DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
2531 JEFFERSON DAVIS HWY
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IN REPLY REFER TO

NAVSEAINST 9593.2
Ser 03L11/
1 Oct 96

NAVSEA INSTRUCTION 9593.2

From: Commander, Naval Sea Systems Command

Subj: INSPECTION AND CERTIFICATION PROCESS FOR OIL POLLUTION ABATEMENT (OPA) SYSTEMS IN U.S. NAVY SURFACE SHIPS AND CRAFT

Ref: (a) OPNAVINST 5090.1B
(b) DoD Directive 6050.15
(c) Title 33, Code of Federal Regulations, Parts 151, 155, and 157, "Oil Pollution Regulations"
(d) Title 46, Code of Federal Regulations, Part 162, "Engineering Equipment; Design and Approval Requirements for Oil Pollution Prevention Equipment"

Encl: (1) Procedures for Inspection and Certification of U.S. Navy Shipboard Oil Pollution Abatement Equipment and Systems

1. Purpose. This instruction defines the Naval Sea Systems Command (NAVSEA) inspection and certification process for oil pollution abatement (OPA) equipment and systems. Requirements for inspection and certification of OPA equipment and system installations are outlined to ensure compliance with Federal and Department of Defense (DoD) regulations.

2. Applicability and Scope. This inspection and certification process is applicable to all U.S. Navy surface ships in which shipboard OPA control equipment and systems are currently installed or are being installed during new construction, conversion or under the Fleet Modernization Program (FMP). These shipboard waste oil/oily waste (WO/OW) control systems include oil water separators (OWS), oil content monitors (OCM), oily waste holding tanks (OWHT), oily waste transfer systems, waste oil tanks (WOT) and associated components.

3. Background

a. Reference (a) is the formal Navy implementation plan ensuring compliance with reference (b). Reference (b) defines oil content effluent standards and establishes guidelines for the treatment of oily bilge water prior to discharge. Requirements include the installation of shipboard oil water separators; oil content monitors; and associated tanks, pumps, piping, fittings and transfer equipment. In addition, periodic inspections must

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be accomplished to verify proper equipment installation and operation.

b. Reference (b) requires an initial inspection of OPA equipment before the ship is put into service or just after equipment installation in the case of retrofitting. Periodic inspections are also required at specified intervals, but are not to exceed five years, to determine the integrity and working order of the OPA system and all associated equipment. When inspection verifies compliance with the requirements of reference (b), the ship will be issued a certificate of compliance. This certificate is equivalent to the International Oil Pollution Prevention (IOPP) certificate issued by references (c) and (d) to private ships. When inspection determines that a ship does not comply with the requirements of reference (b), corrective action shall be immediately initiated to bring the ship into compliance.

c. The inspection and certification process to monitor fleet-wide installations of shipboard OPA systems and equipment minimizes FMP and logistic support costs by ensuring proper installations and associated performance capabilities.

4. Action and Responsibilities. Procedures for the inspection and certification of shipboard OPA equipment and systems are contained in enclosure (1). Specific actions and responsibilities are as follows:

a. Environmental Protection Program Manager (SEA 03L11)

(1) As program coordinator, monitor program progress and provide program status to NAVSEA and higher authority as required.

(2) Provide engineering input and design guidance for the overall program. Prepare and update the general specifications for overhaul, pertinent specifications, design data sheets and standard drawings to reflect certifiable systems. Ensure design baseline criteria is specified for new ship construction.

(3) Maintain the design baseline and inspection checklists, review modifications to the baseline and checklists and issue updated changes only after fully evaluating the impact and necessity of the modification.

(4) Review and evaluate requests for waivers from requirements where system installation modifications are not considered cost effective. Any waivers are to be requested by the installing activity and reviewed by NAVSEA for approval.

(5) Maintain and update Integrated Logistic Support (ILS) and technical documentation for OPA systems.

b. Surface Ship Program Managers

(1) Ship Program Managers (SPMs) shall ensure that OPA systems in new construction ships are properly installed in accordance with design baseline criteria and that deficiencies are corrected before systems are turned over to the fleet.

(2) SPMs shall ensure that OPA system ship alterations (SHIPALT) conform to design baseline criteria, that drawings are reviewed by Carderock Division, Naval Surface Warfare Center (CDNSWC) 631, and that deficiencies are corrected before ship alteration installation drawings/ship alteration records (SIDs/SARs) are issued to installing activities. Include the inspection requirements in OPA SHIPALTs.

(3) SPMs shall require re-inspection in any subsequent SHIPALT that alters or otherwise affects the operation of the OPA system.

c. Support Activities, Including CDNSWC 631, SUPSHIP, NAVSHIPYD

Responsibilities for the various support activities in the inspection and certification program are contained in enclosure (1).

d. Type Commanders (TYCOMs)

(1) Issue, as appropriate, implementing instructions, responsibilities and procedures of TYCOM organizational elements to achieve and maintain inspection and certification of each ship OPA system.

(2) Ensure ship's force monitors correction of installation deficiencies identified by the OPA system inspectors.

(3) Complete and issue certificates of compliance to ships under TYCOM cognizance based on report of correction of all deficiencies.

(4) Ensure OPA system inspections are periodically conducted as required in enclosure (1) to ensure that the system is performing properly. These inspections should be conducted every time the system is reactivated after a period of non-use of twelve months or more because of maintenance activity.

(5) Upon expiration of a ship's certificate, conduct a system inspection as required in enclosure (1) and after verifying system compliance complete and issue a new certificate to the ship.

(6) Ensure ship's force is adequately trained in the operation and maintenance of the system components, conducts required maintenance actions (PMS) and operates the system where pier reception facilities are not available or local regulations require.

(7) In the event of OPA system inoperability, malfunction, casualty or incidence of safety, health or sanitation risk, ensure the ship submits a feedback report (4790/2K) in accordance with 3M/MDS.

5. Reports

a. The report of deficiencies found during inspections of OPA systems in U.S. ships and craft is exempt from report control procedures in accordance with NAVSEAINST 5214.2, Chapter III, paragraph 3.

b. Report symbol NAVSEA 9593-3 is assigned to the report of Correction of Deficiencies of OPA systems in U.S. Ships and Craft.

c. Configuration changes accomplished on OPA systems during maintenance, repair, or overhaul shall be reported on the OPNAV 4790/CK form.

G. R. STERNER

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PROCEDURES FOR INSPECTION AND CERTIFICATION U.S. NAVY SHIPBOARD OIL POLLUTION ABATEMENT EQUIPMENT AND SYSTEMS

1. Fleet Modernization Program Procedures

a. Design Review. After completion of the pre-overhaul test and inspection (POT&I) shipcheck, each planning activity shall provide installation drawings to CDNSWC 631 and PERA within 70 days for design review purposes. The typical sequence of events and actions from design review to certification issuance for both the Fleet Modernization Program and New Construction and Conversion Ships is outlined in Attachment (A).

b. System Inspection. Each NAVSHIPYD or SUPSHIP shall establish liaison with CDNSWC 631 so that the OPA system inspection can be scheduled with at least three weeks' advance notice to the OPA system inspector at CDNSWC 631 and sufficient time is available after the inspection to correct any deficiencies. The inspection shall be conducted using the appropriate equipment checklist, Attachment (B), which covers the minimum installation and performance requirements and standards. A post-inspection conference chaired by CDNSWC 631 shall be held with ship's force and the cognizant NAVSHIPYD or SUPSHIP representatives to categorize deficiencies. Prior to the ship's departure, the installing activity shall correct those installation deficiencies within the scope of the SHIPALT as authorized. The NAVSHIPYD or SUPSHIP shall advise SPMs of action taken to correct the installation deficiencies identified in the inspection report. No action should be taken to include any design improvements in the system unless there is no cost, contractual or schedule impact and then only when approved by the cognizant SPMs with NAVSEA 03L11 concurrence. In accordance with paragraph 3 of this enclosure, a message inspection report shall be issued from the ship by CDNSWC 631 prior to completion of the inspection visit.

c. Certificate Issuance. If no critical deficiencies as defined in paragraph 3 are found and the OPA system complies with standards, CDNSWC 631 will complete and issue a certificate of compliance, Attachment (C), to the ship with an information copy to the TYCOM. If critical deficiencies are found, the NAVSHIPYD or SUPSHIP, upon correction of all contractor responsible critical deficiencies, shall recommend to the TYCOM that the TYCOM complete and issue an inspection certification to the ship with an information copy to CDNSWC 631.

2. New Construction and Conversion Procedures

a. Design Review. SPMs shall establish liaison with NAVSEA 03L11 and the OPA system inspector at CDNSWC 631 to ensure compliance with the applicable design baseline. SPMs shall

ensure that NAVSEA 03L11 participates in appropriate OPA system design reviews and approves any proposed modifications to the OPA baseline design.

b. System Inspection. SPMs shall ensure that inspections are conducted prior to Builder's Trials and that the cognizant SUPSHIP provides notification to CDNSWC 631 that the OPA system is ready for inspection at least three weeks prior to Builder's Trials. For ships currently under contract, it is not intended that this milestone be formalized into the shipbuilding contract or that the inspection interfere with the shipbuilding schedule. SUPSHIP and the inspectors should coordinate timing of the inspection visit at the convenience of all parties so as to not impact on delivery. The OPA system inspection should be considered a pre-INSURV audit and should be scheduled early enough to allow for the identification of deficiencies and determination of responsibility for corrective action and the correction of all contractor responsible deficiencies prior to Acceptance Trials. If the contractor responsible deficiencies are not corrected prior to Acceptance Trials, the SUPSHIP should present the items as INSURV items.

NOTE: Conversions and ships in the Service Life Extension Program (SLEP) may be administered by NAVSHIPYDs.

A post-inspection conference chaired by the CDNSWC 631 inspector shall be held with SUPSHIP and ship's force representatives. The purpose of the conference is to review the deficiencies identified by the inspector and to establish responsibility for correction of deficiencies. Prior to ship delivery, the SUPSHIP shall ensure that the contractor corrects those contractor responsible deficiencies agreed to be within the scope of the ship's contract specifications. If responsibility for corrective action of a deficiency cannot be resolved or if it is of a design nature clearly beyond the scope of the contract specifications, the inspection report shall so state. SPMs shall then resolve the issue of responsibility and determine corrective action. In most instances, it is intended that the SPMs direct the SUPSHIP to negotiate a contract modification, within authorized responsibility, with the contractor for corrective action while the ship is still within the SCN envelope. The SUPSHIP shall advise SPMs of action taken to correct the contractor responsible deficiencies identified in the inspection report. SPMs shall notify SEA 03L11 and TYCOM of the resolution of all deficiencies.

c. Certificate Issuance. If no critical deficiencies as defined in paragraph 3 are found and the OPA system complies with standards, CDNSWC 631 will complete and issue a certificate of compliance, Attachment (C), to the ship with an information copy

to the TYCOM and SPMs. If critical deficiencies are found, the SUPSHIP, upon correction of all contractor responsible critical deficiencies, shall recommend that SPMs complete and issue a certificate of compliance to the ship with information copies to the TYCOM and CDNSWC 631. The certificate is issued provided that the system is fully operational, no hazards exist, all necessary logistic support elements have been provided and all items on the applicable checklist, Attachment (B), have been satisfied.

In the event all of the criteria necessary for certification cannot be satisfied during construction or conversion, the action of granting certification shall be the responsibility of the TYCOM.

3. Action/Responsibilities

a. CDNSWC 631. The responsibilities of CDNSWC 631 shall include:

(1) Fleet Modernization Program:

(a) Review SIDs/SARs produced by planning yards for conformance to technical guidance and report on findings.

