UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION NEW RIVER
PSC BOX 21001
JACKSONVILLE, NC 28545-1001

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OPS
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AIR STATION ORDER 10345.1K

From: Commanding Officer, Marine Corps Air Station New River
To: Distribution List

Subj: FUEL DIVISION STANDING OPERATING PROCEDURES

Ref: (a) NAVAIR 00-80T-109
(b) MIL-STD 3004D W/Ch1
(c) ASTM Method D4057
(d) DoDD 4140.25-M of 25 June 2015
(e) NAVFAC MO-230 of 1 August 1990
(f) MIL-HDBK 201 Series
(g) DLA Energy Policies
(h) SOP Fuels Maintenance ltr 4000 of 15 January 2015
(i) MCO 5100.19F
(j) DoDD 4140.25 of 25 May 1980
(k) ASO 3710.41A
(l) ASTM D-1250-80
(m) NATOPS Aircraft Manual

Encl: (1) Fuel Division Standing Operating Procedures

1. Situation. This Order establishes a Marine Corps Air Station (MCAS) New River comprehensive and standardized method for the management of the Fuel Division and provides guidance for the operation, receipt, storage, quality assurance (QA), accountability, and issue of fuel within MCAS New River.

2. Cancellation. Air Station Order 10345.1J.

3. Mission. MCAS New River provides tenant and transient aircraft with mobile (cold) refueling, hydrant (hot) refueling, and defueling to meet operational and training mission requirements.

4. Execution

a. Commander’s Intent and Concept of Operations

(1) Commander's Intent. This document shall be used by all Fuel Division personnel under the operational control of MCAS New River and tenant commands utilizing MCAS New River fueling services.

(2) Concept of Operations. Station and tenant command personnel associated with the operation of the Station Fuel Division will be familiar with the contents of this Order and the references.

b. Tasks

(1) Commanding Officer, Headquarters and Headquarters Squadron. Assume administrative control of the Station Fuel Division.

(2) Station Plans and Operations (S-3). Assume operational control of the Station Fuel Division.

(3) Station Fuel Division

(a) Maintain occupational skills and military occupational specialty qualifications.

(b) Provide system of checks and balances to eliminate sources of ignition and control fuel vapor generation.

(c) Provide sufficient procedures, training, and personal protective equipment (PPE) to avoid and minimize health hazards associated with Jet Propellant (JP) 5 exposure.

5. Administration and Logistics. Recommendations concerning the contents of this Order shall be forwarded to Station S-3.

6. Command and Signal

a. Command. This Order is applicable to MCAS New River and its tenant units.

b. Signal. This Order is effective the date signed.

C. V. EBITZ

DISTRIBUTION: B

LOCATOR SHEET

Subj: FUEL DIVISION STANDING OPERATING PROCEDURES

Location: _____
(Indicate the location(s) of the copy(ies) of this Order.)

DEC 0 6 2021

RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Entered	Signature of Person Incorporated Change

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Chapter 1

Safety and Fire Prevention

1. Safety in Fuel Handling Operations. Reference (a) identifies specific procedures in the safety of fuel handling operations. The greatest danger associated with petroleum products is during handling operations. Failure to comply with one safety precaution could jeopardize the entire fueling operation; resulting in possible loss of life, injury, and/or destruction of valuable property. Training of fuel handling personnel shall be directed toward overcoming initial fear through knowledge and respect for potential danger. A greater source of danger is the possibility of experienced personnel becoming overconfident, complacent, and careless. Therefore, continual surveillance of dangers involved and careful supervision of operating procedures must be followed at all times.

2. Sources of Ignition

a. The elimination of all sources of ignition is the most important method of preventing fires and/or explosions in fuel handling operations.

b. One of the primary sources of ignition is static electricity. To ensure the safe discharge of static charges relevant to fuel operations, all personnel shall:

(1) Prohibit the top-loading or splash-filling of any vessel.

(2) Refill filter(s)/separator(s) when drained.

(3) Keep tanks free of foreign objects; such as small conductive objects that can be floated by foaming fuel, thereby becoming an unbonded charge collector. This does not prohibit suspending thermometers or samplers in tanks; however, these devices must be removed prior to any receipt.

(4) Always electrically bond the refueling equipment to the aircraft or truck into which the fuel is being loaded.

(5) Conduct grounding for all hot refueling operations.

(6) Check the electrical resistance of single point nozzle monthly, in accordance with (IAW) the nozzle manufacturer's technical manual.

(7) Bond overwing (gravity) refueling nozzles to the aircraft using a separate pigtail before removing tank caps.

(8) Attach bonding cables to aircraft using the plug and jack method whenever available.

(9) Inspect bonding and ground cables, clamps, and plugs on a daily basis.

(10) Cease all refueling/defueling evolutions when electrical storms are within a ten nautical mile radius.

(11) Don and properly wear non-static producing and flame retardant clothing while offloading, transferring, issuing, gauging, sampling, testing, and overall involvement of handling fuel, per reference (a).

(a) These clothing items are provided and issued through the Fuel Division supply system per the direction of the Responsible Officer (RO).

(b) Clothing will be of the same like and brand for uniformity, structure, procurement and replacement; such as long sleeve shirt, pants, jacket, coveralls, or Marine Corps issued flight suit.

(c) Personal clothing and Marine pattern are not authorized.

c. Eliminate Sources of Ignition. The elimination of all potential sources of ignition is the responsibility of all fuel handling personnel. Specific procedures and precautions to prevent sources of ignition are as follows:

(1) Post and observe "No Smoking" signs.

(2) Prohibit fuel personnel from wearing shoes with exposed nails or metal plates. Personnel should periodically inspect footwear for serviceability.

(3) Fuel personnel shall not carry or wear loose metal objects during fuel handling operations.

(4) Exhaust piping on fueling equipment shall be inspected daily to ensure the integrity of the system.

(5) Prohibit smoking, spark, or flame producing operations, open flames, or hot work within 50 feet of any fuel handling operations.

(6) Do not carry lighters, matches, and e-cigarettes.

(7) Defer all repair work on fueling equipment during fuel handling operations.

(8) Do not use drop, floodlights, or any other lighting; except those approved by proper authority for use in hazardous locations. Always assume fuel vapors in a tank or above a pool of fuel are in the flammable range.

(9) Never fuel or defuel during electrical storms; refer to reference (b) for guidance.

(10) Ensure no repair or maintenance work is being conducted on the aircraft before beginning the refueling or defueling operation.

(11) Fuel spillage of any size presents an increased possibility of fire and must be controlled through good housekeeping clean-up procedures.

(12) Do not conduct aircraft fuel handling operations within 300 feet of ground radar equipment.

