UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION
BOX 99100
YUMA, ARIZONA 85369-9100

StaO P10345.1J
3KD
05 JUN 1998

STATION ORDER P10345.1J

From: Commanding Officer
To: Distribution List

Subj: PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

Ref: (a) Current Refueling Contract (NOTAL)
(b) Handbook on Aircraft Refueling, NAVAIR 06-5-502 (NOTAL)
(c) Military Standardization Handbook Petroleum Operations H-201B (NOTAL)
(d) StaO P5510.8E
(e) NAVAIRINST 10340.3B (NOTAL)
(f) NAVSUPMAN VOL II, par. 22416-3, 25320, 25360-2, 25315, 25317 (NOTAL)
(g) StaO P3710.4F

Encl: (1) Locator Sheet

Reports Required: Refueler Discrepancy Report (Report Code EXEMPT), par. 5003

1. Purpose. To establish procedures for commercial contractors in the operation and maintenance of the bulk storage plant and aircraft refueling/defueling and to publish the aircraft refueling/defueling priorities and scheduling procedures for tenant, deployed and station activities, and contractor personnel. This manual has been prepared in accordance with references (a) through (g).

2. Cancellation. StaO P10345.1H, StaO 10340.2A.

3. Summary of Revision. This Order has been revised throughout and requires complete review.

4. Certification. Reviewed and approved this date.

C. J. TURNER

DISTRIBUTION: SPL
3AC (1), 3AP (1),
3AS (1), 3DJ (2),
3ED (1), 3EF (1),
3KA (10)

StaO P10345.1J
05 JUN 1998

LOCATOR SHEET

Subj: PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

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

ENCLOSURE (1)

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

RECORD OF CHANGES

Log completed change action as indicated.

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

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CONTENTS

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 1

GENERAL INFORMATION

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 1

GENERAL INFORMATION

1000. BACKGROUND

1. Reference (a) is the contract established for the accomplishment of aircraft refueling, defueling operations, and operation of the Bulk Storage Plant and related facilities at the Marine Corps Air Station, Yuma, Arizona, by a commercial contractor. The contract provides that the contractor's equipment and operation will comply with the spirit and intent of references (b) and (c). A copy of this contract may be seen at the Fuel Branch Office, Building 301. Extra copies are not available.

2. These facilities will consist of government owned bulk fuel storage tanks numbers 312, 356, 361, 366, 367, 368, 369, and Santa Fe Pacific Line Tanks Y-1 and Y-2, the related pumps and pipe system and the loading and unloading facilities up to and including Santa Fe Pacific Pipe Lines Systems.

1001. RESPONSIBILITY. The Supply Officer is assigned the responsibility for the administration and quality/quantity control of the aircraft refueling, defueling, and bulk plant operation contract for MCAS Yuma, Arizona. The contractor, under the general supervision of the Station Fuel Inspector, to whom the contractor's manager will report each day except those weekends and holidays when flight operations are not scheduled, will be responsible for performing the functions of the Plant Section and Refueler Section of the Fuel Branch, Supply Department, MCAS Yuma, Arizona. An authorized agent for the contractor shall receipt for, take custody of, and become accountable for all liquid aviation fuels in store. All subsequent receipts of fuels and petroleum products will require a like signature for each and every such receipt as delineated under accountability.

1002. DEFINITIONS. For the purpose of this order, the following definitions apply: (Each includes accountability for the particular petroleum product.)

1. Refueling

a. Alongside Refueling. Consists of obtaining government owned aviation fuels from government storage for delivery alongside aircraft, of passing the fuel hose to the plane captain, the attaching of the bonding devices and the operation of the refueler pumps. It does not include the placing of the nozzles to aircraft and the actual filling of fuel cells and tanks.

b. Defueling. Positioning of defueler equipment alongside aircraft to permit removal of fuel and operation of pumps, does not include manning of hoses and nozzles.

c. Aircraft Pressure Refueling with Engines Operating (Hot Refueling). The contractor shall, when directed by the Commanding Officer, or an authorized representative, refuel aircraft with engines idling.

2. Plant Operations

a. The physical receiving of all petroleum products peculiar to this activity. This shall include receipt by commercial trucks, trailers, and pipeline.

b. The transfer of all products from terminal storage to master issue storage.

c. The extraction of samples for analysis of products from all modes of receipt at and for the convenience of the Supply Officer/designee.

