COMNAVRESFORCOM INSTRUCTION 3120.1D

From: Commander, Navy Reserve Forces Command

Subj: NAVY RESERVE MARITIME PRE-POSITIONING FORCE UTILITY BOAT OPERATIONS MANUAL

Ref: See appendix A


1. **Purpose.** To provide guidance for the safety, operation, maintenance, and material management of Navy Reserve Maritime Pre-positioning Force Utility Boats (MPFUB) per appendix A and B of this instruction. The purpose of MPFUBs at Navy Operational Support Centers (NAVOPSPTCEN) is to train and qualify reserve Assault Craft Unit (ACU) personnel in the operation and maintenance of MPFUBs.

2. **Cancellation.** COMNAVRESFORCOMINST 3120.1C.

3. **Scope and Applicability.** This instruction is not intended to be all-inclusive, but to emphasize Commander, Navy Reserve Forces Command (COMNAVRESFORCOM) requirements. NAVOPSPTCENs and Navy Reserve (NR) ACU detachments must comply with this instruction as well as their supported command’s MPFUB standard operating procedures.

4. **Administrative and Maintenance.** Recommendations concerning changes to this instruction are encouraged and should be submitted to COMNAVRESFORCOM (N7) via the chain of command.

5. **Action.** Reserve Component Commands (RCC) with assigned MPFUBs shall comply with specified actions in this instruction. RCCs may issue additional guidance to accommodate local conditions and shall forward copies of any additional guidance to COMNAVRESFORCOM (N7). Additionally, any procedures not covered by this instruction shall be approved by the applicable NAVOPSPTCEN Commanding Officer (CO).

6. **Records Management.** Records created as a result of this instruction, regardless of media or format, must be managed per Secretary of the Navy Manual 5210.1 of January 2012.
7. Review and Effective Date. Per OPNAVINST 5215.17A, COMNAVRESFORCOM will review this instruction annually on the anniversary of its issuance date to ensure applicability, currency, and consistency with Federal, DoD, SECNAV, Navy policy, and statutory authority using OPNAV 5215/40. This instruction will automatically expire 10 years after its effective date unless reissued or canceled prior to the 10-year anniversary date, or an extension has been granted.

8. Information Management Control. The information collection requirements listed in appendix B are available for use via SharePoint.

T. W. LUSCHER

Releasability and distribution:
This instruction is cleared for public release and is available electronically only via the COMNAVRESFORCOM Web site, http://www.public.navy.mil/nrh/Pages/instructions.asp.
Navy Reserve Maritime Pre-positioning
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SECTION 1
GENERAL

1.1. **Command and Control.** RCC have operational and administrative control of and responsibility for the safety of subordinate NAVOPSPTCENs assigned MPFUBs. The NAVOPSPTCEN CO is responsible for the maintenance, upkeep, operation, and security of assigned MPFUBs per references (a) through (ae). If the MPFUB is not in a maintenance lay-up status, the NAVOPSPTCEN shall provide adequate security including continuous control and daily inspections. Daily inspections shall be performed by qualified watchstanders and documented on a daily boat report. Qualified watchstanders shall notify the chain of command and take immediate steps to correct any discrepancies identified.

1.2. **Operational Support.** Active Duty and Full Time Support (FTS) Sailors are assigned to the NAVOPSPTCEN specifically to support the MPFUBs and subordinate NR ACU detachments. Personnel assigned will attain pertinent Personnel Qualification Standards (PQS) for their billet. NAVOPSPTCENs and NR ACU detachments will follow supported command, RCC, and local guidance in addition to this instruction while operating MPFUBs. Active Duty and FTS Sailors, with the assistance of drilling NR ACU Sailors, are responsible for performing planned maintenance, security watch, and daily boat reports.

1.3. **Safety**

   a. The NAVOPSPTCEN CO will ensure MPFUB crews conduct a thorough Operational Risk Management (ORM) assessment and navigation brief in keeping per references (ad) and (ae) prior to getting underway, anchoring, mooring, beaching, performing Integrated Training Team (ITT) casualty control drills, or anytime deemed essential to the safety of the crew and passengers.

   b. The NAVOPSPTCEN CO is responsible for the safe operation of the MPFUB and shall ensure that the command safety program addresses MPFUB equipment, operations, personnel, and complies with safety regulations per references (h) and (o). The NR ACU detachment (DET) CO shall submit reports via Enterprise Safety Applications Management System (ESAMS) and maintain safety records per reference (c), (e), and (o).

1.4. **Security.** NAVOPSPTCENs shall ensure procedures are established and published to safeguard assigned MPFUBs. The NAVOPSPTCEN operations department shall develop, publish, and institute a NAVOPSPTCEN MPFUB instruction which shall include Standard Operating Procedures (SOP), security checklists, and COMNAVRESFORCOM (N7) daily boat report format as enclosures. At a minimum, the NAVOPSPTCEN MPFUB instruction security annex shall mandate the following measures:

   a. Security of all topside hatches, doors, and scuttles.
b. Heavy Weather Bill.

c. Cold Weather Bill (NAVOPSPTCEN Buffalo and Chicago only).

d. Fueling Bill.

e. Hazardous Material (HAZMAT) Bill, including a HAZMAT Spill Contingency Plan.

f. Fuel Oil Bill, including a Fuel Oil Spill Contingency Plan.

g. Navigation Bill.

h. Daily boat reports to NAVOPSPTCEN CO.

Note: Security watchstanders shall be qualified and submit a daily boat report to the NAVOPSPTCEN CO or designated representative.

1.5. Inspections. Inspections shall be conducted to evaluate subordinate commands’ compliance with this instruction and references listed in appendix A and in order to ensure MPFUBs are properly maintained and safely operated.

a. COMNAVRESFORCOM (N7) shall:

(1) Evaluate reserve unit management of assigned MPFUBs. The readiness cycle for MPFUB units includes a 12-month certification inspection, with assist visits available at the RCC request. Units receiving an inspection assessment of “ineffective” will be placed in “restricted operations” status. While operating in a restricted operations status, units will be required to embark COMNAVRESFORCOM or RCC designated observers during underway operations. All COMNAVRESFORCOM (N7) visits will conclude with an out-brief to the NAVOPSPTCEN CO and written report enumerating discrepancies requiring command attention to successfully complete certification. Diesel inspections will be conducted no earlier than 12 months and not to exceed 18 months per reference (h), chapter 541, Ship Fuel, and Fuel Systems.

(2) Observe and review operating procedures, level of crew knowledge, training practices, and effective MPFUB usage by evaluating the NAVOPSPTCENs compliance with:

(a) Underway preparations, operational training, and underway demonstrations.

(b) Crew professionalism, knowledge, and performance.

(c) PQS accomplishment, including all prerequisites.

(d) Training effectiveness.
(e) Engineering administrative programs (including MPFUB legal records and logs).

(f) MPFUB material condition.

(g) 3M and spot check program.

(h) Equipment tag out program.

(i) HAZMAT/environmental compliance.

(j) Hearing conservation.

(k) ORM.

(l) Fuel and lube oil quality management program.

(m) Jacket Water program.

(n) U. S. Coast Guard Rules of the Road examination (90 percent minimum passing score).

(o) Engineering Operational Sequencing System (EOSS) and Engineering Operational Casualty Control (EOCC).

b. RCCs shall:

(1) Ensure that NAVOPSPTCENs follow the provisions and references of this instruction to maintain and safely operate assigned MPFUBs.

(2) Evaluate budget input, requisition procedures, proper expenditure, custody control, billet management, and logistic support of MPFUBs assigned to subordinate NAVOPSPTCENs.

(3) Provide a representative during 3M inspection in briefs, out briefs, and during the duration of the MPFUB inspection as desired by the RCC.

c. NAVOPSPTCENs shall:

(1) Ensure at least one assigned FTS or Active Duty Sailor and three Selected Reserve Sailors per unit have completed Operator course (CIN: K-062-2121) to maintain three qualified crews and support the ITT requirement.
(2) Ensure at least one assigned FTS or Active Duty Sailor and three Selected Reserve Sailors per unit have completed MPFUB Engineer course (CIN: K-062-0036) to maintain three qualified crews and support the ITT requirement.

(3) Provide detailed budget as required by RCCs.

(4) Conduct quarterly self-assessments utilizing program check sheets and administer level of knowledge exams for Active and Reserve Sailors.

(5) Once self-assessments are complete, create a detailed plan of action and milestones (POAM) to correct discrepancies and submit monthly POAM updates to RCC and COMNAVRESFORCOM (N7) upon request until all discrepancies are corrected.

d. NR ACU detachment COs shall ensure MPFUB crews become familiar and comply with this instruction and its applicable appendices.