(13) Internal combustion engines, operating within 50 feet of fuel handling operations, should be equipped with spark-arresting mufflers.

(14) No engines within 50 feet of refueling or defueling operations shall be started. This includes aircraft being serviced within a 50-foot radius.

(15) Aircraft and all unnecessary radio equipment shall be switched off before fueling operation commences.

(a) If it is necessary that equipment be warmed-up prior to an immediate launch, ensure it is not transmitting.

(b) The only exception to this rule occurs during hot refueling. Hot refueling operations require the pilot to maintain radio contact with the tower at all times.

(16) Ensure Liquid Oxygen (LOX) operations are not being performed and LOX equipment is not located within 50 feet of fuel handling operations.

(17) Open valves slowly to avoid or minimize any splashing in tanks.

(18) Ensure pump suctions are flooded before starting in order to (IOT) avoid introducing air into the fuel system. Air in the fuel system can produce a fuel explosion in filter separators and/or cause pump damage. Truck off-load systems are especially prone to this problem.

(19) Conduct overwing refueling only as a last resort and only if operational necessity or aircraft design dictates.

3. Reducing or Controlling Vapor Generation. Fuel vapors are heavier than air and collect in low places, such as pits, sumps, and sanitary sewage systems. Common sense, attention to duty, and good sound judgment are essential in the handling of petroleum products. The following procedures will help prevent fires by reducing or controlling vapor generation:

a. Do not refuel/defuel aircraft, drain aircraft, or conduct fuel-handling operations in a hangar or any confined area, except for the removal and extraction of samples from aircraft low point drains. This does not apply to structures specifically designed for these types of operations.

b. Keep all fuel containers; such as aircraft fuel tanks or vessels closed except when necessary to open for actual operation.

c. Never operate/move fuel equipment with a leak in the tank, piping, or other equipment.

d. With the exception of draining and sampling procedures, do not handle aviation fuel in open containers.

e. Treat empty containers that formerly held fuel as though they still contain fuel. These containers still contain vapors and are dangerous.

f. Avoid spilling fuel during fuel handling operations. Spills present one of the greatest sources of vapor generation. Take immediate action to clean—up any spill that occurs. Report all leaks, of any size, to the Fuel Division.

g. Utilize good housekeeping procedures and keep all equipment clean and in good mechanical condition.

h. Never dispose of fuel in storm drains or sanitary sewage systems.

i. Properly dispose of oily waste or rags immediately after use.

j. Never top load/splash-fill tanks. This does not prohibit overwing refueling of aircraft that are solely configured for this operation.

k. Only use proper solvent cleaning agents. Never use gasoline or aircraft fuel as a cleaning agent.

4. Procedures for Avoidance/Minimizing Health Hazards of Fuels. The following list of procedures will minimize the dangers to the health of fuel handling personnel.

a. Do not enter enclosed areas where fuel vapors are present. Contact your Safety Officer and/or Gas-Free Engineer for guidance outlined in reference (b).

b. Stay on the windward side or upwind side of the spill when it is necessary to remain in an area where a large spill has occurred.

c. Stay on the windward side or upwind side when conducting fuel-handling operations where the formation of vapors is unavoidable, such as at a truck fill-stand.

d. Keep to an absolute minimum the amount of time spent breathing fuel vapors. Good ventilation of workspaces is essential.

e. If a feeling of dizziness or nausea occurs, stop the fuel handling operation and move to a fresh air location immediately.

f. Avoid skin contact with liquid fuels and tank water bottoms containing Fuel System Icing Inhibitor (FSII). If this happens, immediately wash with soap and water.

g. Never wash hands in gasoline or aviation fuels.

h. Remove fuel-soaked clothing or shoes at once.

i. Avoid splashing fuel in eyes or rubbing eyes with fuel soaked rags or hands.

(1) Immediate action for fuel in eyes:

(a) Do not panic.

(b) Flush eyes with cool water for 15 minutes.

(c) No matter what the quantity of fuel in eyes, seek medical attention as soon as possible.

(2) Wear protective eye goggles when working in hazardous situations, handling hoses, or other hazardous equipment.

j. Wear eye protection and clothing leaving a minimum amount of skin exposed during fuel handling operations.

k. Only wear authorized footwear that completely covers and protects the feet IOT provide protection against fuel spills and fires. Shoes made of fabric or other absorbent materials are not authorized.

l. Never perform fuel-handling operations alone. A buddy system is the best policy. In the event of an accident, especially when fuel is splashed in the eyes, a fellow employee can aid or obtain emergency assistance immediately.

5. Electrical Continuity Inspection Program. The Fuel Division safety representative will conduct a monthly bonding cable continuity inspection and document the results.

Chapter 2

Quality Assurance and Inspection of Petroleum Products

1. Quality Control and Surveillance of Petroleum Products

a. Reference (b) provides the minimum standards for quality surveillance of all Petroleum, Oil, and Lubricants. It is the responsibility of all activities receiving, storing, issuing, and consuming petroleum products to monitor and preserve fuel quality. Quality surveillance is found in all areas of distribution from initial procurement to final consumption. The quality of fuel and safety are the most important factors in petroleum handling operations.

b. Aviation fuels are the most critical fuels and require the highest quality standards. It is essential all aviation fuel dispensed to aircraft meet military specifications and/or deterioration limits.

2. Testing Requirements. The following testing requirements will be performed IAW references (a) and (b) by quality surveillance personnel as they apply to the following products and operations.

a. Tank Truck Receipts

(1) Aviation Turbine Fuel (ATF), Grade JP-5

(a) Per reference (b), upon arrival of tank trucks, inspect the seals to ensure they are intact and all numbers correspond to those on the shipping document. After connections have been made and fuel flow initiated, immediately take a sample from the manifold coupling (nozzle) and conduct the following tests:

1. American Petroleum Institute (API) gravity.

2. Visual color.

3. Appearance.

(b) Per references (a) and (b), if the product is clean and bright in appearance and the API gravity is within 0.3-0.5 degrees of the shipping document (DD Form 250, Material

Inspection and Receiving Report) or delivery notice receipt of the product shall be continued. A second sample shall be taken and tested for:

1. Particulates (visual).

2. Free-water (visual).

3. Flash point (JP-5 and JP-8).

4. FSII (turbine-fuels only).

(c) Per reference (a), if either manifold sample fails the above listed test requirements; product receipt shall be halted and an all-level sample shall be obtained from the tank truck's compartment.

1. In the case of excessive particulates or free-water, the all-level sample shall be tested using the Combined Contaminated Fuel Detector (CCFD) and/or Free Water Detector (FWD) as appropriate.

2. If the resample contamination exceeds 2.0 milligrams/one solids or ten parts-per-million water and the product must be received, additional sampling/testing will be required downstream of the tank and filter separator to ensure contamination is reduced to acceptable levels through settling and filtration.