3. The foregoing requirements are in addition to those in reference (a).

1003. EMPLOYMENT OF MILITARY PERSONNEL. The contractor may employ military personnel subject to the following requirements:

1. The number of military personnel working part-time will not exceed a maximum number which, if withdrawn in case of an alert, would jeopardize the contractor's ability to fulfill refueling requirements generated by such an alert. The Station Fuel Inspector shall ensure that the contractor has an adequate number of trained personnel other than military to provide for an alert.

2. Wages. Military personnel employed by the contractor will not be paid less than the prevailing hourly wage for civilian contract employees performing similar duties.

3. Hours. Military personnel will not work for longer periods of time than specified below:

a. Not more than four hours in a twelve hour period preceding a day of duty.

b. Not during the four hour period immediately prior to reporting to duty.

c. Not more than eight hours in one shift; shifts shall not be nearer than four hours apart.

1004. GENERAL INSTRUCTIONS FOR THE CONTRACTOR

1. Contractor's Quarters

a. Office area will be provided the refueling, defueling, and bulk plant operations contractor in the form of Building S-301, area 311.

b. The contractor will be permitted to erect a fireproof cover shelter by criteria established and agreed upon by the Public Works Officer. Said shelter will be located 50 feet clear of all other structures.

2. Security and Training

a. The contractor and the contractor's personnel shall be required to recognize and abide by all Station Orders and directives, particularly to reference (d), relative to security regulations, personnel identification, vehicle registration, traffic regulations and station security.

b. The contractor will be allowed one month after being awarded the contract to prepare and submit to the Station Fuel Inspector for review, a brochure of the training lectures and material that the contractor will use in training and sustaining trained contractor personnel. The Station Fuel Inspector or designee will attend and assist with training as appropriate.

c. Any additional training material over and above that complied from official directives and publications will be welcomed but will require the approval of the Supply Officer or designee.

d. Particular emphasis will be placed on all the aspects of safety, i.e., fire drills (conducted annually), the issuing of fuels in the proximity of liquid oxygen and the loading of ammunition, the unpredictable actions and results of static electrical discharges, and the hazards of fire and the possibility of flashbacks from the migration and propagation of fires as the result of ruptured fuel hoses, lines, fuel spills, and malfunctioning pressure nozzles.

e. The Commercial Contractor Manager or designee shall administer the testing and examination program that will include a driver's aptitude test for refueler operations and a general knowledge examination covering techniques in the operation and handling of dangerous petroleum products in a safe manner. All operators must have a current State of Arizona Class D license.

f. Applicants who successfully complete the training and subsequent examinations will be assigned to work on the 0700 to 1530 shift for a period of two weeks before being assigned to alternate shifts. New employees will have a two month period, which shall be probationary, and the Supply Officer (or his designee) shall have the prerogative to require dismissal of those persons whose demeanor, aptitude, and operational knowledge are not in the best interests of this command.

3. Contractor's Refueling Equipment

a. The contractor will be required to obtain verification from the Supply Officer, or his designated representative, prior to removing any refueling equipment from the Station. Refuelers leaving the station must be empty.

b. A Supply Department Fuel Inspector will be present when a refueler is to be converted from one product to a product of another type. Conversion will be in conformance with reference (e). Samples shall be taken at the completion of such conversion for an American Petroleum Institute (API) gravity check.

c. Fuel Inspectors will, on a continuing basis, inspect all refueling/defueling equipment for safety deficiencies that could present a hazard to lives, equipage and for the quality protection of petroleum products in mobile storage.

d. The contractor shall maintain a supply of pre-pickled refueler hoses in order that hoses deemed unserviceable may be replaced immediately. Hoses must be pickled for a minimum period of 72 hours, preferably seven days, and continuously flushed until talc and plasticizer are removed and fuel is clean and bright.

e. The contractor shall maintain a sufficient supply of single point and gravity nozzles in order that nozzles declared unserviceable may be replaced immediately.

f. The contractor will replace conventional tread tires with non-FOD/slick tires on a continual basis as attrition necessitates.

4. Storage Facilities

a. The contractor will use the fuel storage facilities for the protective storage of aviation fuels and only such other petroleum products as introduced by the Supply Officer.

b. The storage facilities will not be utilized by the contractor for the storage of any other product nor for the accumulation and storage of such items as drums, tires, used refueler parts, etc. Adequate storage space will be provided for orderly storage of a nominal amount of spare parts.

c. The designated refueler parking area will be maintained free of debris, old or new refueler parts, etc., and refuelers will be so parked that if in the event a fire should occur, the Fire Department will have ready access to any piece of equipment for isolation purposes. (Lateral parking of refuelers will be a minimum of 25 feet between center lines.) All mobile equipment must be parked at least 50 feet from any building.