(b) Inspect the system using the appropriate authorized checklist, Attachment (B). Conduct a post-inspection conference and prior to completion of the inspection visit issue from the ship a message report to the installing activity with information copies to the planning activity, ship, PERA, TYCOM, NAVSHIPYD or SUPSHIP, SPMs, and SEA 03L11 listing any deficiencies. The two categories of deficiencies to be included in the message report are:

Critical deficiencies. Items which must be corrected prior to issuance of a certificate of compliance. A critical item is any installation or equipment deficiency that would cause the discharge of unacceptable effluent. Critical items include any faulty or incomplete installation item and any equipment defect that prevents the proper operation of OPA systems and equipment. Critical items are denoted in the checklists of Attachment (B) by an X in the checklist box.

Non-critical deficiencies. Items which do not require correction prior to certificate issue. Non-critical items are installation and equipment deficiencies that would not cause the inadequate treatment of oily bilge water and the discharge of unacceptable effluent.

(c) If no critical deficiencies are found and the OPA system complies with standards, complete and issue a

certificate of compliance to the ship with an information copy to the TYCOM.

(d) Provide to TYCOM a list of ships that have completed OPA system installation prior to the date of this instruction. Complete and issue a certificate of compliance for those ships that were inspected and found to be in compliance with applicable standards at that time. Such ships must comply with current standards as contained in references (a) and (b) when follow-on inspections occur during the certificate's validity as outlined in Section 4 of this instruction. Any outstanding deficiencies will be resolved and a certificate issued in accordance with the current program.

(e) Provide technical assistance requested by SPMs, SUPSHIP or NAVSHIPYD. Any such assistance shall be funded by the requesting activity.

(2) New Construction and Conversion:

(a) Conduct a design review of the installation drawings and provide a formal report detailing any discrepancies found with current baseline design guidance within fourteen (14) days after receipt of drawings to SPMs, SUPSHIP, planning activity and NAVSEA 03L11.

(b) Inspect the completed system for deficiencies using the appropriate authorized checklist, Attachment (B).

(c) Conduct a post-inspection conference and provide a list of deficiencies to attendees.

(d) Provide a formal inspection report to the SUPSHIP and SPMs for action within two weeks following the inspection. Each deficiency in the report shall be marked as either contractor or Government responsible as determined during the post-inspection conference. For information purposes, distribution of the report will include planning activity, ship, TYCOM, SPMs, SUPSHIP and SEA 03L11.

(e) Provide technical assistance requested by SPMs, SUPSHIP or NAVSHIPYD. Any such assistance shall be funded by the requesting activity.

(f) If no critical deficiencies are found after the initial inspection and the OPA system complies with standards, complete and issue a certificate of compliance to the ship with an information copy to the TYCOM and SPMs.

b. Installing or Supervising Activity (SUPSHIP or NAVSHIPYD). The responsibilities of the installing or supervising activity shall include:

(1) Fleet Modernization Program:

(a) Ensure installation drawings are forwarded to CDNSWC 631 for review. Compare required inspection items with work items in the repair contract work package. Notify CDNSWC 631 and PERA if there are omissions in the work item list.

(b) Ensure that OWS and OCM systems are installed in accordance with SIDs and SARs.

(c) Notify CDNSWC 631 inspector of inspection schedule at least three weeks prior to start of the inspection. Inspections should be scheduled in sufficient time to allow for correction of installation deficiencies prior to completion of a ship's availability.

(d) Accompany CDNSWC 631 inspectors during the inspection and provide assistance in categorizing deficiencies at the post-inspection conference.

(e) Advise SPMs of action taken to correct installation deficiencies and advise SPMs of any design deficiencies.

(f) Correct all items determined to be within installing activity responsibility and notify SPMs when deficiencies have been corrected (Report Symbol NAVSEA 9593-3).

(g) When deficiencies have been corrected, recommend to the TYCOM that the TYCOM complete and issue an inspection certification to the ship with an information copy to CDNSWC 631.

(2) New Construction and Conversion:

(a) Ensure that required corrections to the drawings as reported in the CDNSWC 631 design review are made.

(b) Notify SPMs and the CDNSWC 631 inspector of the system inspection schedule at least three weeks prior to the inspection. The inspection should occur prior to Builder's Trials.

(c) Accompany inspectors during the inspection. Establish responsibility, contractor or Government, for correction of deficiencies.

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(d) Take action to have contractor correct all items determined to be within contractor responsibility and notify SEA NAVSEAINST 9593.2

03L11 and SPMs when deficiencies have been corrected (Report Symbol NAVSEA 9593-3).

(e) Advise SPMs of design deficiencies that are Government responsibility and provide information regarding the feasibility of correction while the ship is within the SCN envelope.

(f) After verifying that all deficiencies have been corrected, recommend to SPMs that SPMs complete and issue a certificate of compliance to the ship with information copies to the TYCOM and CDNSWC 631.

c. Planning and Engineering for Repairs and Alterations Activity (PERA). The responsibilities of PERA shall include:

(1) Fleet Modernization Program:

(a) Conduct pre-overhaul design review, shipchecks and inspections as required to ensure the system complies with the baseline design guidance. Ensure results of design review are incorporated into the contract or work package.

(b) When tasked by SPMs, accompany CDNSWC 631 inspectors during the verification inspection and monitor actions to resolve deficiencies to achieve certificate issuance.

d. Ship Program Managers (SPMs). The responsibilities of SPMs shall include:

(1) Fleet Modernization Program:

(a) Task and fund CDNSWC 631 to conduct design reviews, verification inspections and ship's force training.

(b) Utilizing existing liaison procedures, coordinate with the installing activity to ensure SHIPALT installation deficiencies are resolved and work specifications are complete.

(c) Ensure that outstanding design deficiencies beyond the scope of the alteration are incorporated in a SHIPALT revision.

(d) Task and fund PERA, as required, to provide for pre-overhaul design review, verification inspections and ship's force training.

(2) New Construction and Conversion:

(a) Task and fund CDNSWC 631 to conduct design review, as required for lead ship, verification inspections and ship's force training. Ensure installation drawings are forwarded to CDNSWC 631 for review.

(b) Ensure that specific procedures and responsibilities for the implementation of this program are properly established by SUPSHIP.

(c) Utilizing existing liaison procedures, monitor the SUPSHIP to ensure contractor responsible deficiencies are corrected.

(d) Upon receipt of the inspection report, take action to investigate if outstanding deficiencies beyond the scope of contract specifications can be incorporated into the system, preferably during the SCN period.

(e) Upon receipt of a recommendation from SUPSHIP, complete and issue a certificate of compliance to the ship with information copies to the TYCOM and CDNSWC 631.

e. Type Commanders (TYCOMs). The responsibilities of the TYCOMs shall include:

(1) Fleet Modernization Program:

(a) The responsibility of the TYCOM for certificate issuance is to verify the system as operational upon notification by installing activity (NAVSHIPYD or SUPSHIP) and to ensure that outstanding installation deficiencies have been corrected and that the ship system is in compliance with the requirements of this instruction. Systems generally can be verified if installed and tested to the originally authorized SHIPALT. Follow-on action shall be taken after installation of any required system update SHIPALT(s) to incorporate outstanding design features required by the baseline design guidance.

(2) New Construction and Conversion:

(a) For ships that have been delivered and are beyond the SCN envelope, verify that all inspection deficiencies have been corrected and complete and issue a certificate of compliance to the ship with information copy to CDNSWC 631 and SPMs.

(3) Previously Inspected and Certified Systems:

(a) For ships that have been previously inspected and certified, conduct periodic and recertification inspections as outlined in Section 4 of this instruction. Periodic and

recertification inspections do not have to be performed by CDNSWC 631. TYCOMs can employ any activity or agent to conduct periodic and recertification inspections provided that the appropriate checklists of this instruction are used.

(b) Ensure that any critical deficiencies found during a periodic or recertification inspection are immediately corrected. Neither shall periodic inspections be endorsed on the certificate nor shall new certificates be issued until all critical deficiencies have been corrected.

4. Certificate Issue and Periodic Inspection

Upon verification that an OPA system complies with operational standards and all other requirements outlined in this instruction, a certificate of compliance, Attachment (C), will be completed and issued. The certificate is valid for a period of five years; during this time, periodic inspections of all associated system equipment shall be made at intervals not to exceed eighteen months until certificate renewal. The periodic inspection shall be conducted using the appropriate equipment checklist of this instruction. The first periodic inspection shall be conducted eighteen months after the certificate's date of issue. Inspections shall be made not more than two months before or after the eighteen month interval date. Inspection requirements shall be included on the equipment Maintenance Requirement Card (MRC). Each satisfactory periodic inspection shall be endorsed on the certificate by the Commanding Officer. Upon expiration of a certificate, a recertification inspection of all system equipment shall be made using the appropriate checklist of this instruction. Recertification inspections shall be made not more than two months before or after expiration of the certificate. A new certificate of compliance will be completed and issued upon verification that the system complies with the requirements of this instruction. In the event an inspection or a certificate renewal can not be completed within the specified time, a six month extension may be granted. In no case shall more than two consecutive extensions be granted at any one time.

Events/Actions in the OPA System Inspection and Certification Process	Program Responsibility	
	Fleet Modernization Program	New Construction and Conversion
1. DESIGN REVIEW		
a. Forward installation drawings to CDNSWC 631.	Planning Activity	SPMs
b. Ensure design package complies with design guidance baseline.	PERA/CDNSWC 631	CDNSWC 631
c. CDNSWC 631 forwards review findings to:	Planning Activity	SPMs, SUPSHIP, Planning Activity, SEA 03L11
d. Ensures SHIPALT work specifications are complete.	PERA and SPMs	
2. SYSTEM INSPECTION		
a. Notifies CDNSWC 631 inspectors concerning inspection schedule.	NAVSHIPYD or SUPSHIP	SUPSHIP
b. Performs shipboard inspection of complete system.	CDNSWC 631	CDNSWC 631
c. Conducts post-inspection conference.	NAVSHIPYD or SUPSHIP, CDNSWC 631, Ship's Rep	SUPSHIP, CDNSWC 631, Ship's Rep
d. Inspection results forwarded by CDNSWC 631 to:	NAVSHIPYD or SUPSHIP, SEA 03L11, PERA, TYCOM, Ship, Planning Activity, SPMs	SUPSHIP, TYCOM, Ship, SEA 03L11, Planning Activity, SPMs

Events/Actions in the OPA System Inspection and Certification Process	Program Responsibility	
	Fleet Modernization Program	New Construction and Conversion
3. <u>DEFICIENCIES FOUND DURING INSPECTION</u>		
a. Installation or contractor responsible deficiencies.		
- Initiates corrective action.	Installing Activity	SUPSHIP
- Reports action completed to SPMs.	NAVSHIPYD or SUPSHIP	Contractor reports-SUPSHIP verifies
b. Design deficiencies		
- Advises SPMs of design deficiencies.	NAVSHIPYD or SUPSHIP	
- Approves modifications with concurrence of SEA 03L11.	SPMs	
- Initiates corrective action.	Planning Activity	
- Reports corrective action completed.	NAVSHIPYD or SUPSHIP	
c. Government responsible deficiencies		
- Advises SPMs of deficiencies.		SUPSHIP
- Reports corrective action completed.		SUPSHIP

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Events/Actions in the OPA System Inspection and Certification Process	Program Responsibility	
	Fleet Modernization Program	New Construction and Conversion
4. <u>CERTIFICATE ISSUANCE</u>		
a. Completes and issues certificate if no critical deficiencies are found after initial inspection.	CDNSWC 631	CDNSWC 631
b. When deficiencies corrected, recommends to TYCOM/SPMs that certificate be issued.	NAVSHIPYD or SUPSHIP	NAVSHIPYD or SUPSHIP
c. Completes and issues certificate.	TYCOM	SPMs

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CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. OIL WATER SEPARATOR			
a. Is the OWS operational?	X		
b. Is the OWS operational in all modes?	X		
c. Is the OWS overboard effluent discharge above the full load waterline?			
d. Is separated oil discharged to the WOT?	X		
e. Is the OWS pump cross connected with the OWT pumps and can it take a suction from the bilges, OWHT and OWDCT?			
f. Are OWS plates clean, installed properly and intact as indicated by opening and visually inspecting the OWS?			
g. Does the OWS meet the criteria outlined in its checklist?	X		
2. OIL CONTENT MONITOR			
a. Is the OCM sample connection physically located on the effluent line of the OWS?	X		
b. Can the OCM detect oil in excess of 15 ppm?	X		
c. Can the OCM trigger recirculation of unacceptable effluent back to the OWHT?	X		

Attachment (B)
Enclosure (1)

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
7. DECK DISCHARGE CONNECTIONS AND RISERS			
a. Is the discharge piping the OWT, GTD and FO transfer pumps connected to the port and starboard deck riser?			
b. Is the piping sized to handle the maximum flow possible with all pumps running?			
c. Is the deck discharge connection on the lowest weather deck and accessible from both port and starboard?			
d. Do AD's and AS's have an aft connection for med moor?			
8. OVERBOARD OVERFLOWS			
a. Are the overflows installed IAW Gen Spec Section 506?			
b. Is the overflow piping sized to handle the maximum combined filling rate of all tanks?			
c. Does the FO service tank overflow to an overflow tank or to the storage tank overflow main?			
d. Is the service tank overflow higher than the storage tank overflow high point?			

