	The candidate's description includes the following points of MARPOL 73/78 Annex VI (Air Pollution):  1. No changes should be made to the vessel, except for direct replacement of equipment without the approval of the flag state;  2. Master's duty to report an accident or defect that affects the integrity of the vessel; and  3. International Air Pollution Prevention (IAPP) certificate, including:  a. Dates of intermediate and annual surveys;  b. Record of construction and equipment;  c. Duration of validity; and  d. What will invalidate an IAPP.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.5.A International Health Regulations <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  Maritime declarations of health and the requirements of the International Health Regulations	On a vessel, or in a laboratory, when asked to describe the requirements of the International Health Regulations,	the candidate identifies and describes major provisions of relevant health regulations including the information and procedures that port health officials require to prevent the transmission of diseases.	The candidate’s description includes: 1. Defining: <ul style="list-style-type: none"> <li>a. <i>Maritime Declaration of Health</i>;</li> <li>b. <i>Diseases subject to the regulations</i>;</li> <li>c. <i>Disinfecting</i>;</li> <li>d. <i>Free pratique</i>;</li> <li>e. <i>Infected person</i>;</li> <li>f. <i>Quarantine</i>;</li> <li>g. <i>International voyage</i>;</li> <li>h. <i>Isolation</i>;</li> <li>i. <i>Medical examination</i>; and</li> <li>j. <i>Suspect</i>;</li> </ul> 2. Master’s obligation to inform port authorities of real or suspected illnesses; 3. Process of requesting “free pratique”; and 4. Health procedures involving: <ul style="list-style-type: none"> <li>a. Transiting through a country’s waters; and</li> <li>b. Denial of entry due to health reasons.</li> </ul>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.6.A International Agreements and Conventions <i>OSV</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  international instruments affecting the safety of the ship, passengers, crew and cargo	On a vessel, or in a laboratory, when asked to describe international agreements and conventions applicable to OSVs,	the candidate identifies and describes major provisions of the international agreements and conventions applicable to OSVs.	The candidate's description includes underlying principles, content and application of the following:  1. International Convention for the Unification of Certain Rules of Law with Respect to Collision Between Vessels; 2. International Convention on Salvage; 3. STCW Convention; and 4. ISM Code.
15.6.B International instruments affecting the safety of the ship, passengers, crew and cargo <i>OSV</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  international instruments affecting the safety of the ship, passengers, crew and cargo	On a vessel, or in a laboratory, when asked to describe international instruments affecting the safety of the vessel, passengers, crew and cargo,	the candidate identifies and describes the major provisions of the international instruments applicable to OSVs.	The candidate's identifies and describes the important provisions of the following:  1. Marine Note of Protest; 2. Lloyd's Standard Form of Salvage Agreement; 3. Charter parties; 4. Marine insurance; and 5. P&I Associations.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.7.A Pollution prevention <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  methods and aids to prevent pollution of the marine environment by ships	On a vessel or in a laboratory, when asked to describe the provisions of international environmental conventions,	the candidate describes the major provisions of relevant international environmental conventions.	The candidate’s description includes the contents of the following relevant international environmental conventions: <ol style="list-style-type: none"> <li>1. Convention of the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention);</li> <li>2. International Convention on Civil Liability for Oil Pollution Damage, 1969;</li> <li>3. International Convention for the Control and Management of Ships’ Ballast Water and Sediments;</li> <li>4. International Convention on Oil Pollution Preparedness; and</li> <li>5. International Convention for the Safety of Life at Sea, 1974.</li> </ol>
15.8.A National legislation to implement international conventions <i>Note 2</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  National legislation for implementing international agreements and conventions	On a vessel or in a laboratory, when asked to describe national legislation for implementing international agreements and conventions,	the candidate identifies and describes the major provisions of relevant U.S. national environmental laws.	The candidate may include the contents of the following U.S. national environmental laws: <ol style="list-style-type: none"> <li>1. Oil Pollution Act of 1990;</li> <li>2. Federal Water Pollution Control Act;</li> <li>3. Clean Air Act;</li> <li>4. Clean Vessel Act of 1992;</li> <li>5. Abandoned Barge Act of 1992;</li> <li>6. Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990;</li> <li>7. Act to Prevent Pollution from Ships of 1980;</li> <li>8. Oil Terminal and Oil Tanker Environmental Oversight and Monitoring Act of 1990; and</li> <li>9. The Pollution regulations in 33 CFR Subchapter O.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
16.1.A Life-saving appliance regulations <i>Note 2</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Thorough knowledge of life-saving appliance regulations (International Convention for the Safety of Life at Sea)	On a vessel or in a laboratory, when asked to describe lifesaving appliance regulations applicable to the vessel on which the assessment is performed,	the candidate identifies and describes requirements for specific equipment designated by the assessor.	The candidate correctly describes equipment requirements, including type and quantity that must be carried or frequency of the activity. The assessor should query the candidate on specific SOLAS requirements.

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>16.2.A Plan fire or emergency drill <i>Note 2</i></p>	<p>Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems</p>	<p>Organization of fire drills and abandon ship drills</p>	<p>On a vessel of at least 50 GRT, or in a laboratory, when given a muster list and particulars for a vessel of at least 200 GRT or 500 GT,</p>	<p>the candidate plans a fire or abandon vessel drill.</p>	<p>The candidate:</p> <ol style="list-style-type: none"> <li>1. Determines the:               <ol style="list-style-type: none"> <li>a. Drill to be conducted;</li> <li>b. Location of the simulated casualty; and</li> <li>c. The portion of the station bill that applies;</li> </ol> </li> <li>2. Explains the need to examine the location of the simulated casualty to determine the:               <ol style="list-style-type: none"> <li>a. Suitability for the drill;</li> <li>b. Manpower required;</li> <li>c. Potential hazards; and</li> <li>d. Usability of the onboard emergency plans;</li> </ol> </li> <li>3. Uses the onboard emergency plan for the simulated casualty and space to be used to develop:               <ol style="list-style-type: none"> <li>a. A script to use during the drill; and</li> <li>b. Initial corrections to the emergency plan based upon the examination of the location; and</li> </ol> </li> <li>4. Explains the need to consult with and obtain concurrence with the plan from the Master and other officers.</li> </ol>

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Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
16.3.A Develop a maintenance plan for lifesaving and firefighting equipment <i>Note 2</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Maintenance of operational condition of life-saving, fire-fighting and other safety systems	On board a vessel of at least 50 GRT or in a laboratory using the particulars for a vessel of at least 200 GRT or 500 GT,	the candidate develops a preventive maintenance plan for the vessel's lifesaving and firefighting equipment.	The candidate's plan includes: <ol style="list-style-type: none"> <li>1. The following ship's lifesaving and firefighting equipment:               <ol style="list-style-type: none"> <li>a. Survival craft;</li> <li>b. Portable firefighting equipment;</li> <li>c. Fixed firefighting equipment;</li> <li>d. Life rings; and</li> <li>e. Personal flotation devices; and</li> </ol> </li> <li>2. For each type of equipment, the plan describes:               <ol style="list-style-type: none"> <li>a. Safety procedures for inspecting and simulating operation;</li> <li>b. Number on board;</li> <li>c. Storage equipment condition;</li> <li>d. Exercising of equipment;</li> <li>e. Required inspections; and</li> <li>f. Required maintenance.</li> </ol> </li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
16.4.A Procedures to rescue persons from a vessel in distress  <i>Note 2</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to be taken to protect and safeguard all persons on board in emergencies	On a vessel or in a laboratory, when asked to describe rescuing persons from a vessel in distress,	the candidate describes the general procedures to rescue persons from a vessel in distress.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Waiting for daylight when possible;</li> <li>2. Establishing communications between vessels;</li> <li>3. Replacing unneeded equipment in rescue boats with additional life jackets, lifebuoys, blankets, and portable radios;</li> <li>4. Checking the area for debris and other hazards to the rescue boats;</li> <li>5. Providing a lee and using of oil to calm sea, if needed;</li> <li>6. Rigging equipment to board survivors from boats or in the water;</li> <li>7. Recovering the rescue boat; and</li> <li>8. Alternatives that may be used if the seas are too rough to use rescue boats.</li> </ol>
16.4.B Man overboard procedures  <i>Note 2</i>	Maintain safety and security of the vessel crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to be taken to protect and safeguard all persons on board in emergencies	On a vessel or in a laboratory, when asked to describe the general procedures to be performed on board when a person falls overboard,	the candidate describes general man overboard procedures.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Sounding the man overboard signal;</li> <li>2. Visual signals to be used to indicate that the vessel is recovering a person overboard;</li> <li>3. Importance of man overboard drills;</li> <li>4. Use of recovery equipment to rescue a person overboard; and</li> <li>5. Actions to take when a person is reported missing at sea including, but not limited to:                             <ol style="list-style-type: none"> <li>a. Search of the vessel;</li> <li>b. Use of the Williamson turn;</li> <li>c. Investigation of when person was last seen; and</li> <li>d. Posting of lookouts.</li> </ol> </li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
16.5.A Actions following fire, explosion, collision or grounding <i>Note 2</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to limit damage and salve the ship following a fire, explosion, collision or grounding	On a vessel or in a laboratory, when asked to describe actions following a fire, explosion, collision or grounding,	the candidate describes general procedures to limit damage and save the vessel.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Inspection to determine the extent of damage;</li> <li>2. Shoring weakened areas;</li> <li>3. Plugging holes;</li> <li>4. Electrical damage;</li> <li>5. Piping damage;</li> <li>6. Temporary repairs; and</li> <li>7. Adjusting speed and course to minimize stresses and water entry.</li> </ol>
16.5.B Abandon ship procedures <i>Note 2</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to limit damage and salve the ship following a fire, explosion, collision or grounding	On a vessel or in a laboratory, when asked to describe abandoning the vessel,	the candidate describes general procedures to abandon the vessel.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Determining if the vessel is in imminent danger from:               <ol style="list-style-type: none"> <li>a. Sinking;</li> <li>b. Breaking up;</li> <li>c. Exploding; and</li> <li>d. Other conditions that make remaining on board impossible;</li> </ol> </li> <li>2. Distress messages and signals:               <ol style="list-style-type: none"> <li>a. To attract attention;</li> <li>b. By all means available; and</li> <li>c. Information to insert in the message; and</li> </ol> </li> <li>3. Launching of survival craft:               <ol style="list-style-type: none"> <li>a. When the ship is listing heavily;</li> <li>b. In heavy weather conditions; and</li> <li>c. Use of oil.</li> </ol> </li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
17.1.A Plan fire and emergency drill	Develop emergency and damage control plans and handle emergency situations	Preparation of contingency plans for response to emergencies	This KUP is demonstrated by successful completion of task 16.2.A.		
17.2.A Prepare a damage control plan <i>Note 2</i>	Develop emergency and damage control plans and handle emergency situations	Vessel construction, including damage control	On a vessel of at least 50 GRT, or in a laboratory using particulars for a vessel of at least 200 GRT or 500 GT,	the candidate prepares a damage control plan dealing with the flooding of compartments.	The candidate's plan: <ol style="list-style-type: none"> <li>1. Describes the following:                             <ol style="list-style-type: none"> <li>a. Margin line;</li> <li>b. Permeability of a space; and</li> <li>c. Subdivision;</li> </ol> </li> <li>2. Determines, for a starboard or port compartment specified by the assessor:                             <ol style="list-style-type: none"> <li>a. Stability if this compartment is flooded;</li> <li>b. Effect of asymmetrical flooding on the vessel;</li> <li>c. If the vessel can counter the asymmetrical flooding of the specified compartment; and</li> <li>d. Effect on the vessel's stability if the damage occurred in a Beaufort Scale 6 storm; and</li> </ol> </li> <li>3. Describes additional effects when flooding may occur due to the following:                             <ol style="list-style-type: none"> <li>a. Insufficient reserve buoyancy;</li> <li>b. Progressive flooding; and</li> <li>c. Added stresses.</li> </ol> </li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
17.3 Fire prevention, detection and extinction <i>Note 2 Course</i>	Develop emergency and damage control plans and handle emergency situations	Methods and aids for fire prevention, detection and extinction			This KUP is demonstrated if the candidate has maintained the standard of competence for Advanced Fire Fighting described in 46 CFR 11.303(b).
17.4 Functions and use of lifesaving appliances <i>Note 2 Course</i>	Develop emergency and damage control plans and handle emergency situations	Methods and aids for fire prevention, detection and extinction			This KUP is demonstrated by successful completion of an approved or accepted <i>Proficiency in Survival Craft</i> or <i>Proficiency in Survival Craft Limited</i> course or if the mariner holds an endorsement for PSC or PSC-Limited.
18.1 Shipboard management International conventions and national legislation <i>Note 2 Course</i>	Use of leadership and managerial skill	Knowledge of shipboard personnel management and training  A knowledge of related international maritime conventions and recommendations, and national legislation  A knowledge of related national legislation			These KUPs are demonstrated by successful completion of the approved <i>Leadership and Managerial Skills</i> course specified in 46 CFR 11.311(a)(3)(iv) and 11.313(a)(3)(iv).

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>18.2 Use of Leadership and managerial skill <i>Note 2 Course</i></p>	<p>Use of leadership and managerial skill</p>	<p>Ability to apply task and workload management...</p> <p>Knowledge and ability to apply effective resource management allocation, assignment, and prioritization of resources</p> <p>Knowledge and ability to apply effective resource management effective communication on board and ashore</p> <p>Knowledge and ability to apply effective resource management...</p> <p>Knowledge and ability to apply decision-making techniques...</p>			<p>These KUPs are demonstrated by successful completion of the approved <i>Leadership and Managerial Skills</i> course specified in 46 CFR 11.311(a)(3)(iv) and 11.313(a)(3)(iv).</p>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*



Task No./Name	STCW Competence	STCW Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
19.1 International Medical Guide for Ships <i>Note 2 Course</i>	Organize and manage the provision of medical care on board	A thorough knowledge of the use and contents of the International Medical Guide for Ships or equivalent national publications			This KUPs is demonstrated by successful completion of the approved or accepted <i>Management of Medical Care</i> course specified in 46 CFR 11.305(a)(3)(ix) and 11.307(a)(3)(ix).
19.2 International Code of Signals – medical section <i>Note 2 Course</i>	Organize and manage the provision of medical care on board	A thorough knowledge of the use and contents of the medical section of the International Code of Signals			This KUPs is demonstrated by successful completion of the approved or accepted <i>Management of Medical Care</i> course specified in 46 CFR 11.305(a)(3)(ix) and 11.307(a)(3)(ix).
19.3 Medical First Aid Guide <i>Note 2 Course</i>	Organize and manage the provision of medical care on board	A thorough knowledge of the use and contents of the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods			This KUPs is demonstrated by successful completion of the approved or accepted <i>Management of Medical Care</i> course specified in 46 CFR 11.305(a)(3)(ix) and 11.307(a)(3)(ix).

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

# Record of Assessment

for

Master or Chief Mate of Vessels of 500 GT or More  
and Less Than 3,000 GT

Limited to Service on Offshore Supply Vessels

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*Print Name of Candidate*

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*Candidate's Signature*

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*Candidate's Mariner Reference No.*

Enclosure (4) to NVIC 03-17

**NOTE TO QUALIFIED ASSESSOR(S):** In performing your function as a qualified assessor (QA), you may use your initials only to indicate you have personally witnessed the demonstration of skill or ability by the person being assessed. The Assessment Guidelines in Enclosure (3) will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Assessment Guidelines is not mandatory and an alternative means of having achieved the standards of competence in the STCW Code will be considered as described in paragraph 11 of this NVIC. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Plan a voyage and conduct navigation	Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks	1.1.A <i>Note 2</i>	Create a voyage plan		
		1.2.A <i>Notes 1,2</i>	Great circle sailing		
		1.2.B <i>Notes 1,2</i>	Mercator sailing initial course and total distance		
		1.2.C <i>Notes 1,2</i>	Mercator sailing final position		
	Determine position and the accuracy of resultant position fix by any means	2.1.A <i>Notes 1,2</i>	Meridian transit (other than sun)		
		2.1.B <i>Notes 1,2</i>	Star identification		
		2.1.C <i>Notes 1,2</i>	Star/planet selection		
		2.2.A <i>Notes 1,2</i>	GPS routing		

**Notes:**

*Note 1* The assessment is not required for an endorsement that will be limited to near coastal waters.

*Note 2* The assessment is the same or equivalent to one for an endorsement that is not trade-restricted, and need not be repeated to remove the limitation to OSVs. Completion of the corresponding assessment from NVIC 11-14 will be accepted in lieu of this assessment.

*OSV* The assessment is specific to OSVs, and another assessment of the KUP is needed to remove the limitation to OSVs. The identically numbered assessment(s) in NVIC 11-14 may be used for an endorsement that will not be limited to OSVs.

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Candidate's Mariner Reference No.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Determine and allow for compass errors	Ability to determine and allow for errors of the magnetic and gyro-compasses	3.1.A <i>Notes 1,2</i>	Amplitude of celestial body		
	Knowledge of the principles of magnetic and gyro-compasses	3.2.A <i>Note 2</i>	Write a standing order for compasses		
	Understanding of systems under the control of the master gyro and a knowledge of the operation and care of the main types of gyro-compasses	3.3.A <i>Note 2</i>	Operation and care of gyrocompass		
Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	Evaluation of navigational information derived from all available sources, including radar and ARPA	5.2.A <i>Note 2</i>	Blind pilotage planning		
	The interrelationship and optimum use of all navigational data available	5.3.A <i>Note 2</i>	Plan and execute a passage		
Forecast weather and oceanographic conditions	Ability to understand and interpret a synoptic chart and to forecast area weather	7.1.A <i>OSV</i>	Forecast weather for next 24 hours		
	Knowledge of characteristics of various weather systems	7.2.A <i>OSV</i>	Identify fronts		
	Knowledge of ocean current systems	7.3.A <i>OSV</i>	Ocean Currents		
	Ability to calculate tidal conditions Use all appropriate nautical publications on tides and currents	7.4.A <i>Note 2</i>	Calculate height of tide		
		7.4.B <i>Note 2</i>	Calculate tidal current		
		7.4.C <i>Note 2</i>	Calculate time for desired height of tide		

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 Candidate's Mariner Reference No.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Respond to navigational emergencies	Precautions when beaching a ship	8.1.A <i>OSV</i>	Beaching a vessel		
	Action to be taken if grounding is imminent, and after grounding	8.2.A <i>OSV</i>	Grounding a vessel		
	Refloating a grounded ship with and without assistance	8.3.A <i>OSV</i>	Refloating a grounded vessel		
	Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause	8.4.A <i>OSV</i>	Prepare for a collision		
	Assessment of damage control	8.5.A <i>Note 2</i>	Damage control		
	Emergency steering	8.6.A <i>Note 2</i>	Emergency steering		
	Emergency towing arrangements and towing procedure	8.7.A <i>OSV</i>	Emergency towing		
Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including maneuvers when approaching pilot stations and embarking or disembarking pilots	9.1.A <i>Note 2</i>	Maneuver alongside another vessel		
	Maneuvering and handling a ship in all representative conditions, including handling ship in rivers, estuaries and restricted waters	9.2.A <i>Note 2</i>	Counter set and drift		
	Maneuvering and handling a ship in all conditions, including application of constant-rate-of-turn techniques	9.3.A <i>Note 2</i>	Constant radius turn		
	Maneuvering and handling a ship in all conditions, including maneuvering in shallow water	9.4.A <i>Note 2</i>	Maneuver in shallow water		
	Maneuvering and handling a ship in representative conditions, including interaction between passing vessels and between own vessel and nearby banks	9.5.A <i>Note 2</i>	Canal effect		

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including ship and tug interaction Use of propulsion and maneuvering systems	9.6.A <i>Note 2</i>	Dock vessel		
	Maneuvering and handling a ship in all conditions, including berthing and unberthing Use of propulsion and maneuvering systems	9.7.A <i>Note 2</i>	Turn vessel short around		
	Maneuvering and handling a ship in all conditions, including choice of anchorage; anchoring with one or two anchors in limited anchorages and factors involved in determining the length of cable to be used	9.8.A <i>OSV</i>	Anchoring an OSV		
	Maneuvering and handling a ship in all conditions, including dragging anchor; clearing fouled anchors	9.9.A <i>OSV</i>	Dragging anchor		
	Maneuvering and handling a ship in all conditions, including: Management and handling of ships in heavy weather Means of keeping an unmanageable ship out of trough of the sea Lessening drift and use of oil	9.11.A <i>OSV</i>	Emergency vessel handling		
	Maneuvering and handling a ship in all conditions, including assisting a ship or aircraft in distress	9.11.B <i>OSV</i>	Assisting a ship or aircraft in distress		
	Maneuvering and handling a ship in all conditions, including towing operations	9.11.C <i>OSV</i>	Towing operations		

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 Candidate's Mariner Reference No.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including precautions in maneuvering to launch rescue boats or survival craft in bad weather	9.12.A <i>OSV</i>	Maneuver to launch rescue boats		
	Maneuvering and handling a ship in all conditions, including methods of taking on board survivors from rescue boats and survival craft	9.13.A <i>OSV</i>	Taking on survivors from rescue craft		
	Maneuvering and handling a ship in all conditions, including ability to determine the maneuvering and propulsion characteristics of common types of ships	9.14.A <i>OSV</i>	Maneuvering and propulsion characteristics		
	Maneuvering and handling a ship in all conditions, including importance of navigating at reduced speed to avoid damage	9.15.A <i>OSV</i>	Reducing wake damage		
	Maneuvering and handling a ship in all conditions, including practical measures to be taken when navigating in or near ice	9.16.A <i>Note 2</i>	Ice navigation		
	Maneuvering and handling a vessel in all conditions, including practical measures to be taken when in conditions of ice accumulation on board	9.16.B <i>Note 2</i>	Ice accumulation		
	Maneuvering and handling a ship in all conditions, including use of, and maneuvering in and near, traffic separation schemes and VTS areas	9.17.A <i>Note 2</i>	Maneuver in traffic separation schemes		
Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	10.1.A <i>OSV</i>	Diesel engines		
		10.1.B <i>Note 2</i>	Remote operation		
		10.1.C <i>Note 2</i>	Propeller and propeller shaft		
		10.1.D <i>Note 2</i>	Bridge control		

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	10.2.B <i>OSV</i>	Distillation and fresh water systems on OSVs		
		10.2.C <i>OSV</i>	Pumps and pumping systems on OSVs		
		10.2.D <i>Note 2</i>	Steering gear		
		10.2.E <i>Note 2</i>	Remotely operate steering gear		
		10.2.F <i>Note 2</i>	Generators, alternators, and electrical distribution		
		10.2.G <i>OSV</i>	Air conditioning and ventilation on OSVs		
		10.2.H <i>Note 2</i>	Sewage treatment plants		
		10.2.I <i>Note 2</i>	Oily water separators and oil filtering equipment		
		10.2.J <i>OSV</i>	Deck machinery on OSVs		
		10.2.K <i>OSV</i>	Hydraulic systems on OSVs		
	General knowledge of marine engineering terms	10.3.A <i>Note 2</i>	Engineering terms		
10.3.B <i>Note 2</i>		Fuel consumption			

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 Candidate's Mariner Reference No.



STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Knowledge of and ability to apply relevant international regulations, codes and standards concerning safe handling, stowage, securing & transport of cargoes	11.1.A <i>OSV</i>	International regulations for cargo operations		
	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	11.4.A <i>OSV</i>	Container stowage and securing on OSVs		
		11.4.B <i>Note 2</i>	Stowage and securing of heavy lift cargoes		
		11.4.C <i>OSV</i>	Deck cargo stowage and securing on OSVs		
Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	11.5.A <i>Note 2</i>	Care of cargo during carriage		
		11.5.B <i>Note 2</i>	Safe use of cargo handling gear		
		11.5.C <i>OSV</i>	Develop a loading plan for an OSV		
		11.5.D <i>Note 2</i>	Inspect cargo running gear		
	General knowledge of tankers and tanker operations	11.6.A <i>Note 2</i>	Properties of oil and chemical cargoes		
	Dangerous Liquids operations	11.6.C <i>Note 2</i>	Oil and chemical tanker operations		
		11.6.D <i>OSV</i>	Basic concepts of carriage of liquefied gases		
	Ability to establish procedures for safe cargo handling in accordance with the provisions of the relevant instruments	11.8.A <i>Note 2</i>	Develop a garbage plan		
		11.8.B <i>Note 2</i>	Loading of packaged dangerous goods		
	Ability to explain the basic principles for establishing effective communications and improving working relationship between ship and terminal personnel	11.9.A <i>Note 2</i>	Conduct cargo transfer meeting		
Carriage of dangerous goods	International regulations, standards, codes and recommendations on the carriage of dangerous cargoes	13.1.A <i>OSV</i>	Carriage of dangerous goods on OSVs		

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions Certificates and other documents required to be carried on board s by international conventions, how they may be obtained and their period of validity	15.1.A <i>Note 2</i>	Certificates required by international conventions		
		15.1.B <i>Note 2</i>	Documents required to be carried		
		15.1.C <i>Note 2</i>	Documents required at arrival and departure		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention on Load Lines, 1966, as amended	15.2.A <i>Note 2</i>	International Convention on Load Lines		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention for the Safety of Life at Sea, 1974, as amended	15.3.A <i>Note 2</i>	International Convention for the Safety of Life at Sea		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention for the Prevention of Pollution from Ships, as amended	15.4.A <i>Note 2</i>	MARPOL 73/78		
		15.4.B <i>Note 2</i>	MARPOL Annex I		
		15.4.C <i>Note 2</i>	MARPOL Annex II		
		15.4.D <i>Note 2</i>	MARPOL Annex III		
		15.4.E <i>Note 2</i>	MARPOL Annex IV		
		15.4.F <i>Note 2</i>	MARPOL Annex V		
		15.4.G <i>Note 2</i>	MARPOL Annex VI		

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 Print Name of Candidate

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 Candidate's Mariner Reference No.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions Maritime declarations of health and the requirements of the International Health Regulations	15.5.A <i>Note 2</i>	International Health Regulations		
	Knowledge of international maritime law embodied in international agreements and conventions International instruments affecting the safety of the ship, passengers, crew and cargo	15.6.A <i>OSV</i>	International agreements and conventions		
		15.6.B <i>OSV</i>	International instruments affecting the safety of the ship, passengers, crew and cargo		
	Knowledge of international maritime law embodied in international agreements and conventions methods and aids to prevent pollution of the marine environment by ships	15.7.A <i>Note 2</i>	Pollution prevention		
	Knowledge of international maritime law embodied in international agreements and conventions National legislation for implementing international agreements and conventions	15.8.A <i>Note 2</i>	National legislation to implement international conventions		
Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Thorough knowledge of life-saving appliance regulations (International Convention for the Safety of Life at Sea)	16.1.A <i>Note 2</i>	Life-saving appliance regulations		
	Organization of fire drills and abandon ship drills	16.2.A <i>Note 2</i>	Plan fire or emergency drill		
	Maintenance of operational condition of life-saving, fire-fighting and other safety systems	16.3.A <i>Note 2</i>	Develop a maintenance plan for lifesaving and firefighting equipment		
	Actions to be taken to protect and safeguard all persons on board in emergencies	16.4.A <i>Note 2</i>	Procedures to rescue persons from a vessel in distress		
		16.4.B <i>Note 2</i>	Man overboard procedures		

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to limit damage and save the ship following a fire, explosion, collision or grounding	16.5.A <i>Note 2</i>	Actions following fire, explosion, collision or grounding		
		16.5.B <i>Note 2</i>	Abandon ship procedures		
Develop emergency and damage control plans and handle emergency situations	Vessel construction, including damage control	17.2.A <i>Note 2</i>	Prepare a damage control plan		

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 Candidate's Mariner Reference No.

**ASSESSOR AND VESSEL INFORMATION**

Qualified Assessors (QAs) witnessing the successful demonstrations noted in this record should provide the information below relative to their service with the candidate. Prospective QAs should have a minimum of at least 1 year of experience as Master on vessels at least 200 GRT or 500 GT. After December 31, 2017, QAs must be approved by the National Maritime Center (46 CFR 10.107). Qualified military personnel need not be approved as QAs and may continue to sign assessments after December 31, 2017.

Vessel Name	Gross Tonnage	Assessor's Name	Assessor's Signature	Sample Initials of Assessor	Assessor's Mariner Reference No.	Assessor's Shipboard Position
M/V Sisyphus	1,234 GT	Ignatius J. Reilly	<i>Ignatius J. Reilly</i>	<i>IJR</i>	0112358	Master

\_\_\_\_\_  
 Print Name of Candidate

\_\_\_\_\_  
 Candidate's Mariner Reference No.

**QUALIFICATION REQUIREMENTS FOR NATIONAL AND STCW  
ENDORSEMENTS FOR SERVICE AS MASTER ON OFFSHORE SUPPLY VESSELS  
OF 1,600 GRT/3,000 GT OR MORE**

1. GENERAL. This enclosure provides guidance to qualify for national and STCW endorsements for service as Master on offshore supply vessels (OSVs) of 1,600 GRT/3,000 GT or more.
2. NATIONAL ENDORSEMENT.
  - a. Sea service.
    - 1) As is specified in 46 CFR 11.493(b), to qualify for a national endorsement as Master (OSV) of Less Than 10,000 GRT/GT, a mariner must have at least 24 months of total service as mate, chief mate, or master of ocean, near coastal, and/or Great Lakes on self-propelled vessels of more than 100 GRT. Service on inland waters may substitute for up to 50 percent of the required service. At least one-half of the required experience must be served as chief mate and be obtained on vessels of 1,600 GRT/3,000 GT or more (service as master will meet this requirement). For purposes of qualifying for this endorsement, “chief mate” is defined in 46 CFR 10.107 as the deck officer next in rank to the master and upon whom the command of the vessel will fall in the event of incapacity of the master. Mariners may not raise the tonnage of an endorsement for Master (OSV) of Less Than 1,600 GRT/3,000 GT using 46 CFR 11.402(c).
    - 2) As is specified in 46 CFR 11.493(c), if a mariner does not have at least one-half of the required service on vessels of 1,600 GRT/3,000 GT or more, a tonnage limitation will be placed on the officer endorsement based on the mariner’s qualifying experience. The endorsement will be limited to the maximum tonnage on which at least 25 percent of the required experience was obtained, or 150 percent of the maximum tonnage on which at least 50 percent of the service was obtained, whichever is higher. Limitations are in multiples of 1,000 GRT using the next higher figure when an intermediate tonnage is calculated. The minimum tonnage limitation will be 2,000 GRT, and in no case will the limitation exceed 10,000 GRT/GT unless the applicant meets the full requirements for an unlimited tonnage endorsement.
  - b. When evaluating sea service on vessels that are measured under both GRT and GT, the GT may be used for all international voyages, and for domestic voyages when the vessel is manned in accordance with the GT.
  - c. Training. To qualify for a national officer endorsement of Master (OSV) of Less Than 10,000 GRT/GT, mariners must provide evidence of successful completion of the following training:
    - 1) First Aid and CPR (46 CFR 11.201(i)). If this training was completed more than 1 year before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and

- 2) Basic and Advanced Firefighting (46 CFR 11.201(h)(2)(v)). This training must have been completed within the past 5 years, or if it was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b) and 11.303(b).

d. Examination.

- 1) Mariners holding the following national officer endorsements (for the same route) are considered to have already met the examination requirement for a national endorsement as Master (OSV) of Less Than 10,000 GRT/GT near coastal or oceans:
  - A) Chief Mate of Self-Propelled Vessels of Unlimited Tonnage;
  - B) Chief Mate (OSV) Less Than 10,000 GRT/GT;
  - C) Master (OSV) Less Than 1,600 GRT/3,000 GT;
  - D) Chief Mate (OSV) Less Than 1,600 GRT/3,000 GT.

e. Scope of endorsement.

- 1) National officer endorsements as Master (OSV) of Less Than 10,000 GRT/GT are issued for either near coastal or oceans routes. The service requirements are the same for both near coastal and oceans endorsements. The route on an endorsement will be based on the professional examination the mariner passed to qualify for the endorsement. When applying for an endorsement, mariners should indicate whether they are seeking a near coastal or an oceans endorsement.
- 2) Mariners may increase the scope of a national officer endorsement that is limited to near coastal waters to oceans routes by successfully completing a limited professional examination on topics applicable to oceans routes. The scope of the limited examination is described in the *Deck and Engineering Guide for the Administration of Merchant Marine Examinations*, this guide is available at the National Maritime Center web site: <http://www.uscg.mil/nmc/>. No additional service or training is required to increase the scope of the national officer endorsement from near coastal to oceans service.

3. STCW ENDORSEMENT.

- a. As specified in 46 CFR 11.305(c), the Coast Guard may exempt an applicant from meeting any individual knowledge, understanding, and proficiency required in Section A-II/2 of the STCW Code. Under this authority, mariners may qualify for an STCW endorsement as Master of Vessels of 3,000 GT or More that will be limited to service on OSVs by providing the evidence highlighted below:
  - 1) Service. Meeting the service requirements for an endorsement in 46 CFR 11.305(a)(1). Mariners must provide evidence of either:

- A) At least 36 months of service as officer in charge of a navigational watch (OICNW) on vessels operating in oceans, near-coastal waters, and/or Great Lakes; or
- B) At least 24 months of service as OICNW with at least 12 months service as Chief Mate.

Service on inland waters may be substituted for up to 50 percent of the total required service. Experience gained in the engine department on vessels may be creditable for up to 3 months of the service requirements;

- 2) Standard of competence/assessment. Meeting the standard of competence in Section A-II/2 of the STCW Code (incorporated by reference, see 46 CFR 11.102) as applicable to OSVs of 3,000 GT or more. The assessment guidelines in Enclosure (7) may be used for this purpose; and
  - 3) Training. Successful completion of the following approved training specified in 46 CFR 11.305(a)(3):
    - A) Advanced Stability;
    - B) Advanced Meteorology, if the endorsement will be valid for oceans service;
    - C) Leadership and Managerial Skills;
    - D) Search and Rescue;
    - E) Management of Medical Care;
    - F) Electronic Chart Display Information Systems (ECDIS), to be valid for vessels with this equipment;
    - G) Automatic Radar Plotting Aids (ARPA), to be valid for vessels with this equipment;
    - H) Global Maritime Distress and Safety System (GMDSS), to be valid for vessels with this equipment;
    - I) Basic Training (46 CFR 11.302). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and
    - J) Advanced Firefighting (46 CFR 11.303). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.303(b).
- b. To remove the limitation to OSVs, mariners must meet all requirements for an endorsement without a limitation in 46 CFR 11.305 that were not met when applying for



the OSV limited endorsement. These requirements may be found in NVIC 10-14 and will include completion of the following:

- 1) All assessments from NVIC 10-14 for any task identified in Enclosure (7) of this NVIC as being specific to OSVs;
  - 2) Approved training for Advanced Shiphandling; and
  - 3) Approved training for Advanced Meteorology, if the mariner's endorsement limited to service on OSVs is for near coastal routes.
- c. The scope of a mariner's STCW endorsement (near coastal or oceans) will be determined by the mariner's national officer endorsement and the assessments completed to qualify for the endorsement. To qualify for an STCW endorsement valid for oceans, mariners must hold or qualify for a national officer endorsement authorizing service as Master for oceans, and complete all assessments for an oceans endorsement. Enclosure (7) includes all assessments the mariner must complete in order to qualify for an STCW endorsement for Master (OSV) for oceans, and specifies the assessments that do not need to be completed for a near coastal endorsement.
- d. Mariners holding an STCW endorsement as Chief Mate valid on OSVs of 3,000 GT or more who are raising the grade of their endorsement to Master on Vessels of 3,000 GT or More limited to service on OSVs will not be required to submit management level assessments, and will not need additional training other than the following (if not completed previously):
- 1) Leadership and Managerial Skills (46 CFR 11.305 (a)(3)(iv));
  - 2) ECDIS, to be valid for vessels with this equipment (46 CFR 11.305(a)(3)(vii));
  - 3) ARPA, to be valid for vessels with this equipment (46 CFR 11.305(a)(3)(vi)); and
  - 4) GMDSS, to be valid for vessels with this equipment (46 CFR 11.305(a)(3)(viii)).
- e. Operational-level training and assessments are not required if the mariner holds or has previously held any STCW 95 endorsement as Officer in Charge of a Navigational Watch (OICNW) valid on vessels of 500 GT or more (46 CFR 11.301(g)(4)). Mariners who have not held an STCW endorsement as OICNW for 500 GT or More issued after 1997 must also meet the requirements for qualification as OICNW.
4. GRANDFATHERING.
- a. Mariners who hold STCW endorsements as Master limited to near coastal domestic voyages will have the limitation to domestic voyages removed on their next credential transaction. The limitation to near coastal waters will remain, unless the mariner meets all requirements to increase the scope of the endorsement from near coastal waters to oceans. The limitation to service on OSVs will also remain, unless the mariner meets the requirements for an endorsement that is not trade-restricted.

- b. Mariners who began their service or training before March 24, 2014, may continue to qualify under previous regulations and policy as follows:
- 1) Mariners may qualify for a national endorsement as Master (OSV) Less Than 10,000 GT Near Coastal by holding a national endorsement as either Master Less Than 1,600 GRT or Master of OSVs Less Than 1,600 GRT/3,000 GT based on service and/or training that began before March 24, 2014, and completing an approved “Large OSV” training and assessment program for Master. Mariners may qualify in this manner for a national officer endorsement until March 24, 2019.
  - 2) Mariners who began service or training before March 24, 2014, may qualify for an STCW endorsement as Master of Vessels of 3,000 GT or More, as Master of Vessels of 3,000 GT or More until December 31, 2017 by providing evidence of completion of the following approved training:
    - a) Basic Training, if this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence;
    - b) Advanced Firefighting, If this training was previously completed for another endorsement it need not be re-taken. Holding an endorsement that required this training will be satisfactory evidence that the training was completed;
    - c) Bridge Resource Management (if not completed previously);
    - d) Leadership and Managerial Skills;
    - e) “Large OSV” training program for increasing the tonnage of an endorsement as Master of OSVs from 3,000 GT to 6,000 GT;
    - f) ECDIS, to be valid for vessels with this equipment;
    - g) ARPA, to be valid for vessels with this equipment; and
    - h) GMDSS, to be valid for vessels with this equipment.
  - 3) Existing “Large OSV” training programs for increasing the tonnage of an endorsement as Master of OSVs from 3,000 GT to 6,000 GT will not be valid for STCW endorsements after December 31, 2017, or for any purpose after March 24, 2019. Programs renewing their approvals before these dates will be issued an approval with these date restrictions.
- c. Mariners holding national endorsements for Master of OSVs of not more than 6,000 GT may increase the tonnage authority of their endorsements to less than 10,000 GT by providing evidence of at least one year of service as mate, chief mate, or master on OSVs of at least 1,600 GRT/3,000 GT.

5. RENEWAL OF ENDORSEMENTS.

- a. To renew a national officer endorsement, mariners must meet the applicable requirements in 46 CFR 10.227.
- b. To renew an STCW endorsement as Master, mariners must the applicable requirements to renew their national endorsements in 46 CFR 10.227 and provide evidence of:
  - 1) Completion of approved or accepted training for:
    - A) Leadership and Managerial Skills (46 CFR 11.305(b)(1)); and
    - B) ECDIS, to be valid on a vessel with this equipment(46 CFR 11.305(b)(1));
  - 2) Maintaining the standard of competence for Basic Training as specified in 46 CFR 11.302(b) and Advanced Firefighting as specified in 46 CFR 11.303(b); and
  - 3) Seafarers serving as Lifeboatman must also provide evidence of maintaining the standard of competence for Proficiency in Survival Craft (46 CFR 12.613) or Proficiency in Survival Craft-Limited (46 CFR 12.615), as appropriate.