3. If there is a repeat flash point failure, notify the QA Representative at the point of origin.

(d) For multiple receipts from the same supplier for the same source/tank, and the same tank truck, only the first delivery of the day needs to be tested for flash point and a retention sample kept. All required tests are referenced in Chapter 2 paragraph 2a(1)(b).

(2) Alternate Procedure. An alternate procedure is to take an all-level sample and conduct the tests, listed in Chapter 2 paragraph 2a(l)(b), prior to initiating fuel flow.

b. Defuels. Defueled ATF, Grade JP-5 shall not be returned to ready stocks until a sample is obtained from the defueler's tank compartment and tested to ensure the flash point meets

and/or exceeds 140 degrees Fahrenheit and the API is within the proper range.

c. Fuel Issued to Aircraft

(1) Per reference (a), fuel in mobile refuelers, direct fueling systems, and any other shore-based dispensing equipment shall be recirculated through the equipment's filtration system, hose, and aircraft refueling nozzle back to the tank every 24-hour period prior to the first refueling. During recirculation, the fuel shall be sampled at the nozzle and visually tested for:

(a) Appearance.

(b) Color.

(c) Free water (daily).

(d) Particulates (weekly).

(2) At least once a week the samples from each refueling system shall be tested for particulates and FWD utilizing the CCFD.

(3) Weekly spot-checks will be conducted on refueling systems to ensure FSII levels remain within specification. As long as the fuel is tested upon receipt and contains between 0.10-0.15 percent volume FSII, monthly spot-checks on each storage tank and refueling system will be sufficient to identify any problem.

d. Bulk Storage Tanks. Per reference (b), personnel shall wait a minimum of thirty minutes after receipt of any type of fuel to allow electrostatic charges to dissipate before gauging or sampling. Two all-level samples will be obtained after the ATF, Grade JP-5 storage tank becomes full or as directed and tested for:

(1) Color.

(2) Appearance.

(3) API gravity.

(4) Particulates (visual).

(5) Free water (visual).

(6) Flash point.

(7) FSII.

3. Sampling Procedures. Proper sampling of petroleum products is as important to quality surveillance as proper testing. Improper containers, poorly drawn samples, or mishandled samples can cause laboratory results to be meaningless or worse, misleading. Samples are as good as the sampler. The following are basic procedures to obtain satisfactory samples. Refer to reference (d) for specific sample requirements and types.

a. The sampler's hands are required to be clean and shall wear fuel resistant gloves when sampling.

b. Clear glass bottles with caps, ample containers, and sampling equipment should be flushed with the product being sampled several times (twice minimum).

c. Samples should be taken with the system operating at normal flow.

d. Fill sample containers to approximately one-half inch from the cap line to allow for product expansion.

e. Promptly secure the cap and protect the sample from light.

4. Identification of Correlation Samples. Procedures for proper identification of samples set forth in reference (b) are mandatory to ensure test results can be associated to the sample submitted. The following information is required for sample identification and labeling:

a. The originating activity's name, address, point of contact, and phone number.

b. Sample serial numbers; numbered consecutively by year and item number provide accurate identification.

c. Type of fuel sampled.

d. Date sample taken.

e. Approximate time the sample was taken.

f. The source of sample; nozzle sample, refueler number, or tank number.

g. Name of the person who drew the sample.

h. Classification of the sample and test(s) is required.

5. Analysis Log. An official log will be maintained on all samples conducted.

6. Interpretation of Test Results

a. Aviation fuel must be clean and bright and contain no visible or detectable free water.

b. When off-specification fuel is identified, the refueling truck or other source of fuel will be placed out-of-service pending investigation, and any corrective actions will be completed prior to being placed back on-line.

Chapter 3

Petroleum Accountability

1. Petroleum Accountability. References (d) through (e) outline guidance for proper accounting of petroleum products. Accounting for bulk petroleum products is unlike any other inventory control procedure in that fuel expands and contracts with temperature change; therefore, reflecting a potential for daily loss or gain in volume. The following procedures shall be implemented IOT maintain proper inventory control:

a. All fuel transactions will be accompanied with an air card or vehicle identification link key assigned to the aircraft, vehicle, or piece of equipment receiving fuel.

b. Bulk issues, regardless of the gallon amount, will be accounted for and billed as net amounts once corrected to 60 degrees Fahrenheit IAW reference (l) Volume II, tables 5B and 6B.

c. Individual issues to aircraft, regardless of quantity, will be accounted for and billed as net amounts obtained from meter readings.

d. All receipts will be accounted for as net amounts.

e. All defueled aviation fuel tested on-grade/suitable for use will be Returned to Bulk (RTB).

2. Daily Reporting and Reconciliation. All transactions are imported into the Fuel’s Automated Management System daily to initiate the billing process for each previous day's transactions. In addition, all issue, credit, and receipt transactions are submitted to the Defense Logistics Agency (DLA) via the internet using the Fuels Manager Program. A copy of all daily transactions are available to the appropriate Marine Aircraft Logistics Squadron section in order to advise them of the previous day's fuel issue and credit transactions.

3. Fuel Transaction Folders. Fuel Transaction Folders will be maintained daily by the accounting section reflecting:

a. Opening balance to include line-fill quantities.

b. Daily issues.

c. Receipts.

d. Closing balance.

4. Inventory

a. Fuel Division personnel shall conduct weekly physical inventories.

b. Fuel Division personnel shall conduct monthly physical inventories which are verified by the Accounting QA personnel.

c. Receipt tanks automatic tank gauges (ATG) shall be verified monthly.

d. Non-receipt tanks ATGs are verified quarterly.

5. Meters. Calibration will be completed at least annually or more frequently as directed.

6. Fuels Automated Management Systems

a. DLA has initiated/yielded automated support programs to enhance the overall management of DLA owned fuel. The following information outlines two of these programs:

(1) Fuels Control Center Program. The Fuels Control Center Program is a Microsoft Windows based program, which supports fuel request responses, flightline management, asset management, billing, and inventory management.

(2) Fuels Manager Program. The Fuels Manager Program is a graphics based program, which supports management of inventory levels throughout the fuel storage and fuel distribution system(s) (FDS). The internal operations of this program works in concert with the ATG systems on the fuel storage tanks and in the movement/transfer of fuel from one site to another. The program has alarm system operations which, when activated, will provide different priorities for status conditions during fuel movement/transfer operations.

b. Training. Complete knowledge and understanding of these programs is paramount in properly operating the detailed functional areas inherent with the Federal Communications Commission and the Fuels Manager Program. Direct Service Support Center supports the extensive educational package required to

maintain trained technicians at the work sites. Department of Defense (DoD) training requirements are coordinated through DLA source training.