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Is there a check valve in the service tank overflow?			
f. Does the COS tank overflow originate low in the tank and does it overflow to the OWHT or overboard?			
g. Are there separate overflows for FO and JP-5?			
9. <u>OWT AND FO TRANSFER PUMPS</u>			
a. Are the OWT and FO transfer pumps cross-connected on the suction side by a ball and a check isolation valve?			
b. Are the OWT and FO transfer pump discharges cross-connected with a locked closed isolation valve?			
c. On ships with steam reciprocating pumps, is a minimum of one motor driven pump installed and used for OWT?			
d. Is the OWT pump sized to off-load the OWHT in 1 to 2 hours? (Four hours for carriers)			
e. Is a recirculation chamber installed on all Blackmer OWT pumps?			
f. Is the OWT pump operational?	X		

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
d. Does the OCM meet the criteria outlined in its checklist?	X		
3. <u>OILY WASTE HOLDING TANK</u>			
a. Is the capacity of the OWHT adequate? What is the OWHT capacity? (An OWHT is not required on ships with an ITOWS system.)			
b. Is the OWHT low suction connected to the OWT pump suction manifold?			
c. Does the OWHT have a discharge connection from the OWS, FO and oily waste transfer pumps?			
d. Does each OWHT have an air vent, a sounding tube and an approved tank level indicator with high level alarms?	X		
e. Does the OWHT overflow initiate from a low point near the tank bottom and does it discharge at least one deck above the full load waterline?			
4. <u>WASTE OIL TANK</u>			
a. Is the capacity of the WOT adequate? What is the WOT capacity?			
b. Is the WOT connected to the OWT pump suction?	X		
c. Can the WOT receive the separated oil from the OWS?	X		

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
d. Does the WOT have an air vent, a sounding tube and a TLI with high level alarms?	X		
e. Does the WOT overflow to the OWHT?			
5. TANK REQUIREMENTS			
a. Are the OWHT and WOT oil tight IAW Gen Spec Sections 100 and 192?			
b. Are the OWHT and WOT provided with two manholes IAW Gen Spec Section 071?			
c. Are the tanks coated IAW NSTM 631 and do they have a minimum coating thickness of 8 mils?			
d. Is Cathodic protection provided at a rate of 1 anode per 80 ft^2 of internal tank surface IAW NAVSEA Dwg. 805-921865, ZHC-47 anodes?			
6. TANK LEVEL INDICATORS			
a. Are all the TLI's actuated to ensure proper operation?			
b. Has each bilge high level alarm been actuated and have indicators and audible alarms been verified as operational?			

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
10. DISTILLATE DUMP OVERBOARD			
a. Does the evaporator automatic dump discharge overboard and is the discharge line sufficiently above the waterline to allow gravity drainage?	☐	☐	
b. Are the gravity drained dumps located three feet above a gagged scupper valve via a funnel?	☐	☐	
c. For ships with inadequate evaporator height, is a dump tank installed to accept 5 minutes of evaporator output.	☐	☐	
d. Is a float actuated switch provided to activate the pump to discharge the tank overboard?	☐	☐	
e. Is the pump sized greater than the dump flow?	☐	☐	
11. JP-5 RECLAMATION			
a. Are all fueling and refueling stations provided with a flushing connection to route fuel to the contaminated JP-5 settling tank?	☐	☐	
b. Is a prefilter (Keene Corp. Model D-S-AR-FF-1 or equal) and a filter/separator (MIL-P-15618) installed to process contaminated JP-5?	☐	☐	

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
12. NON-OILY WASTE SEGREGATION			
a. Are all drains from non-oily water systems (i.e. ice makers, drinking fountains, air conditions and cooling coils) directed to a waste water drain collecting tank (WWDCT) and pumped directly overboard by the WWDCT pump?			
13. VALVES AND PIPING			
a. Are all piping and valves IAW MIL-STD 777D, Type R-1, and installed IAW Gen Spec Section 505?			
b. Are all piping and valves labeled IAW Gen Spec Section 602?			
c. Are waster pieces installed between dissimilar pipe flanges?			
d. Is piping sized to accept maximum flow and minimal suction?			

PUMP CAPACITY (gpm)	REQUIRED SUCTION PIPE SIZE (inches)
15	1½
50	2
100	2½
200	3

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Is the horizontal distance of the suction line between intake and pump within the maximum allowable?	☐	☐	

PUMP FLOW RATE (gpm)	SUCTION PIPE SIZE (in.)	MAXIMUM ALLOWABLE HORIZONTAL DISTANCE (feet)				
		INTAKE SAME LEVEL AS PUMP	INTAKE 5' BELOW PUMP	INTAKE 10' BELOW PUMP	INTAKE 5' ABOVE PUMP	INTAKE 10' ABOVE PUMP
10	1½	671	469	267	873	1075
15	1½	367	255	142	479	591
50	2	120	80	39	161	202
100	2½	67	41	14	93	119
200	3	50	28	5	73	96

14. ELECTRICAL

a. Is the shipboard electrical IAW MIL-E-917 (530042)?	☐	☐	
b. Is the control Panel in direct sight of the assembly?	☐	☐	
c. Are warning and caution placards mounted on control panels?	☐	☐	

15. PLACARD OPERATING INSTRUCTIONS

a. Is a summary of operating instruction mounted near the control panel? Are the following included:	☐	☐	
(1) A system diagram?	☐	☐	

CERTIFICATION CHECKLIST FOR
OPA SYSTEMS AND EQUIPMENT

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
(2) A matrix of indications and functions?			
(3) A valve line-up chart?			
(4) Oil pollution warning placards and cautions?			
16. SOFTWARE			
a. Are two technical manuals available for all installed equipment?			
b. Are MIP's and MRC's established and implemented for all equipment?			
c. Through APL research, is the COSAL supported?			
17. CERTIFICATION			
a. Have all critical items been checked?	X		

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CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. SUCTION PIPING			
a. Is an expanded corrosion resistant metal screen installed around all bilge suctions?			
b. Are check and ball valves installed on all suctions?			
c. Are hose connections provided to service all areas not accessible with dedicated piping?			
2. OWHT SUCTION PIPING			
a. Is a dedicated suction line installed from the OWHT to the OWS?			
b. Are isolation ball and swing check valves installed?			
3. OIL DISCHARGE PIPING			
a. Is the discharge piped to the WOT?	X		
b. Are all components installed in correct order?			
c. Is a priming line with fill funnel and gate valve installed at a level above the oil tower top?			
d. Is the flow totalizer accessible for observation?			

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Is the oil line discharge pressure less than 25 psi?	X		
f. Is the pitot tube sampler orientated correctly, installed in a vertical pipe run and accessible for sampling?			
g. Is the motorized ball valve located so that the actuator cover can be removed?			
4. <u>WATER DISCHARGE PIPING</u>			
a. Are all components installed in correct order?			
b. Is the overboard discharge above the full load waterline?			
c. Is the discharge pressure less than 25 psig when pumping overboard?	X		
d. Is the pitot tube sampler orientated correctly, installed in a vertical pipe run and accessible for sampling?			
e. Is the motorized ball valve located so that the actuator cover can be removed?			
5. <u>PUMP PRIMING LINE</u>			
a. Are all components installed in correct order?			
b. Is the priming line at or below the separator foundation level?			

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Is the needle valve adjusted to 0.25 gpm (⅛ to ¼ turn open)?			
d. Is the pump priming line connected close to the pump suction?			
e. Is the solenoid actuator orientated vertically?			
6. <u>INTERCONNECTING AND MISCELLANEOUS PIPING</u>			
a. Is the pitot tube sampler orientated correctly, installed on the pump discharge and accessible for sampling?			
b. Are gauge lines properly installed and equipped with isolation valves?			
7. <u>DUPLEX BASKET STRAINER</u>			
a. Is the strainer mounted with the yoke flush or above the deck plate and accessible for operation and maintenance?			
b. Is the differential pressure switch mounted near the strainer and at or near strainer level?			
c. Is the strainer properly orientated in the direction of flow?			
d. Are the baskets ⅛" mesh?			

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Are strainer gauges calibrated and do they have current stickers?			
8. ULTRASONIC FLOW SENSOR			
a. Is the sensor assembly mounted in a horizontal pipe run with the sensor orientated vertically?			
b. Is the sensor located such that retained pipe fluid will not flood the sensor assembly under a no flow condition?	X		
c. Is the top of the sensor protected from damage by a ¾" conduit? Is the cable installed in conduit to the control panel?			
d. Are scribe marks on the sensor mounting flanges properly aligned (probe gap parallel to flow)?			
e. Is the 50 ft cable cut or spliced?			
9. SIGHT GLASSES			
a. Are sight glasses installed with the glass orientated to side of pipe vice on top to avoid debris accumulation?			
b. Are the sight glasses accessible for backlighting and observation?			

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
10. PUMP ASSEMBLY			
a. Is the pump assembly at or below tank foundation level?			
b. Is the pump rotation correct and is the packing pressurized?	X		
c. Is the belt tension correct?			
d. Is the belt guard installed?	X		
11. RELIEF VALVE			
a. Is the relief valve discharge piped via a funnel to the bilge?			
b. Does the relief valve relieve at 28 psig as determined by closing V3 when the system is operating?			
c. Does the relief valve reset at 23 psig?			
12. OWS TANK			
a. Is there at least 3 feet of clearance above the OWS tank cover?			
b. Is the influent end of the OWS foundation 3" to 5" higher than the effluent end giving a 3° slope?			

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
13. AIR AND WATER VENTS			
a. Is a Bivco air vent installed horizontally with the cap orientated down or is a Sarco/Armstrong air vent installed downstream of the air vent isolation valve?			
b. Do all vent pipes point down to prevent a spray hazard to personnel?			
c. Is the air vent installed above the water vent line?			
d. Is MACALT 315 installed replacing the Bivco air vent with a Sarco air vent?			
14. CONTROL PANEL			
a. Is the audible alarm installed by the main control panel?			
b. Can operator observe the gauge panel from the main control panel?			
c. Are stuffing tubes in place around all cable penetrations?			
d. Is the control panel located to avoid direct water impingement?	X		
e. Are gaskets in place on the doors?			