**QUALIFICATION REQUIREMENTS FOR NATIONAL AND STCW  
ENDORSEMENTS FOR SERVICE AS CHIEF MATE ON OFFSHORE SUPPLY  
VESSELS OF 1,600 GRT/3,000 GT OR MORE**

1. GENERAL. This enclosure provides guidance to qualify for national and STCW endorsements as Chief Mate for service on offshore supply vessels (OSVs) of 1,600 GRT/3,000 GT or more.
2. NATIONAL ENDORSEMENT.
  - a. Sea service.
    - 1) As is specified in 46 CFR 11.495(b), to qualify for a national endorsement as Chief Mate (OSV) of Less Than 10,000 GRT/GT, a mariner must have at least 12 months of total service as mate, chief mate, or master of ocean, near coastal, and/or Great Lakes on self-propelled vessels of more than 100 GRT. At least one-half of the required experience must be on vessels of 1,600 GRT/3,000 GT or more. Service on inland waters may substitute for up to 50 percent of the required service.
    - 2) As is specified in 46 CFR 11.495(c), if a mariner does not have at least one-half of the required service on vessels of 1,600 GRT/3,000 GT or more, a tonnage limitation will be placed on the officer endorsement based on the mariner's qualifying experience. The endorsement will be limited to the maximum tonnage on which at least 25 percent of the required experience was obtained, or 150 percent of the maximum tonnage on which at least 50 percent of the service was obtained, whichever is higher. The minimum tonnage limitation calculated according to this paragraph will be 2,000 GRT. Limitations are in multiples of 1,000 GRT using the next higher figure when an intermediate tonnage is calculated. In no case will the limitation exceed 10,000 GRT/GT unless the applicant meets the full requirements for an unlimited tonnage endorsement.
    - 3) When evaluating sea service on vessels that are measured under both GRT and GT, the GT may be used for all international voyages, and for domestic voyages when the vessel is manned in accordance with the GT.
  - b. Training. To qualify for a national officer endorsement of Chief Mate (OSV) of Offshore Supply Vessels of Less Than 10,000 GRT/GT, mariners must provide evidence of successful completion of the following training:
    - 1) First Aid and CPR (46 CFR 11.201(i)). If this training was completed more than 1 year before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and
    - 2) Basic and Advanced Firefighting (46 CFR 11.201(h)(2)(v)). This training must have been completed within the past 5 years, or if it was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b) and 11.303(b).

- c. Examination. Mariners holding the following national officer endorsements (for the same route) are considered to have already met the examination requirement for a national endorsement as Chief Mate (OSV) of Less Than 10,000 GRT/GT near coastal or oceans:
  - 1) Chief Mate (OSV) Less Than 1,600 GRT/3,000 GT; or Chief Mate (OSV) Less Than 1,600 GRT/3,000 GT; or
  - 2) Master (OSV) Less Than 1,600 GRT/3,000 GT.
- d. Scope of endorsement.
  - 1) National officer endorsements as Chief Mate (OSV) Less Than 10,000 GRT/GT are issued for either near coastal or oceans routes. The service requirements are the same for both near coastal and oceans endorsements. The route on an endorsement will be based on the professional examination the mariner passed to qualify for the endorsement. When applying for an endorsement, mariners should indicate whether they are seeking a near coastal or an oceans endorsement.
  - 2) Mariners may increase the scope of a national officer endorsement that is limited to near coastal waters to oceans routes by successfully completing a limited professional examination on topics applicable to oceans routes. The scope of the limited examination is described in the *Deck and Engineering Guide for the Administration of Merchant Marine Examinations*, this guide is available at the National Maritime Center web site: <http://www.uscg.mil/nmc/>. No additional service or training is required to increase the scope of the national officer endorsement from near coastal to oceans service.

### 3. STCW ENDORSEMENT.

- a. As specified in 46 CFR 11.307(c), the Coast Guard may exempt an applicant from meeting any individual knowledge, understanding, and proficiency required in Section A-II/2 of the STCW Code. Under this authority, mariners may qualify for an STCW endorsement as Chief Mate that will be limited to service on OSVs by providing the evidence highlighted below:
  - 1) Service. Meeting the service requirements for an endorsement that is restricted to OSVs in 46 CFR 11.307(a)(1). Mariners must provide evidence of 12 months of service as officer in charge of a navigational watch on vessels operating in oceans, near-coastal waters, and/or Great Lakes. Service on inland waters may be substituted for up to 50 percent of the total required service. Experience gained in the engine department on vessels may be creditable for up to 1 month of the service requirements;
  - 2) Standard of competence/assessment. Meeting the standard of competence in Section A-II/2 of the STCW Code (incorporated by reference, see 46 CFR 11.102) as applicable to OSVs of 3,000 GT or more. The assessment guidelines in Enclosure (7) may be used for this purpose; and

- 3) Training. Successful completion of the following approved training specified in 46 CFR 11.307(a)(3):
  - A) Advanced Stability;
  - B) Advanced Meteorology, if the endorsement will be valid for oceans service;
  - C) Leadership and Managerial Skills;
  - D) Search and Rescue;
  - E) Management of Medical Care;
  - F) Electronic Chart Display Information Systems (ECDIS);
  - G) Automatic Radar Plotting Aids (ARPA), to be valid for vessels with this equipment;
  - H) Global Maritime Distress and Safety System (GMDSS), to be valid for vessels with this equipment;
  - I) Basic Training (46 CFR 11.302). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.302(b); and
  - J) Advanced Firefighting (46 CFR 11.303). If this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence as specified in 46 CFR 11.303(b).
- b. To remove the limitation to OSVs, mariners must meet all requirements for an endorsement without a limitation in 46 CFR 11.307 that were not met when applying for the OSV limited endorsement. These requirements may be found in NVIC 10-14 and will include completion of the following:
  - 1) All assessments from NVIC 10-14 for any task identified in Enclosure (7) of this NVIC as specific to OSVs;
  - 2) Approved training for Advanced Shiphandling; and
  - 3) Approved training for Advanced Meteorology, if the mariner's endorsement limited to service on OSVs is for near coastal routes.
- c. The scope of a mariner's STCW endorsement (near coastal or oceans) will be determined by the mariner's national officer endorsement and the assessments used to qualify for the endorsement. To qualify for an STCW endorsement valid for oceans, mariners must hold or qualify for a national officer endorsement authorizing service as Master for oceans, and complete all assessments for an oceans endorsement. Enclosure (7) includes all assessments the mariner must complete in order to qualify for an STCW endorsement for

Chief Mate (OSV) for oceans, and specifies the assessments that do not need to be completed for a near coastal endorsement.

- d. Operational-level training and assessments are not required if the mariner holds or has previously held any STCW 95 endorsement as Officer in Charge of a Navigational Watch (OICNW) valid on vessels of 500 GT or more (46 CFR 11.301(g)(4)). Mariners who have not held an STCW endorsement as OICNW for 500 GT or More issued after 1997 must also meet the requirements for qualification as OICNW.

4. GRANDFATHERING.

- a. Mariners who hold STCW endorsements as Chief Mate limited to near coastal domestic voyages will have the limitation to domestic voyages removed on their next credential transaction. The limitation to near coastal waters will remain, unless the mariner meets all requirements to increase the scope of the endorsement from near coastal waters to oceans. The limitation to service on OSVs will also remain, unless the mariner meets the requirements for an endorsement that is not trade-restricted.
- b. Mariners who began their service or training before March 24, 2014, may continue to qualify under previous regulations and policy as follows:
  - 1) Mariners may qualify for a national endorsement as Chief Mate (OSV) Less Than 10,000 GT Near Coastal by holding a national endorsement as Chief Mate (OSV) Less Than 1,600 GRT/3,000 GT based on service and/or training that began before March 24, 2014, and completing an approved “Large OSV” training and assessment program for Chief Mate. Mariners may qualify in this manner for a national officer endorsement until March 24, 2019.
  - 2) Mariners who began service or training before March 24, 2014, may qualify for an STCW endorsement as Master of Vessels of 3,000 GT or More, as Master of Vessels of 3,000 GT or More until December 31, 2017 by providing evidence of completion of the following approved training:
    - A) Basic Training, if this training was completed more than 5 years before the date of application, the applicant must provide evidence of maintaining the standard of competence;
    - B) Advanced Firefighting, if this training was completed for another endorsement it need not be re-taken. Holding an endorsement that required this training will be satisfactory evidence that the training was completed;
    - C) Bridge Resource Management (if not completed previously);
    - D) Leadership and Managerial Skills;
    - E) “Large OSV” training program for increasing the tonnage of an endorsement as Master of OSVs from 3,000 GT to 6,000 GT;

- F) ECDIS, to be valid for vessels with this equipment;
  - G) ARPA, to be valid for vessels with this equipment; and
  - H) GMDSS, to be valid for vessels with this equipment.
- 3) Existing “Large OSV” training programs for increasing the tonnage of an endorsement as Chief Mate of OSVs from 3,000 GT to 6,000 GT will not be valid for STCW endorsements after December 31, 2017, or for any purpose after March 24, 2019. Programs renewing their approvals will be issued an approval with these restrictions.
  - 4) Mariners holding national endorsements for Chief Mate of OSVs of not more than 6,000 GT may increase the tonnage authority of their endorsement to less than 10,000 GT by providing evidence of at least six months of service as mate, chief mate, or master on OSVs of at least 1,600 GRT/3,000 GT.

5. RENEWAL OF ENDORSEMENTS.

- a. To renew a national officer endorsement, mariners must meet the applicable requirements in 46 CFR 10.227.
- b. To renew an STCW endorsement as Chief Mate, mariners must meet the applicable requirements to renew their national endorsements in 46 CFR 10.227 and provide evidence of:
  - 1) Completion of approved or accepted training for:
    - A) Leadership and Managerial Skills (46 CFR 11.307(b)(1)); and
    - B) ECDIS, to be valid on a vessel with this equipment (46 CFR 11.307(b)(2));
  - 2) Maintaining the standard of competence for Basic Training as specified in 46 CFR 11.302(b) and Advanced Firefighting as specified in 46 CFR 11.303(b); and
  - 3) Seafarers serving as Lifeboatman must also provide evidence of maintaining the standard of competence for Proficiency in Survival Craft (46 CFR 12.613) or Proficiency in Survival Craft-Limited (46 CFR 12.615), as appropriate.



## **Assessment Guidelines for Master or Chief Mate on Vessels of 3,000 GT or More Limited to Service on Offshore Supply Vessels**

Every candidate for an STCW endorsement as Master or Chief Mate on Vessels of 3,000 GT or More Limited to Service on Offshore Supply Vessels must provide evidence of having achieved the required standard of competence as specified in Table A-II/2 of the STCW Code (46 CFR 11.305(a)(2) and 11.307(a)(2)) as applicable to offshore supply vessels (OSVs). The table below is adopted from Table A-II/2 of the STCW Code to assist the candidate and assessor in the demonstration of competency.

### **Practical Skill Demonstrations**

These assessment guidelines establish the conditions under which the assessment will occur, the performance or behavior the candidate is to accomplish, and the standards against which the performance is measured.

### **Qualified Assessors**

A shipboard Qualified Assessor who witnesses a practical demonstration may sign the appropriate blocks and pages in the Record of Assessment in Enclosure (3) or an equivalent record. All assessments must be signed by a qualified assessor approved by the Coast Guard in accordance with 46 CFR 10.405. In order to facilitate the transition to this new requirement, the Coast Guard will accept assessments that have been demonstrated in the presence of and signed by an assessor who has not been Coast Guard approved until December 31, 2017, provided that the assessor meets the professional requirements in 46 CFR 10.405(a)(3) to assess competence for the specific endorsement. Assessors must be in possession of the level of endorsement, or other professional credential, which provides proof that he or she has attained a level of experience and qualification equal or superior to the relevant level of knowledge, skills, and abilities to be assessed (46 CFR 10.405(a)(3)). In the interim, the Coast Guard will accept assessments signed by mariners who hold an appropriate national endorsement and have at least 1 year of experience as Master on OSVs of at least 1,600 GRT or 3,000 GT. After December 31, 2017, QAs must be approved by the National Maritime Center to conduct the assessment (46 CFR 10.405). Qualified military personnel need not be approved QA's and may continue to sign assessments after December 31, 2017.

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

**Notes**

- Note 1* The assessment is not required for an endorsement limited to near coastal waters. These assessments must be completed to remove the near coastal limitation.
- Note 2* The assessment is the same or equivalent to one for an endorsement that is not limited to OSVs, and need not be repeated to remove the limitation to OSVs.
- Note 3* Mariners holding any STCW endorsements as Master or Chief Mate of 500 GT or More and Less Than 3,000 GT (with or without a limitation to service on OSVs) do not need to complete the assessment.
- OSV* The assessment is specific to OSVs, and another assessment of the knowledge, understanding, and proficiency (KUP) is needed for an endorsement that is not limited to OSVs or to remove the limitation to OSVs. The identically numbered assessment in NVIC 10-14 for an endorsement as Master or Chief Mate of Vessels of 3,000 GT or More that is not limited to service on OSVs may be used for an endorsement that will not be limited to OSVs..
- TV* The assessment is only required for an endorsement that will be valid upon OSVs that are also classed and inspected as tank vessels.
- ARPA* The assessment is not required for mariners serving exclusively on vessels not fitted with an Automatic Radar Plotting Aid (ARPA); a limitation will be added to the endorsement indicating that it is not valid for service on vessels equipped with ARPA.
- ECDIS* The assessment is not required for mariners serving exclusively on vessels not fitted with an Electronic Chart Display and Information System (ECDIS); a limitation will be added to the endorsement indicating that it is not valid for service on vessels equipped with ECDIS.
- Course* The KUP is demonstrated by the successful completion of the specified Coast Guard approved or accepted course.

Numbering gaps in the sequence of assessments are intentional to allow easy correlation to corresponding assessments for endorsements that are not trade-restricted.

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

**Assessment Guidelines for Master or Chief Mate on Vessels of 3,000 GT or More Limited to Service on Offshore Supply Vessels**

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
1.1.A Create a voyage plan  <i>Note 2</i> <i>Note 3</i>	Plan a voyage and conduct navigation	Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks, taking into account  .1 The General Provisions on Ships' Routing .2 Restricted waters .3 Meteorological conditions .4 Ice .5 Restricted visibility .6 Traffic separation schemes .7 Vessel traffic service (VTS) areas .8 Areas of extensive tidal effects .9 Reporting Systems and VTS procedures	On a vessel or in a navigation laboratory, and provided with chart catalogs, charts, nautical publications, and vessel particulars,	the candidate creates a voyage plan for a coastwise voyage of at least 600 nm, a segment of which must be at night and in restricted waters.	The candidate's plan: 1. Considers and utilizes: a. The condition of the vessel, equipment, operational limitations, draft and maneuvering characteristics; b. Any special characteristics of the cargo and its stowage; c. Crew member competency and rest status; d. Up-to-date vessel certificates and documents; e. Up-to-date charts of proper scale, and the latest notices to mariners and radio navigational warnings; f. Up-to-date coast pilots, sailing directions, and other information sources appropriate for the voyage; g. Relevant routing guides; h. Up-to-date tide and current tables and atlases; i. Weather information; j. Weather routing services; k. Vessel reporting systems, VTS and environmental protection measures; l. Vessel traffic density for the route; m. Pilotage requirements and information exchange; and n. Port information, including emergency response capability; and  <p align="center"><i>Continued on next page</i></p>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>1.1.A <i>Cont'd</i></p> <p>Create a voyage plan</p> <p><i>Note 2</i> <i>Note 3</i></p>					<p style="text-align: center;"><i>Continued from previous page</i></p> <p>2. Contains:</p> <ul style="list-style-type: none"> <li>a. Courses plotted on the appropriately scaled charts noting the ETA at each way point, including the final way point;</li> <li>b. Courses and distances between way points which were correctly calculated and indicated on the charts;</li> <li>c. The most direct route that avoids all hazards to navigation by the margin of safety of 3.0 nm, where possible;</li> <li>d. Areas of all required speed changes;</li> <li>e. Minimum under keel clearances in critical areas; positions requiring a change of machinery status;</li> <li>f. Waypoints of all course changes;</li> <li>g. Methods and frequency of position fixing;</li> <li>h. Positions and radio hailing frequencies or channels where port authorities, pilots and VTS services must be notified are noted on the relevant chart;</li> <li>i. State of the tide and currents at the port of departure for the times of departure and transit were determined; and</li> <li>j. A contingency plan for alternative actions in cases of emergency.</li> </ul>

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1.2.A Great circle sailing <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Plan a voyage and conduct navigation	Voyage planning and navigation	On a vessel or in a navigation laboratory, given a latitude and longitude of departure and arrival at least 3,000 nm apart, using a calculator (non-programmable or programmable), sight reduction tables, and/or U.S. Pub. No. 9 Tables,	the candidate calculates the great circle route between the point of departure and the point of arrival.	<ol style="list-style-type: none"> <li>1. The candidate's great circle route contains the: <ol style="list-style-type: none"> <li>a. Initial course, which is within <math>\pm 1.0^\circ</math> of the assessor's solution;</li> <li>b. Total distance, which is within 1.0 nm of the assessor's solution; and</li> <li>c. Position of the vertex, which is within 1.0 nm of the assessor's position; and</li> </ol> </li> <li>2. The candidate's points along the great circle are at intervals of <math>5^\circ</math> of longitude or 300 nm and are within 1.0 nm of the assessor's solution.</li> </ol>
1.2.B Mercator sailing initial course and total distance <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Plan a voyage and conduct navigation	Voyage planning and navigation	On a vessel or navigation laboratory, given a latitude and longitude of departure and arrival at least 1,000 nm apart, using a calculator (non-programmable or programmable), sight reduction tables, and/or U.S. Pub. No. 9 Tables,	the candidate calculates the Mercator course and distance between the point of departure and the point of arrival.	<p>The candidate's:</p> <ol style="list-style-type: none"> <li>1. Initial course is within <math>\pm 1.0^\circ</math> of the assessor's solution; and</li> <li>2. Total distance is within 1.0 nm of the assessor's solution.</li> </ol>

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1.2.C Mercator sailing final position  <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Plan a voyage and conduct navigation	Voyage planning and navigation	On a vessel or in a navigation laboratory, given a latitude and longitude of departure and a course and distance for a passage of at least 1,000 nm, and using a calculator (non-programmable or programmable), and/or U.S. Pub. No. 9 Tables,	the candidate calculates the final position using Mercator formula.	The candidate's final position is within $\pm 1.0$ nm of the assessor's solution.
2.1.A Meridian transit (other than sun)  <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Determine position and the accuracy of resultant position fix by any means	Position determination in all conditions by celestial observations	In a navigation laboratory or on a vessel, with a celestial body other than the sun at upper transit and a clear horizon,	the candidate measures the altitude of the body as it crosses the meridian of the observer and calculates the latitude of the vessel.	The candidate's latitude is calculated at meridian passage and must be within $\pm 1.0$ nm of the assessor's solution.  <b>NOTE:</b> The assessor may permit the use of an Ex-Meridian to compensate for weather, cloud cover, or other reason which he or she deems necessary.