Chapter 4

Fuel Overflow and Avoidance

1. Petroleum Spills and Prevention

a. Petroleum spills generate complex technical, legal, environmental, and public relation challenges. Strict adherence to proper operational procedures, daily inspections, good maintenance practices, and overall good housekeeping help eliminate spills.

b. It is the responsibility of all fuel handling personnel to prevent fuel spillage. The following preventive measures will reduce the possibility of spillage:

(1) Daily inspections of fuel servicing equipment to include storage tanks. Daily inspections shall be recorded, maintained on site, and available for environmental compliance inspections.

(2) All waste products will be collected in suitable containers prior to disposal.

(3) Use of drip pans with absorbent matting when disconnecting and/or servicing equipment in areas where drips regularly occur.

(4) Daily inspection of oil water separators and containment areas. Daily inspections shall be recorded, maintained on site, and available for environmental compliance inspections.

(5) Emptying of all drip pans, absorbent matting, and secure all container tanks to prevent water seepage.

(6) Monitoring of storage tanks and mobile equipment during filling operations.

(7) Ensuring proper valve settings on pipelines, storage tanks, and mobile equipment prior to pumping operations.

(8) Ensure spill response materials are readily available, personnel know where and how to access them, and are

properly trained in their use. Spill kits shall be stocked with appropriate amounts of material at all times.

2. Immediate Action Procedures

a. Seal off fuel flow and provide for initial containment, if possible.

b. All fuel spills occurring in the Fuel Division area will be reported immediately.

c. Fuel spills will be reported to:

(1) Security and Emergency Services: 911.

(2) Radio the Tower, if applicable.

(3) Fuels Officer in Charge (OIC)/Staff Noncommissioned OIC (SNCOIC) (910) 449-6694/6152.

(4) Installation and Environmental (I&E).

(5) Command Duty Officer (after hours).

d. When reporting spills, ensure the following information is provided:

(1) Location (latitude/longitude).

(2) Type product.

(3) Approximate amount spilled.

(4) Cause of spill.

(5) Point of contact on site.

(6) Did the spill enter drains, sewers, and/or pipes.

(7) How was the spill discovered, stopped, contained, and cleaned up?

e. All spills will be cleaned-up as soon as possible.

f. A Spill Report, Form 10, shall be completed for each spill and forwarded to the Station I&E Department, by close of business of the next working day. The I&E Department fax is (910) 449-6488.

g. Defense Fuel Support Point will report to the DLA Regional Office, a Situation Report (SITREP) of the fuel spill utilizing the SITREP format provided in reference (i).

Chapter 5

Fuel Division Organization and Operations

1. Duties and Responsibilities

a. Fuel Management Officer (FMO). The FMO is responsible for the safe and efficient operation of the Fuels Division. Inherent in this assignment are the responsibilities of accountability, quality control, safety, handling practices, personnel training, and operational and corrective maintenance of facilities and equipment.

b. Assistant FMO (AFMO). In the absence of the FMO, the AFMO will assume the responsibilities of the FMO and shall maintain oversight of the Fuel Maintenance Section.

c. FDS Worker (FDSW) Supervisor (FDSWS). The FDSWS is responsible to the FMO and AFMO for the efficient operation of the FDS and the vehicles and equipment used to transport and distribute fuel. The FDSWS will notify the Fuel Division Maintenance Section when a need for repair is identified during inspections.

d. FDSW. The FDSW shall annotate any maintenance deficiencies on the daily checklist and notify the FDSWS. In the extended (more than four hours) absence of the FDSWS, maintenance deficiencies shall be reported in this order per availability:

(1) QA Evaluator (QAE).

(2) Industrial Equipment Repairer (IER).

(3) AFMO.

(4) FMO.

e. QAE. The QAE will report all deficiencies to the Fuel Maintenance Section and assist with weekly reconciliations. The QAE will assist the Fuel Maintenance Section in submitting deficiencies to the Facilities Supervisor in the Station S-4 via the Enterprise Business System.

f. IER. The IER is responsible for the efficient operation of the Fuel Division Maintenance Section. The IER is the technical expert for all aspects of the FDS. The IER duties and responsibilities include but are not limited to the following:

(1) Conduct scheduled and unscheduled preventative maintenance (PM) as established by current regulations and directives or as directed by the FMO or his assigned representative.

(a) Unscheduled maintenance includes but is not limited to replacement of valves, meter register assemblies, nozzles, hoses, and any other miscellaneous component parts. Additionally, the rebuilding of nozzles, pressure-regulating assemblies, and other miscellaneous equipment may be required.

(b) Scheduled maintenance shall be conducted in accordance with current manual and technical publications or as directed by the FMO or assigned representative.

(2) Procure, store, and maintain repair or replacement parts, equipment, and tools required for fuel system PM.

(3) Upon notification from the IER, generate work requests for facilities repair or replacement and forward to the I&E Department.

(4) Generate Recurring Maintenance and Minor Repair (RM&MR) requests and forward to the DLA contractor for minor repairs in accordance with reference (g).

(5) Understand the current policies for requesting maintenance support.

(6) Maintain electronic records and reports IAW current directives and policies or per the direction of the FMO.

(7) Conduct reconciliation weekly and report results to the FMO or assigned representative to ensure maintenance and repair of the fuel systems and the facilities that support fuel system operations are at the highest level of readiness.

(8) Maintain required technical support publications.

(9) Immediately report any item beyond the scope of a minor repair to the attention of a QAE, Alternate RO/AFMO, and RO/FMO.

2. Fuel Farm Operations

a. The FDSW Supervisor is responsible for the receipt, issue, storage, and quality control of all petroleum products handled within the FDS.

b. Only fuel inspectors will drain the containment berms. When fuel inspectors are not available for an extended period, the work center supervisor or Fuel Division OIC can direct other fuels personnel to drain containments.

3. New Item Receipts

a. All fuel, JP-5 and regular unleaded, shall be received by the tank truck.

b. The FDSW shall ensure the all commercial drivers and anyone operating with or near fuel operations are wearing proper PPE.

c. FDSW and Marines will perform the following prior to off-loading either type product:

(1) Ensure shipment coincides with bill of lading.

(2) Ensure all valves and domes have been properly sealed.

(3) Inspect all seals ensuring there is no evidence of tampering.

(4) Compare seal numbers to those annotated on the shipping document.

(5) Ensure product amount received corresponds with amount indicated on the shipping document. If discrepancies exist during the initial off-loading check, do not off-load the product until granted permission from the work center supervisor or the Fuel Division OIC.

(6) Ensure trucks, tank cars, and equipment are properly bonded/grounded.

(7) Ensure sampling and testing of products as outlined in Chapter 2 is completed by lab technicians and quality surveillance personnel.

