



DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
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OPNAVINST 3120.47  
N95/N96  
2 May 2013

OPNAV INSTRUCTION 3120.47

From: Chief of Naval Operations

Subj: SURFACE SHIP ENGINEERED OPERATING CYCLE PROGRAM

Ref: (a) OPNAVINST 4700.7L  
(b) COMUSFLTFORCOMINST 4790.3 Rev C  
(c) MIL-STD-3034, Department of Defense Standard  
Practice: Reliability-Centered Maintenance (RCM)  
Process, 21 Jan 2011

1. Purpose. To establish policy for the Surface Ship Engineered Operating Cycle Program.
2. Scope. The Surface Ship Engineered Operating Cycle Program applies to all Navy battle force surface ships and patrol craft (PC) under cognizance of Director, Expeditionary Warfare (OPNAV N95) and Director, Surface Warfare (OPNAV N96). It does not apply to Military Sealift Command ships, leased vessels, boats and craft other than PCs.
3. Background. The Surface Ship Engineered Operating Cycle Program addresses the identification, documentation, tracking, and execution of the minimum assessment and maintenance tasks necessary for a ship to achieve expected service life (ESL), including actions required when exceeding established periodicities for these tasks. The class maintenance plan identifies all maintenance tasks, with periodicities, for a given class. Class maintenance plan tasks determined necessary for compliance with this instruction are identified as Surface Ship Engineered Operating Cycle tasks. The engineered operating cycle is the disciplined assignment of class maintenance plan tasks throughout a ship's life cycle.
4. Discussion
  - a. An engineered timely approach to adequately accomplish the minimum maintenance tasks necessary for achieving a ship's ESL will reduce costs to execute those tasks in future years; minimize excessive and unplanned costs to correct any resulting deficiencies; and provide pressure on modernization and new construction budgets to rectify these maintenance shortfalls.

b. Consistent with references (a) and (b), the Surface Ship Engineered Operating Cycle Program is a disciplined engineering approach based on reliability-centered maintenance principles, reference (c), for managing maintenance tasks critical to achieve ESL. Surface Ship Engineered Operating Cycle tasks are mandatory minimum maintenance tasks comprising assessments and qualified repair intended to cost-effectively sustain ship materiel condition, and which, if not accomplished, are likely to cause significant, unplanned corrective maintenance and cost burdens at a later date. Some general guidelines for determining Surface Ship Engineered Operating Cycle tasks include:

(1) Supportability of Equipment. Systems, equipment, or material that impact ESL for which the acquisition process did not adequately plan and program for in-service sustainment.

(2) Lessons Learned. Naval Sea Systems Command (NAVSEASYS COM) will validate, document and analyze growth and new work that occur during Chief of Naval Operations (CNO) availabilities for possible inclusion into the Surface Ship Engineered Operating Cycle Program.

(3) Engineering Margins. These margins (e.g., weight and moment, cooling capacity, etc.) are capabilities built into a ship's design to accommodate modernization over the ESL. Surface Ship Engineered Operating Cycle tasks will provide a means to manage consumption of these design margins.

c. Surface Ship Engineered Operating Cycle supports the surface ship maintenance process described in reference (b) and the Planning, Programming, Budgeting and Execution (PPBE) process. In summary, Surface Ship Engineered Operating Cycle tasks are a subset of maintenance tasks in a given ship class maintenance plan. The technical foundation papers align the class maintenance plan requirements with CNO availabilities and continuous maintenance availabilities over a ship's life. The technical foundation papers provide notional estimates for the work. Ship sheets, developed annually, refine the technical foundation paper notionals with hull-specific information, including any previously deferred Surface Ship Engineered Operating Cycle requirements in order to make out-year adjustments to the program objective memorandum (POM).

The baseline availability work package and availability work package translate these requirements and budgets for execution.

## 5. Policy

a. The engineered operating cycle and associated reliability-centered maintenance based Surface Ship Engineered Operating Cycle tasking will be accorded high priority. Surface Ship Engineered Operating Cycle tasks will be developed using sound technical rationale and objective quality evidence. Surface Maintenance Engineering Planning Program, as NAVSEASYSKOM's principal surface ship maintenance planning activity, is responsible for developing, updating, and tracking Surface Ship Engineered Operating Cycle tasks for surface ships.

b. All Surface Ship Engineered Operating Cycle tasks shall be programmed according to their periodicity requirements. Early planning, close coordination among the several commands involved, and accommodation with current support facilities, manpower and funds are required to achieve satisfactory implementation.

c. At times, exceeding Surface Ship Engineered Operating Cycle task periodicities or deferring scheduled Surface Ship Engineered Operating Cycle tasks may be necessary. Technical adjudication of deferred tasks will be per reference (b) by NAVSEASYSKOM. Early and close coordination among the various parties is required to minimize these occurrences and, where unavoidable, to rapidly recover from the deferral. CNO availability close-out letter shall capture all deferred Surface Ship Engineered Operating Cycle tasks.

d. Fleet commanders shall interface with type commanders (TYCOM) and notify Director, Fleet Readiness (OPNAV N43), Deputy Chief of Naval Operations, Warfare Systems (CNO N9), OPNAV N95, and OPNAV N96 of deferral of planned and funded Surface Ship Engineered Operating Cycle tasks including an explanation of the impact (e.g., additional dry-dock availability, an extension of the next CNO availability, etc.). NAVSEASYSKOM shall ensure the baseline availability work package close-out letter documented at 90 days following end of availability include these requirement changes in support of the PPBE process.

e. At the end of each fiscal year, NAVSEASYSKOM shall submit to OPNAV N43, OPNAV N95, and OPNAV N96, via the appropriate fleet commander, the Surface Ship Engineered Operating Cycle Deferred Tasks Annual Report (assigned OPNAV RCS 1320-3) from the previous year (CNO availabilities and continuous maintenance availabilities) to assist with future budgeting and programming requirements. The ship sheets shall also capture these deferrals to accurately update depot maintenance requirements in support of the PPBE process.