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2.1.B Star identification <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Determine position and the accuracy of resultant position fix by any means	Position determination in all conditions by celestial observations	On a vessel or in a navigation laboratory, using a star finder or navigational publication, such as Pub. 249, and given the times of observation, altitudes and azimuths of three unknown stars,	the candidate identifies the three stars.	The candidate correctly identifies the three stars within 20 minutes.
2.1.C Star/planet selection <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Determine position and the accuracy of resultant position fix by any means	Position determination in all conditions by celestial observations	On a vessel in a navigation laboratory or onshore with a suitable horizon, given the time of observation,	the candidate identifies the best three stars or planets to obtain a fix.	The candidate's identification is completed within 20 minutes and the bodies identified: <ol style="list-style-type: none"> <li>1. Are the brightest available; and</li> <li>2. Have the greatest crossing angles possible between each other when plotted.</li> </ol>

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2.2.A GPS routing <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Determine position and the accuracy of resultant position fix by any means	Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks: Routing in accordance with the General Principles on Ship's Routing	On a vessel underway, in a navigation laboratory, or in a vessel simulator, using a GPS receiver which meets IMO standards, and given a port of departure and a port of arrival at least 2,000 nm apart in a generally east - west direction, with at least 3 legs, which include both rhumb line and great circle legs,	the candidate enters the waypoints and route for the voyage into the GPS.	The candidate's: <ol style="list-style-type: none"> <li>1. Way points are correctly determined, entered, and saved;</li> <li>2. Route is correctly entered and saved; and</li> <li>3. Great circle or rhumb line legs are correctly designated.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
3.1.A Amplitude of celestial body <i>Note 1</i> <i>Note 2</i> <i>Note 3</i>	Determine and allow for compass errors	Ability to determine and allow for errors of the magnetic and gyro-compasses	On a ship underway, with a celestial body other than the sun on either the visible horizon or the celestial horizon,	the candidate takes a compass bearing of the body.	The candidate: 1. Takes the bearing when the repeater is level and notes the: a. Time of the reading; b. Compass bearing (magnetic and/or gyrocompass); c. Determined true bearing of the sun (if the bearing of the sun was taken on the visible horizon, the Table 28 correction must be properly applied); and d. Compass error as determined by comparing the true bearing to the compass bearing; and 2. Calculates a solution that is within $\pm 1.0^\circ$ of the assessor's solution.
3.2.A Write a standing order for compasses <i>Note 2</i> <i>Note 3</i>	Determine and allow for compass errors	Knowledge of the principles of magnetic and gyro-compasses	On a vessel, or in a navigation laboratory, when asked to write a standing order regarding onboard compasses,	the candidate writes a standing order regarding the onboard compasses.	The candidate's standing order includes: 1. Frequent magnetic and gyrocompass comparison; 2. Error determination is increased when near navigational hazards; 3. Comparison of master gyro and slaves; 4. Listing all slave compasses to be checked including the emergency steering stand); and 5. Effect of magnetic objects near magnetic compass.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
3.3.A Operation and care of gyrocompass  <i>Note 2</i> <i>Note 3</i>	Determine and allow for compass errors	Understanding of systems under the control of the master gyro and a knowledge of the operation and care of the main types of gyro-compasses	On a vessel, or in a navigational laboratory, when asked to write an instruction regarding onboard compasses,	the candidate writes an instruction for the watchstanding Mates regarding the onboard compasses.	The candidate's instruction includes: <ol style="list-style-type: none"> <li>1. Systems affected by a malfunction of the master gyrocompass;</li> <li>2. How a malfunction of the master gyrocompass manifests itself in each system;</li> <li>3. Location of instructions for starting the master gyrocompass and simulating the procedure;</li> <li>4. Location of instructions for shutting down the master gyrocompass and simulating the procedure;</li> <li>5. Procedures to follow in the event of a master gyrocompass malfunction;</li> <li>6. Procedures to follow in the event of a disconnect of system requiring input from the master gyrocompass; and</li> <li>7. Routine maintenance.</li> </ol>
4.1 Knowledge of IAMSAR procedures  <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Co-ordinate search and rescue operations	A thorough knowledge of and ability to apply the procedures in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual	This KUP is demonstrated by successful completion of the approved <i>Search and Rescue</i> course specified in 46 CFR 11.305(a)(3)(v) and 11.307(a)(3)(v).		

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5.1 Operate ARPA Controls and functions  <i>Note 2</i> <i>Note 3</i> <i>ARPA Course</i>	Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	An appreciation of system errors and thorough understanding of the operational aspects of navigational systems  Evaluation of navigational information derived from all sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the ship			These KUPs are demonstrated by successful completion of the approved ARPA course specified in 46 CFR 11.305(a)(3)(viii) and 11.307(a)(3)(viii) or if the mariner holds an STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ARPA.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
5.2.A Blind pilotage planning <i>Note 2</i> <i>Note 3</i>	Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	Blind pilotage planning Evaluation of navigational information derived from all available sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the ship	On a vessel, or in a navigation laboratory,	the candidate writes a standing order regarding navigation in restricted visibility.	The candidate's standing order includes: <ol style="list-style-type: none"> <li>1. Conditions constituting restricted visibility;</li> <li>2. Informing the Master;</li> <li>3. Traffic considerations;</li> <li>4. Following the appropriate rules of the road;</li> <li>5. Safe speeds;</li> <li>6. Engine room alert level (SBE, etc);</li> <li>7. Appropriate signals being used;</li> <li>8. Posting of lookouts;</li> <li>9. Operation and use of RADAR and other electronic surveillance devices available; and</li> <li>10. Positioning of vessel in the seaway.</li> </ol>

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5.3.A Plan and execute a passage <i>Note 2</i> <i>Note 3</i>	Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	The interrelationship and optimum use of all navigational data available for conducting navigation	On a vessel underway or in a simulator, using a radar and/or ARPA, with multiple targets displayed on the 12-mile range scale, in congested coastal waters with reduced visibility, while transiting a traffic separation scheme and/or narrow channel(s), in the presence of current, and with a least one course change of not less than 30° on the route,	the candidate plans and executes a passage through the area of transit, using the principles of bridge resource management.	The candidate's plan and passage includes: <ol style="list-style-type: none"> <li>1. Assigning BRM roles;</li> <li>2. Monitoring the vessel progress;</li> <li>3. Communicating clearly and effectively;</li> <li>4. Controlling passage for safe navigation and collision avoidance; and</li> <li>5. Ensuring that all team members use all relevant navigational data.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>6.1 ECDIS licensing and updating <i>Note 2</i> <i>Note 3</i> <i>ECDIS Course</i></p>	<p>Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making</p>	<p>Management of operational procedures, system files and data, including procurement, licensing and updating of chart data and system software to conform to established procedures</p>			<p>This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.305(a)(3)(vii) and 11.307(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.</p>
<p>6.2 Update ECDIS system version <i>Note 2</i> <i>Note 3</i> <i>ECDIS Course</i></p>	<p>Maintain the safety of navigation through use of ECDIS and associated navigation systems to assist command decision making</p>	<p>Management of operational procedures, system files and data, including system and information updating, including the ability to update ECDIS system version in accordance with vendor's product development</p>			<p>This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.305(a)(3)(vii) and 11.307(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.</p>

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6.3 ECDIS system configure and backup <i>Note 2</i> <i>Note 3</i> <i>ECDIS Course</i>	Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making	Management of operational procedures, system files and data, including create and maintain system configuration and backup files			This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.305(a)(3)(vii) and 11.307(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.
6.4 Create and maintain ECDIS log files <i>Note 2</i> <i>Note 3</i> <i>ECDIS Course</i>	Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making	Management of operational procedures, system files and data, including create and maintain log files in accordance with established procedures			This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.305(a)(3)(vii) and 11.307(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>6.5</p> <p>Maintain ECDIS route plan files</p> <p><i>Note 2</i> <i>Note 3</i> <i>ECDIS Course</i></p>	<p>Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making</p>	<p>Management of operational procedures, system files and data, including create and maintain route plan files in accordance with established procedures</p>			<p>This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.305(a)(3)(vii) and 11.307(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.</p>
<p>6.6</p> <p>ECDIS track history and alarms</p> <p><i>Note 2</i> <i>Note 3</i> <i>ECDIS Course</i></p>	<p>Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making</p>	<p>Management of operational procedures, system files and data, including use ECDIS log-book and track history functions for inspection of system functions, alarm settings and user responses</p>			<p>This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.305(a)(3)(vii) and 11.307(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.</p>

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6.7 ECDIS playback and route planning <i>Note 2</i> <i>Note 3</i> <i>ECDIS Course</i>	Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making	Use ECDIS playback functionality for passage review, route planning and review of system functions	This KUP is demonstrated by successful completion of the approved ECDIS course specified in 46 CFR 11.305(a)(3)(vii) and 11.307(a)(3)(vii) or if the mariner holds any STCW endorsement as OICNW, Chief Mate, or Master that is valid for vessels equipped with ECDIS after December 31, 2016.		
7.1.A Forecast weather for next 24 hours <i>Note 1</i> <i>Note 3</i> <i>OSV</i>	Forecast weather and oceanographic conditions	Ability to understand and interpret a synoptic chart and to forecast area weather, taking into account local weather conditions and information received by weather fax	On a vessel, or in a laboratory, given synoptic surface and 500 mb weather charts for the previous 24-hour period, and temperature, pressure and wind readings for the previous 8 hours,	the candidate determines the weather to be encountered during the next 24-hour period.	The candidate's determinations of expected wind, sea, and weather conditions (e.g. types and amount of cloud cover, rain, and fog) are correct when compared with the movement of the systems and fronts during subsequent 24-hour period.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
7.2.A Identify fronts <i>Note 3 OSV</i>	Forecast weather and oceanographic conditions	Knowledge of characteristics of various weather systems, including tropical revolving storms and avoidance of storm centers and the dangerous quadrants	On a vessel, or in a laboratory, when asked to describe the characteristics of tropical storms,	the candidate describes the characteristics of tropical storms.	The candidate correctly describes tropical storms of differing magnitudes and actions to maintain the safety of navigation and minimize any risks to the vessel.
7.3.A Ocean currents <i>Note 3 OSV</i>	Forecast weather and oceanographic conditions	Knowledge of ocean current systems	On a vessel, or in a laboratory, when asked to describe the anticipated effects of set and drift,	the candidate describes the anticipated effects of set and drift in regards to leeway, increased or decreased fuel consumption, voyage (or voyage leg) duration and potential traffic.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Long distance voyages where large current systems will affect the navigation and operation of the vessel; and</li> <li>2. Short distance voyages or voyage legs where small current systems will affect the navigation and operation of the vessel.</li> </ol>
7.4.A Calculate height of tide <i>Note 2 Note 3</i>	Forecast weather and oceanographic conditions	Ability to calculate tidal conditions  Use all appropriate nautical publications on tides and currents	On a vessel, or in a laboratory, given a zone time at a subordinate location, and using an appropriate nautical publication,	the candidate correctly calculates the height of the tide.	The candidate's calculation is within $\pm 0.5$ feet of the assessor's solution.  <b>NOTE:</b> This assessment may be conducted with the use of a computer program.

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7.4.B Calculate tidal current <i>Note 2</i> <i>Note 3</i>	Forecast weather and oceanographic conditions	Ability to calculate tidal conditions  Use all appropriate nautical publications on tides and currents	On a vessel or in a laboratory, given a zone time at a subordinate location, and using an appropriate nautical publication,	the candidate correctly calculates the tidal current.	The candidate's calculation is within $\pm 0.5$ knots and $\pm 5^\circ$ of the assessor's solution.  <b>NOTE:</b> This assessment may be conducted with the use of a computer program.
7.4.C Calculate time for desired height of tide <i>Note 2</i> <i>Note 3</i>	Forecast weather and oceanographic conditions	Ability to calculate tidal conditions  Use all appropriate nautical publications on tides and currents	On a vessel or in a laboratory, given a desired height of the tide at a subordinate location, and using an appropriate nautical publication,	the candidate correctly calculates the time period when the tidal rise creates a temporary situation where there is sufficient depth of water for the vessel to safely transit a given area where the chart datum indicates insufficient depth of water for the transit.	The candidate's calculation is within $\pm 5$ minutes of the assessor's solution.  <b>NOTE:</b> At the assessor's discretion, the candidate may calculate the time period when the tidal drop creates a temporary situation where there is insufficient depth of water for the vessel to safely transit a given area where the chart datum indicates sufficient depth of water for the transit.  This assessment may be conducted with the use of a computer program.

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8.1.A Beaching a vessel  <i>Note 3 OSV</i>	Respond to navigational emergencies	Precautions when beaching a ship	On a vessel or in a laboratory, when asked to describe beaching a vessel,	the candidate describes the precautions to be observed.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Ideal conditions, such as:                             <ol style="list-style-type: none"> <li>a. Weather;</li> <li>b. Material of which the beach is made;</li> <li>c. Slope of the beach; and</li> <li>d. Trim of the vessel;</li> </ol> </li> <li>2. Effects of weather and current after beaching; and</li> <li>3. Precautions to take after beaching such as:                             <ol style="list-style-type: none"> <li>a. Preparations to keep from being driven further ashore;</li> <li>b. Preparations for refloating;</li> <li>c. Damage assessment;</li> <li>d. Effects of ballast; and</li> <li>e. Vessel Soundings.</li> </ol> </li> </ol>
8.2.A Grounding a vessel  <i>Note 3 OSV</i>	Respond to navigational emergencies	Action to be taken if grounding is imminent, and after grounding	On a vessel, or in a laboratory, when asked to describe minimizing grounding damage,	the candidate describes the appropriate steps to minimize grounding damage.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. All watertight doors be closed, the hull be checked, the bilges and tanks be sounded, and all spaces below the waterline be visually inspected where possible;</li> <li>2. The vessel be anchored in order to hold it until the grounding force is calculated and the float plan is complete;</li> <li>3. Ballast and fuel be transferred as necessary;</li> <li>4. The radio room or GMDSS station, satellite terminals, and other automatic distress transmitters of the vessel position be notified as necessary;</li> <li>5. Communications with the engine room be established and the sea suction be switched if necessary;</li> <li>6. Type of bottom on which the vessel grounded is determined; and</li> <li>7. The threat of oil pollution is determined.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
8.3.A Refloating a grounded vessel <i>Note 3 OSV</i>	Respond to navigational emergencies	Refloating a grounded ship with and without assistance	On a vessel or in a laboratory, when asked to describe refloating a grounded vessel, with and without assistance,	the candidate describes the appropriate steps to prepare for refloating a grounded vessel.	The candidate's description includes: 1. Determining the: a. Depth of water around the vessel; b. Effects of tide and current; c. Time and height of the next high tide; d. Best placement of assist boats (if available); e. Structural integrity of the hull; f. Vessel stability, stress, and grounding forces; and g. Effect of de-ballasting or cargo removal; 2. Maintaining constant radio communications with assist boats; 3. Displaying proper day and night signals; 4. Obtaining continuous update of weather forecasts; 5. Determining the effectiveness of assist boats; and 6. The crew remains away from towing lines before pulling starts.
8.4.A Prepare for a collision <i>Note 3 OSV</i>	Respond to navigational emergencies	Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause	On a vessel or in a laboratory, when asked to describe preparing for a collision or on a simulator during a simulation of an imminent collision,	the candidate gives or describes the proper commands to prepare for a collision.	The commands described or given include: 1. Closing all watertight doors; 2. Broadcasting appropriate radio messages; 3. Sounding of danger, maneuvering, and vessel emergency signals, as required; 4. Alerting the engine room; and 5. Directing the vessel crew to take appropriate steps to lessen the force of impact.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
8.5.A Damage control <i>Note 2</i>	Respond to navigational emergencies	Assessment of damage control	On a vessel of at least 200 GRT or 500 GT underway, or in a laboratory, during a drill simulation of a vessel casualty resulting in structural damage,	the candidate correctly identifies the type and scale of the presented vessel casualty damage and promptly identifies and takes proper action to safely minimize the effects of the damage.	The candidate's actions ensure that: <ol style="list-style-type: none"> <li>1. Communications are effective and comply with established procedures; and</li> <li>2. Decisions and actions maximize safety of persons.</li> </ol>
8.6.A Emergency steering <i>Note 2</i> <i>Note 3</i>	Respond to navigational emergencies	Emergency steering	On a vessel of at least 200 GRT or 500 GT underway, or in a laboratory, during a drill simulation of the vessel suffering a steering casualty that cannot be corrected by switching steering motors,	the candidate gives the proper commands to operate the emergency steering system.	The commands given by the candidate include: <ol style="list-style-type: none"> <li>1. Having crew man the aft steering room;</li> <li>2. Establishing communications with the steering engine room;</li> <li>3. Switching steering control from the bridge to the steering engine room; and</li> <li>4. Appropriate helm orders to be followed and courses to be steered.</li> </ol>
8.7.A Emergency towing <i>Note 3</i> <i>OSV</i>	Respond to navigational emergencies	Emergency towing arrangements and towing procedure	On a vessel, or in a laboratory, when asked to describe emergency towing arrangements and towing procedures,	the candidate describes the proper decisions to be made and steps to be taken to prepare the vessel for emergency towing.	The commands described by the candidate include: <ol style="list-style-type: none"> <li>1. Preparing to receive a towing line; or</li> <li>2. Deploying the emergency towing gear; or</li> <li>3. Ordering that the anchor and chain be lowered to the water (or into the water as directed by the towing vessel) and:                             <ol style="list-style-type: none"> <li>a. Ensuring the chain will not pay out until the towing vessel requests additional chain; and</li> <li>b. Lowering a messenger to the water line in case it is needed.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.1.A Maneuver a large OSV alongside another vessel <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including maneuvers when approaching pilot stations and embarking or disembarking pilots, with due regard to weather, tide, head reach and stopping distances	On a vessel underway of at least 1,600 GRT or 3,000 GT, or in a simulator using a model of a vessel of at least 1,600 GRT or 3,000 GT, when approaching a smaller vessel that will come along side with other vessels maneuvering to and from the area,	the candidate maneuvers the vessel to bring the smaller vessel alongside.	The candidate: 1. Determines the: a. Direction and force of wind and sea; b. Which side the boat will come along side; c. Heading needed to make a lee; d. How the presence of other traffic affects the vessel's safe approach; 2. Maneuvers and slows the vessel to make a lee and allow the boat to safely come along side; and 3. Ensures that the boat is away before resuming normal maneuvering.
9.2.A Counter set and drift <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all representative conditions, including handling ship in rivers, estuaries and restricted waters, having regard to the effects of current, wind and restricted water on helm response	On a vessel of at least 1,600 GRT or 3,000 GT underway, or in a simulator using the model of a vessel of at least 1,600 GRT or 3,000 GT, while transiting restricted waters for at least 30 minutes,	the candidate pilots the vessel.	The candidate: 1. Determines the intended track of the vessel; 2. Determines the force and direction of the wind and current; 3. Sets courses to counter the effect of wind and current to maintain the vessel on the intended track; and 4. Uses the proper speed and rudder orders to maintain the vessel on the intended track (in the deepest water) during turns around points and bends in the river.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.3.A Constant radius turn <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including application of constant-rate-of-turn techniques	On a vessel of at least 1,600 GRT or 3,000 GT underway, or in a simulator using the model of a vessel of at least 1,600 GRT or 3,000 GT, in an exercise with a turn of at least 50°,	the candidate completes the turn while maintaining a constant radius of turn throughout the maneuver.	The candidate: <ol style="list-style-type: none"> <li>1. Determines the radius of the turn; and</li> <li>2. Applies the correct amount of rudder to maintain the constant radius of turn with no more than two adjustments of less than 5° each.</li> </ol>
9.4.A Maneuver in shallow water <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including maneuvering in shallow water, including the reduction in under-keel clearance caused by squat, rolling and pitching	On a vessel of at least 1,600 GRT or 3,000 GT underway, or in a simulator using the model of a vessel of at least 1,600 GRT or 3,000 GT,	the candidate sets the speed to prevent the vessel from touching bottom.	The candidate: <ol style="list-style-type: none"> <li>1. Determines the under keel clearance;</li> <li>2. Determines the maximum speed allowable to keep the vessel from squatting and touching bottom; and</li> <li>3. Sets the speed of the vessel to keep the vessel on an even trim on straight courses and during turns.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.5.A Canal effect <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in representative conditions, including interaction between passing vessels and between own vessel and nearby banks (canal effect)	On a vessel of at least 1,600 GRT or 3,000 GT underway, or in a simulator using the model of a vessel of at least 3,000 GT, while conning in a narrow channel, and meeting a vessel on the opposite course,	the candidate passes the other vessel close aboard.	The candidate: <ol style="list-style-type: none"> <li>1. Agrees on a passing arrangement with the approaching vessel; and</li> <li>2. Applies appropriate rudder direction and amount to: <ol style="list-style-type: none"> <li>a. Anticipate and react to the pressure of interacting bow waves and bank effect;</li> <li>b. Anticipate and react to the pressure of interacting stern suction and bank effect; and</li> <li>c. Remain in the channel.</li> </ol> </li> </ol>
9.6.A Dock a large OSV <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including berthing and unberthing under various conditions of wind, tide and current with and without tugs  Use of propulsion and maneuvering systems	On a vessel of at least 1,600 GRT or 3,000 GT underway, or in a simulator using the model of a vessel of at least 3,000 GT, in clear visibility, with a wind speed of less than 15 knots and a current of less than 3 knots,	the candidate docks the vessel to a pier.	The candidate docks a vessel to a pier under the supervision of the vessel's Master. Actions taken include: <ol style="list-style-type: none"> <li>1. Planning. The candidate determines: <ol style="list-style-type: none"> <li>a. Depth of water at the berth for the state of the tide;</li> <li>b. Strength and direction of the current for the route to the berth and at berth;</li> <li>c. Direction and speed of the wind; and</li> <li>d. Appropriate courses and maneuvers for the approach to the berth;</li> </ol> </li> <li>2. Approaching: The candidate approaches the dock at the angle required by the wind and current, and at a speed that allows the vessel to maintain its heading and allows it to be stopped before allusion; and</li> <li>3. Docking: The candidate: <ol style="list-style-type: none"> <li>a. Uses the engines and spring line, as necessary, to stop the vessel or move it into final position;</li> <li>b. Properly runs out the mooring lines; and</li> <li>c. Takes in all slack lines until the vessel lies secure alongside.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.7.A Turn a large OSV short around <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including ship and tug interaction  Use of propulsion and maneuvering systems	On a vessel underway of at least 1,600 GRT or 3,000 GT, or in a vessel simulator using a vessel model of at least 1,600 GRT or 3,000 GT,	the candidate turns the vessel short around (with or without tug assistance).	The candidate completes a 180° turn in two lengths of the vessel.
9.8.A Anchor an OSV <i>Note 3 OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including choice of anchorage; anchoring with one or two anchors in limited anchorages and factors involved in determining the length of anchor cable to be used	On a vessel or in a laboratory, when asked to describe anchoring an OSV of at least 3,000 GT,	the candidate describes how to anchor an OSV of at least 3,000 GT.	The candidate's description includes: 1. Planning the following: a. Depth of water; b. Type of bottom; c. Wind and current; d. Bottom obstructions; e. Room to swing; f. Place to anchor; g. Courses and maneuvers to the anchor site; h. Desired final heading; i. Expected weather for the time at anchor; and j. Whether tug assistance will be required; 2. Approach: a. Not passing to windward or up-current of any anchored vessel or hazard to navigation; and b. Determining that the vessel has enough way to pass safely any vessel or hazards;  <i>Continued on next page</i>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.8.A <i>Cont'd</i> Anchor an OSV <i>Note 3 OSV</i>					<i>Continued from previous page</i> 3. Placement: a. Approaching the anchor site at a safe speed; b. Checking the vessel position using multiple sources; c. Ensuring that the engines are used appropriately to stop the vessel off the ground and then gain minimum sternway; d. Dropping the anchor as the vessel begins to gain sternway; and e. Slowly paying out a length of chain 5-7 times the water depth; and 4. Fetching up: allow the vessel to fetch up on the chain, within the desired area and at the appropriate distance from other vessels.
9.9.A Dragging anchor <i>Note 3 OSV</i>	Maneuver and handle a vessel in all conditions	Maneuvering and handling a ship in all conditions, including dragging anchor; clearing fouled anchors	On a vessel or in a laboratory, when asked how to determine if an OSV of at least 3,000 GT is dragging anchor,	the candidate describes all precautions to determine if the vessel is dragging anchor.	The candidate's description includes: 1. Setting the GPS anchor watch function; 2. Setting the VRM and EBL of the ARPA or radar on prominent fixed objects; 3. Taking frequent visual bearings on fixed objects approximately 90° apart; and 4. Constructing a swing circle on a chart.
9.9.B Clearing a fouled anchor <i>Note 2</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including dragging anchor; clearing fouled anchors	On a vessel or in a laboratory, when asked how to clear a fouled anchor,	the candidate describes vessel procedures and maneuvers to clear a fouled anchor.	The candidate describes the procedures for the clearing a fouled anchor, including: 1. Informing the engine room; 2. Clearing anchor fouled on an obstruction; 3. Clearing heavily buried anchor; 4. Clearing anchor winch malfunction; and 5. Heavy strain on the anchor.