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 2

SPECIFIC INSTRUCTIONS FOR REFUELING EQUIPMENT OPERATORS

CHAPTER 2

SPECIFIC INSTRUCTIONS FOR REFUELING EQUIPMENT OPERATORS

2000. PRE-CHECK INSPECTION. Conduct a daily pre-check inspection on all refuelers and defuelers as directed by reference (b) and record the findings on a form approved by the Fuel Branch and correct **ALL** deficiencies **BEFORE** putting any one of the pieces of equipment into operation. Any deviations are submitted in writing prior to adoption.

2001. SAMPLING

1. Use a clean glass beaker or bottle and draw samples from all of the refueler tanks and filter sumps each morning before putting the equipment into service.

2. Visually inspect each of these samples for sediment and water and if either is found, drain the sediment and water off the tank bottoms and repeat the visual inspection after each draining until NO sediment or water can be detected in visual inspection.

3. On a daily basis, extract a minimum of one quart samples using pre-washed sample bottles. Obtain the fuel samples from the fuel hose while actually fueling aircraft or while recirculating the fuel. Typical samples are to be drawn from not less than one refueler per day, rotating the refuelers until all refuelers have been sampled at least once a week. These samples will be tested using the approved Contained Fuel Detector (CFD) and Free Water Detector (FWD) as required by NAVAIR 00-80T-109.

2002. VISUAL SAMPLE. When taking a visual sample, pay particular attention to the minor point of the vortex (at the bottom and in the center of the glass receptacle); all heavy foreign substances will accumulate at this point and will give an immediate indication as to the amount of contaminants present in the fuel hose. Intently study the fuel above the vortex point for flecks of substance floating in the fuel. These flecks could be minute particles of air, sediment, or moisture. If the flecks of substance are air, the motion of the flecks will be upward toward the surface. If the migration of the flecks of substance is toward the bottom of the sample container, the flecks are not air, but are contaminants and being other than mere flecks or light are larger than five microns in size and should not be in the sample.

2003. INSPECTION OF NOZZLE SCREENS. Inspect the nozzle screen only if hose has been installed less than ten days. Inspect daily on newly installed hose. Weekly inspection and change of nozzle screens will be performed

on all equipment which is being returned to service following any "down" time which exceeds 72 hours. Be sure the strainer fits solidly in place so fuel will not bypass the strainer and does not bounce or float around. Single point nozzles will be inspected daily.

1. All nozzles must be adequately capped with a protective dust cap at all times when not in actual use.

2. All over-wing nozzles are required to have a bonding wire 36 inches long with a grounding plug and an adapter clip attached to the free end.

3. Check out all of the pipe and fittings from the pump through the filter unit to and including the metering device as well as the tubing and tube fittings from the pump pressure regulator, the Hytrol Valve (water slug control valve) and the filter pressure differential tubing lines to the pressure gauge.

4. Pressure drop readings are taken while refueling aircraft via pressure nozzle. Take pressure differential readings at the filter pressure gauge. The readings are to be taken from the inlet end of the filter chamber, at the center of the filter chamber, and at the discharge end of the chamber.

5. Record these readings on the appropriate form provided for that particular unit or refueler.

6. The differential reading is determined by subtracting the pressure reading obtained at the center of the filter chamber from the reading obtained at the inlet end of the filter chamber. Record this reading as it is an index to the amount of contaminants the filter element has absorbed.

7. Subtract the pressure reading obtained at the discharge end of the filter chamber from that obtained at the center of the filter chamber; record this pressure difference as it is indicative of the amount of water contaminant absorbed by the fuel monitors (go-no-go fuse).

8. The maximum combined pressure drop across filter and monitor elements will be no more than 25 pounds from end to end of the filter chamber, providing the filter chamber is equipped with a conversion kit and in any instance, it is mandatory that the use life of filter elements and fuel monitors are not to exceed three years.

9. For those installations where the filter elements and the fuel monitors are contained in separate containers, the maximum allowable pressure differential shall not exceed 20 PSI for the elements and not to exceed 20 PSI for the monitors; the use life time of three years is still applicable. Change elements and monitors at maximum pressure allowable or at the end of the three year use life, whichever occurs first.