1.6. Tours and Public Visiting

a. Public visiting may take place as either open public visits or pre-arranged, controlled group tours and may include various groups of personnel (VIP, JROTC, etc.) getting underway onboard MPFUBs.

b. NAVOPSPTCENs shall coordinate with local civilian authorities as required by local regulations for visitor control.

c. NAVOPSPTCEN COs shall request permission from respective RCC utilizing sample 1-1 no later than 15 working days prior to any visit or mission involving the transport of any non-essential or unassigned personnel.

d. The MPFUB crew shall conduct a thorough ORM brief prior to the evolution and shall provide a detailed safety brief to each group of visitors prior to boarding the MPFUB. Visitors shall wear appropriate Personnel Protective Equipment (PPE), including personal flotation devices; at all times while onboard the craft.
From: Commanding Officer, Navy Operational Support Center XXXXX
To: Commander, Navy Region Reserve Component Command XXXX

Subj: REQUEST FOR MARITIME PRE-POSITIONING FORCE UTILITY BOAT VISITOR UNDERWAY

Ref: (a) COMNAVRESFORCOMFORINST 3120.1D
(b) OPNAVINST 5100.19E

1. Per references (a) and (b), the following request to conduct underway operations (outside the established operation areas or with civilian personnel as participants) is submitted:

   a. Date of event: **DD Month YYYY**

   b. Visiting organization: **Name of Organization**

   c. Number of personnel: **Number of participants**

   d. Planned evolution: This training evolution supports [Insert text here].

   e. Value of this evolution: [Insert comments here]

   f. Risk Mitigation: All voyage planning and trip planning have been completed, full navigation briefs to be conducted and communications plan enacted. [Insert any additional comments here].

All required pre-underway checks will be completed no later than [Insert additional text here].

   g. NAVOPSTCEN XXXX expects to utilize MPFUBs XX and YY for these underway evolutions. [Add amplifying details here]

   h. Commanding Officer Comments: [Insert comments here]

2. NAVOPSTCEN XXXX shall take all precautions necessary to ensure the safety of all personnel embarked per references (a) and (b).
Subj: REQUEST FOR MARITIME PRE-POSITIONING FORCE UTILITY BOAT VISITOR UNDERWAY

3. Point of contact is (Point of contact information), who can be reached at COMM: (XXX) XXX-XXXX or via e-mail at first.last@navy.mil.

NAVOPSPTCEN CO
SECTION 2
RESERVE MARITIME PRE-POSITIONING FORCE UTILITY BOATS OPERATIONS

2.1. Operations. RCCs, NAVOPSPTCENs, and NR ACU DET COs shall provide supplemental guidance to address local conditions, including foul weather contingency plans. NAVOPSPTCEN COs shall arrange safe berthing and security for assigned MPFUBs. All charts shall be prepared per NavBill, reviewed by the Navigator or DET OIC and Executive Officer, and approved for use by the Commanding Officer. COMNAVRESFORCOM (N7) shall review and promulgate any additional charts not outlined in Appendix B per reference (ad) and safety of navigation. The NAVOPSPTCEN CO may approve exceptions; including operating inside protected areas that mitigate the effects of weather conditions such as harbors or areas sheltered by breakwaters and jetties. MPFUBs may conduct landing operations in approved areas at the discretion of NAVOPSPTCEN CO after all required clearances have been obtained from appropriate authorities. NAVOPSPTCENs shall work with their NR ACU DETs to:

a. Identify local operating areas suitable for underway MPFUB training. NAVOPSPTCENs shall maintain corrected charts clearly indicating operating area boundaries, beach landing areas with Environmental Protection Agency compliance, shipping and boating channels, navigation hazards, restricted areas, and other limitations.

b. Request permission from RCC utilizing sample 1-1 prior to operating outside the approved operating area. Requests shall be submitted to RCC and shall include intended route, estimated times of arrival and departure, transit time, and total underway time. NAVOPSPTCENs shall forward this request to RCC no later than 15 working days prior to the intended underway to allow adequate time for review and approval.

c. Establish a MPFUB crew and maintenance training program to qualify designated personnel for watch stations onboard and maintenance of assigned MPFUBs.

d. Establish a flexible drill schedule which supports underway MPFUB training periods, preferably on multiple drill weekends.

e. Provide supervision and support necessary to ensure safe operation of MPFUBs, including the following:

   (1) Maintain two-way communications between operating MPFUBs, ITT members, and NAVOPSPTCENs.

   (2) Assign and publish call signs, recall conditions, signals, and procedures.

   (3) Provide a means to obtain current weather, sea state, and small craft warning information.
(4) Provide updated and approved charts of the operating area.

(5) Provide equipment to meet underway operations and safety requirements.

(6) Establish and publish MPFUB and crew limitations, as well as casualty reporting procedures.

(7) Obtain or develop checklists for MPFUB operations and custody transfer.

(8) Publish a sailing list prior to any underway period with legible name, rank, and blood type of all crew members and passengers along with the MPFUB operator's signature and post the list on the NAVOPSPTCEN quarterdeck or appropriate command location.

2.2. **Procedures.** NAVOPSPTCENs and NR ACU DETs will use MPFUB checklists for underway preparation and fueling evolutions in conjunction with EOSS.

   a. **Briefings Before Underway Operation.** Prior to the MPFUB underway, the crew will conduct navigation and mission briefings that address all pre-underway checklist items. Only qualified individuals will conduct the briefings and all crewmembers assigned to the underway period will attend. The briefer will carefully detail plans for intended MPFUB movement (including tracks to be used by the MPFUB) to and from a clearly defined area of operation as well as ORM considerations, operating instructions, training to be accomplished, communication procedures, expected time of underway, and return.

   b. **Underway Checklists.** MPFUB operators will ensure they utilize current underway and maintenance requirement checklists prior to each underway period. The MPFUB operator shall lead the event from commencement to completion. The assigned crew shall conduct the underway checks.

**Note:** The NAVOPSPTCEN and NR ACU DET CO will add any checklist items deemed necessary to ensure the safe operation of assigned MPFUBs. Work Center Supervisors (WCS) will schedule applicable Material Maintenance Management (3M) checks and ensure completion, accountability, and administrative recording of all maintenance checks. Qualified MPFUB operators and engineers will complete all pre-underway checklist items before getting underway and make entries in applicable logs, including the Engineering Operating Procedure Master Light Off Checklist (EOP MLOC); qualified maintenance personnel may assist. Completed checklists will be signed by the NAVOPSPTCEN CO before granting permission to get underway and retained for 1 year. Should any mishap occur during an underway period, the NAVOPSPTCEN will retain the checklist for that underway period until COMNAVRESFORCOM (N7) grants disposal authorization. During the underway period, the MPFUB operator will notify the NAVOPSPTCEN of any casualties or significant events.
c. **Communications.** MPFUBs will not get underway without reliable two-way radio communications or an appropriate substitute capable of communicating on U.S. Coast Guard and harbor control channels and with the NAVOPSPTCEN. While underway all units will monitor channels 12, 13, 16, and locally-designated working channel(s). Positive two-way voice communications will be maintained between the parent NAVOPSPTCEN and operating MPFUB during each underway period. MPFUBs that lose communications will return to base if they cannot regain communications within 30 minutes. ITT members shall operate independently from MPFUB crewmembers on two-way headsets compatible with hearing protection.

d. **Weather and Sea State.** The NR ACU DET CO will provide local and regional forecast information for pre-underway navigation briefings. The NAVOPSPTCEN or NR ACU DET will communicate weather and sea state updates to operating MPFUBs as significant changes occur. MPFUBs will not operate when visibility is less than one mile, or in weather conditions that exceed Beaufort Sea State Four, or when small craft warnings are in effect as determined by the NAVOPSPTCEN CO and NR ACU DET CO. MPFUBs can operate inside protected areas such as break walls that mitigate the effects of weather conditions or sea state restrictions that would normally require the MPFUB to return to base when approved by the NAVOPSPTCEN CO. MPFUB will return to base if weather conditions deteriorate or when recalled by NAVOPSPTCEN CO or NR ACU detachment CO. If weather or other conditions prevent an MPFUB from returning to its assigned berthing, the MPFUB operator will communicate all intended actions to the NAVOPSPTCEN CO and NR ACU detachment CO, who will assist the MPFUB operator in determining the best course of action, notifying their RCC, and requesting Coast Guard assistance as required.

e. **Operational Reporting.** When notified of personnel injuries, MPFUB damage, equipment casualties, events of an unusual, serious nature that affect embarked personnel, or MPFUB operations, the NAVOPSPTCEN CO shall ensure the respective RCC Commander is notified via the appropriate communication medium (phone call, standard message, operational report unit, situation report, etc. per reference (d)).