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
15. REMOTE PANEL			
a. Is the remote panel located in a continuously manned space and is it visible from the watch station?			
b. Are stuffing tubes in place around all cable penetrations?			
16. OIL/WATER INTERFACE SENSORS			
a. Is there enough clearance to remove the sensors without disassembly?			
17. OPERATION			
a. Is the OWS pump rotation correct?	X		
b. Do all manual valves operate satisfactorily?			
c. Do all solenoid and motorized valves operate properly during system operation?	X		
d. Has proper operation of the controller been satisfactorily demonstrated?	X		
e. Are all OWS tank level switches working?	X		
f. Does the OWS water discharge produce a sheen of oil?		X	

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
g. Has operation of all safety devices, indicator and warning lights been properly demonstrated?	X		
18. LABELING AND SAFETY			
a. Do the OWS operating instructions, the oily waste transfer system schematic drawing and the valve aligning chart reflect the installed OWS system?			
b. Is the operating instruction placard mounted as close as practical to the main control panel?			
c. Does each valve in the system have a label indicating the system, the valve number and valve function?			
d. Is an electrical control schematic diagram posted inside the main control panel?			
e. Is there a toxic warning placard installed adjacent to the OWS tank?			
f. Does the relief valve have a placard with set pressure, date set and setting activity?			
g. Are there warning placards restricting the overboard discharge of oily waste?			

CERTIFICATION CHECKLIST FOR
10NP OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
19. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?			
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
20. CERTIFICATION			
a. Have all critical items been checked?	X		

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CERTIFICATION CHECKLIST FOR
OPB-10N OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. SUCTION PIPING			
a. Are check and ball valves installed on all suctions?			
b. Are hose connections provided to service all areas not accessible with dedicated piping?			
c. Is the piping 2" CuNi?			
d. Is a dedicated suction line installed from the OWHT to the OWS?			
2. OIL DISCHARGE PIPING			
a. Is the oil suction line in the OWS tank orientated upward?	X		
b. Are all valves installed to permit proper use and maintenance?			
c. Does the oil pump discharge to the WOT?	X		
d. Is the discharge pressure below 35 psig when discharging to the WOT?	X		
3. WATER DISCHARGE PIPING			
a. Are all valves installed to permit proper use and maintenance?			
b. Is the water pump overboard discharge above the full load waterline?			

CERTIFICATION CHECKLIST FOR
OPB-10N OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Is the discharge pressure below 35 psig when pumping overboard?	X		
4. VACUUM PIPING			
a. Are all valves installed to permit proper use and maintenance?			
b. Is the liquid trap installed in a low point of the piping?	X		
c. Is the vacuum piping connected correctly to the pump stand?	X		
d. Does the vacuum pump discharge to the atmosphere?			
5. INTERCONNECTING AND MISCELLANEOUS PIPING			
a. Are gauge lines properly installed and equipped with isolation valves?			
b. Is the primary connection installed for ease of use?			
c. Is a priming line with funnel installed?			
6. DUPLEX STRAINER			
a. Is the strainer installed to permit proper use and maintenance?			

CERTIFICATION CHECKLIST FOR
OPB-10N OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
7. FLOW TOTALIZER			
a. Is the flow totalizer accessible for observation?			
8. OIL AND WATER PUMP STANDS			
a. Are all components on the pump stand secure and in place?	X		
b. Are the relief valves set at 30 psig?			
c. Are the drive belts properly aligned and tightened?			
d. Are the belt guards in place?	X		
e. Can the pumps turn freely by hand?			
f. Are the pumps rotating in the correct direction?	X		
g. Are the gauges in good condition and do they have current calibration stickers?			
h. Are the gauges installed to meet the flexibility requirements for instrument piping? (Gauge piping shall contain two loops each a minimum of four inches in diameter or be at least 18 inches long with one unsupported bend.)			

CERTIFICATION CHECKLIST FOR
OPB-10N OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
9. <u>ELECTRICAL CONTROL PANELS</u> (3 PANELS)			
a. Are the control panels located to avoid direct water impingement?	X		
b. Are stuffing tubes in place around all cable penetrations?			
c. Are gaskets in place on all doors?			
d. Are terminal connections tight and corrosion free?			
10. <u>REMOTE PANEL</u>			
a. Is the remote panel located in a continuously manned space and is it visible from the watch station?			
b. Is the panel located to avoid direct water impingement?			
c. Are stuffing tubes in place around all cable penetrations?			
d. Is a gasket in place around the panel?			
e. Are terminal connections tight and corrosion free?			

CERTIFICATION CHECKLIST FOR
OPB-10N OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
11. OIL/WATER INTERFACE SENSORS (PRIMARY AND BACKUP)			
a. Are stuffing tubes in place around all cable penetrations?	☐	☐	
b. Is cable slack and clearance sufficient to permit maintenance and removal of the sensor without disassembly?	☐	☐	
12. AIR/LIQUID INTERFACE SENSORS (TWO SENSORS)			
a. Are stuffing tubes in place around all cable penetrations?	☐	☐	
13. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?	☐	☐	
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?	☐	☐	
c. Have the damage control book and the damage control plates been updated to show the installation?	☐	☐	
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?	☐	☐	

CERTIFICATION CHECKLIST FOR
OPB-10N OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
14. <u>CERTIFICATION</u>			
a. Have all critical items been checked?	X		

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. SUCTION PIPING			
a. Is the piping 2½" CuNi?			
b. Are check and ball valves installed on all suctions?			
c. Is there a suction pressure gauge?			
2. STRAINER DIFFERENTIAL PRESSURE GAUGE			
a. Is the gauge visible from the main control panel?			
b. Is the gauge installed to meet the flexibility requirements for instrument piping? (Gauge piping shall contain two loops each a minimum of four inches in diameter or be at least 18 inches long with one unsupported bend.)			
c. Are the gauge lines protected from inadvertent damage?			
d. Are the union ends of the gauge line isolation valves ¼" globe type and are they for oil and water service?			
e. Is the gauge in good condition and does it have current calibration stickers?			

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CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
f. Are there test connections?			
3. DUPLEX STRAINER			
a. Is the strainer properly oriented in the direction of flow?			
b. Is the strainer accessible from deckplate level for operation and maintenance?			
c. Is the strainer a yoke type?			
d. Are the gaskets in good condition?			
e. Is there enough space to rotate the plug valve handle 360°?			
f. Is there enough space available for switching the strainer baskets?			
4. DIFFERENTIAL PRESSURE SWITCH			
a. Is the downstream gauge line on the strainer attached to the high pressure side of the switch?			
5. PUMP PRIMING LINE			
a. Is the piping ½" CuNi?			

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CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Are all components installed in correct order and properly oriented in the direction of flow?			
c. Is the solenoid valve installed in a horizonal pipe run with the solenoid in an upright position?			
d. Is the priming line connected immediately upstream of the pump?			
e. Is the orifice sized to allow 1 gpm of flow?			
f. Is the solenoid valve lubricated properly?			
6. PUMP ASSEMBLY			
a. Is the pump located so that the suction lift does not exceed 15" of Hg?	X		
b. Is the pump rotation correct?	X		
c. Is there leakage from the mechanical seal?			
d. Is there excessive noise, heat or vibration from the pump and motor?	X		
e. Is the oil level in the pump helical reducer gear housing ⅛" above the lip of the cup?	X		

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
f. Are pump mounting bolts loose or corroded?	☐	☐	
7. PUMP RELIEF VALVE			
a. Is the relief valve drain piped via a funnel to the bilge or OWHT?	☐	☐	
b. Does the relief valve relieve at 70 ± 5 psig when the overboard discharge valve is completely closed?	☐	☐	
c. Does the relief valve have a current calibration sticker?	☐	☐	
8. PUMP DISCHARGE PRESSURE GAUGE			
a. Is the gauge visible from the main control panel?	☐	☐	
b. Is the gauge installed to meet the flexibility requirements for instrument piping? (Gauge piping shall contain two loops each a minimum of four inches in diameter or be at least 18 inches long with one unsupported bend.)	☐	☐	
c. Are the gauge lines protected from inadvertent damage?	☐	☐	
d. Are the union ends of the gauge line isolation valves ¼" globe type and are they for oil and water service?	☐	☐	

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Is the gauge in good condition and does it have current calibration stickers?			
f. Are there test connections?			
9. OWS EFFLUENT DISCHARGE			
a. Is the piping 2" CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			
10. INLINE SENSOR			
a. Is the inline sensor installed above the deck plates?			
b. Is the enclosure NEMA 4 with a gasket to protect from water impingement?	X		
c. Are the sensor transmitter and receiver properly aligned and tightened to prevent leaks?			
11. FLUSHING LINE			
a. Is the piping 1½" CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Is the flushing pressure gauge indicating 60 ±10 psig?			
d. Is the solenoid valve installed in a horizonal pipe run with the solenoid in an upright position?			
e. Is the red pointer set?			
12. <u>SYSTEM PRESSURE GAUGE</u>			
a. Is the gauge visible from the main control panel?			
b. Is the gauge installed to meet the flexibility requirements for instrument piping? (Gauge piping shall contain two loops each a minimum of four inches in diameter or be at least 18 inches long with one unsupported bend.)			
c. Are the gauge lines protected from inadvertent damage?			
d. Are the union ends of the gauge line isolation valves ¼" globe type and are they for oil and water service?			
e. Is the gauge in good condition and does it have current calibration stickers?			

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
13. OWS OIL DISCHARGE			
a. Is the piping to the WOT 2" CuNi?			
b. Is an orifice installed?			
c. Is an orifice installed to maintain a minimum pressure of 35 psig when discharging oil?			
d. Is the solenoid valve installed in a horizontal pipe run with the solenoid in an upright position?			
e. Are all components installed in correct order and properly oriented in the direction of flow?			
14. BULK OIL SENSOR			
a. Is the sensor installed horizontally and at a level below the centrifuge centerline?			
b. Is the bulk oil sensor accessible for maintenance?			
c. Is the sensor properly oriented in the direction of flow?	X		
15. OIL WATER SEPARATOR			
a. Is the separator provided with three feet of overhead clearance?			

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Is the separator provided with three feet of side clearance to swing the cover?			
c. Is the cover jack accessible for operation?			
d. Is the air eliminator piped to the bilge or OWHT?			
e. Is the 1½" CuNi drain piped via a funnel to the bilge or OWHT?			
f. Are all anchor bolts tightly secured to the foundation?			
g. Are all flange connections installed with proper gaskets?			
h. Is the BOS baffle plate assembly clean?			
i. Is there a gasket around the cover?			
16. <u>CENTRIFUGE OIL DISCHARGE</u>			
a. Is the piping ¾" CuNi?			
b. Is the oil discharge piped via a funnel to the bilge or a tank with its top below the centrifuge centerline?			

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Are all components installed in correct order and properly oriented in the direction of flow?			
17. RECIRCULATION LINE			
a. Is the piping 2" CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			
c. Is an orifice installed to maintain a minimum pressure of 35 psig when recirculating or discharging overboard?			
d. Is recirculating piping routed to the OWHT?	X		
e. Is the solenoid valve installed in a horizontal pipe run with the solenoid in an upright position?			
18. OVERBOARD DISCHARGE			
a. Is the piping 2" CuNi?			
b. Are all components installed in correct order and properly orientated in the direction of flow?	X		
c. Is the solenoid valve installed in a horizonal pipe run with the solenoid in an upright position?			

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
d. Is the discharge above the full load waterline?			
19. CENTRIFUGE DIFFERENTIAL PRESSURE GAUGE			
a. Is the gauge installed between the centrifuge inlet and centrifuge oil outlet?			
20. CENTRIFUGAL SEPARATOR			
a. Is the location close to the ship's centerline and is the axis of rotation parallel to the centerline?			
b. Is the direction of rotation correct?	X		
c. Are the belt guards in place?	X		
d. Is the belt tension correct?			
e. Are the oil and fluid coupling levels correct?	X		
21. CONTROL PANEL			
a. Is the control panel accessible for maintenance and operation?			
b. Can operator observe the gauge panel, OWS pump and centrifuge from the main control panel?			

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
22. REMOTE PANEL			
a. Is the remote panel located in a continuously manned space and is it visible from the watch station?			
b. Are stuffing tubes in place around all cable penetrations?			
23. OPERATION			
a. Can the system be operated in the automatic mode?	X		
b. Can the system be operated in the manual mode?	X		
c. Are there leaks from valves and piping?			
d. During system start-up, are there discrepancies from the detailed system start-up sequence?			
e. During system shut down, are there discrepancies from the detailed system shut down sequence?			
f. Does the OWS water discharge produce a sheen of oil?		X	
24. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?			