10. At any time a decrease in the pressure differential readings occur or the differential pressure fails to increase after an extended period, immediately discontinue all fueling operations from this unit or refueler as the drop or failure to increase in differential pressure indicates either one or both of the following conditions:

a. Ruptured elements or monitors.

b. Due to improper installation, fuel is bypassing the elements or monitors.

11. Open the respective unit, filter chamber or monitor for an intensive inspection.

12. Do not limit the taking of pressure differential readings to a once a day function as a failure is unpredictable and could occur at any moment.

2004. AUTOMATIC WATER DRAW-OFF. Check the automatic water draw-off on the filter shell sump to see that someone has not inadvertently capped or plugged the outlet. At **NO** time will this outlet be capped or plugged.

2005. EMERGENCY CONTROL RELEASES. Test the emergency control releases (fore and aft and under the tank) to the internal valve.

2006. FIRE FIGHTING EQUIPMENT. Check each piece of fire fighting equipment to ensure inspection seal is not broken; if a seal is broken, or a hose or nozzle is damaged, or the inspection period has lapsed, the unit should be taken to the Fire Department for an official test; new seal; and new inspection date and signature. Do not move any refueler if any discrepancy or a fire hazardous nature exists.

2007. EXHAUST SYSTEM. Check the entire exhaust system for breaks, cracks, disconnected tubing, faulty spark arrestor or leaky manifold gaskets.

2008. HOSES. Check all hoses for breaks, worn or soft spots. Any exposed hose reinforcement material is cause for hose replacement because exposed fabric provides a source for water to penetrate, migrate, and ultimately rot the fabric.

2009. ELECTRICAL SYSTEM. Check the entire electrical system for bare wire, poor connectors, or any other deficiency that could cause an arc or a spark including the ignition system and wiring about the motor.

2010 PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

2010. ELECTRICAL ACCESSORIES AND WIRING. Monthly checks shall be made of all electrical accessories and wiring for arcing by operating units in the dark for five minutes.

2011. LAMP BULBS. Check rear view mirrors and the wiring system for burned out lamp bulbs at the control panels, head lamps, tail lights, riding lights, brake lights, and turn signals. Assistance will be needed to check the brake lights.

2012. BONDING. Always electrically bond the refueling equipment to the aircraft or truck into which the fuel is being loaded.

2013. DEFUELING. Defueling falls into two categories:

1. The defueling of aircraft for the purpose of maintenance where the fuel is not suspected of contamination and is declared salvageable as food fuel. Reference (e) establishes the procedures of defueling good fuel through the use of refuelers for the respective grades of fuel.

a. This concept is ideal in that it eliminates the possibility of generating admixtures of fuel through the use of a defueler, particularly so, if after a defuel, the defueler is dormant for an extended period of time during which time the original operator has been assigned to other duties or may have even secured for the day. Herein lies the possibility of the loss of identity of the product in the defueler.

b. To conform to the requirements of reference (e), it will be required that a minimum of one refueler, for each grade product, be configured to function as a defueler for those fuels declared to be good fuel. Additional equipment will be similarly configured as the request for defuels increases.

2. The defueling of aircraft because the fuel is suspected of or declared to be contaminated and to be treated as such. The defueler is to be assigned for all defuels where the fuel is suspected of contamination or known to be contaminated and to be disposed of as such. The defueler is to be assigned to the additional functions of removing contaminated fuel for the convenience of the crash crew.

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 3

ACCOUNTABILITY FOR REFUELING AND DEFUELING

CHAPTER 3

ACCOUNTABILITY FOR REFUELING AND DEFUELING

3000. GENERAL. Aircraft requiring refueling at Marine Corps Air Station, Yuma fall into three categories: station aircraft; deployed squadron aircraft; and transient aircraft. This chapter contains detailed procedures for documenting these issues. Each document will have recorded on it the identification number or the issuing refueler in order to facilitate investigation of suspected fuel contamination and its migration. Erasures or alterations on documents will be justification for their denial by the Supply Officer or designee in evaluating quantities for contract reimbursement purposes.