(8) Perform opening tank gauges on the receiving tank(s).

(9) Upon completion of off-loading operations, ensure all equipment is secured properly.

(10) Allow approximately 30 minutes for each foot of product received for settling and static dissipation time before closing tank gauges.

(11) Do not transfer fuel from storage to filtration system without being tested by the Fuel Inspector.

d. The FSDW and all personnel shall remain in the direct vicinity of the off-load area with an unobstructed view of each commercial driver while off-loading.

4. Defueler Receipts

a. Defueled aviation turbine fuel will be collected by the Fuel Division. Prior to RTB, mobile defuelers will be sampled and tested by the Quality Surveillance Section. Product sampling and testing will be performed as outlined in Chapter 2.

b. Fuel Farm operators will:

(1) Ensure the defueler's contents have been examined and released by the Quality Surveillance Section prior to discharge/ off-loading and as directed by the Fuel Farm Foreman.

(2) Perform opening tank gauges.

(3) Ensure amount to be received will not exceed the available usage of the receiving tank.

(4) Ensure that all valves are properly set.

(5) Properly ground/bond equipment.

(6) Establish radio communication with dispatch.

(7) Off-load product.

(8) Upon completion of off-loading, secure all equipment and close all valves.

(9) Perform closing tank gauges after settling and static dissipation time.

5. Issues

a. JP-5 Bulk Issues

(1) Bulk issues of JP-5 will be accounted for as outlined in Chapter 3.

(2) A six-part DoD Single Line Item Requisition System Document, DD Form 1348, will be presented by the requesting unit for fuel issued to support aircraft not organic to MCAS New River.

(3) Bulk issues will be made from the fuel farm storage area fill-stand. FDSWs will complete the following:

(a) Ensure a DD Form 1348 has been presented.

(b) Reset the meter before and after every issue; however, all meter readings will be logged into the fill-stand operator's logbook.

b. JP-5 Issues to Aircraft

(1) Each issue of a JP-5 to all tenant aircraft will be recorded on tally sheets and on an Energy Sales Slip, DD Form 1898, using the information from the aircraft’s air card. Tally sheets and the DD Form 1898 will be submitted daily to the Fuel Division accounting office, building AS-148, by 0800.

(2) Visiting aircraft will be recorded on tally sheets and the DD Form 1898 with the information from the aircraft’s air card. Tally sheets and the DD Form 1898 will be submitted daily to the Fuel Division accounting office, building AS-148, by 0800.

(3) Notify the Fuel Division immediately in any case where a visiting aircraft does not have a DD Form 1898.

6. Refueler Truck Fill-Stand Operations. FDSW and Marines are responsible for the safe operation of the fill-stand during loading and shall confirm the following:

a. Prior to bulk loading refuelers from units other than the Fuel Division, ensure the Fuel Division OIC is presented with a DD Form 1348 or has granted approval of the operation.

b. The driver will position the refueler under the fill-stand, set the brakes, and turn-off the engine and all electrical apparatus.

c. Connect grounding cable to the refueler's body at an unpainted point before opening the refueler dome cover. Do not connect grounding cable near the dome lid or near any point on the refueler located near an opening where fumes may be present. The connecting point must be bare metal and provide a positive connection.

d. Ensure fuel to be loaded coincides with markings on refuelers.

e. The driver must conduct a physical inspection and gauge the refueler tank(s) to verify available space. Reset meters before pumping.

f. Truck dome lids must remain open during refueling. Fuel Farm operators and/or refueler operators are not allowed on top of any tank/vehicle being filled.

g. All refuelers/tanks must be in satisfactory condition in order to receive fuel.

h. Ensure all hoses are connected and valves are properly set.

i. Upon signal from the driver, the FDSW and Marines will start pumping operations.

j. Operator will remain alert and await a signal from driver to secure pumping.

k. Upon completion of loading operations, secure the dome lid, remove bonding cable, and disconnect hose.

l. The FDSW reads the meter and enters the quantity in the operator's logbook. Prior to loading any other vehicles, the FDSW will perform a closing meter reading. Before and during loading operations, the operator/driver will ensure all fire lanes are open. If fire lanes are blocked, loading operations will be halted until lanes can be cleared.

m. Upon confirmation that no leaks or spillage from the tank and all equipment has been disconnected, the fill-stand operator will clear the driver to move the truck from the fill-stand loading area.

7. Transfer Line Operations

a. Prior to commencement of transfer operations to the Aircraft, Direct Fuel System (ADFS) FDSW will ensure the following:

(1) Establish radio contact with ADFS personnel.

(2) Ensure valves in the Fuel Farm are properly set.

(3) Establish quantity required by ADFS.

(4) Establish pumping start time and commence fuel transfer when all parties are in concert with one another.

b. Record the following in the booster pump logbook:

(1) Start time.

(2) Quantity required.

(3) Opening meter reading.

(4) Issue tank number.

(5) Receiving tank (A, B, C, or D).

c. During transfer operations, the following will be performed:

(1) FDSW will ensure the dispatcher is aware of pumping operations and is standing by to assist if there are any communication problems.

(2) The fuel farm operators will make radio checks with rapid jet personnel every 1,500 gallons for tanks A and B and every 1,000 gallons for tanks C and D.

(3) Immediately stop pumping if radio contact is broken and use a second form of communication, such as a landline or cellular phone.

(4) Monitor discharge pressure. If there is any significant increase or decrease in pressure, immediately stop pumping.

(5) If quantity pumped exceeds amount requested, stop pumping and re-verify.

(6) Monitor the following information in the booster/transfer pump logbook:

(a) Discharge pounds per square inch (PSI).

(b) Receiving PSI obtained from ADFS.

(7) After transfer operations, the following will be performed:

(a) Close all valves.

(b) Ensure line pressure is relieved.

(c) Record the following information in the booster/transfer pump logbook:

1. Closing meter reading.

2. Quantity pumped.

3. Stop time.

(8) Provide ADFS facility with open meter, close meter, and total gallons pumped.

(9) Provide the dispatcher with the total gallons pumped for the daily logbook.

8. Storage Tank Water Bottom Stripping Operations

a. Water bottoms will be stripped from tanks as soon as possible after detection through daily or weekly quality surveillance monitoring and/or as directed.

b. Ensure all valves are set prior to pumping and secured upon completion.