CERTIFICATION CHECKLIST FOR
C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
25. <u>CERTIFICATION</u>			
a. Have all critical items been checked?	X		

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CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. SUCTION PIPING			
a. Is the piping CuNi?			
b. Are check and ball valves installed on all suctions?			
c. Is a dedicated suction line installed from the OWHT to the OWS?			
d. Is the suction piping cross-connected with the transfer pump suction?			
e. Are all the suction solenoid valves operational?	X		
2. PUMP ASSEMBLY			
a. Is the pump rotation correct?	X		
b. Is the pump junction box located to avoid direct water impingement?	X		
3. PUMP RELIEF VALVE			
a. Is the relief valve drain piped via a funnel to the bilge or OWHT?			
4. PUMP DISCHARGE PRESSURE GAUGE			
a. Is the gauge visible from the main control panel?			

CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Is the gauge installed to meet the flexibility requirements for instrument piping? (Gauge piping shall contain two loops each a minimum of four inches in diameter or be at least 18 inches long with one bend.)	☐	☐	
c. Are the gauge lines protected from inadvertent damage?	☐	☐	
d. Are the union ends of the gauge line isolation valves ¼" globe type and are they for oil and water service?	☐	☐	
e. Is the gauge in good condition and does it have current calibration stickers?	☐	☐	
5. <u>DISCHARGE EFFLUENT PIPING</u>			
a. Is the piping CuNi?	☐	☐	
b. Are all components installed in correct order and properly oriented in the direction of flow?	☐	☐	
6. <u>FLUSHING PIPING</u>			
a. Is the piping CuNi?	☐	☐	
b. Are all components installed in correct order and properly oriented in the direction of flow?	☐	☐	

CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Is the solenoid valve installed in a horizonal pipe run with the solenoid in an upright position?			
d. Is a minimum of 25 psig available for OWS backflushing?	X		
e. Is there a check valve in the flushing line?			
7. <u>SYSTEM PRESSURE GAUGE</u>			
a. Is the gauge visible from the main control panel?			
b. Is the gauge installed to meet the flexibility requirements for instrument piping? (Gauge piping shall contain two loops each a minimum of four inches in diameter or be at least 18 inches long with one bend.)			
c. Are the gauge lines protected from inadvertent damage?			
d. Are the union ends of the gauge line isolation valves ¼" globe type and are they for oil and water service?			
e. Is the gauge in good condition and does it have current calibration stickers?			

CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
8. DISCHARGE OIL PIPING			
a. Is the waste oil piped to the WOT?	X		
b. Is the solenoid valve installed in a horizontal pipe run with the solenoid in an upright position?			
c. Are all components installed in correct order and properly oriented in the direction of flow?			
9. OIL SENSOR			
a. Is the sensor installed horizontally?			
b. Is the sensor accessible for maintenance?			
c. Is the sensor properly oriented in the direction of flow?			
10. OIL WATER SEPARATOR			
a. Is sufficient overhead clearance available to remove the OWS plates for inspection and maintenance?			
b. Is the drain piped via a funnel to bilge or WOT?			
11. RECIRCULATION PIPING			
a. Is the piping ½" CuNi?			

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CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Are all components installed in correct order and properly oriented in the direction of flow?			
c. Is the recirculating piping routed to the OWHT?			
d. Is the solenoid valve installed in a horizontal pipe run with the solenoid in an upright position?			
12. OVERBOARD DISCHARGE PIPING			
a. Is the piping CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			
c. Is the solenoid valve installed in a horizonal pipe run with the solenoid in an upright position?			
d. Is the discharge above the full load waterline?			
13. CONTROL PANEL			
a. Is the control panel accessible for maintenance and operation?			
b. Can operator observe the gauge panel and the OWS pump from the main control panel?			

CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Are all the indicators functional?			
d. Is the three phase disconnect box installed?			
14. REMOTE PANEL			
a. Is the remote panel located in a continuously manned space and is it visible from the watch station?			
b. Are stuffing tubes in place around all cable penetrations?			
15. GENERAL			
a. Is the OWS painted?			
b. Is the OWS system piping painted?			
c. Are the exterior surfaces in acceptable condition, no rust, corrosion or crushed piping?			
d. Is the power source correctly labeled at the breaker box to indicate service to the OWS?			
16. OPERATION			
a. Does the OWS operate in the automatic mode?	X		

CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Does the OWS operate in the manual mode?	X		
c. Does the OWS operate in the oil discharge mode?	X		
d. Does the OWS operate in the slow backflush mode?	X		
e. Does the OWS water discharge produce a sheen of oil?		X	
17. LABELING AND SAFETY			
a. Do the OWS operating instructions, the oily waste transfer system schematic drawing and the valve aligning chart reflect the installed OWS system?			
b. Is the operating instruction placard mounted as close as practical to the main control panel?			
c. Does each valve in the system have a label indicating the system, the valve number and valve function?			
d. Is an electrical control schematic diagram posted inside the main control panel?			
e. Is there a toxic warning placard installed adjacent to the OWS tank?			

CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
f. Does the relief valve have a placard with set pressure, date set and setting activity?	☐	☐	
g. Are there warning placards restricting the overboard discharge of oily waste?	☐	☐	
18. <u>INTEGRATED LOGISTIC SUPPORT</u>			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?	☐	☐	
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?	☐	☐	
c. Have the damage control book and the damage control plates been updated to show the installation?	☐	☐	
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?	☐	☐	
e. Are the required technical manuals onboard?	☐	☐	
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?	☐	☐	

CERTIFICATION CHECKLIST FOR
BILGEMASTER OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
g. Has ship's force received training for operation and maintenance of the system?			
19. CERTIFICATION			
a. Have all critical items been checked?	X		

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CERTIFICATION CHECKLIST FOR
CPS-3B15 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. <u>SUCTION PIPING</u>			
a. Is the piping CuNi?	☐	☐	
b. Are check and ball valves installed on all suctions?	☐	☐	
c. Is a dedicated suction line installed from the OWHT to the OWS?	☐	☐	
d. Is the suction piping cross-connected with the transfer pump's suction?	☐	☐	
2. <u>STRAINER</u>			
a. Is a strainer installed before the OWS tank inlet port?	☐	☐	
b. Is a differential pressure gauge installed across the strainer to monitor system operation?	☐	☐	
c. Is the gauge visible from the main control panel?	☐	☐	
d. Are the gauge lines protected from inadvertent damage?	☐	☐	
e. Are the union ends of the gauge line isolation valves ¼" globe type and are they for oil and water service?	☐	☐	
f. Is the gauge in good condition and does it have current calibration stickers?	☐	☐	

CERTIFICATION CHECKLIST FOR
CPS-3B15 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
3. PUMP ASSEMBLY			
a. Is the pump rotation correct?	X		
b. Is the pump provided with a suction and discharge gauge?			
4. OWS DISCHARGE PIPING			
a. Is the piping CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			
c. Is the flow switch installed in a horizontal pipe run at the same level as the pump's suction/discharge port?			
d. Is a swing check valve installed after the flow switch to prevent backflow?			
5. RELIEF VALVE			
a. Is the relief drain piped via a funnel to the bilge or OWHT?			
b. Is the relief valve set properly?			
c. Does the relief valve have a placard with set pressure, date set and setting activity?			

CERTIFICATION CHECKLIST FOR
CPS-3B15 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
6. OIL WATER SEPARATOR			
a. Does the separator have 16 inches of end clearance to remove the plates for inspection and maintenance?			
b. Is the drain piped via a funnel to the bilge or OWHT?			
c. Is the OWS tank provided with a sacrificial anode?			
d. Is the OWS tank free of leakage?			
e. Are the coalescer plates and the sensor probe clean?			
7. PRIMING LINE			
a. Is the piping CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			
8. OIL DISCHARGE PIPING			
a. Is the waste oil piped to the WOT?	X		
b. Is the solenoid valve installed in a horizontal pipe run with the solenoid in an upright position?			

CERTIFICATION CHECKLIST FOR
CPS-3B15 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Are all components installed in correct order and properly oriented in the direction of flow?			
9. OIL SENSOR PROBES			
a. Are the sensor probes installed?	X		
b. Are the oil sensor probes accessible for maintenance?			
c. Is there enough clearance to remove the sensors without disassembly?			
d. Is there enough slack in the cables to remove the components without disconnecting electrical connections?			
10. RECIRCULATION LINE			
a. Is the piping CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			
c. Is the recirculating piping routed to the OWHT?	X		
d. Is the solenoid valve installed in a horizontal pipe run with the solenoid in an upright position?			

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CERTIFICATION CHECKLIST FOR
CPS-3B15 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
11. OVERBOARD DISCHARGE			
a. Is the piping CuNi?			
b. Are all components installed in correct order and properly oriented in the direction of flow?			
c. Is the solenoid valve installed in a horizonal pipe run with the solenoid in an upright position?			
d. Is the discharge above the full load waterline?			
e. Is dedicated piping provided for the overboard discharge?			
12. CONTROL PANEL			
a. Is the control panel accessible for maintenance and operation?	X		
b. Can operator observe the gauge panel and the OWS pump from the main control panel?			
c. Are all the indicators functional?	X		
13. REMOTE PANEL			
a. Is the remote panel located in a continuously manned space and is it visible from the watch station?			

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CERTIFICATION CHECKLIST FOR
CPS-3B15 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Are stuffing tubes in place around all cable penetrations?			
14. OPERATION			
a. Does the OWS operate in the automatic mode?	X		
b. Does the OWS operate in the manual mode?	X		
c. Does the OWS operate in the oil discharge mode?	X		
d. Does the OWS water effluent produce a sheen of oil?		X	
15. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?			
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			

CERTIFICATION CHECKLIST FOR
CPS-3B15 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
16. <u>CERTIFICATION</u>			
a. Have all critical items been checked?	X		

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CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. <u>SUCTION PIPING</u>			
a. Are check and ball valves installed on all suctions?	☐	☐	
b. Is a dedicated suction line installed from the OWHT to the OWS?	☐	☐	
c. Is a duplex strainer installed upstream of the OWS pump?	☐	☐	
d. Is the duplex strainer properly oriented in the direction of flow?	☐	☐	
e. Is the duplex strainer accessible?	☐	☐	
f. Is the duplex strainer a yoke type?	☐	☐	
g. Is the mesh ⅛ inch?	☐	☐	
h. Is the gasket in good condition?	☐	☐	
i. Is a pressure gauge installed on the OWS pump suction?	☐	☐	
j. Is a pressure gauge installed on the duplex strainer?	☐	☐	
k. Can the coaming for the strainer foundation be drained?	☐	☐	

CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
l. Is a pressure gauge installed on the OWS pump discharge?			
m. Can the handles be rotated 360°?			
2. <u>FIRST STAGE</u>			
a. Is the tank mounted to the sub base?			
b. Is a capacitance type level detector probe installed?	X		
c. Is the level detector probe calibrated correctly?	X		
d. Is an air eliminator installed and does it terminate to atmosphere? Is it free from leaks?			
e. Is a sight glass installed and is it clean?			
f. Is a drain installed and is it piped to the WOT?			
g. Is a zinc anode installed and is it in good material condition?			
h. Are sampling valves installed on the inlet and outlet lines?			
i. Are the plate assembly, sensor probe and oil drain pipe clean?			

CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
j. Is a tank drain valve installed?			
k. Is a solenoid oil discharge valve installed and is it in good condition?			
l. Is the discharge line provided with a relief valve set at 55 psig?	X		
m. Does the sight glass have protective cages installed to prevent inadvertent breakage?			
n. Is the filter gasket material in good condition?			
3. <u>SECOND STAGE</u>			
a. Is the tank mounted to the sub base?			
b. Is a capacitance type level detector probe installed?	X		
c. Is the level detector probe calibrated correctly?	X		
d. Is an air eliminator installed and does it terminate to atmosphere? Is it free from leaks?			
e. Is a sight glass installed and is it clean?			
f. Is a drain installed and is it piped to the WOT?			