2.3. **Planning Considerations for Beach Landing Operations.** Beach Landing Operations must be approved in advance by NAVOPSPTCEN CO. NAVOPSPTCENs shall obtain required clearances and arrange for beach support equipment, if required. The NR ACU DET CO will generate a letter of instruction (LOI) to conduct Beach Landing Operations. LOIs for beach landing operations involving extended transits or multiple units must be submitted to the NAVOPSPTCEN CO for approval 30 days prior. The minimum information required on a beach landing LOI includes:

a. Description of the operation and beach landing area.

b. Units assigned to the operation.

c. Dates and times of the planned operation.
d. Designation of the Operational Test Coordinator or operational Officer Conducting Exercise for the exercise or event at the landing site.

e. Procedures to establish a beach party with an observer.

f. Training objectives and schedule of events.

g. Communications plan including call signs, circuits, and frequencies.

h. Loading plan if equipment or personnel are to be embarked.

i. Movement plan indicating tracks to be used and transiting procedures.

j. Logistic requirements and planned support.

k. Up-to-date charts of the approach lanes and beach landing area with identifying markers and navigational aids clearly indicated.

l. Beach surf conditions and tides.

m. HAZMAT and pollution abatement procedures.
SECTION 3
TRAINING AND QUALIFICATIONS

3.1. Qualifications for MPFUB Crew Members. The NAVOPSPTCEN CO shall designate in writing all personnel who are qualified and permitted to operate assigned MPFUBs. All MPFUB operators, engineers and crew members will complete all prerequisites and pertinent MPFUB Operator courses, Engineer courses, or both as well as successfully complete an oral board prior to completing qualifications. In addition to the oral board, prospective MPFUB operators shall be a minimum of E-5 in pay grade and shall successfully complete a practical underway evaluation period with the respective NAVOPSPTCEN CO as the senior member. Waivers may be granted by the respective NAVOPSPTCEN CO for Sailors in the pay grade of E-4 who demonstrate maturity, competence, and initiative.

Note: At a minimum, one FTS/Active Duty Sailor shall attend the MPFUB Engineer course (CIN: K-062-0036) and one FTS/Active Duty Sailor shall attend the MPFUB Operator course (CIN: K-062-2121). These graduates shall be two separate personnel to maintain one qualified boat crew made up of FTS/Active Duty personnel. Local NAVOPSPTCEN qualification procedures must incorporate MPFUB qualification from supported Active Component (AC) ACUs, as well as practical and written tests administered by the NAVOPSPTCEN operations department. NAVOPSPTCEN CO will review PQS qualification of newly reporting Sailors for validity and currency and record this review in the member's training jacket. The NAVOPSPTCEN operations department will conduct re-qualifications for all reporting Sailors holding a 3M 301 and Basic Damage Control (DC) 301 to 306 and develop a re-qualification instruction to be included in the command PQS instruction. NAVOPSPTCEN COs will designate PQS qualifiers in writing in the command's collateral duty listing.

3.2. Required Training. NAVOPSPTCENs and supported units shall maintain short and long range training plans per reference (h), chapter 542, Gasoline and JP-5 Fuel Systems.

3.3. Explosive Ordnance Disposal/Mobile Diving Salvage Unit Training Support. The NAVOPSPTCEN CO and NR ACU detachment CO may incorporate diver availability into their training plans. MPFUBs may be used to support Navy Reserve Explosive Ordnance Disposal/Mobile Diving Salvage Unit (EOD/MDSU) unit training and certification.

3.4. Small Craft Insignia. The Chief of Naval Operations (CNO) (N861) determined that MPFUB operations meet the spirit and intent of reference (an) and has authorized the Small Craft Insignia for leadership personnel attached to units with assigned MPFUBs. Personnel must meet the following criteria to wear the Small Craft Insignia:

a. Served in a leadership position (petty officer in charge or higher) in a unit with an MPFUB for a minimum of 6 months
b. Completed all of the following prerequisites as outlined in NAVEDTRA 43119, 301 through 306:

(1) 2\textsuperscript{nd} Class Swimmer.

(2) Cardiopulmonary Resuscitation.

(3) Basic DC.

c. Completed the following MPFUB PQS as outlined in NAVEDTRA 43315-1A, 301 through 303:

(1) Crewman.

(2) Craft Engineer.

(3) Operator.

d. Pass a designation board. NAVOPSPTCEN CO shall ensure board procedures are established and boards are held for FTS/Active Duty Sailors. NR ACU detachment COs shall ensure board procedures are established and boards are held for Selected Reserve Sailors by guidance from supported Active Duty ACU.
SECTION 4
RECORDS, MATERIAL MANAGEMENT AND FINANCIAL SUPPORT

4.1. Support and Material Readiness. MPFUBs are training assets assigned to NAVOPSPTCENs and are supported through the COMNAVRESFORCOM chain of command.

a. COMNAVRESFORCOM (N7) will provide guidance, funding, and assistance necessary to support MPFUBs.

b. NAVOPSPTCEN COs are the primary custodian for MPFUBs, associated equipment, parts, tools, HAZMAT, and support materials required to maintain assigned MPFUBs. NAVOPSPTCEN COs are responsible for the material management and local supply support of MPFUBs assigned to the NAVOPSPTCEN. NAVOPSPTCENs will ensure proper support and material readiness of assigned MPFUBs through the following actions:

(1) Submit MPFUB status reports to COMNAVRESFORCOM (N7) via the RCC monthly (by the end of the second Wednesday of the month) or when there is a major change to material or readiness status of the MPFUBs.

(2) Manage the 3M program per reference (b), (h), and (ac).

(3) Report MPFUB casualties per references (b) and (h).

(4) Process requisitions.

(5) Maintain inventory of training allowance and coordinated ships allowance list supplies.

(6) Issue and ensure chain of custody for tools, support equipment, parts, and supplies to ensure required materials are available at the user level.

(7) Develop timetables and establish internal procedures for budget input and supply requisitions.

c. NR ACU are the primary users of MPFUBs. The NR ACU detachment CO shall ensure that MPFUBs are properly equipped and safely operated by qualified boat crews under the provisions of this instruction. Local NR ACUs shall assist their supporting NAVOPSPTCEN in completing preventive and corrective maintenance. NAVOPSPTCEN FTS/Active Duty Sailors are primarily responsible for execution of the 3M program and are accountable to the NAVOPSPTCEN CO for proper MPFUB maintenance. NAVOPSPTCEN COs will incorporate MPFUB maintenance into future training plans and ensure proper management of Planned Maintenance System (PMS).
4.2. Maintenance, Repairs, and Upkeep. Administration, disposition, and support for MPFUBs will be conducted per references (f) and (h). NAVOPSPTCENs will execute the 3M program, ensure PMS requirements are completed per references (b), (h), and (ac), equip, maintain, and preserve their MPFUBs per the applicable references. Per reference (h) chapter 583, Volume 1, Boats, and Small Craft NAVOPSPTCENs will conduct a 6-year routine overhaul of the craft and associated equipment. RCCs will fund MPFUB maintenance through regular periodic budgets and may request additional funds from COMNAVRESFORCOM (N7) when needed to maintain MPFUBs in an operational status.

4.3. Fuel and Petroleum Product Management. NAVOPSPTCEN’s will manage procurement of fuel per reference (f). In the event the only available commercial grade fuel does not meet the requirements set forth in reference (f), NAVOPSPTCENs shall submit a waiver request appendix J, Exhibit J-1 via the RCC to COMNAVRESFORCOM (N7). Waiver requests must outline in detail, circumstances for deviation and be approved prior to on loading fuel.

Note: NAVOPSPTCENs will maintain records of fuel, completed tests, and contractor-supplied specifications for 2 years, perform lubricant sampling, testing, and change out per references (m) and (n). Tag out sheets shall be maintained for a minimum of 13 weeks to coincide with the rolling 13 week files retained in support of PMS. Lube Oil (L/O) Quality and Fuel Oil (F/O) Quality logs appendix E and J will be maintained to reflect local tests, routine checks, sampling, and testing conducted per reference (m) and (n). Amplifying instructions for proper F/O and L/O handling, testing procedures and quality criteria can be found in appendix B, C, and D. The NAVOPSPTCEN shall ensure that all fuel, hazardous materials, and disposal methods are certified to comply with local and federal environmental regulations.

4.4. Damage Control. Effective damage control is the product of damage control education, equipment, and realistic scenario training. Damage control training and drills will be conducted per reference (h) chapter 223, Diesel Engines and (v). The NAVOPSPTCENs will maintain a damage control equipment inventory per reference (c) and appendix C.