Chapter 6

Mobile Refueler and Defueler Operational Procedures

1. Mobile Refueler and Defueler Operator Requirements. Mobile Refeulers and Defuelers are a highly specialized type of equipment and the danger of fire or delivering contaminated fuel potentially exists. Therefore, only highly qualified personnel who are properly indoctrinated, certified, and thoroughly familiar with all operations will operate equipment. Operators must:

a. Possess a valid U.S. Government Motor Vehicle Operator's Identification Card; an OF346 with additional qualifications for transporting petroleum, explosives; and a valid health certificate. Civilian employees must possess a valid Commercial Driver's License (CDL), X endorsement (tanker hazardous material), and a North Carolina Class B CDL.

b. Be thoroughly familiar with station traffic, vehicle regulations, and safe driving practices.

c. Be familiar with location and operation of mobile refueler/defueler valves and mechanical devices.

d. Be familiar with operation of safety devices, fire fighting equipment, and spill contingency procedures.

e. Ensure they have a proper amount of rest prior to operating equipment in accordance with reference (i).

2. Refueler Daily Operations (Pre-Service). Operators will proceed with the following routine checks prior to the mobile refueler being serviced:

a. Ensure bottom pressure and overwing refueling nozzles have a dust cover in place at all times when fuel is not being transferred.

b. Inspect trucks daily for overall serviceability.

c. Drain the low points and filter/separator on each refueler prior to recirculation.

d. Visually check tank compartments on each vehicle.

e. Ensure the trucks are recirculated/flushed with 1,500 gallons minimum in the following order:

(1) First. Rear hose: 50-100 gallons.

(2) Second. Main hose: 1,500 gallons.

f. Draw proper fuel samples from each refueler and deliver to the Fuel Division laboratory. The fuel will be tested prior to refueling the first aircraft of the day.

g. Ensure all hoses are fully inserted into the containment area while recirculation is in progress.

3. Fuel Requirements

a. For squadron aircraft requiring fuel support, contact the Fuel Farm Dispatcher at (910) 449-6462/6739 during published working hours.

b. Per reference (j), all closed field fuel support requests must be coordinated through the Airfield Operations Officer at (910) 449-5010/6311.

c. Refueler/defueler support will be dispatched on a first call, first serve basis. However, this may be altered if emergency requirements and/or prioritization is imposed by the FMO.

d. For emergency fuel requirements off the installation, Marine Wing Support Squadron 272 is the primary support. However, if the Fuel Division is tasked with a mission, an additional vehicle with hazardous material and spill clean-up kits will accompany the refueler truck.

4. Cold Refueling Procedures

a. Whenever possible, operators shall proceed down a line of parked aircraft with the driving path of their refueler perpendicular to the aircraft's fuselage axis at the maximum distance the hose length will permit servicing. However, at no time shall a truck be within ten feet of an aircraft in accordance reference (a). Normally, turns are only made at the end of the parking line. Driving between aircraft parked in-line shall be avoided when possible. In all cases, the refueler shall be positioned, so the operator can drive away quickly in case of

an emergency. Refuelers shall never be backed towards an aircraft or left pointing towards an aircraft.

b. Ensure all bonding equipment is in place prior to the nozzle being connected to the aircraft. Maintain metal-to-metal contact between the overwing nozzle and the aircraft fueling port throughout the entire fueling operation.

c. In case of pressure refueling, ensure two to three personnel are on-site, depending on requirements.

(1) Normal cold refueling aircraft operations via truck are a two-person function requiring a nozzle operator (squadron personnel familiar with the airframe being refueled) and a Fuel Division driver/operator.

(2) For overwing refueling requirements, three persons are required: a nozzle operator (squadron personnel familiar with airframe being refueled), a safety/fire extinguisher operator (crewmember), and a Fuel Division driver/operator.

d. Aircraft inside a hangar or in a confined area will not be refueled/defueled due to possible vapor collection.

e. Ensure all non-essential electronic equipment is turned-off during refueling operations.

f. No personnel will remain in the aircraft unless they are required for the refueling operation.

g. The driver/operator must ensure the aircraft requiring fuel is promptly located away from all sources of ignition. Do not allow smoking, open fires, matches, cigarette, e-cigarettes, lighters, or any similar open flame equipment within 50 feet of fuel handling equipment.

h. Discontinue fuel-handling operations during electrical storms when lightning is visible, lightning is identified within ten miles, or as directed by the Station S-3.

i. Maintenance is not permitted on either the refueler/defueler or aircraft during refueling operations.

j. Cold refueling is conducted with the Air Card assigned to the aircraft receiving fuel and a proper DD Form 1898.

k. New aircraft or aircraft being transferred from one unit to another will not be authorized fuel without the permission of the Fuels OIC. If authorized, the DD Form 1898 will be legibly handwritten with the minimum information as follows:

(1) Aircraft bureau number.

(2) Squadron.

(3) Appropriate signatures.

(4) Aircraft type.

(5) Gallons issued.

5. Hot Refueling Procedures with Refuelers. All issues discussed above remain the same for hot refueling operations with a mobile refueler. In addition, the mobile refueler must be positioned at a minimum of 150 feet away from any part of the aircraft being serviced. This requires additional hoses not organic to the mobile refueler. If this type of service is required, an approved site will be designated to position the truck in a stationary posture.

6. Aircraft Defueling Procedures. All operational issues remain the same for defueling operations as outlined in Chapter 5 paragraph 4. Defueling is one of the most technically demanding and potentially dangerous operations performed in fuel handling operations. Pump affluent regulations must be regulated IOT prevent catastrophic accidents. Only experienced operators will be assigned to execute defueling requirements. A defuel certificate from the requesting squadron will be presented prior to defueling. Each aircraft defueling operation requires three trained personnel: a Fuel Division defueler operator, nozzle operator (squadron crew member), and a fire extinguisher watch (squadron crew member).

a. Defuelings normally have a lower priority than refuelings. A defuel request for an aircraft leaking fuel shall be considered an emergency and will be handled promptly. The emergency will be confirmed by Aircraft Rescue and Firefighting.

b. Request for defuels will be made via telephone at (910) 449-6462/6739 and the following procedures will be implemented for each defuel operation:

(1) A defuel request form will be completed by the defueler operator and squadron crewmember prior to defueling. The request will indicate reasons for the defuel operation (maintenance or contamination) and an estimate of fuel to be defueled.

(2) A sample will be drawn from the aircraft prior to defueling by squadron personnel after the defueler has arrived on-site. The defueler operator will visually examine the sample prior to defueling the aircraft when possible. If visual examination reveals a variation in color and/or the presence of gross amount of water or sediment, the operator will contact their immediate supervisor for instructions regarding disposition of the product.