3001. ISSUES TO MILITARY AIRCRAFT. Upon refueling, pilots will present the appropriate AVFUELS Identaplate DD Form 1896 (White, DoD Jet Fuel Identaplate). Data contained on the Identaplate must be transferred to the AVFUELS Into-Plate Contract Sales Slip (DD Form 1898). Only DD Form 1898 Identaplate is acceptable for processing of Into-Plane transactions utilizing the DD Form 1898. After imprinting the DD Form 1898 with the Identaplate obtained from the pilot of the aircraft, the flight line attendant will:

1. Insert the number of gallons of the commodity loaded into the aircraft in the spaces provided.

2. Insert the applicable Bureau Number of the aircraft in the space following the preprinted number of the DD Form 1898.

3. Have the pilot print their Name, Rank/Grade, Social Security Number, and Organization Identifier in the spaces provided.

4. Have the pilot or crew chief sign the DD Form 1898 in the space provided.

5. Sign the DD Form 1898 as refueler in the space provided.

6. Provide the pilot with one copy of the issue slip.

7. Deliver remaining copies to the Supply Department Fuel Accounts Maintenance Section, Building 324 for generating necessary Inter-service or Intra-service billing.

3002. AIRCRAFT WITHOUT CREDIT CARD CAPABILITY. Navy, Marine, and aircraft of other United States Armed Forces and Federal Government Departments (US Air Force, Army, Coast Guard, General Services Administration, Department of

the Interior, etc.) without credit card capability, will be serviced by using the DD Form 1348 as the issue document. If the aircraft does not have a supply of these documents, the contractor will provide a blank DD Form 1348 for use upon request. The DD Form 1348 must include the following information:

1. Type, model, and serial number of the plane.

2. Major command to which the plane is assigned along with the name and address of office to be billed

3. Grade, quantity, Navy standard price, total value, and date of issue

4. Name, rank, social security number, and signature of the pilot, co-pilot or crew chief on the original plus two copies, - then provide the pilot with the green copy of the DD Form 1348

3003. SALES TO CONTRACT, CHARTER AND CIVIL AIRCRAFT

1. Cash sales of aviation fuel to contract, charter and civil aircraft are authorized under the following conditions:

a. Sales to Contract Aircraft operating under Department of Defense contracts or contracts of other United States Government departments are authorized without regard to availability of commercial fuel. Upon completion of contract flights, sales are permitted at the point of completion only as required for repositioning of aircraft concerned. Qualifications provided will be restricted to an amount needed to reach one of the following desired destinations:

(1) the aircraft's nearest home base,

(2) the point from which, or any point short of the point from which the terminated flight commenced, or

(3) the point from which another immediate flight is scheduled to originate.

b. Sales to Charter Aircraft are not authorized at activities where commercial fueling is available. At activities where commercial fueling is not available, sales are authorized at the point of flight completion only as required for repositioning of the aircraft concerned. Quantities provided will not exceed either an amount sufficient to reach the desired destination or the aircraft's nearest home base, whichever distance is less.

c. Sales to Civil Aircraft not under contract or charter are authorized under the following conditions:

(1) When civil operators have been granted permission to use the activity as a regular airport for scheduled flights and the agreement covering this use expressly authorizes the sale of aviation fuels for such flights.

(2) When civil operators have been granted permission to use an installation as a weather alternate airport in conjunction with scheduled flights and commercial aviation fuels and oils are not available, the Commanding Officer will determine whether fuel should be furnished in the quantity needed to reach the next destination or the nearest commercial airport where the grade of fuel required is available.

(3) When private and company-operated aircraft carry private individuals and company executives to conduct official business related to government activities.

(4) When an emergency exists, the Commanding Officer will, based on prevailing conditions, determine whether fuel should be furnished in the quantity needed to reach the next destination or the nearest commercial airport where the grade of fuel required is available.

2. Identification of Aircraft

a. Department of Defense Contract Aircraft. Contract aircraft operating under the Department of Defense contracts for domestic operations are identified by a Certificate of Operations signed by the Contracting Officer. This certificate will indicate the type of service involved and the contract under which operations are being performed. Examples are: Certificates of Logistic Air Support (LOGAIR) Operations and Certificates of Quick Transportation (QUICKTRANS) Operations. Contract operations under Department of Defense contracts for international operations are identified by Civil Aircraft Certificate (MAC Form 8) indicating contract aircraft.

b. Department of Defense Charter Aircraft. Charter aircraft operating under DoD Charters will be identified as follows:

(1) Flights limited to continental United States for cargo service are identified by a Civil Air Freight Movement (CAFM) number on the US Government Bill of Lading (Standard Form 1103).

(2) Flights limited to continental United States for passenger service are identified by a Commercial Air Movement (CAM) number on the US Government Transportation Request (Standard Form 1169).