4.5. DoD Fleet Card. The NAVOPSPTCEN CO will designate the command DoD Fleet Authorizing Official (AO) in writing via DD form 577 (11-14) to ensure proper oversight, accountability, training, and tracking of government funding. The AO and all card holders shall complete computer based training, and be familiar with authorized transactions as well as the consequences of card misuse. The AO shall maintain all DoD Fleet Card receipts for 3 years and process all expenditures within 30 days. The AO shall review all purchases (type, date, quantity, price, etc.) to ensure they are valid and authorized. Motor gasoline/diesel fuel, marine (MOGAS/DFM), emergency repairs, and emergency towing assistance are the only authorized expenditures. Card holders will make all fuel purchases with the DoD Fleet Card. Each craft shall have its own card specifically designated for use with or in support of that craft only. The card will be stored under lock and key when not in use. The AO shall run the DoD Fleet Card Program per reference (k) through (n).
4.6. **ACU Maintenance Funding Procedures.** The NAVOPSPTCEN CO shall authorize ACU maintenance fund expenditures for support equipment, necessary facilities, and the associated costs specifically identified for NR ACUs per reference (f), (v), (w), and (x). Associated costs may include fuel, consumable supplies (example; tools, cold weather gear, PPE, etc.), and equipment necessary for administrative support of MPFUB operations.

4.7. **MPFUB Program Funding Requests.** The NAVOPSPTCEN CO will coordinate with the NR ACU DET CO to create an annual phased spend plan for required fuel, maintenance, equipment, repair parts, and consumables. The NAVOPSPTCEN CO shall transmit the phased spend plan for ACU maintenance funds to COMNAVRESFORCOM (N7) via their RCC. Funding requests shall originate at the NAVOPSPTCEN or NR ACU DET to COMNAVRESFORCOM (N7) via the RCC Comptroller. The NAVOPSPTCEN shall obligate and execute available ACU maintenance funding and request additional funding if necessary via their RCC comptrollers. RCC comptrollers will pass those requests for additional ACU maintenance funds to the COMNAVRESFORCOM (N7) resource manager and info COMNAVRESFORCOM (N8). COMNAVRESFORCOM (N7) will validate the request and work with COMNAVRESFORCOM (N8) to distribute additional funding to the RCC comptroller.

4.8. **Signature Authority for MPFUB Sub-Program Logs**

a. The NAVOPSPTCEN CO shall review and approve the following:

   (1) Daily boat report.

   (2) Navigation charts (prior to navigation brief).

   (3) Navigation brief (prior to underway).

   (4) Pre-underway checks (prior to underway).

   (5) Refueling checklist (prior to fueling).

   (6) Deck log (monthly, after underway).

   (7) Jacket water package (monthly).

b. The Chief Engineer (CHENG) and Leading Chief Petty Officer (LCPO) of the Operations department shall review, sign, or both the following:

   (1) Daily fuel oil quality management log (monthly).

   (2) Material history logs (after each entry).
(3) Two main engine logs (after each operation).

(4) One generator log (after each operation).

(5) One craft log (after each operation).

(6) Engine hour logs (monthly).

(7) Jacket water package (monthly).

(8) Lube oil quality management logs (monthly).

(9) 3M 13-week accountability log (weekly).

(10) 3M quarterly report (quarterly).

c. The Leading Petty Officer (LPO) of the Operations department shall review, sign, or both the following:

(1) Daily fuel oil quality management log (daily and when engines are operated).

(2) Refueling log (daily and when refueled).

(3) Operating log (daily and when engines run).

(4) Monthly lube oil logs (daily and when engines run and/or oil drained/added).

d. The WCS shall review, sign, or both the following:

(1) 3M 13-week accountability log (weekly).

(2) 3M quarterly report (quarterly).

(3) Tag out sheets for 13-week accountability log (weekly).

e. Operators, engineers, and watchstanders shall maintain all required logs and make initial entries of fuel and lube oil samples and testing results in the following reports and logs:

(1) Daily boat report.

(2) Daily fuel oil quality management log (daily and when engines are operated).

(3) Refueling log (daily and when refueled).
(4) Monthly lube oil quality management logs (daily and when engines run and/or oil drained/added).

4.9. **Required Letters of Designation.** The NAVOPSPTCEN CO shall designate in writing (either by individual letters of designation or by current command collateral duty notices) the following individuals:

a. CHENG.

b. Oil King.

c. WCS.

d. ITT leader.

e. ITT member (engineer).

f. ITT member (operator).

g. ITT member (safety observer).

h. ITT member (damage control).

i. EOSS manager.

j. Tag out manager.

k. PQS coordinator.

l. HAZMAT/hazardous waste manager.

m. HAZMAT control officer.

n. MPFUB crew member.

o. MPFUB engineer.

p. MPFUB operation.
APPENDIX A
REFERENCES

(a) Navy Regulations, 1990

(b) NAVSEAINST 4790.8C of 30 November 2015

(c) NWP 1-03.1

(d) OPNAVINST F3100.6J of 22 December 2009

(e) OPNAVINST 5102.1D of 7 January 2005

(f) NAVSUP P-485 of October 1997

(g) OPNAVINST 3140.24F

(h) Naval Ships’ Technical Manual, 1 September 1999

(i) COMUSLTFORCOMINST 4790.3C

(j) JP-3502.3 of March 2012

(k) COMNAVSURFORINST 3540.3A

(l) JP-3541.1A of March 2015

(m) JP-4790.1H of July 2013

(n) OPNAVINST 3120.32D

(o) OPNAVINST 5100.19E

(p) OPNAVINST 4780.6F

(q) NTTP 3-20.31

(r) S0400-AD-URM-010/TUM Rev 7

(s) NAVSEA Technical Publication Tag-Out User’s Manual, 21 November 2013

(t) S6430-AE-TED-010 TECHNICAL DIRECTIVE FOR PIPING DEVICES, FLEXIBLE HOSE ASSEMBLIES
(u) MILPERSMAN 1200-030

(v) NAVSUP MPFUB Allowance Equipage List 2-99CES1938 of 3 Feb 12

(w) NAVSUPINST 4200.98A


(y) NSTCINST 4200.1A

(z) DoD 7000.14-R, Financial Management Regulation, June 2017

(aa) 33 U.S.C §1251

(ab) EOSS, Engineering Operational Sequencing System

(ac) COMNAVRESFORCOMINST 4790.1

(ad) COMNAVSURFPAC/COMNAVAIRPAC/COMNAVAIRLANT/CINABA/USURFLANT INSTRUCTION 3530.4F (NAVDORM)

(æ) OPNAVINST 3100.7C (SHIP'S DECK LOGS)
APPENDIX B
CHARTS AND OPERATING AREAS

1. NAVOPTCEN's shall operate in RCC approved Operating Areas (OPAREA) contained within the following charts:

   a. NAVOPSPTCEN Baltimore:
      (1) 12270
      (2) 12278
      (3) 12281

   b. NAVOPSPTCEN Buffalo:
      (1) 14822
      (2) 14832
      (3) 14833
      (4) 14844

   c. NAVOPSPTCEN Chicago:
      (1) 14901
      (2) 14905
      (3) 14928

   d. NAVOPSPTCEN Pensacola:
      (1) 11378
      (2) 11382
      (3) 11383

   e. NAVOPSPTCEN Tampa:
2. All charts shall be prepared per NavBill, reviewed by the Navigator or Detachment OIC and Executive Officer, and approved for use by the Commanding Officer.
1. **Fueling Prerequisites.** The possibility of mishaps can be greatly reduced by assuring availability of adequately trained personnel, sufficient containment equipment, sufficient clean-up equipment, and during fueling operations. All fueling and defueling operations shall be accomplished during sunrise to sunset. A refueling check sheet appendix H shall be signed and approved by the CO or CHENG in their absence prior to starting the evolution. Command duty officer (CDO) will call the CO, if at all possible, to get verbal authority prior to commencing fueling evolution. Embarking Selected Reserve unit refueling permission will be based on operational necessity. For effective management of fuel receipt, stowage, testing, use, and offloading, appendix E shall be maintained.

   a. **Stripping Fuel Tanks.** Per references (n) and (o), prior to any fuel loading operations and whenever a “prior to suction” (PTS) sample is not clear and bright tanks shall be stripped of water and sediment to the greatest extent possible. The sample shall be taken from the sample/drain valve on the bottom of the service tanks.

      Step 1: Obtain a suitable container, ensure that it is clean and contains no foreign material.

      Step 2: Place it under the sample line and open the valve obtaining a sample.

      Step 3: Transfer the sample into a 32oz fuel oil sample bottle and observe for clear and bright criteria as per reference (h), chapter 541, Ship Fuel and Fuel Systems.