6. Responsibilities and Actions

a. OPNAV N95 and OPNAV N96 shall:

(1) Ensure that planning, programming, and budgeting support class maintenance plan execution for applicable platforms and that Surface Ship Engineered Operating Cycle tasks are programmed as minimum mandatory maintenance requirements.

(2) In coordination with OPNAV N43, fleet commanders, and TYCOMs use ship sheet data to inform out-year programming requirements for Surface Ship Engineered Operating Cycle tasks.

b. OPNAV N43 shall:

(1) Assess surface ship maintenance requirements in support of class maintenance plan execution for all surface ship classes covered by this instruction.

(2) Publish surface ship POM availability schedules.

c. Commander, U.S. Fleet Forces Command and Commander Pacific Fleet shall:

(1) Report to the Chief of Naval Operations by letter via CNO N9, copy to CNO, Fleet Readiness and Logistics and NAVSEASYSKOM (for retention), on a quarterly basis, any change to a programmed CNO availability type, rescheduling of any CNO availability outside of the programmed fiscal year, or cancellation of any CNO availability. Included in this letter shall be the cause(s) of the change or cancellation, funding impacts, and associated mitigation and recovery plans. The letter shall also provide supporting documentation of the ship's ability to withstand the resulting extended maintenance interval

from a material condition perspective. Examples of such documentation are:

- (a) Last Board of Inspection and Survey report;
- (b) Last docking report;
- (c) Class maintenance plan accomplishment;
- (d) Outstanding departures from specification; and
- (e) Any other pertinent maintenance or material condition data.

(2) Report to OPNAV N43, OPNAV N95, and OPNAV N96 all Surface Ship Engineered Operating Cycle task deferrals no more than 30 days following NAVSEASYSKOM technical adjudication response. Notification shall include the cause(s) of the deferral, funding impacts, and associated mitigation and recovery plans.

(3) Submit recommendations to ensure overall Surface Ship Engineered Operating Cycle Program implementation in budgeting and execution.

(4) Endorse NAVSEASYSKOM's Surface Ship Engineered Operating Cycle Deferred Tasks Annual Report (OPNAV RCS 1320-3) and ensure it is provided to OPNAV N43, OPNAV N95, and OPNAV N96 by 15 November each year.

d. Commander, NAVSEASYSKOM shall:

(1) Develop, implement and maintain a NAVSEASYSKOM policy for the Surface Ship Engineered Operating Cycle Program detailing functions, roles and responsibilities to develop, update, and track Surface Ship Engineered Operating Cycle tasks.

(2) Establish the Surface Ship Engineered Operating Cycle Program task list for each ship class.

(3) Ensure that class maintenance plan and technical foundation papers reflect these tasks and that ship sheets also

identify them, including prior deferrals, for fleet commander submissions to OPNAV N43, OPNAV N95, and OPNAV N96 in support of the PPBE process.

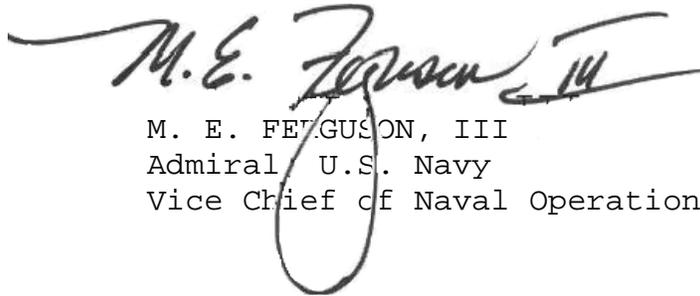
(4) Ensure Surface Ship Engineered Operating Cycle tasks are appropriately identified during planning process and tracked through completion, to provide early awareness of potential task deferrals or lapses from periodicity.

(5) Adjudicate Surface Ship Engineered Operating Cycle task periodicity extension or deferral requests from the Fleets by providing appropriate technical risk evaluation.

(6) Submit the Surface Ship Engineered Operating Cycle Deferred Tasks Annual Report (OPNAV RCS 1320-3) for the preceding fiscal year to fleet commanders by 31 October for endorsement and forwarding to OPNAV N43, OPNAV N95, and OPNAV N96.

7. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed per Secretary of the Navy Manual 5210.1 of January 2012.

8. Reports Control. Surface Ship Engineered Operating Cycle Deferred Tasks Annual Report (OPNAV 1320-3) called for in paragraphs 5e, 6c(4), and 6d(6) is approved for 3 years at which point it may be renewed or cancelled.



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