(3) All fuel removed from turbine-engine aircraft shall be a mixture of varying jet fuels, such as JP-5, JP-8, or Jet-A1 (kerosene).

c. Prior to commencing defueling operations, the operator will ensure there are at least 500 gallons of fuel in the defueler (required to maintain a flooded suction above the anti-vortex splash-plate in the tank IOT minimize turbulence and possible ingestion of air).

d. If, during defueling operations, the pump starts to lose prime or cavitate, the operation will be halted until the problem is resolved and the fuel supervisor authorizes a restart. At no time will a restart be authorized without waiting a minimum interval of one minute to allow for dissipation of any static charges.

e. At no time during defueling operations will the defueler dome covers be opened.

f. When the defueler tank capacity has reached 96%) 4,800 gallons, and/or the operators are otherwise directed) the tank contents will be recirculated and then tested by the Fuel Division Quality Surveillance Section. Defueled fuel shall not be immediately returned to JP-5 storage tanks without first confirming the flash point to be 140 degrees Fahrenheit or higher.

7. Truck Fill-Stand Procedures. The truck fill-stand operations are normally a one-person operation for trucks equipped with

high-level alarm, shut-off systems, and deadman control valves. If these are inoperable or not present, two personnel are required.

a. Refueler vehicles will enter the fill-stand area through gate 3/4. Ensure compliance with the five mile per hour speed limit and position the refueler along the proper/designated side of the fill-stand within containment.

b. Drivers will ensure once their vehicles are properly positioned, all electrical equipment except for necessary alarms is secured, the emergency brake set, the engine turned-off, and the vehicle is properly bonded to the fill-stand.

c. After bonding the vehicle, the driver will open the dome covers and hook-up the bottom-load adapters to the truck.

d. Before commencing filling operations, the driver, as required, will physically inspect the truck's tank compartments for product verification and quantification.

e. Trucks that have been completely drained shall be minimally filled with 500 to 1,000 gallons using another truck set at the low flow rate in order to cover the bottom inlet valve inside the truck's tank.

f. All refuelers will be topped off nightly regardless of quantity.

g. The driver will commence filling trucks at a slow rate.

h. After the tank has been filled, the driver will secure all equipment and ensure the truck tally sheet has been properly administrated.

Chapter 7

Maintenance

1. Maintenance. Maintenance responsibilities are found in all levels of supervision and phases of inspections IOT ensure all equipment is maintained at the highest possible level of readiness. Every member of the Fuel Division must constantly strive to prevent deterioration of fuel equipment and ensure operational efficiency and effectiveness.

a. The primary mission of the Fuels Division Maintenance Section is to provide maintenance support. This support includes but is not limited to:

(1) Fuel storage, receiving, and issue.

(2) Pipeline and ADFS areas.

(3) Fuel facilities.

(4) Aviation Refueler Capability modifications.

b. Maintenance and Repair

(1) RM&MR. The RM&MR Program's purpose is to provide maintenance, inspections, repairs, and emergency response actions for DLA capitalized petroleum facilities on military installations worldwide, in compliance with federal, state, local code, criteria, and regulations.

(2) Sustainment, Restoration, and Modernization (SRM). In reference to fuel capitalized facilities, SRM processes also define responsibilities and processes associated with obtaining DLA Energy funding.

(a) Sustainment. Facility maintenance and repair activities necessary to keep facilities in good working condition over their expected service lives and include regularly scheduled adjustments and inspections, PM tasks, and emergency response and service calls for minor and major repairs over the life of the facility.

(b) Restoration. Restoration is repair and replacement work to restore facilities damaged by inadequate sustainment, excessive age, natural disaster, fire, accident, or other causes.

(c) Modernization. Modernization is alteration of facilities solely to implement new or higher standards, to accommodate new functions, or to replace building components that typically last more than 50 years. Restoration or modernization can be either minor construction or Military Construction (MILCON) IAW reference (g).

1. Minor Construction. Currently less than $200,000,000.

2. MILCON. Currently greater than $200,000,000.

2. Service Requests and Work Orders. All fuel personnel that discover or identify a maintenance action, will expeditiously inform the Fuel Maintenance Section of any items requiring maintenance or repair. All Fuel Division service requests and work orders for RM&MR shall be submitted through the Fuel Division Maintenance Section.

3. Vehicle Maintenance. All trucks will be inspected by Fuel Division QA personnel prior to being checked out of the maintenance cycle.

Chapter 8

Aircraft Direct Fueling Operations (ADFS)

1. ADFS. The ADFS facility, located on the north and south sides of Delta taxiway, provides aircraft hot refueling services on the installation. The ADFS facility consists of two stand-alone, high-speed hydrant systems, A and B (North) and C and D (South). The ADFS OIC/SNCOIC is responsible for the overall supervision of personnel, receipt, storage, issue, and quality control of the ADFS.

2. ADFS Daily Operation

a. Perform opening and closing tank gauges on all tanks prior to and at the conclusion of operation, to include all receipts.

b. Visually inspect all equipment and ensure all valves are properly set prior to starting pumps.

c. Complete inspection checklists.

d. Report all maintenance problems to the Fuel Division Maintenance Section.

e. Perform radio checks on all frequency modulation radios and headsets.

f. Ensure all emergency eye wash and shower systems are properly functioning.

g. Maintain daily fuel tally sheets.

h. Drain filter separators of all accumulated water and record pressure differential gauge readings.

i. Ensure floodlights are operational, fire extinguishers are properly charged, and grounding cable is in operating condition.

j. Obtain samples from each dispensing point and forward to the Quality Surveillance (QS) Section for analysis. No fuel will be dispensed until clearance is obtained from the QS Section after analysis.

k. Recirculation, flushing, and testing are required on all in-service refueling equipment and systems once during every 24-hour period. When recirculation is being performed, personnel will utilize the following:

(1) Points 1/2 for Alpha tank.

(2) Points 3/4 for Bravo tank.

(3) Points 5/6 for Charlie tank.

(4) Points 7/8 for Delta tank.

l. At a minimum, personnel will recirculate 2,000 gallons per operational refueling point before pulling a fuel sample and may begin rinsing the sample bottles after 1,500 gallons has been recirculated. Personnel shall ensure each tank is recirculated at a minimum of 2,000 gallons.

m. During seasonal changes, it may be necessary for personnel to increase recirculation quantity in certain cases where there may be increased built up moisture and condensation.

n. Conduct a daily foreign object debris inspection.

o. Inspect all nozzle screens prior to commencing recirculation at the beginning of each week.

p. During recirculation, personnel will obtain gallons per minute and PSI gauge readings of each operational refueling point.

q. Inspect all sump tanks and oil water separators daily and service as necessary. Coordinate servicing through the Fuel Division Safety Section.

r. Remove all tank water bottoms promptly upon detection of bottom, sediment, and water.

s. Issue fuel on a first-come-first-serve basis and/or priorities as required and/or directed.

3. Fuel Receiving Procedures. JP-5 is received into the ADFS by an underground pipeline from the bulk storage tanks. Procedures for receiving fuel for the ADFS are as follows:

a. Prior to receiving fuel, personnel will initiate a receiving fuel checklist and perform the following:

(1) Gauge receiving tank.