      Note: If the sample is clear and bright record it in the log and take no further action. Per reference (h), chapter 541, Ship Fuel and Fuel Systems, if the sample fails clear and bright, continue to strip fuel until a sample meets the bright criteria and, if applicable, submit the sample to the embarking unit’s oil lab for bottom, sediment, and water (BS&W) testing. If an oil lab is not available, fuel will have to be stripped until it meets the clear and bright criteria.

   WARNING

   Fuel of any amount in the bilge constitutes a fire hazard. Stripping large amounts of fuel creates a HAZMAT disposal logistics problem as all MPFUBs are not equipped with a contaminated oil setting tank or a waste oil tank. Forethought and planning are a must.

   Note: Dispose of all waste oil products in accordance with current hazardous waste disposal procedures.

   b. **Sounding Tanks.** When tank stripping is complete, and prior to refueling evolutions, sound tanks and record fuel levels in the fuel logs to estimate the amount of fuel to be loaded.
Per reference (h), fuel oil service tanks are not to be filled beyond 95 percent capacity. Keep this in mind when estimating fuel load to be received.

d. **Damage control.** For “in port” re-fueling/de-fueling the Bravo flag will be flown on the main mast or highest station on the craft. The smoking lamp is out throughout the craft. One carbon dioxide (CO2) bottle will be manned on station in standby. When fueling aboard another ship, that ship’s procedures will be followed.

e. **Pollution Control.** Ensure that the location of oil spill response kits are known to all personnel involved in fueling operations.

2. **Procedures.** Detailed procedures for operation, and maintenance of the fuel oil system, and equipment are available in the applicable diesel technical manual and related documentation (PMS, EOSS, etc.) specific to each MPFUBs fuel system.

3. **Order of Fuel Preference.** Per reference (h), chapter 541, Ship Fuel and Fuel Systems, Navy Distillate MIL-F-16884 (NATO code F-76) is the preferred fuel in all craft propulsion and non-propulsion diesel engines. Substitute fuel (JP-5) may be used based as operational necessity and for cold weather operations. Open market/local purchase are fuel purchases from a commercial supplier not under a Defense Logistics Agency Energy contract. Emergency substitute fuels in order of preference are commercial marine gas oil (MGO) (MGO conforming to the International Standards Organization code 8217 Grade DMA) and American society for testing and materials D 975, 2-D.

**Note:** Due to the low lubricating properties of JP-5 a lubricity additive or a fuel lubricity filter may be required. Refer to the specific Craft Information Book for lubricity requirements.

**Note:** Minimizing poor fuel quality impacts. The extent of the impacts to diesel engines and fuel handling systems will depend on how much fuel is burned, over what timeframe, and the quality of fuel being lifted. To minimize the impacts, craft are encouraged to lift as small a quantity of commercial fuel as operationally necessary, consume the fuel within 6 weeks, and refuel with F-76 or an acceptable substitute as soon as possible. Potential adverse operational and performance impacts from using commercial fuels are outlined in the table C-1.
**Navy Ships’ Technical Manual 541 Table 541-10-2**

<table>
<thead>
<tr>
<th>DIESEL ENGINE POTENTIAL IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHORT TERM:</strong></td>
</tr>
<tr>
<td>• Rough operation due to low cetane index (less than 43). Conversely, if cetane index is too high (upper 50’s and greater), then premature auto-ignition in medium-speed diesels, such as Pielsticks on the Dock Landing Ships (LSD) can occur.</td>
</tr>
<tr>
<td>• Poor operation (poor atomization), increased valve temperatures due to high viscosity.</td>
</tr>
<tr>
<td>• Lower power output due to low viscosity.</td>
</tr>
<tr>
<td>• Increased lube oil change-outs due to high sulfur.</td>
</tr>
<tr>
<td><strong>LONG TERM:</strong></td>
</tr>
<tr>
<td>• Increased combustion deposits on rings and pistons; exhaust valve corrosion and seating issues due to high carbon residue, ash or sulfur, or if vanadium is present.</td>
</tr>
<tr>
<td>• Increased lube oil fuel dilution due to low viscosity.</td>
</tr>
<tr>
<td>• Increased soot accumulation in lube oil and lube oil thickening, due to high 90% distillation temperature point.</td>
</tr>
<tr>
<td>• Increased plugging/coking of fuel injectors and damage to fuel injector pumps due to high carbon residue.</td>
</tr>
<tr>
<td>• Cylinder liner fuel wash-down is possible if fuel injectors become severely plugged, causing distorted fuel injector spray pattern/poor atomization, due to high carbon residue, and high sulfur.</td>
</tr>
<tr>
<td>• Worn injectors, high wear of cylinder liner, rings, valves, and valve seats due to high ash.</td>
</tr>
<tr>
<td>• Increased top-ring wear due to high sulfur.</td>
</tr>
</tbody>
</table>

Table C-1 Operational Impacts on Propulsion Equipment using Commercial Fuel

4. **Fuel Quality Analysis**. Analysis will be limited to the type of sampling, test procedure, and requirements specified per reference (h).

5. **Acceptance Criteria**. Since MPFUBs do not have a fuel oil purifier system or a BS&W test capability, a less stringent “SUITABLE FOR USE” vice “CLEAR AND BRIGHT” test shall be used to determine the acceptability of the fuel oil for use in propulsion and ship service diesel engines. The objective is to maintain a fuel oil acceptance criterion as near as possible to the “CLEAR AND BRIGHT” criteria per reference (h), chapter 541, Ship Fuel and Fuel Systems, but which recognizes the craft’s limitations. In particular, where “CLEAR” refers to the absence of visible particulate and “BRIGHT” to the absence of suspended water droplets that appear as haziness or cloudiness in the sample, “SUITABLE FOR USE” requirements are no free water or excessive amounts of solids which cover the bottom of the glass bottle. The water and solids would likely clog the fuel oil filters/ separators. The CHENG shall make the “SUITABLE FOR USE” determination.

a. **“SUITABLE FOR USE” test apparatus**. Sample bottle, clear glass, 8 oz. (NSN 8125-00-543-7699) for PTS samples. Sample bottle, clear glass, 32 oz. (NSN 8125-00-
for commercial supplier (CSS), refueling start (RS), refueling midpoint (RM), 15 minute intervals during refueling (R15), and refueling endpoint (RE) samples. Thermometer, -5 degrees F to 215 degrees F. (NSN 6685-01-515-2149).

b. “SUITABLE FOR USE” test procedure:

(1) Obtain a representative sample in a 32 oz. clear glass bottle. The fuel temperature shall be at least 60°F (15.6°C).

(2) Apply the modified “CLEAR” criterion. Invert or swirl the sample and observe the presence or absence of visible particles. Look through the sample when examining the fuel for sediment. Visible particles, if present, will be observed in the moving fuel or the resultant vortex. If particulate is present, allow the sample to settle for approximately 5 minutes. The sample passes this test if the bottom of the jar is not completely covered with sediments.

(3) To test for water contamination, hold the sample in front of a good light source. The presence of suspended water will be indicated by haziness or cloudiness in the sample. As the amount of water increases, the sample will appear milky. When the fuel saturation point is reached and the fuel cannot hold additional water contamination, free water will fall to the bottom of the sample bottle. If the sample appears cloudy, allow it to sit for 5 minutes. If the sample clears from the bottom to the top, the cloudiness is due to dissolved air and the fuel is acceptable. If the sample clears from the top to bottom, the cloudiness is probably the result of water contamination. If the sample does not clear after 5 minutes, the sample should be warmed to at least 85°F (29.5°C) in water bath (see below) and observed. Water Bath procedures: the temperature of the sample. Immerse the capped bottle with sample in a small bucket or container of hot water (at least 25°F above sample temperature). Monitor sample temperature and appearance until either sample clears or the temperature increased 25°F, whichever occurs first.

Note: Additional HOT water may have to be added to adequately raise the sample’s temperature. If the sample remains hazy or cloudy, but there is no free water in the jar, then the fuel is acceptable for use.

(4) Record results in the fuel oil quality management (FOQM) Test Log.

6. Sampling and Testing. Due to the design of the re-fueling connections on MPFUBs, adherence to refueling sampling procedures apply to all craft re-fueling operations. The following procedures apply to local operating area naval bunkers and shall be used for ship to craft/shore to craft/truck to craft transfers, as a minimum, based on operational necessity.

a. Types of fuel sampling. Fuel sampling is categorized by where the sample is obtained, as follows:

(1) All-levels sample. Obtained by submerging a closed thief sampler to a point as near
as possible to the draw-off level, then opening the sampler and raising it at such a rate that it is nearly full as it emerges from the fuel (through a sounding tube).

(2) **Bottom sample.** Taken on the bottom surface of the tank at its lowest point. The bottom sample is usually obtained to check for water, sludge, scale, and other containments (through the sounding tube with thief sample, drain valve, or stripping connection).