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9.10 Drydocking <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including dry-docking, both with and without damage	This KUP is demonstrated by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.305(a)(3)(ii) and 11.307(a)(3)(ii).		
9.11.A Emergency vessel handling <i>Note 3</i> <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including:  Management and handling of ships in heavy weather  Means of keeping an unmanageable ship out of trough of the sea  Lessening drift and use of oil	On a vessel or in a laboratory, when asked to describe handling a vessel in heavy weather,	the candidate describes handling a vessel under heavy weather conditions	The candidate's description includes: 1. Defining the following and, as appropriate, suggesting methods to prevent or minimize damage: a. Weather routing; b. Wavelength; c. Wave period; d. Period of encounter; e. Roll period; f. Synchronous rolling; g. Synchronous pitching; h. Panting; i. Slamming; j. Heavy pitching; k. Pooping; and l. Broaching;  <i>Continued on next page</i>

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9.11.A <i>Cont'd</i> Emergency vessel handling <i>Note 3 OSV</i>					<p style="text-align: center;"><i>Continued from previous page</i></p> <ol style="list-style-type: none"> <li>2. Describing how to:               <ol style="list-style-type: none"> <li>a. Turn in heavy seas;</li> <li>b. Detect heavy slamming;</li> <li>c. Turn a disabled vessel to avoid broaching or reduce drifting;</li> <li>d. Use oil to break seas;</li> <li>e. Avoid heavy longitudinal stresses when pitching; and</li> <li>f. Avoid racing the propeller; and</li> </ol> </li> <li>3. Describing the characteristics of vessels in heavy weather, including:               <ol style="list-style-type: none"> <li>a. Speed of drift;</li> <li>b. Angle of drift; and</li> <li>c. When hove to with the seas on the bow or quarter.</li> </ol> </li> </ol>
9.11.B Maneuver to launch rescue boats <i>Note 3 OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including precautions in maneuvering to launch rescue boats or survival craft in bad weather	On a vessel or in a laboratory, when asked to describe assisting a ship or aircraft in distress,	the candidate describes the possible actions to be taken when assisting a ship or aircraft in distress.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Reporting systems, such as AMVER:               <ol style="list-style-type: none"> <li>a. Preparing departure, arrival, and daily reports;</li> <li>b. Actions to be taken when instructed to assist; and</li> <li>c. Actions to be taken to request assistance;</li> </ol> </li> <li>2. Emergency towing to prevent a ship from grounding on a lee shore by other than a salvage tug;</li> <li>3. Medical emergency communications;</li> <li>4. Contacting contracted doctors ashore;</li> <li>5. Medical assistance from nearby ships with doctors aboard;</li> <li>6. Taking aboard survivors of ship and aircraft casualties;</li> <li>7. Relaying sea and weather conditions to aircraft needing assistance; and</li> <li>8. Relaying navigational information to aircraft and ships needing assistance.</li> </ol>

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9.11.C Towing operations <i>Note 3 OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including:  Towing operations	On a vessel or in a laboratory, when asked to describe towing operations	the candidate describes onboard towing arrangements.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Required notifications and permissions, and arrangements for:                             <ol style="list-style-type: none"> <li>a. Vessel owners;</li> <li>b. Cargo owners;</li> <li>c. Charterers;</li> <li>d. Coastal states; and</li> <li>e. Flag states;</li> </ol> </li> <li>2. Preparations:                             <ol style="list-style-type: none"> <li>a. Required emergency towing arrangements of tankers equal or greater than 20,000 DWT;</li> <li>b. Onboard vessel to be towed;</li> <li>c. Onboard vessel to do towing; and</li> <li>d. Communications between towed and towing vessels; and</li> </ol> </li> <li>3. Procedures:                             <ol style="list-style-type: none"> <li>a. Towing vessel's approach to disabled vessel;</li> <li>b. Passing messengers;</li> <li>c. Paying out towing cable;</li> <li>d. Securing towing wire to towing vessel;</li> <li>e. Securing towing wire to disabled vessel's anchor chain;</li> <li>f. Prevention of kinking and chafing;</li> <li>g. Taking on weight of tow;</li> <li>h. Determination of speed of tow;</li> <li>i. Emergency slipping of the tow; and</li> <li>j. Termination of tow at destination.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.13.A Taking on survivors from rescue craft  <i>Note 3 OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including methods of taking on board survivors from rescue boats and survival craft	On a vessel or in a laboratory, when asked to describe taking on board survivors from rescue boats and survival craft,	the candidate describes the methods of taking on board survivors from rescue boats and survival craft.	The description includes: <ol style="list-style-type: none"> <li>1. Methods to provide a calm area for the recovery of survival craft and rescue boat in adverse conditions, and the procedures to bring survivors aboard from survival craft, including:               <ol style="list-style-type: none"> <li>a. Creating a lee;</li> <li>b. Round turns to knock down adverse wave conditions; and</li> <li>c. Use of light oil;</li> </ol> </li> <li>2. The limitations that may make the launching of rescue boats unduly hazardous to the ship's crew and/or the survivors such as:               <ol style="list-style-type: none"> <li>a. Sea height;</li> <li>b. Own vessel's movements;</li> <li>c. Potential piracy;</li> <li>d. Limitations of equipment available;</li> <li>e. Limitations of personnel available;</li> <li>f. The use of gangways, cargo nets, and other rescue devices available to the candidate; and</li> <li>g. Concerns about contents of baggage being brought aboard;</li> </ol> </li> <li>3. Care of survivors including:               <ol style="list-style-type: none"> <li>a. Hypothermia;</li> <li>b. Dehydration;</li> <li>c. Exposure to sun, salt, water for extended periods;</li> <li>d. Starvation;</li> <li>e. First aid; and</li> <li>f. Preparations for disembarkation; and</li> </ol> </li> </ol> <p style="text-align: right;"><i>Continued on next page</i></p>

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<p>9.13.A <i>Cont'd</i></p> <p>Taking on survivors from rescue craft</p> <p><i>Note 3 OSV</i></p>					<p><i>Continued from previous page</i></p> <p>4. Reporting procedures, including:</p> <ul style="list-style-type: none"> <li>a. Notifications to company;</li> <li>b. Notifications to regulatory agencies;</li> <li>c. Nav alerts about drifting vessels and other possible survivors; and</li> <li>d. Preparation and submission of reports.</li> </ul>
<p>9.14.A</p> <p>Maneuvering and propulsion characteristics</p> <p><i>Note 3 OSV</i></p>	<p>Maneuver and handle a ship in all conditions</p>	<p>Maneuvering and handling a ship in all conditions, including ability to determine the maneuvering and propulsion characteristics of common types of ships, with special reference to stopping distances and turning circles at various draughts and speeds</p>	<p>On a vessel or in a laboratory, when asked to describe the maneuvering and propulsion characteristics of common types of vessels,</p>	<p>the candidate describes the maneuvering and propulsion characteristics of common types of vessels.</p>	<p>The description includes:</p> <p>1. Maneuvering characteristics of vessel propulsion systems, including:</p> <ul style="list-style-type: none"> <li>a. Slow-speed diesels;</li> <li>b. Medium-speed diesels;</li> <li>c. High-speed diesels;</li> <li>d. Gas turbines; and</li> <li>e. Stopping distances and turning circles at various drafts and speeds for different vessel types.</li> </ul>

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9.15.A Reducing wake damage <i>Note 3</i> <i>OSV</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including importance of navigating at reduced speed to avoid damage caused by own ship's bow wave and stern wave	On a vessel or in a laboratory, when asked to describe avoiding damage caused by own bow and stern waves,	the candidate describes navigating at reduced speed to avoid damage caused by own bow and stern waves.	The description includes: <ol style="list-style-type: none"> <li>1. Generation of bow and stern waves;</li> <li>2. Effects that bow and stern waves have on:               <ol style="list-style-type: none"> <li>a. The open ocean;</li> <li>b. Man-made structures such as piers and breakwaters that are close to or in the water;</li> <li>c. Banks, mud flats, and other geologic structures;</li> <li>d. People onshore or in the water;</li> <li>e. Vessels moored alongside piers; and</li> <li>f. Vessels at anchor or moving in a channel;</li> </ol> </li> <li>3. How to moderate bow and stern waves to minimize or eliminate injury or damage; and</li> <li>4. Precautions to take to eliminate or minimize damage to the candidate's ship, at anchor or tied up alongside to a pier or jetty from another vessel's bow or stern wave.</li> </ol>
9.16.A Ice navigation <i>Note 2</i> <i>Note 3</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including practical measures to be taken when navigating in or near ice	On a vessel, or in a navigation laboratory, when asked to describe navigating in or near ice,	the candidate describes appropriate ice navigation procedures.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Where to obtain information about ice on or in the vicinity of the intended track;</li> <li>2. Precautions to follow when navigating near ice; and</li> <li>3. Precautions when navigating in thick ice.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
9.16.B Ice accumulation <i>Note 2</i> <i>Note 3</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including practical measures to be taken when in conditions of ice accumulation on board	On a vessel, on a simulator, or in a navigation laboratory, when asked to describe the practical measures to be taken when in conditions of ice accumulation on board,	the candidate describes appropriate procedures.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Master's obligation to report conditions that are causing severe ice accumulations;</li> <li>2. Danger of reduced stability;</li> <li>3. Other dangers of ice accumulation;</li> <li>4. Damage to exposed surfaces and equipment conditions that cause ice accumulation to the vessel's topside, superstructure, and rigging; and</li> <li>5. Precautions to limit, reduce, and remove the accumulation.</li> </ol>
9.17.A Maneuver in traffic separation schemes <i>Note 2</i> <i>Note 3</i>	Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including use of, and maneuvering in and near, traffic separation schemes and in vessel traffic service (VTS) areas	On a vessel, on a simulator, or in a navigation laboratory, when asked to describe traffic separation schemes and vessel traffic service (VTS) areas,	the candidate describes procedures for operating in VTS areas.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Expected behavior of vessels entering, transiting, and exiting a traffic separation scheme by quoting Rule 10 of the current COLREGS;</li> <li>2. Relevance of the remaining Rules of the Road when transiting a traffic separation scheme; and</li> <li>3. Reporting requirements of a Vessel Traffic System (VTS) including:                             <ol style="list-style-type: none"> <li>a. Information required to be initially reported;</li> <li>b. Location and/or times where the reports must be made; and</li> <li>c. Information that must be reported when exiting the VTS.</li> </ol> </li> </ol>
10.1.A OSV Diesel engines <i>Note 3</i> <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	On a vessel, or in a laboratory, when asked to describe the diesel engines found on OSVs	the candidate describes the operating principles of diesel engine operation.	The candidate's description includes the general properties of diesel engines found on OSVs, in generally accepted engineering terms, including: <ol style="list-style-type: none"> <li>1. General diesel engines operating properties;</li> <li>2. Two and four-stroke diesel cycles;</li> <li>3. High-speed diesel engines; and</li> <li>4. Medium-speed diesels.</li> </ol>

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10.1.C Propeller and propeller shaft <i>Note 2</i> <i>Note 3</i>	Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	On a vessel or in a laboratory, when asked to describe propellers and propeller shafts,	the candidate describes operating principles of propellers and propeller shafts.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Propellers and propeller shafts:               <ol style="list-style-type: none"> <li>a. Types of propellers, including variable pitch;</li> <li>b. Parts of a propeller;</li> <li>c. Attachment to propeller shaft;</li> <li>d. Pitch;</li> <li>e. Slip;</li> <li>f. Efficiency;</li> <li>g. RPM vs. ship's speed; and</li> <li>h. Operational precautions for variable pitch propellers;</li> </ol> </li> <li>2. Calculating slip and ship's speed given RPM, slip, and pitch; and</li> <li>3. Propeller shaft, including:               <ol style="list-style-type: none"> <li>a. Transmission of propeller thrust to hull;</li> <li>b. Transmission of rotational energy to propeller; and</li> <li>c. Stern tube bearing.</li> </ol> </li> </ol>

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10.1.D Bridge control <i>Note 2</i> <i>Note 3</i>	Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	On a vessel, or in a laboratory, when asked to describe bridge control,	the candidate describes operating principles of bridge control.	The candidate's description includes the properties of bridge control, in generally accepted engineering terms, including: <ol style="list-style-type: none"> <li>1. Control of the main engine from:                             <ol style="list-style-type: none"> <li>a. The bridge;</li> <li>b. Machinery space;</li> <li>c. Local control; and</li> <li>d. Change-over of control station procedures;</li> </ol> </li> <li>2. Control of variable-pitch propellers;</li> <li>3. Control-system indicators and alarms:                             <ol style="list-style-type: none"> <li>a. In the engine room;</li> <li>b. On the bridge; and</li> <li>c. Locally; and</li> </ol> </li> <li>4. Bow and stern thrusters:                             <ol style="list-style-type: none"> <li>a. Operations;</li> <li>b. Indicators and alarms;</li> <li>c. Bridge control; and</li> <li>d. Local control.</li> </ol> </li> </ol>
10.2.B Distillation and fresh water systems <i>Note 3</i> <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe the freshwater systems on OSVs,	the candidate describes OSV freshwater systems.	The candidate describes domestic-water systems on OSVs.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
10.2.C Pumps and pumping systems on OSVs <i>Note 3</i> <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe the operating principles of pumps and pumping systems,	the candidate describes operating principles of pumps and pumping systems on OSVs.	The candidate's description includes: 1. Applications and characteristics of centrifugal pumps; 2. Defining head, including describing: a. Suction head and its significance; b. Discharge head and its significance; and c. Head losses and their significance; 3. Bilge and ballast systems; and 4. Cross connections such as the engine room emergency bilge system and the main circulating pump.
10.2.D Steering gear <i>Note 2</i> <i>Note 3</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe the operating principles of steering gear,	the candidate describes operating principles of steering gear.	The candidate's description includes: 1. The general design and operation of different systems, including: a. Variable delivery hydraulic pumps ; b. Hydraulic ram steering gear; and c. Rotary vane steering gear; 2. Control systems including: a. Auxiliary steering; b. Power supplies; and c. Emergency control; and 3. Testing steering gear.

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10.2.E Remotely operate steering gear <i>Note 2</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel of at least 1,600 GRT or 3,000 GT while at sea,	the candidate remotely operates the steering gear.	The demonstration includes remote start-up and shut-down procedures, switching over, response to alarms, and adherence to manufacturer's operating manual.
10.2.F Generators, alternators, and electrical distribution <i>Note 2</i> <i>Note 3</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel or in a laboratory, when asked to describe generators, alternators, and electrical distribution,	the candidate describes the operating principles of generators, alternators, and electrical distribution.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Direct-current (D.C.) and Alternating current (A.C.) systems, including:                             <ol style="list-style-type: none"> <li>a. Advantages and disadvantages;</li> <li>b. Operation of generators;</li> <li>c. Purpose and use of inverters and rectifiers;</li> <li>d. Functioning of motors; and</li> <li>e. Distribution systems;</li> </ol> </li> <li>2. Safety precautions, including:                             <ol style="list-style-type: none"> <li>a. Circuit breakers and fuses; and</li> <li>b. Lockout/tag-out procedures;</li> </ol> </li> <li>3. Batteries, including:                             <ol style="list-style-type: none"> <li>a. Characteristics of lead-acid and alkaline batteries;</li> <li>b. Safety precautions; and</li> <li>c. Battery maintenance;</li> </ol> </li> <li>4. Emergency generators and lighting systems; and</li> <li>5. Reading a navigational-light circuit.</li> </ol>

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10.2.G OSV Air conditioning and ventilation systems <i>Note 3</i> <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel or in a laboratory, when asked to describe air conditioning and ventilation,	the candidate describes operating principles of air conditioning and ventilation systems on OSVs.	The candidate's description includes operating principles and controls of refrigeration and ventilation systems.
10.2.H OSV Sewage treatment plants <i>Note 3</i> <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe sewage treatment plants,	the candidate describes operating principles of sewage treatment plants aboard OSVs.	The candidate's description includes: 1. U. S. regulations and International Conventions; and 2. Operation of -sewage treatment plants installed on OSVs.
10.2.I Oily water separators and oil filtering equipment <i>Note 2</i> <i>Note 3</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel or in a laboratory, when asked to describe oily-water separators and oil filtering equipment,	the candidate describes operating principles of oily-water separators and oil filtering equipment.	The candidate's description includes: 1. U. S. regulations and International Conventions: and 2. Operation, and limitations of: a. Oily-water separators; b. Oil filtering equipment; c. Metering equipment; and d. Monitoring and control.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
10.2.J OSV Deck machinery <i>Note 3</i> <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe deck machinery,	the candidate describes operation and limits of deck machinery on OSVs.	The candidate's description includes the operation and limits of: <ol style="list-style-type: none"> <li>1. Anchor windlasses;</li> <li>2. Mooring winches;</li> <li>3. Cargo and crane winches; and</li> <li>4. Lubrication of deck machinery.</li> </ol>
10.2.K OSV Hydraulic systems <i>Note 3</i> <i>OSV</i>	Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	On a vessel, or in a laboratory, when asked to describe hydraulic systems,	the candidate describes basic operating principles of hydraulic systems on OSVs.	The candidate's description includes basic principles of OSV hydraulic system(s): <ol style="list-style-type: none"> <li>1. Identifying and describing the main parts of a hydraulic system;</li> <li>2. Cleanliness of the hydraulic fluid; and</li> <li>3. Effects of air in the hydraulic system.</li> </ol>
10.3.A Engineering terms <i>Note 2</i> <i>Note 3</i>	Operate remote controls of propulsion plant and engineering systems and services	General knowledge of marine engineering terms	On a vessel or in a laboratory, when asked to define engineering terms,	the candidate defines the specified terms.	The candidate correctly defines: <ol style="list-style-type: none"> <li>1. <i>Mass</i>;</li> <li>2. <i>Force</i>;</li> <li>3. <i>Work</i>;</li> <li>4. <i>Power</i>;</li> <li>5. <i>Energy</i>;</li> <li>6. <i>Pressure</i>;</li> <li>7. <i>Stress</i>;</li> <li>8. <i>Strain</i>;</li> <li>9. <i>Heat</i>;</li> <li>10. <i>Indicated power</i>; and</li> <li>11. <i>Shaft power</i>.</li> </ol>