(3) Charter aircraft used exclusively within an overseas area, provided identification by the appropriate overseas commander.

c. Other US Government Departments and Agencies. When other departments or agencies of the US Government desire that aircraft under contract or charter by them obtain fuel and oil from Navy or Marine Corps activities,

the department or agency will provide information as to the identification documents.

d. Civil Aircraft. All private or commercial aircraft not identified in accordance with subparagraphs a, b, and c will be considered to be civil aircraft.

3. Sales to Contract, Charter, and Civil aircraft must be secured by a surety payment bond, irrevocable letter of credit or security deposit. If such security has not been established with the Comptroller of the Navy, a Captain's Check is required.

4. Exemption certificates are required for exemption of the Federal Excise Tax in accordance with NAVCOMPTMAN 32511. An exemption certificate must be furnished for each purchase of fuel at the time each purchase is made. When so furnished, the exemption certificate will be required by the selling activity as part of the file documenting the sale. Exceptions thereto apply to such repetitive sales as pertain to Navy QUICKTRANS contract. In this situation, the exemption certificate furnished will cover all sales during the one year period designated on the certificate. In all cases, the exemption certificates will be retained on file for ready reference and audit for a minimum period of four years.

SALES OF JET FUEL TO CONTRACT, CHARTER, AND CIVIL AIRCRAFT

TYPE OF AIRCRAFT	JET FUEL	FEDERAL EXCISE TAX (per gal)	SURCHARGES actual or estimated + 2% admin chg
1. Contract aircraft			
a.. with exemption certificate	X	$0.00	N/A
b. without exemption certificate	X	$0.219	N/A
2. Chartered aircraft			
a.. with exemption certificate	X	$0.00	X
b. without exemption certificate	X	$0.219	X
3. Civilian aircraft			
a.. with exemption certificate	X	$0.00	X
b. without exemption certificate	X	$0.219	X

5. Cash sales of these type aircraft will be accomplished on a DD Form 1149 as follows:

a. Date of issue

b. Stock number, description (including grade) and quantity of the item issued

c. Pricing for fuel will be completed as follows:

(1) Quantity times standard price

(2) Prevailing price of truck movement(s) required for refueling operations

(3) 2% of the totals of items (1) and (2) for overhead

(4) Federal Excise Tax as applicable

d. Aircraft type, FAA license number, and home port of aircraft

e. Printed name and legible signature of persons on all copies of DD Form 1149 indicating acceptance of product and marked "Paid", if transaction was check or cash sale

6. Cash sales will be paid in advance or concurrently with delivery of the product.

7. All such cash sales collected, in the form of checks, will be processed at the Fuel Accounting Section, Building 324, as soon as possible following completion of the sale.

3004. PRICING. Aviation fuel sold will be priced as follows:

1. Contract aircraft will be charged the standard price plus applicable Federal Excise Taxes.

2. Charter aircraft will be charged the standard price plus surcharges and applicable Federal Excise Taxes.

3. Civil aircraft will be charged the DoD Standard Prices for Petroleum Products plus surcharges, and applicable Federal Excise Taxes will be added to the selling price.

3005. TRANSMITTAL OF CHECKS AND DOCUMENTS FOR CASH SALES

1. When the Station or the Refueling Contractor receives a request for aviation fuel that is determined to be a cash sale, it is mandatory that

the Supply Officer's responsible representative be in attendance to consummate the receiving and receipt for the cash sale involved.

2. The Supply Officer's responsible representatives are identified as personnel assigned to the Fuel Branch.

3. The Supply Officer's representative will, prior to attending the refueling, obtain a properly, pretyped DD Form 1149 from the Fuel Accounting Section Supervisor, Building 301.

4. Particular attention is invited to the following:

a. The refueling contractor has a response time limitation of 20 minutes for service calls.

b. The pilot of the aircraft needing service, also, has a requirement in the form of a flight schedule to maintain; therefore, it becomes necessary for the Supply Officer's representative to first advise the refueling contractor of the exact time they will be at the aircraft on extension X2234 and be there at that time.

c. Never instruct the refueling contractor to go ahead and fuel the aircraft until such time as the representative is actually at the aircraft and has made the determination as to whether the transaction is a cash sale or a charge account and the quantity and type of fuel is required.

d. Computation should be performed by application of the appropriate formula for the category of the plane.