(3) **Line sample.** Obtained from a designated location within the fuel system while the fuel is flowing (if applicable).

b. Per reference (h), chapter 541, Ship Fuel and Fuel Systems, MPFUB fuel oil service tanks are to be sampled 8 hours prior to use. The testing procedure is visual and the requirements are as defined in paragraph 5. If any evidence of sediment or water is found in the sample, the sample shall be given to the CHENG for determination of suitability for use. Any time the sample fails the “SUITABLE FOR USE” test, the tank should be stripped to remove the water or the fuel off-loaded.

c. Record results in the FOQM Test Log.

**Note:** Any contamination (water/sediment) must be minimized. Accordingly, fuel oil tank samples should be representative bottom samples, preferably taken from the stripping line sample connection. If this is not possible, the craft may sample the tanks from the sounding tube. However, when a sounding tube sample is taken and fails the test, a second sample from the stripping system should be taken to verify the contamination.

6. **FOQM Program Records.** Diesel engine FOQM Test Logs provide a method for maintaining a chronological record of the visual test results for all fuel receipts, transfers, and off-loads as well as the quality of fuel in the MPFUBs two service tanks prior to use. The logs are a tool used by the CHENG to ensure reliable operation of the main propulsion and ship service diesel engine fuel systems. Accurate recording of the test results and any required corrective actions are essential to establishing an effective FOQM program. The monthly FOQM Test Logs shall be retained for 2 years. Appendix E is provided and contains the following minimum information as per reference (o):

   a. Ship name, hull, and page number.

   b. Source of sample.

   c. Date in format day/month/year.

   d. Time in 24-hour clock basis.

   e. Test results, with appropriate unit (both pass and failed test results shall be recorded).
f. Any action taken because of the test result.

g. Where appropriate, enter findings in a remarks section. Findings should indicate any descriptions of unusual conditions found, and explanations of any test results which are out of limits.

h. When appropriate, remarks section shall indicate “resample” when new sample is immediately pulled from the same location of a previously failed sample.

i. Initials of person performing the test/procedure.

j. Submission, review, and approval signatures, as appropriate.

(1) A new log shall be initiated at the beginning of each month. The log shall include all test results for the two service tanks. Additional pages may be required and shall be numbered accordingly. The sections of the log shall be maintained as follows:

(2) Enter the date, time, and tank number for each of the following actions:

(a) Fuel receipt.

(b) Fuel transfers (off boat).

(c) Periodic (prior to use).

(d) Other (special situations not covered above).

(3) Enter the appropriate code as given on the back of the log.

(a) CSS denotes receipt of fuel from other than a USN or Defense Logistics Agency supplier under government contract. May require multiple (all level) samples and entries for each barge, tanker, or other type of fuel delivery vehicle.

(b) RS denotes a sample obtained from the deck connection at commencement of refueling. RS samples shall be taken for each additional barge, tanker, etc.

(c) R15 denotes a sample obtained from the deck connection every 15 minutes while refueling operations are in progress.

(d) RM denotes a sample obtained from the deck connection at the midpoint of refueling (if applicable).

(e) RE denotes a sample take from the deck connection at completion of the refueling.
A RE sample shall be taken for each separate barge, tanker, etc. supplying fuel during refueling operation.

(f) ARF (24 hours after refueling) denotes a sample taken from each tank refueled to ensure that any particulate or water in suspension has settled sufficiently and the fuel passes the “SUITABLE FOR USE” criteria.

(g) PTS denotes a sample taken to test the fuel in the service tank on suction within 8 hours prior to diesel light-off.

(h) WIP (Water Indicating Paste) denotes fuel tanks tested for the presence of water (if applicable).

(i) Other is used to indicate events related to refueling, casualty, or fuel use not covered by a specified code.

(j) Resample denotes a sample that was taken after tank(s) were stripped, due to a failed PTS clear and bright sample.

(4) For each fuel oil sample, record the type of sample/location (e.g., thief, bottom, in-line, or deck connection).

Note: Samples which contain visual particulate and/or water shall be brought immediately to the attention of the CHENG, who will perform the “SUITABLE FOR USE” determination.

(5) The Coxswain shall review the log entry, visually inspect the sample bottle, and initial the log. If water or sediment is noted the CHENG shall determine if the fuel is suitable for use, annotate the log, take appropriate action (i.e.: suspend refueling operations, strip the tank, isolated effected tank, etc.), and record actions in the remarks section of the log.

(6) Remarks. The remarks section shall describe significant events related to the fuel management. Additional pages for remarks shall be inserted as necessary. All remarks shall include the date, time, and other pertinent reference data. If a doubt exists as to whether or not an entry should be made, enter it. The following types of information shall be recorded understanding they are not all-inclusive:

(a) Source and type of fuel received if other than F-76.

(b) Results of any fuel oil sample failing the “SUITABLE FOR USE” test and the action taken.

(c) Guidance provided by the squadron staff concerning use of commercial fuels received in foreign ports failing the “SUITABLE FOR USE” test.
(d) Use of emergency substitute fuels and any visual test results.

7. Refueling procedures. All fueling and de-fueling operations shall be accomplished while moored or grounded in a well. Procedures listed below steps (a, b, and c) are intended to compliment appendix F and H.

a. Prior to delivery:

   (1) All fuel tanks shall be stripped of water and sediment per EOSS specific to each MPFUBs fuel system. When stripping is complete, verify and record level of fuel in fuel log and determine amount of fuel to be loaded.

   (a) The Craft Engineer shall obtain the fuel laboratory analysis report from the fuel oil supplier that provides flashpoint, American Petroleum Institute Gravity, water content, and sediment results. Enter the report in the fuel log. Laboratory analysis reports shall be retained in the fuel log for 2 years. The craft will draw a sample of fuel to be loaded and perform the “SUITABLE FOR USE” test requirements on sample.

   (b) Draw a 32-ounce sample bottle of fuel to be loaded, inspect per the clear and bright criteria of references (a) and (b). Enter this in the fuel log as the beginning sample. If possible, sample directly from the delivery hose. The location of where the sample can be drawn may differ from supplier to supplier because of their configuration and system setup. If it is not possible, a representative sample of the supply tank needs to be obtained. Either thief or bottom sample the delivery tank, or draw a sample from the delivery pumping equipment. All testing must be completed and satisfactory prior to taking on fuel.

b. During refueling operations:

   (1) Draw a 32-ounce sample at the beginning, midpoint, and endpoint. Per reference (h), chapter 541, Ship Fuel and Fuel Systems, samples shall be drawn for clear and bright inspection and results shall be documented accordingly in the refueling FOQM log appendix E.

   (2) Per reference (h), chapter 541, Ship Fuel and Fuel Systems, fuel oil service tanks shall not be filled beyond 85 percent in port and 95 percent capacity at sea or embarked in the well deck.

   (3) If at any time during transfer the fuel’s appearance shows free water, hazy or milky, or contains solids that cover the bottom of the sample bottle, the refueling shall be suspended until the supplier can remedy the problem and verify the quality of the fuel oil being delivered.

c. After delivery:

   (1) Boat Engineer shall strip fuel tanks 24 hours after receipt of fuel.
(2) Boat Engineer shall perform water level/water indicating paste test on all fuel tanks weekly.

(3) Record all test results in the FOQM log appendix E.

Note: When fuel is procured from a commercial supplier or in foreign ports not under government contract (local purchase) and who does not provide a fuel oil analysis report, visual examination of the fuel, and if necessary, stripping must be more rigorously conducted. In particular, thief samples at all levels of the fuel oil tanker, barge, or other fuel oil container shall be taken, if possible, and visually tested for adherence to the more stringent "CLEAR AND BRIGHT" criteria of no water and no visible sediment. Untested fuel, which appears to contain water or sediments, shall be reported to the cognizant command by the most expeditious manner (phone, message, etc.). The boat engineer should include the results of stripping and an assessment on the reliability/safety of the fuels use ("SUITABLE FOR USE" test). Any guidance received from the CHENG shall be documented in the FOQM Test Log and/or Engineering Log, as applicable.

8. Damage Control. The BRAVO flag will be displayed on the main mast or highest stanchion available. The smoking lamp will be out throughout the boat regardless of fuel type during the entire refueling/de-fueling evolution. One CO2/purple-k/aqueous fil forming foam extinguisher will be on station.

9. Pollution Control. The craft shall be oil boomed (when available) to prevent the spread of an oil spill, should one occur. Oil spill response kits shall be made readily available at or near the fueling station.

10. Responsibility:

a. CO shall:

(1) Ensure compliance with directives specified in this document.

(2) Assign a fuel oil quality Program Manager.