(2) If receiving into tanks A and B, visually inspect tanks C and D to ensure receiving valves are closed and vice versa.

(3) Ensure valves to receiving tank are open.

(4) Establish radio contact with the Fuel Farm dispatcher.

(5) Inform Fuel Farm personnel of quantity required.

(6) Establish start time.

(7) Make appropriate log entries.

b. During receiving operations, the following will be performed:

(1) Maintain radio contact. Radio checks will be made by Fuel Farm personnel every 1,500 gallons.

(2) Any break in the radio communications will constitute immediate shutdown of the pumps by the Fuel Farm operator.

(3) Visually monitor the tank being filled.

(4) Obtain tank gauge every 1,500 gallons received and ensure tank gauge matches with appropriate tank strapping chart. Stop pumping operations immediately if a difference is detected.

(5) Monitor the receiving PSI. If the PSI drops from normal; stop pumping operations immediately, initiate contact with the Fuel Farm operator to determine and/or analyze the reason for the drop. A sudden drop in PSI may indicate a break in the transfer line or it may also indicate a receiving valve to another tank is open.

(6) Make appropriate logbook entries.

c. After receiving operational reports and instructions, the following will be performed:

(1) Close all valves to receiving tank.

(2) Gauge tank after 30 minutes to allow the fuel to settle if time permits.

(3) Obtain the ATG tank inventory increase receipt.

(4) Make appropriate logbook entries.

4. Hot Refueling Fixed and Rotary Wing Aircraft. Hot refueling aircraft presents safety hazards not normally encountered in other refueling operations. Consequently, the personnel conducting these operations must have a thorough knowledge of all equipment, observe all safety procedures, and follow the specified procedures in reference (a) for each operation.

a. The following are minimum personnel requirements for servicing hot refueling aircraft:

(1) ADFS Personnel Requirements

(a) One refueling coordinator positioned at the servicing tank control panel. Personnel will have radio communication with the tower at tank C/D while performing hot refueling operations.

(b) One fuel operator positioned at the hydrant.

(c) One fire extinguisher watch positioned at the fire extinguisher during normal operations.

(2) Aircraft Crew Requirement. One nozzle operator from tenant unit or transient aircrew.

b. The following equipment is required for hot refueling operations:

(1) One service unit fueling hydrant. The servicing system's fuel supply tank(s) shall be located at least 50 feet from any part of the aircraft being serviced.

(2) Hose or pantograph fueling arm with an emergency dry breakaway coupling.

(3) One nozzle assembly.

(4) One grounding cable.

(5) Aircraft wheel chocks.

(6) PPE.

(a) Sound attenuating ear protectors.

(b) Goggles.

(c) Cranial.

(d) Long-sleeved shirt.

(e) Trousers, coveralls or flight suit for each crewmember that are non-static producing and flame retardant.

(f) Personnel shall not wear shoes that have nails or other metal devices on the soles that might cause sparking.

(7) One fire extinguisher for each aircraft being refueled.

c. Procedures for hot refueling aircraft:

(1) Aircraft will taxi to the fuel pit area as directed by MCAS New River Ground Control on the appropriate ultra high frequency, as available.

(2) Prior to an aircraft entering the hot refueling area, the following is required:

(a) Secure all unnecessary electrical and electronic equipment.

(b) All ordnance shall be de-armed; for example, replacement of any mechanical arming level safety pin, electrical interrupt plug/pin, security of armament switches, and/or any appropriate action rendering the particular ordnance carried as safe.

1. Qualified squadron personnel shall verify all ordnance is de-armed.

2. Personnel are able to install red laser covers on CH-53s during hot refueling operations.

(3) Hot refueling procedures shall be performed in the following sequence:

(a) Taxi speed into the fueling area shall be no faster than a man can walk. The aircraft's pilot will maintain communications with ground control or as directed.

(b) Aircraft will position on the appropriate markings:

1. MV-22s will position their front wheel on the yellow square.

2. CH-53s will position their front wheel on the yellow square.

3. CH-46s will position their front wheel on the white square.

4. AH/UH-1s will be guided in by fuel personnel.

(c) If an aircraft fails to position on the appropriate mark it will be directed to exit the pits and reposition.

(d) Fuel operator chocks aircraft wheels.

(e) Passenger and crew members, other than the pilot and the co-pilot, will be required to debark prior to refueling.

(f) Fuel operator operates the fire extinguisher.

(g) Fuel operator connects the grounding cable.

(h) Fuel operator pulls out the pantograph and places it in proper position for refueling.

(i) Nozzle operator removes refueling adapter cap from the aircraft and the dust cover from the nozzle, inspects the face of the nozzle to ensure it is clean, and verifies the flow control handle is in the fully closed and locked position.

(j) Nozzle operator visually inspects the aircraft's receptacle for any damage or wear.

(k) Nozzle operator connects the nozzle to the aircraft.

(l) Fuel operator checks meter and resets if required.

(m) Nozzle operator determines aircraft is ready to receive fuel and signal when ready.

(n) Fuel operator presses deadman control valve.

(o) Nozzle operator rotates the nozzle flow control handle when hose is fully charged.

(p) Individual aircraft fuel system safety checks IAW reference (m).

(q) Fueling will stop if any fuel leak is noted around the aircraft. Should a leak occur, comply with the following instructions:

1. Nozzle operator and/or fuel operator immediately discontinues hot refueling.

2. If fuel spill occurs externally and is less than 10 feet in diameter, aircraft will taxi clear of spill area.

3. If fuel spill occurs externally and is more than 10 feet in diameter, aircraft will shut down immediately and be towed from spill area.

4. For all internal leaks/spills, aircraft will be shut down immediately and be towed from spill area.

(r) Nozzle operator and/or fuel operator checks flow rate meter reading and watches for signal to terminate refueling.

(s) Fuel operator releases deadmen.

(t) Nozzle operator closes nozzle valve.

(u) Nozzle operator disconnects nozzle.

(v) Fuel operator disconnects grounding cable.

(w) Fuel operator stows pantograph hose and nozzle.

(x) Nozzle operator and/or fuel operator completes required paperwork.

(y) Fuel operator removes and stows wheel chocks.

(z) Fuel operator ensures area is clear of equipment and personnel. Teamwork between the nozzle operator, fuel operator, and fire extinguisher watch are paramount for safe and expeditious refuel.

(4) If an aircraft enters the hot pits without the proper DD Form or air card, gather the following information:

(a) Squadron.

(b) Aircraft bureau number.

(c) Aircraft type.

(5) Once the aircraft enters the fuel pits, the pilot does not leave until given authorization from the fuel personnel on the ground or the tower.