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CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
g. Is a zinc anode installed and is it in good material condition?			
h. Is a solenoid oil discharge valve installed and is it in good condition?			
i. Is a sampling valve installed on the discharge pipe?			
j. Are the coalescence element, sensor probe and oil drain pipe clean?			
k. Is a tank drain valve installed?			
l. Does the sight glass have protective cages installed to prevent inadvertent breakage?			
m. Is the filter gasket material in good condition?			
4. <u>THIRD STAGE</u>			
a. Is the tank mounted to the sub base?			
b. Are the coalescence element and oil drain pipe clean?			
c. Is an air eliminator installed and does it terminate to atmosphere? Is it free from leaks?			
d. Is a sight glass installed and is it clean?			

CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Is a drain installed and is it piped to the WOT?			
f. Is a zinc anode installed and is it in good material condition?			
g. Is a 1" ball valve installed in the drain piping to the WOT?			
h. Does the sight glass have protective cages installed to prevent inadvertent breakage?			
i. Is the filter gasket material in good condition?			
5. <u>WATER DISCHARGE PIPING</u>			
a. Is the solenoid valve properly orientated in the direction of flow?			
b. Is a ball check vale installed in the overboard discharge?			
c. Is a sampling valve installed?			
d. Is a second and third stage bypass with a cutoff valve installed?			
e. Is dedicated piping provided for the overboard discharge?			

CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
6. PUMP STAND			
a. Are all components in place and are they secure?			
b. Is the pump drive belt aligned and tightened properly?			
c. Is the belt guard in place?	X		
d. Does the pump turn freely by hand?			
e. Is the pump rotation correct?	X		
f. Is there excessive noise, heat or vibration from the pump and motor?			
7. CONTROL PANEL			
a. Are the control panels located to avoid direct water impingement?	X		
b. Are stuffing tubes in place around all cable penetrations?			
c. Are gaskets in place on the doors?			
d. Are terminal connections tight and corrosion free?			

CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
8. OPERATION			
a. Is the OWS pump rotation correct?	X		
b. Do all manual valves operate satisfactorily?	X		
c. Do all solenoid valves operate properly during system operation?	X		
d. Has proper operation of the controller been satisfactorily demonstrated?	X		
e. Are all OWS tank level switches working?			
f. Is the differential pressure gauge operational and in good material condition?			
g. Does the OWS water discharge produce a sheen of oil?		X	
9. LABELING AND SAFETY			
a. Do the OWS operating instructions, the oily waste transfer system schematic drawing and the valve aligning chart reflect the installed OWS system?			
b. Is the operating instruction placard mounted as close as practical to the main control panel?			

CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Does each valve in the system have a label indicating the system, the valve number and valve function?			
d. Is an electrical control schematic diagram posted inside the main control panel?			
e. Is there a toxic warning placard installed adjacent to the OWS tank?			
f. Do the relief valves have placards with set pressures, dates set and setting activity?			
g. Are there warning placards restricting the overboard discharge of oily waste?			
10. <u>INTEGRATED LOGISTIC SUPPORT</u>			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?			
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			

CERTIFICATION CHECKLIST FOR
VGS-10 SAREX OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
11. CERTIFICATION			
a. Have all critical items been checked?	X		

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CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. SUCTION PIPING			
a. Is an expanded corrosion resistant metal screen installed around all bilge suctions?			
b. Are check and ball valves installed on all suctions?			
c. Are hose connections provided to service all areas not accessible with dedicated piping?			
2. OWHT SUCTION PIPING			
a. Is a dedicated suction line installed from the OWHT to the OWS?			
b. Are isolation ball and swing check valves installed?			
3. OIL DISCHARGE PIPING			
a. Is the discharge piped to the WOT?	X		
b. Are all components installed in correct order?			
c. Is a priming line with fill funnel and gate valve installed at a level above the oil tower top?			
d. Is the flow totalizer accessible for observation?			

CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Is the oil line discharge pressure less than 25 psi?	X		
f. Is the pitot tube sampler orientated correctly, installed in a vertical pipe run and accessible for sampling?			
g. Is the motorized ball valve located so that the actuator cover can be removed?			
4. <u>WATER DISCHARGE PIPING</u>			
a. Are all components installed in correct order?			
b. Is the overboard discharge above the full load waterline?			
c. Is the discharge pressure less than 25 psig when pumping overboard?	X		
d. Is the pitot tube sampler orientated correctly, installed in a vertical pipe run and accessible for sampling?			
e. Is the motorized ball valve located so that the actuator cover can be removed?			
5. <u>PUMP PRIMING LINE</u>			
a. Are all components installed in correct order?			
b. Is the priming line at or below the separator foundation level?			

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CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Is the needle valve adjusted to 0.25 gpm (⅛ to ¼ turn open)?	☐	☐	
d. Is the pump priming line connected close to the pump suction?	☐	☐	
e. Is the solenoid actuator orientated vertically?	☐	☐	
6. <u>INTERCONNECTING AND MISCELLANEOUS PIPING</u>			
a. Is the pitot tube sampler orientated correctly, installed on the pump discharge and accessible for sampling?	☐	☐	
b. Are gauge lines properly installed and equipped with isolation valves?	☐	☐	
7. <u>DUPLEX BASKET STRAINER</u>			
a. Is the strainer mounted with the yoke flush or above the deck plate and accessible for operation and maintenance?	☐	☐	
b. Is the differential pressure switch mounted near the strainer and at or near strainer level?	☐	☐	
c. Is the strainer properly orientated in the direction of flow?	☐	☐	
d. Are the baskets ⅛" mesh?	☐	☐	

CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Are strainer gauges calibrated and do they have current stickers?			
8. <u>FLOW SENSOR</u>			
a. Is the sensor assembly mounted in a horizontal pipe run with the sensor orientated vertically?			
b. Is the sensor located such that retained pipe fluid will not flood the sensor assembly under a no flow condition?	X		
c. Is the top of the sensor protected from damage by a ¾" conduit? Is the cable installed in conduit to the control panel?			
d. Are scribe marks on the sensor mounting flanges properly aligned (probe gap parallel to flow)?			
e. Is the 50 ft cable cut or spliced?			
9. <u>SIGHT GLASSES</u>			
a. Are sight glasses installed with the glass orientated to side of pipe vice on top to avoid debris accumulation?			
b. Are the sight glasses accessible for backlighting and observation?			

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CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
10. PUMP ASSEMBLY			
a. Is the pump assembly at or below tank foundation level?			
b. Is the pump rotation correct and is the packing pressurized?	X		
c. Is the belt tension correct?			
d. Is the belt guard installed?	X		
11. RELIEF VALVE			
a. Is the relief valve discharge piped via a funnel to the bilge?			
b. Does the relief valve relieve at 28 psig as determined by closing V3 when the system is operating?			
c. Does the relief valve reset at 23 psig?			
12. OWS TANK			
a. Is there at least 3 feet of clearance above the OWS tank cover?			
b. Is the influent end of the OWS foundation 3" to 5" higher than the effluent end giving a 3° slope?			

CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
13. AIR AND WATER VENTS			
a. Is a Bivco air vent installed horizontally with the cap orientated down or is a Sarco/Armstrong air vent installed downstream of the air vent isolation valve?			
b. Do all vent pipes point down to prevent a spray hazard to personnel?			
c. Is the air vent installed above the water vent line?			
d. Is MACALT 315 installed replacing the Bivco air vent with a Sarco air vent?			
14. CONTROL PANEL			
a. Is the audible alarm installed by the main control panel?			
b. Can operator observe the gauge panel from the main control panel?			
c. Are stuffing tubes in place around all cable penetrations?			
d. Is the control panel located to avoid direct water impingement?	X		
e. Are gaskets in place on the doors?			

CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
15. REMOTE PANEL			
a. Is the remote panel located in a continuously manned space and is it visible from the watch station?			
b. Are stuffing tubes in place around all cable penetrations?			
16. OIL/WATER INTERFACE SENSORS			
a. Is there enough clearance to remove the sensors without disassembly?			
17. OPERATION			
a. Is the OWS pump rotation correct?	X		
b. Do all manual valves operate satisfactorily?			
c. Do all solenoid and motorized valves operate properly during system operation?	X		
d. Has proper operation of the controller been satisfactorily demonstrated?	X		
e. Are all OWS tank level switches working?	X		
f. Does the OWS water discharge produce a sheen of oil?		X	

CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
g. Has operation of all safety devices, indicator and warning lights been properly demonstrated?	X		
18. LABELING AND SAFETY			
a. Do the OWS operating instructions, the oily waste transfer system schematic drawing and the valve aligning chart reflect the installed OWS system?			
b. Is the operating instruction placard mounted as close as practical to the main control panel?			
c. Does each valve in the system have a label indicating the system, the valve number and valve function?			
d. Is an electrical control schematic diagram posted inside the main control panel?			
e. Is there a toxic warning placard installed adjacent to the OWS tank?			
f. Does the relief valve have a placard with set pressure, date set and setting activity?			
g. Are there warning placards restricting the overboard discharge of oily waste?			

CERTIFICATION CHECKLIST FOR
MODEL 690231 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
19. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?			
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
20. CERTIFICATION			
a. Have all critical items been checked?	X		

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CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. <u>SUCTION PIPING</u>			
a. Is an expanded corrosion resistant metal screen installed around all bilge suctions?			
b. Are check and ball valves installed on all suctions?			
c. Are hose connections provided to service all areas not accessible with dedicated piping?			
2. <u>OWHT SUCTION PIPING</u>			
a. Is a dedicated suction line installed from the OWHT to the OWS?			
b. Is an isolation ball valve installed in proximity of the OWHT tank top?			
c. Is an electric motor operated valve installed upstream of the OWHT isolation valve?			
d. Is a full port ball isolation valve installed between OWS A and OWS B?			
3. <u>OIL DISCHARGE PIPING</u>			
a. Is the discharge piped to the WOT?	X		
b. Are all components installed in correct order?			

CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Are cross connect valves installed between the port and starboard waste oil tanks?			
d. Is the oil line discharge pressure less than 25 psi?	X		
e. Is the pitot tube sampler orientated correctly, installed in a vertical pipe run and accessible for sampling?			
f. Is the motorized ball valve located so that the actuator cover can be removed?			
g. Is the motorized ball valve located so that the actuator can be observed?			
4. <u>WATER DISCHARGE PIPING</u>			
a. Are all components installed in correct order?			
b. Is the overboard discharge above the full load waterline?			
c. Is the discharge pressure less than 25 psig when pumping overboard?	X		
d. Is the pitot tube sampler orientated correctly, installed in a vertical pipe run and accessible for sampling?			
e. Is the motorized ball valve located so that the actuator cover can be removed?			

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CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
f. Is the motorized ball valve located so that the actuator can be observed?	☐	☐	
5. FIRE MAIN (BACKFLUSH PIPING)			
a. Are the components installed in correct order: solenoid valve, by-pass isolation valve and the OWS tank isolation valve?	☐	☐	
b. Is the solenoid actuator orientated vertically?	☐	☐	
6. INTERCONNECTING AND MISCELLANEOUS PIPING			
a. Is the OCM pitot tube sampler orientated correctly, installed on the pump discharge and accessible for sampling?	☐	☐	
b. Are gauge lines properly installed and equipped with isolation valves?	☐	☐	
7. DUPLEX BASKET STRAINER			
a. Is the strainer mounted with the yoke flush or above the deck plate and accessible for operation and maintenance?	☐	☐	
b. Is the differential pressure switch mounted near the strainer and at or near strainer level?	☐	☐	

CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Is the strainer properly orientated in the direction of flow?			
d. Are the baskets ⅛" mesh?			
e. Are strainer gauges calibrated and do they have current stickers?			
8. SIGHT GLASSES			
a. Are sight glasses installed with the glass orientated to side of pipe vice on top to avoid debris accumulation?			
b. Are the sight glasses accessible for backlighting and observation?			
9. PUMP ASSEMBLY			
a. Are the pump assemblies installed on top of the tank top?			
b. Does motor (A) rotate counterclockwise when looking at the rear of the C-50	X		
c. Does motor (B) rotate clockwise when looking at the rear of the C-50?	X		
d. Are the motors direct coupled to the pumps by a chain and special gear?			
10. RELIEF VALVE			
a. Is the relief valve discharge piped via a funnel to the bilge or the OWHT?			