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10.3.B Fuel consumption <i>Note 2</i> <i>Note 3</i>	Operate remote controls of propulsion plant and engineering systems and services	General knowledge of marine engineering terms	On a vessel, or in a laboratory, when asked to describe fuel consumption,	the candidate describes factors affecting fuel consumption.	The candidate's description includes defining fuel consumption as a function of: 1. Displacement; 2. Distance; 3. Speed; 4. Sea state; 5. Hull condition; 6. Propeller condition; 7. Calculating daily consumption at service speed; 8. Fuel required for a voyage; and 9. Speed for a specific consumption on a daily and voyage consumption basis.
11.1.A International regulations for OSV cargo operations <i>Note 3</i> <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Knowledge of and ability to apply relevant international regulations, codes and standards concerning the safe handling, stowage, securing and transport of cargoes	On a vessel, or in a laboratory, when asked to describe the safe handling, stowage, securing and transport of cargoes,	the candidate identifies and describes international regulations, codes and standards applicable to OSVs of 3,000 GT or more.	The candidate's description includes the general obligations of the vessel owner and the vessel Master, regarding the carriage of goods by sea, including: 1. Loadline Convention; 2. Code of Safe Practice for Cargo Stowage and Securing; 3. Company guides and instructions regarding cargo stowage; 4. Information provided in the shipboard cargo securing manual; and 5. Certificates required for inspection by a port state control officer.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.1.B Prepare a loading and discharge plan <i>OSV</i> <i>TV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Knowledge of and ability to apply relevant international regulations, codes and standards concerning the safe handling, stowage, securing and transport of cargoes	On a vessel, or in a laboratory, when given information concerning a future cargo operation and vessel stability data and/or vessel specific software for an OSV of at least 1,6000 GRT or 3,000 GT,	the candidate prepares a loading/discharge plan for an OSV of at least 3,000 GT.	The candidate's plan includes: <ol style="list-style-type: none"> <li>1. Stability and trim calculations;</li> <li>2. Stress calculations;</li> <li>3. Application of appropriate procedures, rules and regulations regarding the loading and stowage of hazardous cargo on deck;</li> <li>4. Application of appropriate procedures, rules and regulations regarding the loading and stowage of incompatible cargoes;</li> <li>5. Application of appropriate procedures, rules and regulations regarding the stowage locations of easily damaged and/or contaminated cargoes;</li> <li>6. Rigging of appropriate cargo equipment for the loading and/or discharge of cargo;</li> <li>7. Securing of the loaded cargo;</li> <li>8. Listing of safety procedures to be followed during the cargo operation;</li> <li>9. Collecting and collating the appropriate cargo paperwork; and</li> <li>10. An initial schedule of events for the cargo operation.</li> </ol>
11.2 Effect of cargo on trim and stability <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Knowledge of the effect on trim and stability of cargoes and cargo operations	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.305(a)(3)(ii) and/or 11.307(a)(3)(ii).		

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11.3 Stability calculations <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Use of stability and trim diagrams and stress calculating equipment, including automatic database (ADB) equipment, and knowledge of loading cargoes and ballasting in order to keep hull stress within acceptable limits	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.305(a)(3)(ii) and/or 11.307(a)(3)(ii).		
11.4.A Deck cargo stowage and securing <i>Note 3</i> <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	On a vessel, or in a laboratory, when asked to describe the proper stowage and securing of deck cargoes on board an OSV,	the candidate describes proper stowage and securing of deck cargoes, including pipe, on board an OSV.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Inspection of lashings: <ol style="list-style-type: none"> <li>a. Maximum height of deck cargoes, including pipe;</li> <li>b. Loadline; and</li> <li>c. Stability information;</li> </ol> </li> <li>2. Personnel safety;</li> <li>3. When the worst stability condition during voyage is most likely to occur; and</li> <li>4. Actions to take if angle of loll occurs.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.4.B Container stowage and securing on OSVs <i>Note 3 OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	On a vessel, or in a laboratory, when asked to describe the stowage and securing of containers on board OSVs,	the candidate describes proper stowage and securing of containers on OSVs.	The candidate's description includes: 1. General stowage; 2. General lashing and securing; and 3. Lashing and securing safety.
11.4.C Stowage and securing of heavy lift cargoes on OSVs <i>Note 3 OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	On a vessel, or in a laboratory, when asked to describe the stowage and securing of heavy lift cargoes on board OSVs,	the candidate describes the proper stowage and securing of heavy lift cargoes.	The candidate's description includes: 1. Use of shoring on decks below, and special supports for awkward shaped loads; 2. Vessel stability considerations; and 3. Pre and post-lift inspections.
11.5.A Receipt and delivery of cargo on OSVs <i>Note 3 OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel, or in a laboratory, when asked to describe the receipt, tallying, and delivery of cargo on board OSVs,	the candidate describes receipt, tallying, and delivery of cargo.	The candidate's description includes: 1. Responsibility of the Master for the cargo; 2. Tallying; 3. Note of Protest; and 4. Dangerous goods.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.5.B Care of cargo during carriage on OSVs  <i>Note 3 OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel or in a laboratory, when asked to describe care of cargo during carriage,	the candidate describes care of cargo during carriage.	The candidate's description includes preventing damage to and contamination of cargo.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>11.5.C Safe use of OSV cargo handling gear <i>Note 3 OSV</i></p>	<p>Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes</p>	<p>Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing</p>	<p>On a vessel, or in a laboratory, when asked to describe the use of cargo handling gear on board OSVs,</p>	<p>the candidate describes the safe use of cargo handling gear.</p>	<p>The candidate's description includes:</p> <ol style="list-style-type: none"> <li>1. Defining the following terms:               <ol style="list-style-type: none"> <li>a. <i>Certified rigger</i>;</li> <li>b. <i>Flagger/signalman</i>;</li> <li>c. <i>JSA/JSEA</i>;</li> <li>d. <i>Lifting appliance</i>; and</li> <li>e. <i>Loose gear</i>;</li> </ol> </li> <li>2. National laws and regulations, and other requirements regarding:               <ol style="list-style-type: none"> <li>a. Safe means of access to holds, staging, equipment and lifting appliances;</li> <li>b. Work in confined spaces;</li> <li>c. Construction, maintenance and use of lifting and other cargo-handling appliances;</li> <li>d. Testing, examination and certification of lifting appliances, loose gear, and other pieces of equipment forming part of a load;</li> <li>e. Handling different types of cargo; and</li> <li>f. Dangerous substances and other hazards that occur when handling cargo; and</li> </ol> </li> <li>3. Personnel protection from accidents by:               <ol style="list-style-type: none"> <li>a. Installing guards on dangerous machinery;</li> <li>b. Marking of low beams, and other equipment and structures that may present a collision or falling hazard;</li> <li>c. Marking of safe-working loads;</li> <li>d. Fencing of openings to cargo deck;</li> <li>e. Limiting access to the control of equipment to authorized personnel only;</li> <li>f. Testing equipment before first time use;</li> <li>g. Use of Personal Protective Equipment (PPE);</li> <li>h. Proper maintenance and inspection of equipment in use; and</li> <li>i. Locating elements of the vessel rigging plan</li> </ol> </li> </ol>

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.5.D Develop a loading plan for a large OSV <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel, or in a laboratory, when given a list of cargo to be loaded aboard and discharged from an OSV of at least 1,600 GRT or 3,000 GT, and given vessel stability data and/or software for an OSV of at least 3,000 GT,	the candidate develops a loading plan for an OSV of at least 3,000 GT.	The candidate's plan takes into account the following: <ol style="list-style-type: none"> <li>1. Carriage requirements of each cargo loaded;</li> <li>2. Potential damage that may occur to each cargo that is loaded or unloaded and how to prevent that damage;</li> <li>3. Precautions to prevent and/or contain leakage of liquid cargo;</li> <li>4. Precautions to prevent pilferage and/or contamination of cargo; and</li> <li>5. Minimizing the risk of injury or death to: <ol style="list-style-type: none"> <li>a. Vessel personnel;</li> <li>b. Maritime workers;</li> <li>c. Visitors; and</li> <li>d. Other personnel expected to attend the transfer.</li> </ol> </li> </ol>
11.5.E Inspect cargo running gear <i>Note 2</i> <i>Note 3</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	On a vessel or in a laboratory, when given a sampling of loose gear, line, and wire rope,	the candidate examines the gear provided and reports the results to the assessor.	The candidate examines the gear and reports to the assessor on the use, safe working load, condition and maintenance of the following: <ol style="list-style-type: none"> <li>1. Wire ropes;</li> <li>2. Fiber line;</li> <li>3. Cargo blocks;</li> <li>4. Shackles; and</li> <li>5. Chain.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.6.A Properties of oil and chemical cargoes <i>Note 2</i> <i>Note 3</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	General knowledge of tankers and tanker operations	On a vessel or in a laboratory, when asked to describe basic properties of oil and chemical cargo	the candidate describes, in general terms, the basic properties of oil and chemical cargo.	The candidate's describes general terms and concepts such as: 1. <i>Reid Vapor Pressure (RVP)</i> ; 2. <i>Flashpoint</i> ; 3. <i>Flammable</i> ; 4. <i>Upper flammable limit</i> ; 5. <i>Lower flammable limit</i> ; and 6. <i>Auto-ignition temperature</i> .
11.6.C Oil and chemical tanker operations <i>Note 2</i> <i>Note 3</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	General knowledge of tankers and tanker operations	On a vessel or in a laboratory, when asked to describe oil and chemical tanker operations,	the candidate describes, in general terms, tanker operations.	The candidate's description includes: 1. Ballasting; 2. Inert gas systems; 3. Tank cleaning; 4. Discharge of oil and chemical cargo; and 5. Gas freeing.
11.6.D Basic concepts of carriage of liquefied gases on OSVs <i>Note 3</i> <i>OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	General knowledge of tankers and tanker operations	On a vessel, or in a laboratory, when asked to describe the carriage of liquefied gases aboard OSVs,	the candidate describes, in general terms, basic concepts of the carriage of liquefied gases.	The candidate: 1. Defines: a. <i>Liquefied gas</i> ; and b. <i>Boiling point</i> ; and 2. Describes the loading, carriage, and discharging of liquefied gases.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.8.A Develop garbage plan for an OSV <i>Note 3 OSV</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Ability to establish procedures for safe cargo handling in accordance with the provisions of the relevant instruments such as IMDG Code, IMSBC Code, MARPOL 73/78 Annexes III and V and other relevant information	On a vessel or in a laboratory using particulars and information of a specific OSV,	the candidate develops a garbage plan for the vessel.	The candidate's plan includes: <ol style="list-style-type: none"> <li>1. Identification of garbage types and segregation of garbage by type; and</li> <li>2. Detailed instructions for:               <ol style="list-style-type: none"> <li>a. Collection of garbage;</li> <li>b. Discharge of garbage;</li> <li>c. Accidental discharge of garbage;</li> <li>d. Recording of the collection and discharge of garbage; and;</li> <li>e. Reporting collection and discharge of garbage.</li> </ol> </li> </ol>
11.8.B Loading of packaged dangerous goods <i>Note 2 Note 3</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Ability to establish procedures for safe cargo handling with the provisions of the relevant instruments such as IMDG Code, IMSBC Code, MARPOL 73/78 Annexes III and V and other relevant information	On a vessel, or in a laboratory, when asked to describe the procedures for safe cargo handling,	the candidate describes procedures for safe cargo handling in accordance with the provisions of the relevant regulations, conventions and good practice.	The candidate's description includes basic concepts of the loading of packaged dangerous goods: <ol style="list-style-type: none"> <li>1. Defining the following from the IMDG Code:               <ol style="list-style-type: none"> <li>a. <i>Dangerous goods</i>; and</li> <li>b. <i>Packaged form</i>;</li> </ol> </li> <li>2. Reporting of incidents involving dangerous goods; and</li> <li>3. Stowage requirements for three items from Chapter 7.1 of the IMDG Code specified by the assessor.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
11.9.A Conduct cargo transfer meeting <i>Note 2</i> <i>Note 3</i>	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Ability to explain the basic principles for establishing effective communications and improving working relationship between ship and terminal personnel	On a vessel, or in a laboratory,	the candidate conducts an actual or simulated cargo transfer meeting with terminal personnel, under the supervision of the vessel Chief Mate or Master and uses effective communications.	The candidate conducts the cargo transfer meeting with terminal or facility personnel: 1. Using standard phrases; 2. Asking questions and repeating the answers in the candidate's terms; 3. Answering questions and confirming that the answer was properly understood; 4. Assigning personnel as needed for inspections and other pre-cargo transfer procedures; 5. Politely objecting to procedures requested from terminal personnel that would be counter to the proper discharge of the vessel or applicable rules and regulations; and 6. Acting in a manner that is not culturally offensive to the terminal personnel.

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
13.1.A Carriage of dangerous goods on OSVs  <i>Note 3 OSV</i>	Carriage of dangerous goods	International regulations, standards, codes and recommendations on the carriage of dangerous cargoes, including the International Maritime Dangerous Goods (IMDG) Code and the International Maritime Solid Bulk Cargoes (IMSBC) Code	On a vessel, or in a laboratory, when asked to describe the proper stowage and carriage of dangerous cargoes aboard OSVs,	the candidate describes the basic concepts for stowage and carriage of dangerous goods aboard OSVs.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Basic concepts used in the stowage and carriage of dangerous goods; and</li> <li>2. Reporting of incidents involving dangerous goods.</li> </ol>
14.1 Vessel construction and stability  <i>Note 2            Note 3            Course</i>	Control trim, stability and stress	Understanding of fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.305(a)(3)(ii) and/or 11.307(a)(3)(ii).		

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
14.2 Effect of flooding  <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Control trim, stability and stress	Knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and countermeasures to be taken	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.305(a)(3)(ii) and/or 11.307(a)(3)(ii).		
14.3 IMO recommendation for ship stability  <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Control trim, stability and stress	Knowledge of IMO recommendations concerning ship stability	This KUP is satisfied by successful completion of the approved <i>Advanced Stability</i> course specified in 46 CFR 11.305(a)(3)(ii) and/or 11.307(a)(3)(ii).		

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.1.A Certificates required by international conventions <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  Certificates and other documents required to be carried on board by international conventions, how they may be obtained and their period of validity	On a vessel, or in a laboratory, when asked to describe the certificates required to be carried on board vessels by international conventions,	the candidate identifies and describes the certificates that must be carried.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Certificate of Nationality (Ship's Registry);</li> <li>2. International Tonnage Certificate;</li> <li>3. Panama and/or Suez Canal Tonnage Certificates;</li> <li>4. International Load Line Certificate;</li> <li>5. International Oil Pollution Prevention Certificate;</li> <li>6. International Sewage Pollution Prevention;</li> <li>7. License(s) for the ship radio station; and</li> <li>8. INMARSAT access authorization certificate.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>15.1.B Documents required to be carried <i>Note 2</i> <i>Note 3</i></p>	<p>Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment</p>	<p>Certificates and other documents required to be carried on board vessels by international conventions, how they may be obtained and their period of validity</p>	<p>On a vessel, or in a laboratory, when asked to describe the documents required to be carried on board vessels,</p>	<p>the candidate identifies and describes the documents that must be carried.</p>	<p>The description includes the obligation to carry the following documents:</p> <ol style="list-style-type: none"> <li>1. Classification Society Certificates for Hull and Machinery, Refrigerating Machinery and Cargo Handling Appliances;</li> <li>2. Anchor and Chain Cable Certificate;</li> <li>3. Inflatable Liferaft Inspection Certificates;</li> <li>4. Stability, Loading, and Ballasting Information;</li> <li>5. Damage Control Plan and Booklets;</li> <li>6. Oil Record Book;</li> <li>7. Official Log Book; Deck, Engine-room and Radio Logbooks;</li> <li>8. Articles of Agreement with the Crew;</li> <li>9. Certificates for Competency of Officers and Ratings;</li> <li>10. Minimum Safe Manning Document</li> <li>11. Safety Management Certificate; and</li> <li>12. Copy of the owner’s or manager’s Document of Compliance.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.1.C Documents required at arrival and departure <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  Certificates and other documents required to be carried on board ships by international conventions, how they may be obtained and their period of validity	On a vessel or in a laboratory, when asked to describe the documents required at arrival or departure,	the candidate describes the documents required.	The description includes the obligation to carry the following documents required at arrival or departure: <ol style="list-style-type: none"> <li>1. General declaration;</li> <li>2. Cargo declaration;</li> <li>3. Dangerous goods manifest or plan;</li> <li>4. Ship's stores declaration;</li> <li>5. Crew list;</li> <li>6. Passenger list;</li> <li>7. Ship Sanitation Control Exemption Certificate/Ship Sanitation Control Certificate; and</li> <li>8. Maritime Declaration of Health.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>15.2.A International Convention on Load Lines <i>Note 2</i> <i>Note 3</i></p>	<p>Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment</p>	<p>Knowledge of international maritime law embodied in international agreements and conventions  International Convention on Load Lines, 1966, as amended</p>	<p>On a vessel or in a laboratory, when asked to describe the International Convention on Load Lines, 1966, as amended,</p>	<p>the candidate describes important provisions of the Convention.</p>	<p>The candidate's description includes:</p> <ol style="list-style-type: none"> <li>1. Safety function of load lines;</li> <li>2. Requirements for a valid International Load Line Certificate;</li> <li>3. Defining the load line marks that may be marked on each side of the vessel; and</li> <li>4. Relationship of vessel draft to its operations under the International Convention of Load Lines in the following operational situations:                             <ol style="list-style-type: none"> <li>a. A vessel must comply with the requirements for the zones and areas it is or will be sailing in;</li> <li>b. Applicable load line must never be submerged when the vessel is at sea;</li> <li>c. Determination of the applicable load line when a vessel departs from a port on the boundary between two zones or areas;</li> <li>d. Determination of the applicable load line when a vessel arrives at a port on the boundary between two zones or areas;</li> <li>e. Calculation of fresh water allowance to determine how far the applicable load line may be submerged; and</li> <li>f. Calculation of allowance for fuel and stores from sailing to departure to determine how far the load line may be submerged.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.3.A International Convention for the Safety of Life at Sea  <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Safety of Life at Sea, 1974, as amended	On a vessel or in a laboratory, when asked to describe the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS),	the candidate describes important provisions of SOLAS.	The candidate's describes the obligations of the vessel Master under SOLAS, including: <ol style="list-style-type: none"> <li>1. Sending danger messages relating to ice, dangerous derelicts, dangers to navigation, tropical storms, ice accretion, unreported wind force 10 or above;</li> <li>2. Sailing at moderate speed when in the area of ice;</li> <li>3. When receiving any signal that a vessel or aircraft is in distress;</li> <li>4. The carriage of navigation equipment and publications;</li> <li>5. Proper manning;</li> <li>6. Testing of steering gear before sailing;</li> <li>7. Placing a placard indicating the changeover of steering gear and use of remote steering;</li> <li>8. Emergency steering gear drills and logging of steering gear tests;</li> <li>9. Logging of steering gear tests;</li> <li>10. The normal obligation of a ship's Master is waived when receiving a distress signal;</li> <li>11. Rights of the Master to requisition a ship which has answered a call for assistance;</li> <li>12. Information required in danger messages; and</li> <li>13. Non-emergency use of international distress signals is prohibited.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>15.4.A MARPOL 73/78 <i>Note 2</i> <i>Note 3</i></p>	<p>Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment</p>	<p>Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended</p>	<p>On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, as amended,</p>	<p>the candidate describes important provisions of MARPOL.</p>	<p>The candidate's description includes:</p> <ol style="list-style-type: none"> <li>1. The following points concerning the general construction of MARPOL 73/78 and its 6 annexes for:               <ol style="list-style-type: none"> <li>a. Oil;</li> <li>b. Bulk noxious liquid substances;</li> <li>c. Packaged harmful substances;</li> <li>d. Sewage;</li> <li>e. Garbage; and</li> <li>f. Air pollution</li> </ol> </li> <li>2. Obligation of the countries who are signatory to this convention to apply to all vessels, even if the vessel is flagged in a country that is not a signatory;</li> <li>3. Which annexes are mandatory when a country becomes a signatory to the convention;</li> <li>4. Which annexes are only mandatory if the country chooses to become signatory to that particular annex;</li> <li>5. Which annexes the United States is signatory to and what replaces any annexes the United States is not signatory to; and</li> <li>6. Exceptions to each annex.</li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.B MARPOL Annex I <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, As amended	On a vessel or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex I (Oil),	the candidate describes important provisions of MARPOL Annex I.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. No changes should be made to the vessel, except for direct replacement of equipment without the approval of the flag state;</li> <li>2. Master's duty to report an accident or defect that affects the integrity of the ship;</li> <li>3. International Oil Pollution Prevention (IOPP) certificate:               <ol style="list-style-type: none"> <li>a. Dates of intermediate and annual surveys;</li> <li>b. Record of construction and equipment;</li> <li>c. Duration of validity; and</li> <li>d. What will invalidate an IOPP;</li> </ol> </li> <li>4. Master must be provided information regarding cargo loading and distribution to ensure subdivision and stability criteria compliance; and</li> <li>5. All vessels over 400 GT (tankers over 150 GT) must carry an approved shipboard oil pollution emergency plan (SOPEP), the seven parts of which detail the following:               <ol style="list-style-type: none"> <li>a. General information;</li> <li>b. Preamble;</li> <li>c. Reporting requirements;</li> <li>d. Information required;</li> <li>e. Required contacts;</li> <li>f. Steps to control discharge; and</li> <li>g. Non-mandatory provisions.</li> </ol> </li> </ol>

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.C MARPOL Annex II <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex II,	the candidate describes the important provisions of MARPOL Annex II.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. MARPOL 73/78 Annex II (Noxious Liquid Substances in Bulk);</li> <li>2. International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;</li> <li>3. Categorization of noxious liquid substances;</li> <li>4. Procedures and Arrangements Manual;</li> <li>5. Cargo Record Book;</li> <li>6. Master must be provided information regarding cargo loading and distribution to ensure subdivision and stability criteria compliance; and</li> <li>7. All ships over 150 GT must carry an approved Shipboard Oil Pollution Emergency Plan (SOPEP).</li> </ol>
15.4.D MARPOL Annex III <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex III,	the candidate describes important provisions of MARPOL Annex III.	The candidate's description includes the important points of MARPOL 73/78 Annex III (Packaged Harmful Substances).