(3) Provide final approval to commence all fuel oil transfers.

b. Division Officer/LCPO shall:

(1) Ensure compliance with directives specified in this document.

(2) Monitor FOQM training once per quarter at a minimum.

c. Boat Coxswain shall:
(1) Ensure compliance with directives specified in this document.

(2) Review and sign the fuel oil sampling logs (appendix E) monthly.

(3) Conduct FOQM training on the boat quarterly, at a minimum.

(4) Ensure prompt corrective action to FOQM program deficiencies, to include fuel oil quality casualties.

(5) Sign the fuel oil system checklist (appendix H) and submit to the CO/CDO for approval prior to all fuel oil transfer evolutions.

(6) Contact the CO/CDO prior to and upon completion of all fuel oil transfer evolutions.

d. Boat Engineer shall:

(1) Ensure compliance with directives specified in this document.

(2) Review and initial all fuel oil sample results recorded on appendix E, daily, if samples, and testing was conducted.

Note: Any test results on the lube, oil, quality management (LOQM) log that indicate out of specification reading shall be circled in red, and corrective action being taken shall be documented in the remark section of the FOQM logs.

(3) Sample and test fuel oil service tank within 8 hours prior to placing on suction and log results in the FOQM log.

(4) Initiate prompt action as necessary to correct un-satisfactory (UNSAT) conditions; noting such action on the FOQM log.

(5) Notify the Coxswain immediately of any UNSAT fuel oil sample results and the course of action to correct.

(6) Notify the CHENG of any UNSAT fuel oil sample results and the course of action to correct.

(7) Verify and sign the fuel oil system checklist, and submit to the Boat Coxswain.

e. Chief Engineer shall:

(1) Ensure compliance with directives specified in this document.
(2) Monitor the operation of the program through routine review of fuel oil logs and records.

(3) Ensure all key personnel receive adequate training in the intent, and operational procedures of the FOQM program.

(4) Document fuel oil quality issues and actions in the fuel oil quality test log (appendix H), and Engineering log as appropriate.

(5) Review the fuel oil quality test log daily, taking prompt and effective action to correct program deficiencies.

(6) Maintain applicable fuel oil inventory, test reports, receipts, and related documentation on file and available for review. Maintain files on board for 2 years.

(7) Be responsible for proper receipt and storage of fuel oil following the guidelines of this instruction as augmented by Engineering Operational Sequencing System (EOSS) and Planned Maintenance System (PMS).
APPENDIX D
LUBE OIL HANDLING, TESTING PROCEDURES, AND QUALITY CRITERIA

1. **Receipt of new oil.** New oil is delivered in bulk as packaged products in drums, pails, or cans. The recipient of delivered oil should check for intact seals on commercial trucks and verify delivery documents. If oil quality or quantity is questionable, do not accept the oil until the problem is resolved with the activity personnel responsible for the delivery. Delivery by Navy trucks should include a laboratory test report of lube oil quality. Laboratory test reports shall be maintained in the lube oil log for a period of 2 years.

   a. Inspect the delivered oil for appearance. New MIL-PRF-2104 (15W 40) oil delivered shall be bright and contain no particulates or free water.

   b. Packaged lube oil is normally sealed and the containers are marked to identify the contents. Do not use the oil if the container markings are unclear. 55-gallon drums are fitted with cap seals on the bungs. If these seals are not intact do not use the oil until the quality can be verified by chemical analysis. When initially opening new drums and pails, take a thief sample and visually inspect for quality. If the sample appears suspect, do not use until the oil quality has been established.

   c. Per reference (h), chapter 262, lubricating oils, greases, specialty lubricants, and lubrication systems, do not add packaged lube oil directly into operating machinery. All packaged lube oil shall be filtered through a 60 mesh or finer screen when servicing equipment.

   b. **Sampling and Testing Oils:**

      (1) All engine sumps shall be sampled daily when operating and tested for viscosity. Record test results on the respective equipment lube oil log.

**WARNING**

The lube oil shall be changed when fuel dilution is 3.5 percent or greater. Fuel dilution greater than 5.0 percent is unacceptable and cause for serious concern about the fitness of the engine. The proper analysis of test results depends upon the size and design of the engine from which a sample has been taken. The normal range of the fuel dilution is from less than 0.5 percent to 2 percent. Fuel dilution greater than 2 percent may indicate a leak or faulty injection equipment that requires immediate correction. Refer to the table D-1 below for in-service viscosity and fuel dilution/thickening limits for diesel engines per reference (m).
<table>
<thead>
<tr>
<th>Status</th>
<th>Fuel %</th>
<th>Viscosity @ 40°C cst</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commercial SAE 40 (1)</td>
<td>MIL-PRF-9000 (MS 9250)</td>
<td>MIL-PRF-2104 (15W-40)</td>
</tr>
<tr>
<td>Acceptable</td>
<td>0 to 1.9</td>
<td>120 to 165</td>
<td>90 to 200</td>
</tr>
<tr>
<td>Marginal</td>
<td>2.0 to 3.4</td>
<td>108 to 119</td>
<td>N/A</td>
</tr>
<tr>
<td>Warning</td>
<td>3.5 to 4.9</td>
<td>97 to 107</td>
<td>N/A</td>
</tr>
<tr>
<td>Unacceptable</td>
<td>5.0 and greater</td>
<td>&lt;97</td>
<td>&lt;90</td>
</tr>
<tr>
<td>Marginal condition (due to thickening by soot)</td>
<td>N/A</td>
<td>&gt;165</td>
<td>&gt;200</td>
</tr>
</tbody>
</table>

Note (1) For ships using commercial SAE 40 oils with a typical viscosity lower than 133 and a viscosity index higher than 105 (i.e. Mobil DELVAC 1640), use only the % fuel requirement column rather than the detailed viscosity column.

Table D-1 In Service Viscosity and Fuel Dilution/Thickening Limits for Diesel Engines

(2) Lube oil standards for viscosity testing shall be drawn prior to filing the sump. Standards shall be maintained by the CHENG in a suitable container, or storage rack.

(3) Per reference (h), chapter 262 and 541 a sample must be provided for spectrographic, physical and chemical analysis, and per reference (h), chapter 262, 541, and (16) local acidity test shall be conducted quarterly or every 100 (+10) hours for Main Propulsion Diesel Engines and Generators. Record the results on the respective equipment lube oil logs.

(4) Per reference (m), marine gear sumps have no specific requirements for sampling and testing shall be changed annually or every 500 (+50) hours.

(5) Any piece of equipment experiencing a casualty shall be sampled per Engineering Operational Casualty Control (EOCC).
c. Oil use limits.

(1) Oil that exceeds the use limits for viscosity or fails the acidity test shall be drained, and the system re-filled with new oil. In the event of an UNSAT viscosity test due to fuel dilution, the source of the fuel dilution must be identified and repaired before the oil and filters are changed and the engine is placed back in service.

(2) Per reference (h), chapter 262, routine oil changes shall be scheduled and conducted semi-annually or every 250 (±25) hours of operation.

d. Record keeping and logs.

(1) Each individual piece of equipment containing lubricating oil shall have its own sampling and testing log appendix J.

(2) Each operational sump transfer shall be logged on the equipment log appendix J. Enter the transfer in the remarks section on the back of the equipment logs. For example:

<table>
<thead>
<tr>
<th>Date:</th>
<th>Time:</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 JAN 16</td>
<td>0800</td>
<td>Transferred one gallon of 15W 40 to NR 2 SSDG Sump.</td>
</tr>
</tbody>
</table>

(3) The remarks section shall describe significant events related to lube oil management. Additional pages for remarks shall be inserted as necessary. All remarks shall include the date, time, and other pertinent reference data. If a doubt exists as to whether or not an entry should be made, enter it.

(4) Lube oil logs shall be closed out at the end of each month by the CHENG, submitted to the Coxswain for review and signature. The CHENG will file in the LOQM binder and retain for 2 years.

e. Waste Disposal:

(1) MPFU Rs have no waste oil storage by design. Boats are permitted to stow (3), 5 gallon containers on deck as a waste oil receptacle. Upon completion of the oil change, waste oil shall be disposed of per reference (t) or the embarking vessels instructions.
## APPENDIX E

**MONTHLY FUEL OIL QUALITY MANAGEMENT LOG**

### 40FT MPFUB

MONTHLY FUEL OIL QUALITY MANAGEMENT LOG

<table>
<thead>
<tr>
<th>CRAFT#</th>
<th>HULL IDENTIFICATION#</th>
<th>NAVOPSPTCEN</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>SAMPLE CODE</th>
<th>Source Port(P), STBD(S), Refueling Schedule (RS)</th>
<th>VISUAL Clear &amp; Bright (C/B), UNSAT (U)</th>
<th>STRIP Yes (Y), No (N)</th>
<th>Boat Engineer</th>
<th>LPO/OIL KING</th>
</tr>
</thead>
<tbody>
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</table>
Notes:

SAMPLE CODES:
- CSS: (local purchase)
- PTS: (PRIOR TO PLACING ON SUCTION) GOOD FOR 8 HOURS.
- R: (Resample)
- RS: (Refueling Start)
- RM: (Refueling Midpoint)
- R15: (Refueling 15 minute)
- RE: (Refueling End)
- ARF: (24 Hours post refueling)
- WIP: (Water Indicating Paste)
- OTH: (Other)

Note 1: PTS samples are drawn from low point drains in accordance with EOSS SNOK.
Note 2: PTS is required on both tanks if aligned. Log each sample individually.
Note 3: Visuals must be clear and bright or stripped until clear and bright IAW EOSS.