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CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Does the relief valve relieve at 28 psig?			
c. Does the relief valve reset at 23 psig?			
11. OWS TANK			
a. Is there at least 24 inches of access space all around the unit?			
b. Is the separator tank assembly mounted to the foundation?			
12. AIR VENT			
a. Is the air vent installed in a vertical pipe above the top section of the oil tower?			
b. Do all vent pipes terminate into a funnel and point downward to prevent a spray hazard to personnel?			
13. CONTROL PANEL			
a. Is the audible alarm installed by the main control panel?			
b. Can operator observe the gauge panel from the main control panel?			
c. Are stuffing tubes in place around all cable penetrations?			
d. Is the control panel located to avoid direct water impingement?	X		

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CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
e. Is the control panel a NEMA 4 spray tight enclosure?			
14. OIL/WATER INTERFACE SENSORS			
a. Is there enough clearance to remove the sensors without disassembly?			
15. OPERATION			
a. Are the OWS pump rotations correct?	X		
b. Do all manual valves operate satisfactorily?			
c. Do all solenoid and motorized valves operate properly during system operation?	X		
d. Has proper operation of the controller been satisfactorily demonstrated?	X		
e. Are all OWS tank level switches working?	X		
f. Does the OWS water discharge produce a sheen of oil?		X	
g. Has operation of all safety devices, indicator and warning lights been properly demonstrated?	X		

CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
16. LABELING AND SAFETY			
a. Do the OWS operating instructions, the oily waste transfer system schematic drawing and the valve aligning chart reflect the installed OWS system?			
b. Is the operating instruction placard mounted as close as practical to the main control panel?			
c. Does each valve in the system have a label indicating the system, the valve number and valve function?			
d. Is an electrical control schematic diagram posted inside the main control panel?			
e. Is there a toxic warning placard installed adjacent to the OWS tank?			
f. Does the relief valve have a placard with set pressure, date set and setting activity?			
g. Are there warning placards restricting the overboard discharge of oily waste?			
17. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?			

CERTIFICATION CHECKLIST FOR
QUANTEK C-50 OWS

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
18. <u>CERTIFICATION</u>			
a. Have all critical items been checked?	X		

CERTIFICATION CHECKLIST FOR
BAIRD OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. MECHANICAL INSTALLATION			
a. Is the OCM inlet connected to the OWS discharge line?	X		
b. Is air line tubing connected to the air-in on the Sensor Module and to the air-out on the Conditioner Module?			
c. Is water line tubing connected to the water-in on the Sensor Module and to the water-out on the Conditioner Module?			
d. Is a flow control valve installed in the water line tubing to the Sensor Module?			
e. Is the drain line piped via a funnel to the OWHT or bilge?			
f. Are the Sensor Module and Conditioner Module within 15 feet of each other?			
g. Can the OCM detect oil in excess of 15 ppm?	X		
h. Can the OCM trigger recirculation of unacceptable effluent back to OWHT?	X		
2. ELECTRICAL			
a. Is the function switch in the transmission position?			
b. Is the toggle switch for the ultraviolet lamp power supply in the on position?			

CERTIFICATION CHECKLIST FOR
BAIRD OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Is the Water In Indicator in the off position?			
d. Is the Water Flow Indicator in the off position?			
e. Is the Temperature Indicator in the off position?			
f. Is the Drain Indicator in the off position?			
g. Is the Air Pressure Indicator in the off position?			
h. Is the Fan Air Indicator in the off position?			
i. Is the Operate Solid State Relay Indicator in the on position?			
j. Are all electrical components corrosion free?			
3. <u>GENERAL</u>			
a. Are all of the indicators functional?			
b. Are all of the controllers operational?			
c. Is a warning placard posted close to the OCM?			

CERTIFICATION CHECKLIST FOR
BAIRD OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
4. <u>INTEGRATED LOGISTIC SUPPORT</u>			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?			
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
5. <u>CERTIFICATION</u>			
a. Have all critical items been checked?	X		

105/106B

CERTIFICATION CHECKLIST FOR
BIOSPHERICS OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. MECHANICAL INSTALLATION			
a. Is the Disperser located 1 to 4 feet upstream of the sensor probe in the effluent line?			
b. Is the Control unit within 25 feet of the sensor?			
c. Is the Sensor mounted in a vertical pipe run at least 10 pipe diameters upstream and downstream from any change in flow direction?			
d. Can the OCM detect oil in excess of 15 ppm?	X		
e. Can the OCM trigger the 3-way valve to recirculate unacceptable effluent back to the OWHT?	X		
2. ELECTRICAL INSTALLATION			
a. Is the proper range selected and the correct light lit?			
b. Is the power source 115 VAC, 60 Hz, single phase?			
c. Is the sensor cover gasket in good material condition?			
d. Is the sensor located to avoid direct water impingement?			

CERTIFICATION CHECKLIST FOR
BIOSPHERICS OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
3. GENERAL			
a. Is the remote indicating console located in a continuously manned space?	☐	☐	
b. Are all the indicators operational?	☐	☐	
c. Are all the components correctly installed?	☐	☐	
d. Is the piston in the probe assembly free from leakage?	☐	☐	
e. Is the piston mechanism lubricated?	☐	☐	
f. Are all the controllers operational?	☐	☐	
g. Are all the electrical components corrosion free?	☐	☐	
h. Is a warming placard posted close to the OCM?	☐	☐	
4. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General information Book (GIB) updated?	☐	☐	
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?	☐	☐	

CERTIFICATION CHECKLIST FOR
BIOSPHERICS OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
5. <u>CERTIFICATION</u>			
a. Have all critical items been checked?	X		

109/110B

CERTIFICATION CHECKLIST FOR
ET-35N OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
1. MECHANICAL INSTALLATION			
a. Is the nozzle sampler located in the OWS discharge line downstream of the motorized valve and upstream the diverter valve?	X		
b. Is the nozzle sampler located in a vertical pipe run with the flow up?			
c. Is the nozzle sampler located at least 10 pipe diameters upstream and downstream from any change in flow direction?			
d. Is the nozzle sampler installed with the ports pointed opposite to the direction of flow?	X		
e. Is a 0 to 30 psig pressure gauge installed downstream of the connection between the sampling and flushing lines?			
f. Is a drain funnel installed at the OCM discharge leading to the OWHT or bilges with a minimum air gap of 4" but not exceeding 36"?			
g. Is the drain funnel provided with a check valve?			
2. REMOTE INDICATOR PANEL			
a. Is the indicator panel mounted at eye level in a continuously manned space?			

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CERTIFICATION CHECKLIST FOR
ET-35N OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
3. <u>REMOTE RELAY ASSEMBLY</u>			
a. Is the relay panel installed adjacent to the diverter valve?			
b. Is the relay panel interconnected to the diverter valve junction box?			
4. <u>OCM VALVES AND PRESSURE REDUCING STATION</u>			
a. Is a gate valve and check valve installed between the OWS discharge and OCM inlet piping?			
b. Is a gate valve, pressure reducing station and check valve installed on the OCM flushing water supply line?			
c. Are all the valves properly labeled?			
d. Is a gate valve installed on the OCM inlet line to completely isolate the sampling/sensor assembly?			
e. Is a relief valve installed and set at 20 psig to protect the OCM from over pressurization?	X		
f. Is a sampling valve installed on the OCM inlet downstream of the check valves in the sampling and flushing lines?			

CERTIFICATION CHECKLIST FOR
ET-35N OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
g. Is the pressure reducing station provided with:			
(1) A pressure reducing valve set at 15 psig?			
(2) Cut off valves upstream and downstream of the pressure reducing valve?			
(3) A by pass line with a globe valve?			
(4) Inlet and outlet pressure gauges?			
5. ELECTRICAL			
a. Is the power source 115 VAC, single-phase, 60 Hz, 12 AMPS?			
b. Are the three OCM panels located to avoid direct water impingement?			
c. Are stuffing tubes in place around all cable penetrations?			
d. Are gaskets in place on panel doors?			
e. Are terminal connections tight and corrosion free?			
6. OPERATION			
a. Is the OCM energizing in AUTO mode at an inlet pressure of 5 ± 1 psig?	X		

CERTIFICATION CHECKLIST FOR
ET-35N OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Is the OCM energizing in the MANUAL mode?	X		
c. Does the 15/70 ppm alarm set point change when the alarm limit toggle is switched in the sampling sensor panel?	X		
d. Can the 15/70 ppm alarm set point be switched from the remote alarm panel when the sampling sensor panel is in REMOTE mode?	X		
e. Is the remote alarm panel showing a digital ppm readout, power on, alarm limit and alarm status consistent with the indicators of the sampling sensor assembly?			
f. Is the sampling sensor door showing power, oil content and 15 or 70 ppm range?	X		
g. Are the three warning lights on the sampling/sensor door extinguished?			
h. Is the oil content indication free from fluctuations greater than ± 2 green LEDs?			
i. When the check switch inside the sampling sensor is held in the up position:			
(1) Do the oil content range green LEDs blink and the red LEDs light within 20 seconds?	X		

CERTIFICATION CHECKLIST FOR
ET-35N OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
(2) Does the OWS flow divert to the OWHT within 80 seconds?	X		
j. Are all LEDs and indicators operating?			
k. Is there constant flow through the sampling sensor discharge when the OCM is energized?	X		
l. Does the flow stop when the OCM is de-energized?			
m. Does the installed flushing line provide flushing water between 5 and 25 psig?			
n. Is the pressure in the sampling line at the sampling/sensor assembly between 5 and 25 psig during both the overboard and recirculation modes? (An orifice plate may be required.)	X		
o. Can the OCM detect oil in excess of 15 ppm?	X		
p. Does the OCM trigger the 3-way valve to recirculate unacceptable effluent back to the OWHT?	X		
q. Is the OCM sampling sensor panel leakproof?	X		

CERTIFICATION CHECKLIST FOR
ET-35N OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
r. Can a high pitched sound and the sound of two valves clicking be heard at 15 second intervals?	X		
7. THREE-WAY DIVERTER VALVE			
a. Is the 3-way valve installed to divert flow to the OWHT when energized?	X		
b. Does the 3-way valve reset automatically when deenergized?			
c. Is the 3-way valve provided with a light indicator to show the valve position?			
d. Is the 3-way valve provided with a locking device to lock the valve in the "Recirculation to the OWHT" position?			
e. Is the 3-way valve accessible for maintenance and repairs?			
f. Is a 7.5kW resistor installed on the three-way valve junction box?	X		
8. INTEGRATED LOGISTIC SUPPORT			
a. Are the Ship Information Book (SIB) and the General Information Book (GIB) updated?			

CERTIFICATION CHECKLIST FOR
ET-35N OCM

X	DESIGNATES CRITICAL ITEM. ALL CRITICAL ITEMS MUST BE CHECKED FOR CERTIFICATION.