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.E MARPOL Annex IV <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex IV,	the candidate describes important provisions of MARPOL Annex IV.	The candidate's description includes the following important points of MARPOL 73/78 Annex IV (Sewage):  1. U.S. is not signatory to this Annex, however the following U.S. laws, regulations, and policies apply: a. Federal Water Pollution Act; b. U.S. requirements found in 33 CFR 159; and c. Applicable U. S. Coast Guard policy.
15.4.F MARPOL Annex V <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex V,	the candidate describes important provisions of MARPOL Annex V.	The candidate's description includes the following points of MARPOL 73/78 Annex V (Garbage):  1. Applicable requirement when garbage is mixed with other discharges; 2. Provisions for the disposal of garbage, including: a. In special areas; and b. From and within 500 meters of offshore platforms; 3. Use of grinders and comminutors; 4. Special areas and Gulf of Mexico Area limits; 5. Record keeping; and 6. Port state control inspections.

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.4.G MARPOL Annex VI <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  International Convention for the Prevention of Pollution from Ships, as amended	On a vessel, or in a laboratory, when asked to describe the International Convention for the Prevention of Pollution from Ships, Annex VI,	the candidate describes important provisions of MARPOL Annex VI.	The candidate's description includes the following points of MARPOL 73/78 Annex VI (Air Pollution): <ol style="list-style-type: none"> <li>1. No changes should be made to the vessel, except for direct replacement of equipment without the approval of the flag state;</li> <li>2. Master's duty to report an accident or defect that affects the integrity of the vessel; and</li> <li>3. International Air Pollution Prevention (IAPP) certificate, including:                             <ol style="list-style-type: none"> <li>a. Dates of intermediate and annual surveys;</li> <li>b. Record of construction and equipment;</li> <li>c. Duration of validity; and</li> <li>d. What will invalidate an IAPP.</li> </ol> </li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.5.A International Health Regulations <i>Note 2</i> <i>Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  Maritime declarations of health and the requirements of the International Health Regulations	On a vessel, or in a laboratory, when asked to describe the requirements of the International Health Regulations,	the candidate identifies and describes major provisions of relevant health regulations including the information and procedures that port health officials require to prevent the transmission of diseases.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Defining:               <ol style="list-style-type: none"> <li>a. <i>Maritime Declaration of Health</i>;</li> <li>b. <i>Diseases subject to the regulations</i>;</li> <li>c. <i>Disinfecting</i>;</li> <li>d. <i>Free pratique</i>;</li> <li>e. <i>Infected person</i>;</li> <li>f. <i>Quarantine</i>;</li> <li>g. <i>International voyage</i>;</li> <li>h. <i>Isolation</i>;</li> <li>i. <i>Medical examination</i>; and</li> <li>j. <i>Suspect</i>;</li> </ol> </li> <li>2. Master's obligation to inform port authorities of real or suspected illnesses;</li> <li>3. Process of requesting "free pratique"; and</li> <li>4. Health procedures involving:               <ol style="list-style-type: none"> <li>a. Transiting through a country's waters; and</li> <li>b. Denial of entry due to health reasons.</li> </ol> </li> </ol>

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.6.A International agreements and conventions  <i>Note 3 OSV</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions  international instruments affecting the safety of the ship, passengers, crew and cargo	On a vessel, or in a laboratory, when asked to describe the international agreements and conventions applicable to OSVs,	the candidate identifies and describes the major provisions of relevant international agreements and conventions.	The candidate's description includes underlying principles, content and application of the following: <ol style="list-style-type: none"> <li>1. International Convention for the Unification of Certain Rules of Law with Respect to Collision Between Vessels;</li> <li>2. International Convention on Salvage;</li> <li>3. STCW Convention; and</li> <li>4. ISM Code.</li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*



Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
15.6.B International instruments affecting the safety of the ship, passengers, crew and cargo  <i>Note 3 OSV</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions affecting the safety of the ship, passengers, crew and cargo	On a vessel, or in a laboratory, when asked to describe international instruments affecting the safety of the vessel, passengers, crew and cargo,	the candidate identifies and describes the major provisions of relevant international instruments applicable to OSVs.	The candidate's identifies and describes the important provisions of the following: <ol style="list-style-type: none"> <li>1. Marine Note of Protest;</li> <li>2. Lloyd's Standard Form of Salvage Agreement;</li> <li>3. Charter parties;</li> <li>4. Marine insurance; and</li> <li>5. P&amp;I Associations.</li> </ol>
15.7.A Pollution prevention  <i>Note 2 Note 3</i>	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions methods and aids to prevent pollution of the marine environment by ships	On a vessel, or in a laboratory, when asked to describe the provisions of international environmental conventions,	the candidate describes the major provisions of relevant international environmental conventions.	The candidate's description includes the contents of the following relevant international environmental conventions: <ol style="list-style-type: none"> <li>1. Convention of the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention);</li> <li>2. International Convention on Civil Liability for Oil Pollution Damage, 1969;</li> <li>3. International Convention for the Control and Management of Ships' Ballast Water and Sediments;</li> <li>4. International Convention on Oil Pollution Preparedness; and</li> <li>5. International Convention for the Safety of Life at Sea, 1974.</li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>15.8.A National legislation to implement international conventions <i>Note 2</i> <i>Note 3</i></p>	<p>Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment</p>	<p>Knowledge of international maritime law embodied in international agreements and conventions  National legislation for implementing international agreements and conventions</p>	<p>On a vessel, or in a laboratory, when asked to describe national legislation for implementing international agreements and conventions,</p>	<p>the candidate identifies and describes major provisions of relevant U.S. national environmental laws.</p>	<p>The candidate may include the contents of the following relevant U.S. national environmental laws:</p> <ol style="list-style-type: none"> <li>1. Oil Pollution Act of 1990;</li> <li>2. Federal Water Pollution Control Act;</li> <li>3. Clean Air Act;</li> <li>4. Clean Vessel Act of 1992zzAbandoned Barge Act of 1992;</li> <li>5. Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990;</li> <li>6. Act to Prevent Pollution from Ships of 1980;</li> <li>7. Oil Terminal and Oil Tanker Environmental Oversight and Monitoring Act of 1990; and</li> <li>8. The Pollution regulations in 33 CFR Subchapter O.</li> </ol>
<p>16.1.A Life-saving appliance regulations <i>Note 2</i> <i>Note 3</i></p>	<p>Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems</p>	<p>Thorough knowledge of life-saving appliance regulations (International Convention for the Safety of Life at Sea)</p>	<p>On a vessel or in a laboratory, when asked to describe lifesaving appliance regulations applicable to the vessel on which the assessment is performed,</p>	<p>the candidate identifies and describes requirements for specific equipment designated by the assessor.</p>	<p>The candidate correctly describes equipment requirements, including type and quantity that must be carried or frequency of the activity. The assessor should query the candidate on specific SOLAS requirements.</p>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
16.2.A Plan fire or emergency drill for an OSV  <i>Note 3 OSV</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Organization of fire drills and abandon ship drills	On a vessel of at least 3,000 GT, or in a laboratory given a station bill and particulars for a vessel of at least 1,600 GRT or 3,000 GT,	the candidate plans a fire or emergency drill.	The candidate: <ol style="list-style-type: none"> <li>1. Determines the:               <ol style="list-style-type: none"> <li>a. Drill to be conducted;</li> <li>b. Location of the simulated casualty; and</li> <li>c. Portion of the station bill that applies;</li> </ol> </li> <li>2. Explains the need to examine the location of the simulated casualty to determine the:               <ol style="list-style-type: none"> <li>a. Suitability for the drill;</li> <li>b. Required manpower;</li> <li>c. Potential hazards; and</li> <li>d. Usability of the onboard emergency plans</li> </ol> </li> <li>3. Uses the onboard emergency plan for the simulated casualty and space to be used to develop:               <ol style="list-style-type: none"> <li>a. A script to use during the drill;</li> <li>b. Contingency plans; and</li> <li>c. Initial corrections to that emergency plan based upon the examination of the location; and</li> </ol> </li> <li>4. Explains the need to consult with and obtain concurrence with the plan from the Master and other officers.</li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
<p>16.3.A</p> <p>Develop a maintenance plan for lifesaving and firefighting equipment for an OSV</p> <p><i>Note 3</i> <i>OSV</i></p>	<p>Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems</p>	<p>Maintenance of operational condition of life-saving, fire-fighting and other safety systems</p>	<p>On a vessel or in a laboratory, using particulars for an OSV of at least 1,600 GRT or 3,000 GT,</p>	<p>the candidate develops a plan to maintain the vessel's lifesaving and firefighting equipment.</p>	<p>The candidate's plan includes:</p> <ol style="list-style-type: none"> <li>1. The following ship's lifesaving and firefighting equipment:                             <ol style="list-style-type: none"> <li>a. Survival craft;</li> <li>b. Portable firefighting equipment;</li> <li>c. Fixed firefighting equipment;</li> <li>d. Life rings; and</li> <li>e. Personal floatation devices; and</li> </ol> </li> <li>2. For each type of equipment, the plan describes:                             <ol style="list-style-type: none"> <li>a. Safety procedures for inspecting and simulating operation;</li> <li>b. Number on board;</li> <li>c. Storage;</li> <li>d. Exercising of equipment;</li> <li>e. Required inspections of equipment; and</li> <li>f. Maintenance.</li> </ol> </li> </ol>
<p>16.4.A</p> <p>Procedures to rescue persons from a vessel in distress</p> <p><i>Note 2</i> <i>Note 3</i></p>	<p>Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems</p>	<p>Actions to be taken to protect and safeguard all persons on board in emergencies</p>	<p>On a vessel, or in a laboratory, when asked to describe rescuing persons from a vessel in distress,</p>	<p>the candidate describes general procedures to be taken to rescue persons from a vessel in distress.</p>	<p>The candidate's description includes:</p> <ol style="list-style-type: none"> <li>1. Preference to wait for daylight, if possible;</li> <li>2. Establishing communications between vessels;</li> <li>3. Replacing unneeded equipment in rescue boats with additional life jackets, lifebuoys, blankets, portable radios;</li> <li>4. Check area for debris and other hazards to the rescue boats;</li> <li>5. Providing a lee and use of oil, if needed;</li> <li>6. Rigging equipment to board survivors from boats or in the water;</li> <li>7. Recovering the rescue boat; and</li> <li>8. Alternatives if the seas are too rough to use rescue boats.</li> </ol>

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
16.4.B Man overboard procedures <i>Note 2</i> <i>Note 3</i>	Maintain safety and security of the vessel crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to be taken to protect and safeguard all persons on board in emergencies	On a vessel, or in a laboratory, when asked to describe man overboard procedures,	the candidate describes general procedures to be performed on board when a person falls overboard.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Sounding the man overboard signal;</li> <li>2. Visual signals to be used to indicate that the vessel is recovering a person overboard;</li> <li>3. Importance of man overboard drills;</li> <li>4. Use of recovery equipment to rescue a person overboard; and</li> <li>5. Actions to take when a person is reported missing at sea including, but not limited to: <ol style="list-style-type: none"> <li>a. Search of the vessel;</li> <li>b. Use of the Williamson turn;</li> <li>c. Investigation of when the person was last seen; and</li> <li>d. Posting of lookouts.</li> </ol> </li> </ol>
16.5.A Actions following fire, explosion, collision or grounding <i>Note 2</i> <i>Note 3</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to limit damage and save the ship following a fire, explosion, collision or grounding	On a vessel or in a laboratory, when asked to describe actions following a fire, explosion, collision or grounding,	the candidate describes general procedures to limit damage and save the vessel.	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Inspection to determine the extent of damage;</li> <li>2. Shoring weakened areas;</li> <li>3. Plugging holes;</li> <li>4. Electrical damage;</li> <li>5. Piping damage;</li> <li>6. Temporary repairs; and</li> <li>7. Adjusting speed and course to minimize stresses and water entry.</li> </ol>

*Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.*

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
16.5.B Abandon ship procedures <i>Note 2</i> <i>Note 3</i>	Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Actions to limit damage and save the ship following a fire, explosion, collision or grounding	On a vessel, or in a laboratory, when asked to describe abandoning the vessel following a fire, explosion, collision or grounding,	the candidate describes procedures for abandoning ship	The candidate's description includes: <ol style="list-style-type: none"> <li>1. Determining that the vessel is in imminent danger of:                             <ol style="list-style-type: none"> <li>a. Sinking;</li> <li>b. Breaking up;</li> <li>c. Exploding; and</li> <li>d. Other conditions that make remaining on board impossible;</li> </ol> </li> <li>2. Distress messages and signals:                             <ol style="list-style-type: none"> <li>a. To attract attention;</li> <li>b. By all means available; and</li> <li>c. The information to insert in the message; and</li> </ol> </li> <li>3. Launching of survival craft:                             <ol style="list-style-type: none"> <li>a. When the vessel is listing heavily;</li> <li>b. In heavy weather conditions; and</li> <li>c. The use of oil.</li> </ol> </li> </ol>
17.1.A Plan fire and emergency drill	Develop emergency and damage control plans and handle emergency situations	Preparation of contingency plans for response to emergencies	This KUP is demonstrated by successful completion of Task 16.2.A		

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Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
17.2.A Prepare a damage control plan for a large OSV <i>OSV</i>	Develop emergency and damage control plans and handle emergency situations	Vessel construction, including damage control	On a vessel of at least 50 GRT, or in a laboratory using particulars for an OSV of at least 1,600 GRT or 3,000 GT,	the candidate prepares a damage control plan dealing with the flooding of compartments.	The candidate's plan: <ol style="list-style-type: none"> <li>1. Describes:               <ol style="list-style-type: none"> <li>a. Margin line;</li> <li>b. Permeability of a space; and</li> <li>c. Subdivision;</li> </ol> </li> <li>2. Determines, for a starboard or port compartment specified by the assessor:               <ol style="list-style-type: none"> <li>a. The stability if this compartment is flooded;</li> <li>b. The effect of asymmetrical flooding on the vessel;</li> <li>c. If the vessel can counter the asymmetrical flooding of the designated compartment; and</li> <li>d. The effect on vessel stability if the damage occurred in a Beaufort Scale 6 storm; and</li> </ol> </li> <li>3. Describes additional effects that may incur due to flooding, including:               <ol style="list-style-type: none"> <li>a. Insufficient reserve buoyancy;</li> <li>b. Progressive flooding; and</li> <li>c. Added stresses.</li> </ol> </li> </ol>
17.3 Fire prevention <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Develop emergency and damage control plans and handle emergency situations	Methods and aids for fire prevention, detection and extinction	This KUP is demonstrated by completing the approved or accepted <i>Advanced Fire Fighting</i> course specified in 46 CFR 11.303.		

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
17.4 Use of Lifesaving appliances <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Develop emergency and damage control plans and handle emergency situations	Functions and use of lifesaving appliances	This KUP is demonstrated by completing an approved or accepted <i>Proficiency in Survival Craft</i> or <i>Proficiency in Survival Craft Limited</i> course or if the mariner holds an endorsement for PSC or PSC-Limited.		
18.1 Shipboard management International conventions and national legislation <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Use of leadership and managerial skill	Knowledge of shipboard personnel management and training  A knowledge of related international maritime conventions and recommendations , and national legislation  A knowledge of related national legislation	These KUPs are demonstrated by successful completion of the approved <i>Leadership and Managerial Skills</i> course specified in 46 CFR 11.305(a)(3)(iv) and 11.307(a)(3)(iv).		

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.



Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
18.2 Use of Leadership and managerial skill  <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Use of leadership and managerial skill	Ability to apply task and workload management...  Knowledge and ability to apply effective resource management allocation, assignment, and prioritization of resources  Knowledge and ability to apply effective resource management effective communication on board and ashore  Knowledge and ability to apply effective resource management...  Knowledge and ability to apply decision-making techniques...			These KUPs are demonstrated by successful completion of the approved <i>Leadership and Managerial Skills</i> course specified in 46 CFR 11.305(a)(3)(iv) and 11.307(a)(3)(iv).

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

Task No./Name	STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standard
19.1 International Medical Guide for Ships  <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Organize and manage the provision of medical care on board	A thorough knowledge of the use and contents of the International Medical Guide for Ships or equivalent national publications			This KUPs is demonstrated by successful completion of the approved or accepted <i>Management of Medical Care</i> course specified in 46 CFR 11.305(a)(3)(ix) and 11.307(a)(3)(ix).
19.2 International Code of Signals – medical section  <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Organize and manage the provision of medical care on board	A thorough knowledge of the use and contents of the medical section of the International Code of Signals			This KUPs is demonstrated by successful completion of the approved or accepted <i>Management of Medical Care</i> course specified in 46 CFR 11.305(a)(3)(ix) and 11.307(a)(3)(ix).
19.3 Medical First Aid Guide  <i>Note 2</i> <i>Note 3</i> <i>Course</i>	Organize and manage the provision of medical care on board	A thorough knowledge of the use and contents of the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods			This KUPs is demonstrated by successful completion of the approved or accepted <i>Management of Medical Care</i> course specified in 46 CFR 11.305(a)(3)(ix) and 11.307(a)(3)(ix).