Cheng/LCPO Monthly Review: __________________________ Date: __________________________
APPENDIX F
FUELING BILL

1. **Purpose.** Prescribe standard procedures for fueling MPFUB to minimize the risks and hazards to personnel, equipment, and the environment.

2. **Procedures**
   a. **The Coxswain shall:**
      
      (1) Contact the CO or CDO prior to commencing and upon completion of all fuel transfer evolutions.

      (2) Moor the MPFUB to the pier with lines rigged for quick release.

      (3) Be overall in charge of the fueling evolution and safety.

      (4) Ensure the following watchstations are manned prior to giving the Engineer permission to commence fueling:

         | Watchstation  | Location | Duty           |
         |---------------|----------|----------------|
         | Coxswain      | Conn     | Safety observer|
         | Engineer      | Well Deck| Sounder/Operator|
         | Crewman #1    | Well Deck| Fire watch     |

      (5) Monitor fuel oil tank level indicator (TLI) from conn.

   b. **The Boat Engineer shall:**

      (1) Raise the BRAVO flag prior to pumping and ensuring that the smoking lamp is out.

      (2) Ensure the grounding strap is received from the pier, and is properly connected to the MPFUB and the Fueling station, if applicable.

      (3) Ensure the fueling stations have placed a boom around the craft, if applicable.

      (4) Ensure absorbent materials are placed in the drip pan around the fueling cap and additional material is available to use in the case of spills.

      (5) Notify the Coxswain when fueling commences, ceases, and is completed.

      (6) Receive fuel aboard at a safe rate of flow.
COMNAVRESFORCOMINST 3120.1D
14 Feb 2019

(7) Maintain positive communications with the pumping station. No pumping will occur until Engineer reports (a) through (d) have been completed and sent to Coxswain.

(8) Take fuel samples and maintain the fuel sample log in accordance with the FOQM program. Request fuel analysis report from transfer station, and record and attach into the monthly FOQM log.

c. Engineer shall:

(1) Take initial soundings, reporting results to the Boat Engineer.

(2) Take continuous soundings while receiving fuel and report results to the Boat Engineer.

(3) Take final soundings and report results to the Boat Engineer.

d. Crewman 1 shall:

(1) Assist as needed in preparing craft for fueling.

(2) Maintain fire watch on deck during refueling with a CO2 extinguisher.

e. Precautions:

(1) Never smoke in fuel transfer or storage areas.

(2) Prohibit any open flames, hot work, or the use of non-explosion proof fixtures or equipment in the vicinity of fuel transfer or storage areas.

(3) Do not discharge fuel or oily waste over the side.

(4) Avoid physical contact with fuel.

(5) In pier side, stop all fuel transfer operations during electrical storms or thunderstorms.

(6) Do not fuel craft with passengers aboard.

(7) Ensure two plastic pails are placed under the fuel vents in case of overflow.

(8) Provide rags to prevent spills around fuel fittings, wiping off sounding rod, etc.
(9) Make sure CO2 extinguishers are placed on deck.

(10) Re-Fueling will only take place between the hours of sunrise and sunset.
APPENDIX G
FUEL OIL SYSTEM CHECKLIST

1. The following statements are general in nature and are intended to serve as a guide for preparation to the refueling evolution. All additional requirements or details shall be added to this list by the Coxswain. It must be remembered, that these are minimum requirements and there may be other requirements of the assigned personnel, based on the situation as it develops.

2. In port, fuel oil tanks will be filled to 95 percent capacity.

3. Use appropriate docking plans to identify location of all overboard discharges affected by the filling evolution.

<table>
<thead>
<tr>
<th>VERIFIED BY BOAT ENGINEER</th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory and inspect fuel sounding rod and deck wrenches.</td>
<td></td>
</tr>
<tr>
<td>Ensure all tank level indicators are energized. Verify accuracy of all indicators by comparing with actual tank soundings.</td>
<td></td>
</tr>
<tr>
<td>Verify that fill cap on tank NOT designated to receive fuel is secured tightly.</td>
<td></td>
</tr>
<tr>
<td>Verify that all tank vents are open.</td>
<td></td>
</tr>
<tr>
<td>Ensure bilges and drip pans are free of fuel and oil.</td>
<td></td>
</tr>
<tr>
<td>Ensure all valve wheels are installed and labelled. Ensure remote operators are installed and operational (If applicable).</td>
<td></td>
</tr>
<tr>
<td>Identify/inspect fuel oil tanks and overflow areas for debris and accessibility.</td>
<td></td>
</tr>
<tr>
<td>Ensure adequate supply of rags on station.</td>
<td></td>
</tr>
<tr>
<td>All deck drains in the area of fuel tank vents and refueling connections shall be blocked during all fueling evolutions.</td>
<td></td>
</tr>
<tr>
<td>Conduct communications check. Take initial tank soundings of tanks being refueled.</td>
<td></td>
</tr>
</tbody>
</table>

Report all discrepancies to the Coxswain for determination to proceed with the refueling evolution.

<table>
<thead>
<tr>
<th>Initial Soundings</th>
<th>Port Gallons:__________</th>
<th>STBD Gallons:_______</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated amount of fuel to be received</td>
<td>Port Gallons:__________</td>
<td>STBD Gallons:_______</td>
</tr>
<tr>
<td>Actual amount of fuel received</td>
<td>Port Gallons:__________</td>
<td>STBD Gallons:_______</td>
</tr>
<tr>
<td>Coxswain:__________ Date:_______</td>
<td>CO/CDO:__________ Date:_______</td>
<td></td>
</tr>
</tbody>
</table>
## APPENDIX H
MONTHLY LUBE OIL MANAGEMENT LOG

### LUBE OIL LOG FOR MIL-PRF-2104, 15W-40

<table>
<thead>
<tr>
<th>EQUIPMENT:</th>
<th>S/N:</th>
<th>CRAFT:</th>
<th>DATE:</th>
<th>PAGE: of</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>TIME</td>
<td>SAMPLE CODE</td>
<td>SUMP LEVEL</td>
<td>FUEL DILUTION(%)</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
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</table>

Enclosure (1)
### SAMPLE Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>NOAP Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Daily</td>
<td>AA</td>
<td>Normal</td>
</tr>
<tr>
<td>W</td>
<td>Weekly</td>
<td>ZZ</td>
<td>Abnormal</td>
</tr>
<tr>
<td>B</td>
<td>Biweekly</td>
<td>WA</td>
<td>Water</td>
</tr>
<tr>
<td>M</td>
<td>Monthly</td>
<td>NN</td>
<td>Acidity</td>
</tr>
<tr>
<td>U</td>
<td>Abnormal</td>
<td>CS</td>
<td>Change Oil</td>
</tr>
</tbody>
</table>

Submitted By (Boat ENG) | Reviewed By (Coxswain) | Approved By CHENG

---

II-2

Enclosure (1)
<table>
<thead>
<tr>
<th>1. NAVOPSPTCEN:</th>
<th>2. Boat Hull Number:</th>
<th>3. Date:</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

4. Originator: **TYPED OR PRINT NAME (NAME, RANK, BILLET/CODE)**

5. ISIC concurrence required  □ YES  □ N/A

6. System/Component/Location Description:

7. References:

8. Applicable specifications:

9. Situation/Degree of Non-Compliance


11. Date answer requested by:  


**ISIC**

13. APPROVED  □ DISAPPROVED  □  14. TEMPORARY  □

16. ISIC: PRINT NAME (NAME, RANK, BILLET/CODE)  

17. DATE

13. COMMAND  

19. SIGNATURE

**TYCOM**

20. CONCUR  □  21. TEMPORARY  □

23. TYCOM: PRINT NAME (NAME, RANK, BILLET/CODE)  

24. DATE

25. APPROVED  □ DISAPPROVED  □  26. SIGNATURE

Exhibit H-2 Routing