ITEM	YES	NO	COMMENTS
b. Is the OWS system covered in the Coordinated Shipboard Allowance List (COSAL) and the hard copy of APL's?			
c. Have the damage control book and the damage control plates been updated to show the installation?			
d. Is the Engineering Operational Sequencing System (EOSS) onboard for the OWS system and does it reflect the installation?			
e. Are the required technical manuals onboard?			
f. Is the Planned Maintenance System (PMS) onboard for installed equipment?			
g. Has ship's force received training for operation and maintenance of the system?			
9. <u>CERTIFICATION</u>			
a. Have all critical items been checked?	X		

117/118B

U.S. NAVY OIL POLLUTION PREVENTION CERTIFICATE

ISSUED UNDER THE PROVISIONS OF DOD DIRECTIVE 6050.15, "PREVENTION OF OIL POLLUTION FROM SHIPS OWNED OR OPERATED BY THE DEPARTMENT OF DEFENSE" (hereinafter referred to as "the Directive").

NAME OF SHIP	CLASS AND HULL	TYPE COMMANDER	GROSS TONNAGE

TYPE OF SHIP:

1. Ships of 400 metric tons (gross tonnage) and above other than an oiler or oil tanker (Form A Supplement attached).[1]

2. Oilers and oil tankers of 150 metric tons (gross tonnage) and above (Form B Supplement attached).[1]

THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with Enclosure (4) of the Directive; and

2. That the survey shows that structure, equipment, systems, fittings, arrangement and material of the ship and the condition thereof are in all respects satisfactory and that the ship complies with the applicable requirements of Enclosure (3) of the Directive.

This Certificate is valid until _____ subject to periodic surveys in accordance with Enclosure (4) of the Directive and Enclosure (1) of NAVSEAINST 9593.2.

Issued at _____

_____ _____
(Date) (Issuing Officer)

[1]Delete as appropriate

PERIODIC SURVEYS

THIS IS TO CERTIFY that during periodic surveys as required by Enclosure (4) of the Directive and Enclosure (1) of NAVSEAINST 9593.2 the ship was found to comply with the relevant provisions of the Directive and NAVSEAINST 9593.2:

Periodic survey:

Signed: _____
(Commanding Officer)

Place: _____

Date: _____

Periodic survey:

Signed: _____
(Commanding Officer)

Place: _____

Date: _____

Periodic survey:

Signed: _____
(Commanding Officer)

Place: _____

Date: _____

Periodic survey:

Signed: _____
(Commanding Officer)

Place: _____

Date: _____

FORM A
SUPPLEMENT TO U.S. NAVY OIL POLLUTION PREVENTION CERTIFICATE
(NOPP CERTIFICATE)
RECORD OF CONSTRUCTION AND EQUIPMENT FOR
SHIPS OTHER THAN OIL TANKERS

In respect of the provisions of DOD Directive 6050.15 (hereinafter referred to as "the Directive").

NOTES:

1. This form is to be used for the first type of ship categorized in the NOPP Certificate, i.e., "ships of 400 metric tons and above other than an oiler or oil tanker ."
2. This Record shall be permanently attached to the NOPP Certificate. The NOPP Certificate shall be available on board the ship at all times.
3. Entries in boxes shall be made by inserting either a cross (X) for the answers "yes" and "applicable" or a dash (-) for the answers "no" and "not applicable."

1. **PARTICULARS OF SHIP**

a. Name of ship _____

b. Class and hull number _____

c. TYCOM _____

d. Gross tonnage _____

e. Date of build:

(1) Date of building contract _____

(2) Date on which keel was laid or ship was at a similar stage of construction _____

(3) Date of delivery _____

f. Major conversion (if applicable):

(1) Date of conversion contract _____

(2) Date on which conversion commenced _____

(3) Date of completion of conversion _____

2. **EQUIPMENT FOR THE CONTROL OF OIL DISCHARGE FROM MACHINERY SPACE BILGES AND OIL FUEL TANKS**

a. Carriage of ballast water in oil fuel tanks:

(1) The ship may under normal conditions carry ballast water in oil fuel tanks. ☐

(2) The ship does not under normal conditions carry ballast water in oil fuel tanks. ☐

b. Types of separating/monitoring equipment fitted:

(1) Oil Water Separator(s):

(a) Equipment capable of producing effluent with oil content less than 100 ppm. ☐

(b) Equipment capable of producing effluent with oil content not exceeding 15 ppm. ☐

(2) Oil content monitor(s):

(a) 100 ppm alarm. ☐

(b) 15 ppm alarm. ☐

(3) Discharge monitoring and control system:

(a) With automatic stopping device. ☐

(b) With manual stopping device. ☐

(4) Automatic stopping device for discharges in special areas. ☐

c. The separating/monitoring equipment:

(1) Has been approved in accordance with the equipment checklist(s) contained in Enclosure (1) of NAVSEAINST 9593.2. ☐

(2) Has not been approved. ☐

d. Maximum throughput of the system is _____ gpm. ☐

e. Application:

(1) The ship is not required to be fitted with the above equipment until _____ (date) in accordance with current Navy retrofitting schedules. ☐

3. **TANKS FOR WASTE OIL (SLUDGE)**

a. The ship is provided with waste oil (sludge) tanks with the total capacity of _____ gal. ☐

b. Means for the disposal of oil residue in addition to the provision of the sludge tanks _____ ☐

_____

_____

4. **STANDARD DISCHARGE CONNECTION**

a. The ship is provided with a pipeline for the discharge of residues from machinery bilges to reception facilities, fitted with a standard discharge connection (IMO flange) in compliance with Enclosure (5) of the Directive. ☐

5. **EXEMPTION**

a. Exemptions have been granted by the Administration from the requirements of DOD Directive 6050.15 as follows:

_____

_____

_____

_____

_____

(If additional space is needed, continue on reverse.)

6. **EQUIVALENTS**

a. Equivalents have been approved by the Administrator for certain requirements of DOD Directive 6050.15 as follows:

_____

_____

_____

_____

_____

(If additional space is needed, continue on reverse.)

THIS IS TO CERTIFY that this record is correct in all respects.

Issued at _____

_____ _____

(Date) (Issuing Officer)

123/124B

FORM B

SUPPLEMENT TO U.S. NAVY OIL POLLUTION PREVENTION CERTIFICATE (NOPP CERTIFICATE)

RECORD OF CONSTRUCTION AND EQUIPMENT FOR OIL TANKERS

In respect of the provisions of DOD Directive 6050.15 (hereinafter referred to as "the Directive").

NOTES:

1. This form is to be used for the second type of ship categorized in the NOPP Certificate, i.e., "oilers and oil tankers of 150 metric tons and above."

2. This Record shall be permanently attached to the NOPP Certificate. The NOPP Certificate shall be available on board the ship at all times.

3. Entries in boxes shall be made by inserting either a cross (X) for the answers "yes" and "applicable" or a dash (-) for the answers "no" and "not applicable."

1. **PARTICULARS OF SHIP**

a. Name of ship _____

b. Class and hull number _____

c. TYCOM _____

d. Gross tonnage _____

e. Carrying capacity of ship _____ (gal)

f. Deadweight of ship[1] _____ (metric tons)

g. Length of ship _____ (ft)

h. Date of build:

(1) Date of building contract _____

(2) Date on which keel was laid or ship was at a similar stage of construction _____

(3) Date of delivery _____

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[1]Full load displacement minus lightweight; in accordance with Enclosure (1) of the Directive, the definition of lightweight includes dry cargo capacity.

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i. Major conversion (if applicable):

(1) Date of conversion contract _____

(2) Date on which conversion commenced _____

(3) Date of completion of conversion _____

2. **EQUIPMENT FOR THE CONTROL OF OIL DISCHARGE FROM MACHINERY SPACE BILGES AND OIL FUEL TANKS**

a. Carriage of ballast water in oil fuel tanks:

(1) The ship may under normal conditions carry ballast water in oil fuel tanks. ☐

(2) The ship does not under normal conditions carry ballast water in oil fuel tanks. ☐

b. Types of separating/monitoring equipment fitted:

(1) Oil Water Separator(s):

(a) Equipment capable of producing effluent with oil content less than 100 ppm. ☐

(b) Equipment capable of producing effluent with oil content not exceeding 15 ppm. ☐

(2) Oil content monitor(s):

(a) 100 ppm alarm. ☐

(b) 15 ppm alarm. ☐

(3) Discharge monitoring and control system:

(a) With automatic stopping device. ☐

(b) With manual stopping device. ☐

(4) Automatic stopping device for discharges in special areas. ☐

c. The separating/monitoring equipment:

(1) Has been approved in accordance with the equipment checklist(s) contained in Enclosure (1) of NAVSEAINST 9593.2. ☐

(2) Has not been approved. ☐

d. Maximum throughput of the system is _____ gpm. ☐

e. Application:

(1) The ship is not required to be fitted with the above equipment until _____ (date) in accordance with current Navy retrofitting schedules. ☐

3. **TANKS FOR WASTE OIL (SLUDGE)**

a. The ship is provided with waste oil (sludge) tanks with the total capacity of _____ gal. ☐

b. Means for the disposal of oil residue in addition to the provision of the sludge tanks _____ ☐

_____

_____

4. **STANDARD DISCHARGE CONNECTION**

a. The ship is provided with a pipeline for the discharge of residues from machinery bilges to reception facilities, fitted with a standard discharge connection (IMO flange) in compliance with Enclosure (5) of the Directive. ☐

5. **CONSTRUCTION**

a. Segregated ballast tanks (SBT):

(1) The ship is provided with SBT in compliance with Enclosure (3) of the Directive. ☐

(2) SBT are distributed as follows:

TANK	VOLUME (gal)	TANK	VOLUME (gal)
		TOTAL VOLUME (gal) ⇒	

b. The ship is equipped with a cargo tank cleaning system in compliance with Enclosure (3) of the Directive. ☐

6. **RETENTION OF OIL ON BOARD**

a. Oil discharge monitoring and control system:

(1) The system comprises:

(a) Control unit. ☐

(b) Computing unit. ☐

(c) Calculating unit. ☐

(2) The system is:

(a) Fitted with a starting interlock. ☐

(b) Fitted with automatic stopping device. ☐

(3) The oil content monitor is approved suitable for:

(a) Crude oil. ☐

(b) Black products. ☐

(c) White products. ☐

(4) The ship has been supplied with an operations manual for the oil discharge monitoring and control system. ☐

b. Slop tanks:

(1) The ship is provided with _____ dedicated slop tank(s) with the total capacity of _____ gal which is _____ % of the oil carrying capacity. ☐

(2) Cargo tanks have been designated as slop tanks. ☐

(3) The ship is not required to be provided with slop tank arrangements until _____ (date). ☐

c. Oil/water interface detectors:

(1) The ship is provided with oil/water interface detectors in accordance with Enclosure (3) of the Directive. ☐

7. **PUMPING, PIPING AND DISCHARGE ARRANGEMENTS**

a. The overboard discharge outlets for segregated ballast are located:

(1) Above the waterline. ☐

(2) Below the waterline. ☐

b. The overboard discharge outlets, other than the discharge manifold, for clean ballast are located:[1]

(1) Above the waterline. ☐

(2) Below the waterline. ☐

c. The overboard discharge outlets, other than the discharge manifold, for dirty ballast are located:[1]

(1) Above the waterline. ☐

(2) Below the waterline, in conjunction with the part flow arrangements. ☐

(3) Below the waterline. ☐

d. Discharge of oil from cargo pumps and oil lines:

(1) Means to drain all cargo pumps and oil lines at the completion of cargo discharge:

(a) Drainings capable of being discharged to a cargo tank or slop tank. ☐

(b) For discharge ashore a special small diameter line is provided. ☐

8. **EXEMPTION**

a. Exemptions have been granted by the Administration from the requirements of DOD Directive 6050.15 as follows:

_____

_____

_____

_____

_____

(If additional space is needed, continue on reverse.)

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[1]Only those outlets which can be monitored are to be indicated.

9. **EQUIVALENTS**

a. Equivalents have been approved by the Administrator for certain requirements of DOD Directive 6050.15 as follows:

_____

_____

_____

_____

_____

(If additional space is needed, continue on reverse.)

THIS IS TO CERTIFY that this record is correct in all respects.

Issued at _____

_____ _____

(Date) (Issuing Officer)