Successful completion of these guidelines will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Guidelines is not mandatory and alternative means of having achieved the standards of competence in the STCW Code will be considered. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

# Record of Assessment

for

Master or Chief Mate on Vessels of 3,000 GT or More  
Limited to Service on Offshore Supply Vessels

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*Print Name of Candidate*

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*Candidate's Signature*

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*Candidate's Mariner Reference No.*

Enclosure (8) to NVIC 03-17

**NOTE TO QUALIFIED ASSESSOR(S):** In performing your function as a qualified assessor (QA), you may use your initials only to indicate you have personally witnessed the demonstration of skill or ability by the person being assessed. The Assessment Guidelines in Enclosure (7) will provide satisfactory evidence of meeting the standard of competence specified in Section A-II/2 of the STCW Code as applicable to OSVs. The use of these Assessment Guidelines is not mandatory and an alternative means of having achieved the standards of competence in the STCW Code will be considered as described in paragraph 11 of this NVIC. In accordance with 46 CFR 11.301(a)(1)(i), alternative Assessment Guidelines must be approved by the National Maritime Center before use.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Plan a voyage and conduct navigation	Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks	1.1.A <i>Notes 2,3</i>	Create a voyage plan		
		1.2.A <i>Notes 1,2,3</i>	Great circle sailing		
		1.2.B <i>Notes 1,2,3</i>	Mercator sailing initial course and total distance		
		1.2.C <i>Notes 1,2,3</i>	Mercator sailing final position		
	Determine position and the accuracy of resultant position fix by any means	2.1.A <i>Notes 1,2,3</i>	Meridian transit (other than sun)		
		2.1.B <i>Notes 1,2,3</i>	Star identification		
		2.1.C <i>Notes 1,2,3</i>	Star/planet selection		
	Voyage planning and navigation for all conditions	2.2.A <i>Notes 1,2,3</i>	GPS routing		

**Notes:**

- Note 1* The assessment is not required for an endorsement that will be limited to near coastal waters.
- Note 2* The assessment is the same or equivalent to one for an endorsement that is not trade-restricted, and need not be repeated to remove the limitation to OSVs. Completion of the corresponding assessment from Navigation and Vessel Inspection Circular (NVIC) 10-14 will be accepted in lieu of this assessment
- Note 3* Mariners holding any STCW endorsement as Master or Chief Mate valid for service on vessels of 500 GT or more (with or without a limitation to OSVs) do not need to complete the assessment.
- OSV* The assessment is specific to OSVs, and another assessment of the KUP is needed for an endorsement that is not limited to OSVs.
- TV* The assessment is only required for an endorsement that will be valid upon OSVs that are also classed and inspected as tank vessels.

\_\_\_\_\_  
Candidate's Name

\_\_\_\_\_  
Candidate's Mariner Reference No.

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Determine and allow for compass errors	Ability to determine and allow for errors of the magnetic and gyro-compasses	3.1.A <i>Notes 1,2,3</i>	Amplitude of celestial body		
	Knowledge of the principles of magnetic and gyro-compasses	3.2.A <i>Notes 2,3</i>	Write a standing order for compasses		
	Understanding of systems under the control of the master gyro and a knowledge of the operation and care of the main types of gyrocompasses	3.3.A <i>Notes 2,3</i>	Operation and care of gyrocompass		
Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making	Blind pilotage planning Evaluation of navigational information derived from all available sources, including radar and ARPA	5.2.A <i>Notes 2,3</i>	Blind pilotage planning		
	The interrelationship and optimum use of all navigational data available for conducting navigation	5.3.A <i>Notes 2,3</i>	Plan and execute a passage		
Forecast weather and oceanographic conditions	Ability to understand and interpret a synoptic chart and to forecast area weather, taking into account local weather conditions and information received by weather fax	7.1.A <i>Notes 1,3</i> <i>OSV</i>	Forecast weather for next 24 hours		
	Knowledge of characteristics of various weather systems	7.2.A <i>Note 3</i> <i>OSV</i>	Identify fronts		
	Knowledge of ocean current systems	7.3.A <i>Note 3</i> <i>OSV</i>	Ocean currents		
	Ability to calculate tidal conditions Use all appropriate nautical publications on tides and currents	7.4.A <i>Notes 2,3</i>	Calculate height of tide		
		7.4.B <i>Notes 2,3</i>	Calculate tidal current		
		7.4.C <i>Notes 2,3</i>	Calculate time for desired height of tide		

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STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Respond to navigational emergencies	Precautions when beaching a ship	8.1.A <i>Note 3</i> <i>OSV</i>	Beaching a vessel		
	Action to be taken if grounding is imminent, and after grounding	8.2.A <i>Note 3</i> <i>OSV</i>	Grounding a vessel		
	Refloating a grounded ship with and without assistance	8.3.A <i>Note 3</i> <i>OSV</i>	Refloating a grounded vessel		
	Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause	8.4.A <i>Note 3</i> <i>OSV</i>	Prepare for a collision		
	Assessment of damage control	8.5.A <i>Note 2</i>	Damage control		
	Emergency steering	8.6.A <i>Notes 2,3</i>	Emergency steering		
	Emergency towing arrangements and towing procedure	8.7.A <i>Note 3</i> <i>OSV</i>	Emergency towing		
Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including maneuvers when approaching pilot stations and embarking or disembarking pilots	9.1.A <i>OSV</i>	Maneuver an OSV alongside another vessel		
	Maneuvering and handling a ship in all representative conditions, including handling ship in rivers, estuaries and restricted waters	9.2.A <i>Note 2</i>	Counter set and drift		
	Maneuvering and handling a ship in all conditions, including application of constant-rate-of-turn techniques	9.3.A <i>Note 2</i>	Constant radius turn		
	Maneuvering and handling a ship in all conditions, including maneuvering in shallow water	9.4.A <i>Note 2</i>	Maneuver in shallow water		

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STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in representative conditions, including interaction between passing vessels and between own vessel and nearby banks	9.5.A OSV	Canal effect		
	Maneuvering and handling a ship in all conditions, including berthing and unberthing under various conditions of wind, tide and current with and without tugs Use of propulsion and maneuvering systems	9.6.A OSV	Dock a large OSV		
	Maneuvering and handling a ship in all conditions, including ship and tug interaction Use of propulsion and maneuvering systems	9.7.A OSV	Turn a large OSV short around		
	Maneuvering and handling a ship in all conditions, including choice of anchorage; anchoring with one or two anchors in limited anchorages and factors involved in determining the length of anchor cable to be used	9.8.A Note 3 OSV	Anchor an OSV		
	Maneuvering and handling a ship in all conditions, including dragging anchor; clearing fouled anchors	9.9.A Note 3 OSV	Dragging anchor		
		9.9.B Note 2	Clearing a fouled anchor		

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STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Maneuver and handle a ship in all conditions	Maneuvering and handling a ship in all conditions, including handling of ships in heavy weather; of keeping an unmanageable ship out of trough of the sea; Lessening drift and use of oil	9.11.A <i>Note 3</i> <i>OSV</i>	Emergency vessel handling		
	Maneuvering and handling a ship in all conditions, including precautions in maneuvering to launch rescue boats or survival craft in bad weather	9.11.B <i>Note 3</i> <i>OSV</i>	Maneuver to launch rescue boats		
	Maneuvering and handling a ship in all conditions, including towing operations	9.11.C <i>Note 3</i> <i>OSV</i>	Towing operations		
	Maneuvering and handling a ship in all conditions, including methods of taking on board survivors from rescue boats and survival craft	9.13.A <i>Note 3</i> <i>OSV</i>	Taking on survivors from rescue craft		
	Maneuvering and handling a ship in all conditions, including ability to determine the maneuvering and propulsion characteristics of common types of ships	9.14.A <i>Note 3</i> <i>OSV</i>	Maneuvering and propulsion characteristics		
	Maneuvering and handling a ship in all conditions, including importance of navigating at reduced speed to avoid damage caused by own ship's bow wave and stern wave	9.15.A <i>Note 3</i> <i>OSV</i>	Reducing wake damage		
	Maneuvering and handling a ship in all conditions, including practical measures to be taken when navigating in or near ice	9.16.A <i>Notes 2,3</i>	Ice navigation		
	Maneuvering and handling a vessel in all conditions, including practical measures to be taken when in conditions of ice accumulation on board	9.16.B <i>Notes 2,3</i>	Ice accumulation		
	Maneuvering and handling a ship in all conditions, including use of, and maneuvering in and near, traffic separation schemes and in vessel traffic service (VTS) areas	9.17.A <i>Notes 2,3</i>	Maneuver in traffic separation schemes		

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STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Operate remote controls of propulsion plant and engineering systems and services	Operating principles of marine power plants	10.1.A <i>Note 3</i> <i>OSV</i>	OSV diesel engines		
		10.1.C <i>Notes 2,3</i>	Propeller and propeller shaft		
		10.1.D <i>Notes 2,3</i>	Bridge control		
	Ships' auxiliary machinery	10.2.B <i>Note 3</i> <i>OSV</i>	OSV distillation and fresh water systems		
		10.2.C <i>Note 3</i> <i>OSV</i>	Pumps and pumping systems on OSVs		
		10.2.D <i>Notes 2,3</i>	Steering gear		
		10.2.E <i>Note 2</i>	Remotely operate steering gear		
		10.2.F <i>Notes 2,3</i>	Generators, alternators, and electrical distribution		
		10.2.G <i>Note 3</i> <i>OSV</i>	OSV air conditioning and ventilation		
		10.2.H <i>Note 3</i> <i>OSV</i>	OSV sewage treatment plants		
		10.2.I <i>Notes 2,3</i>	Oily water separators and oil filtering equipment		
		10.2.J <i>Note 3</i> <i>OSV</i>	OSV Deck machinery		

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STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Operate remote controls of propulsion plant and engineering systems and services	Ships' auxiliary machinery	10.2.K <i>Note 3</i> <i>OSV</i>	OSV Hydraulic systems		
	General knowledge of marine engineering terms	10.3.A <i>Notes 2,3</i>	Engineering terms		
		10.3.B <i>Notes 2,3</i>	Fuel consumption		
Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Knowledge of and ability to apply relevant international regulations, codes and standards concerning the safe handling, stowage, securing and transport of cargoes	11.1.A <i>Note 3</i> <i>OSV</i>	International regulations for OSV cargo operations		
		11.1.B <i>OSV</i> <i>TV</i>	Prepare a loading and discharge plan		
	Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment	11.4.A <i>Note 3</i> <i>OSV</i>	Deck cargo stowage and securing		
		11.4.B <i>Note 3</i> <i>OSV</i>	Container stowage and securing		
		11.4.C <i>Note 3</i> <i>OSV</i>	Stowage and securing of heavy lift cargoes		
Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	11.5.A <i>Note 3</i> <i>OSV</i>	Receipt and delivery of cargo on OSVs			
	11.5.B <i>Note 3</i> <i>OSV</i>	Care of cargo during carriage on OSVs			
	11.5.C <i>Note 3</i> <i>OSV</i>	Safe use of OSV cargo handling gear			
	11.5.D <i>OSV</i>	Develop a loading plan for a large OSV			

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STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes	Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing	11.5.E <i>Notes 2,3</i>	Inspect cargo running gear		
	General knowledge of tankers and tanker operations	11.6.A <i>Notes 2,3</i>	Basic concepts of carriage of dangerous liquids		
		11.6.C <i>Notes 2,3</i>	Dangerous Liquids operations		
		11.6.D <i>Note 3</i> <i>OSV</i>	Basic concepts of carriage of liquefied gases on OSVs		
	Ability to establish procedures for safe cargo handling in accordance with the provisions of the relevant instruments such as IMDG Code, IMSBC Code, MARPOL 73/78 Annexes III and V and other relevant information	11.8.A <i>Note 3</i> <i>OSV</i>	Develop a garbage plan for an OSV		
		11.8.B <i>Notes 2,3</i>	Loading of packaged dangerous goods		
	Ability to explain the basic principles for establishing effective communications and improving working relationship between ship and terminal personnel	11.9.A <i>Notes 2,3</i>	Conduct cargo transfer meeting		
Carriage of dangerous goods	International regulations, standards, codes and recommendations on the carriage of dangerous cargoes, including the International Maritime Dangerous Goods (IMDG) Code and the International Maritime Solid Bulk Cargoes (IMSBC) Code	13.1.A <i>Note 3</i> <i>OSV</i>	Carriage of dangerous goods aboard OSVs		

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STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions: Certificates and other documents required to be carried on board s by international conventions, how they may be obtained and their period of validity	15.1.A <i>Notes 2,3</i>	Certificates required by international conventions		
		15.1.B <i>Notes 2,3</i>	Documents required to be carried		
		15.1.C <i>Notes 2,3</i>	Documents required at arrival and departure		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention on Load Lines, 1966, as amended	15.2.A <i>Notes 2,3</i>	International Convention on Load Lines		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention for the Safety of Life at Sea, 1974, as amended	15.3.A <i>Notes 2,3</i>	International Convention for the Safety of Life at Sea		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention for the Prevention of Pollution from Ships, as amended	15.4.A <i>Notes 2,3</i>	MARPOL 73/78		
		15.4.B <i>Notes 2,3</i>	MARPOL Annex I		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention for the Prevention of Pollution from Ships, as amended	15.4.C <i>Notes 2,3</i>	MARPOL Annex II		
		15.4.D <i>Notes 2,3</i>	MARPOL Annex III		
		15.4.E <i>Notes 2,3</i>	MARPOL Annex IV		
	Knowledge of international maritime law embodied in international agreements and conventions: International Convention for the Prevention of Pollution from Ships, as amended	15.4.F <i>Notes 2,3</i>	MARPOL Annex V		
		15.4.G <i>Notes 2,3</i>	MARPOL Annex VI		

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment	Knowledge of international maritime law embodied in international agreements and conventions: Maritime declarations of health and the requirements of the International Health Regulations	15.5.A <i>Notes 2,3</i>	International Health Regulations		
	Knowledge of international maritime law embodied in international agreements and conventions: international instruments affecting the safety of the ship, passengers, crew and cargo	15.6.A <i>Note 3</i> <i>OSV</i>	International Agreements and Conventions		
		15.6.B <i>Note 3</i> <i>OSV</i>	International instruments affecting the safety of the vessel, passengers, crew and cargo		
	Knowledge of international maritime law embodied in international agreements and conventions: methods and aids to prevent pollution of the marine environment by ships	15.7.A <i>Notes 2,3</i>	Pollution prevention		
	Knowledge of international maritime law embodied in international agreements and conventions: National legislation for implementing international agreements and conventions	15.8.A <i>Notes 2,3</i>	National legislation to implement international conventions		

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Enclosure (8) to NVIC 03-17

STCW Competence	Knowledge, Understanding, and Proficiency	Task No.	Task Name	Assessor's Initials	Date
Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	Thorough knowledge of life-saving appliance regulations (International Convention for the Safety of Life at Sea) Plan fire or emergency drill	16.1.A <i>Notes 2,3</i>	Life-saving appliance regulations		
		16.2.A <i>Note 3 OSV</i>	Plan fire or emergency drill for an OSV		
		16.3.A <i>Note 3 OSV</i>	Develop a maintenance plan for lifesaving and firefighting equipment for an OSV		
	Actions to be taken to protect and safeguard all persons on board in emergencies	16.4.A <i>Notes 2,3</i>	Procedures to rescue persons from a vessel in distress		
		16.4.B <i>Notes 2,3</i>	Man overboard procedures		
	Actions to limit damage and save the ship following a fire, explosion, collision or grounding	16.5.A <i>Notes 2,3</i>	Actions following fire, explosion, collision or grounding		
		16.5.B <i>Notes 2,3</i>	Abandon ship procedures		
Develop emergency and damage control plans and handle emergency situations	Vessel construction, including damage control	17.2.A <i>OSV</i>	Prepare a damage control plan for a large OSV		

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**ASSESSOR AND VESSEL INFORMATION**

Qualified Assessors (QAs) witnessing the successful demonstrations noted in this record should provide the information below relative to their service with the candidate. Prospective QAs should have a minimum of at least 1 year of experience as Master on vessels at least 1,600 GRT or 3,000 GT. After December 31, 2017, QAs must be approved by the National Maritime Center (46 CFR 10.107). Qualified military personnel need not be approved as QAs and may continue to sign assessments after December 31, 2017.

Vessel Name	Gross Tonnage	Assessor's Name	Assessor's Signature	Sample Initials of Assessor	Assessor's Mariner Ref. No.	Assessor's Shipboard Position
M/V Kalrot	3,456 GT	Ignatius J. Reilly	<i>Ignatius J. Reilly</i>	<i>IR</i>	0112358	Master

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Candidate's Name

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**QUALIFICATION REQUIREMENTS FOR NATIONAL AND STCW  
ENDORSEMENTS FOR SERVICE AS MASTER AND CHIEF MATE ON OFFSHORE  
SUPPLY VESSELS THAT ARE ALSO INSPECTED AS TANK VESSELS AND/OR  
MISCELLANEOUS CARGO VESSELS**

1. GENERAL. This enclosure provides guidance to qualify for national and STCW endorsements for service as Master and Chief Mate on vessels that are certificated as Offshore Supply Vessels (OSVs) under 46 Code of Federal Regulations (CFR) Subchapter L and also as Tank Vessels under 46 CFR Subchapter D and/or Miscellaneous Cargo Vessels under 46 CFR Subchapter I.
2. MASTER.
  - a. National officer endorsement. Mariners may qualify for a national endorsement as Master of Self-Propelled Vessels (46 CFR 11.404) that is limited to service on Offshore Supply Vessels of Less Than 10,000 GRT/GT that are also inspected as tank vessels under 46 CFR Subchapter D and/or as miscellaneous cargo vessels under 46 CFR Subchapter I by:
    - 1) Meeting the requirements for a national officer endorsement as Master (OSV) of Less Than 10,000 GRT/GT as described in Enclosure (5); and
    - 2) Successfully completing the professional examination for national endorsements as Master and Chief Mate of Self-Propelled Vessels of Unlimited Tonnage appropriate to the route applied for.
  - b. STCW endorsement. Mariners may qualify for an STCW endorsement as Master of Vessels of 3,000 GT or more that is limited to service on offshore supply vessels that are also inspected as tank vessels under 46 CFR Subchapter D and/or as miscellaneous cargo vessels under 46 CFR Subchapter I by:
    - 1) Meeting the requirements for an STCW endorsement as Master valid for service on OSVs of 3,000 GT or more as described in Enclosure (5) of this NVIC;
    - 2) Completing the approved or accepted training for Advanced Stability specified in 46 CFR 11.305(a)(3)(ii) and 11.307(a)(3)(ii). This training must be approved to meet requirements for an endorsement that is not limited to service on OSVs, and may not be tailored to be specific to OSVs.
    - 3) If the mariner holds an endorsement that is limited to service on OSVs, they should complete any assessments of competence in Enclosure (7) that were not completed for their current endorsement.
3. CHIEF MATE.
  - a. National officer endorsement. Mariners may qualify for a national endorsement as Chief Mate (OSV) of Self-Propelled Vessels (46 CFR 11.405) that is limited to service on offshore supply vessels of less than 10,000 GRT/GT that are also inspected as tank



vessels under 46 CFR Subchapter D and/or as miscellaneous cargo vessels under 46 CFR Subchapter I by:

- 1) Meeting the requirements for a national officer endorsement as Chief Mate (OSV) of Offshore Supply Vessels of Less Than 10,000 GRT/GT as described in Enclosure (6); and
  - 2) Successfully completing the professional examination for national endorsements as Master and Chief Mate of Self-Propelled Vessels of Unlimited Tonnage appropriate to the route applied for.
- b. STCW endorsement. Mariners may qualify for an STCW endorsement as Chief Mate of Vessels of 3,000 GT or More that is limited to service on Offshore Supply Vessels of Less Than 10,000 GRT/GT that are also inspected as tank vessels under 46 CFR Subchapter D and/or as miscellaneous cargo vessels under 46 CFR Subchapter I by:
- 1) Meeting the requirements for an STCW endorsement as Chief Mate valid for service on OSVs of 3,000 GT or more as described in Enclosure (6) of this NVIC; and
  - 2) Completing the approved or accepted training for Advanced Stability specified in 46 CFR 11.305(a)(3)(ii) and 11.307(a)(3)(ii). This training must be approved to meet requirements for an endorsement that is not limited to service on OSVs, and may not be tailored to be specific to OSVs.
  - 3) If the mariner holds an endorsement that is limited to service on OSVs, they should complete any assessments of competence in Enclosure (7) that were not completed for their current endorsement.
4. ADDITIONAL ENDORSEMENTS. Mariners who will serve on vessels that are also inspected as tank vessels may also require national tankerman endorsements and STCW oil and/or chemical tanker operations endorsements. Requirements for these endorsements are found in 46 CFR Part 13, Certification of Tankermen.
5. RENEWAL OF ENDORSEMENTS. To renew national and STCW endorsements for service on OSVs that are also inspected as tank vessels and/or miscellaneous cargo vessels, mariners must meet the requirements discussed in Enclosure (5) (for Master) or Enclosure (6) (for Chief Mate).