(1) Date the DD Form 1149, endorse as the Supply Representative and obtain the pilot's signature as having received the fuel.

(2) Collect check and distribute copies or DD Form 1149 as follows:

(a) Copy number 2 to Maytag Aircraft Service.

(b) Copy number 7 to the pilot.

(c) Remainder to Fuel Accounting Desk, Building 324.

e. The Supply Representative will deliver to the Fuel Accounting Desk, Building 324, the check accompanied by the appropriate documentation. NOTE: for night issues, Saturdays, Sundays, and holidays, the Supply Duty Officer will ensure that checks will be held in a secure place. Payment and documentation covering the transaction will be delivered to the Fuel Accounting Desk, Building 324, at the beginning of the first working day following the transaction.

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 4

BULK FUEL PLANT OPERATION AND MAINTENANCE

CHAPTER 4

BULK FUEL PLANT OPERATION AND MAINTENANCE

4000. INTRODUCTION. This chapter contains operating procedures in amplification of references (b) and (c) developed to maintain efficient, safe plant operation and to ensure maximum quantity and quality control.

4001. BULK PLANT OPERATING FACILITIES. Any pumps, pipes, or valves referenced herein are shown in drawings and plans on file in the Fuel Branch Office and in the possession of the contractor.

4002. BULK PLANT OPERATION

1. To maintain maximum safety, qualified liquid fuel plant operators will be on duty at all times the bulk fuel plant is open for issuing, receiving, and transferring of fuels. One operator, in constant attendance, is to be responsible for and supervise all receipts and transfers of fuel with the issuing of fuels delegated to equally qualified operators. A requisite to the qualification of competent operator will be a most thorough knowledge of pipe alignments for issuing, receiving, and transferring of fuels, gauging and sampling techniques and the switching devices for controlling the pumps.

2. All working storage tanks will be checked daily for water content and accumulations of water will be drawn off using the appropriate sump pump, installed or portable, or by opening the tank's bottom water drain valves. Non-working tanks will be checked for water weekly or each time the tank is gauged, whichever occurs first. Above ground, floating roof tanks should be checked more frequently during periods of heavy rain.

3. The master JP storage tanks, Tank 312, Tank Y-1, and Tank Y-2 will be checked for water and drained not less than 48 hours after a pipeline receipt of fuel and checked daily thereafter.

4. The roof drains to Tank Y-1 and Y-2 will be opened immediately before all rainstorms. After all water has been bled off, the drains will be secured.

5. One night light, centrally located, will be left on for security purposes during those times when the bulk storage plant is secured between sunset and sunrise.

4003. BULK FUEL ISSUES. Topping off aircraft refuelers will account for the majority of bulk fuel issues. In the event of a fuel spill, dial extension X2285 from the nearest telephone (located in Building 301, the contract

refueler's office). For those occasions where the Fire Department has washed down the top of a refueler or whenever the refuelers leave the wash rack, it will be mandatory that tank sumps be immediately checked for free water. Drain off all of the water content.

4004. QUALITY CONTROL. The contractor shall take the necessary precautions to prevent mixing or contaminating fuels and lubricants. Special care must be taken to prevent introduction of sand or other foreign material into fuel systems and refueling equipment. Chapter 7 contains instructions for taking fuel samples.

4005. MAINTENANCE

1. Responsibility. The contractor will provide that labor required to complete any item of "minor" plant maintenance requiring up to five man-hours labor. The Station will provide spare parts required for all plant maintenance and that labor required to complete any item of "major" plant maintenance requiring more than five man-hours labor. The contractor shall refer requests for spare parts and major maintenance to the Station Fuel Inspector. Fuel Branch personnel shall be notified of any damage to facilities, equipment, or injury to personnel, however slight. Physical damage to fences, posts and bulk plant facilities shall be inspected and evaluated by the Supply Officer, who shall also determine responsibility for repairs.

2. Minor Maintenance. Minor maintenance items requiring up to five man-hours to complete include, but are not limited to, the following:

a. Lubrication

(1) Plug valves.

(2) Valve shafts on rising stem valves.

(3) Bottom loading stations and component parts.

(4) Motors, using lubricants recommended by manufacturers.

b. Mechanical

(1) Pump shaft packing using material supplied by the Station, EXCEPT mechanical packing which will be applied by station personnel only.

(2) Replacement of filter cartridges whenever pressure differential approaches the limit of 20 pounds or when filter change dates become due. The contractor shall notify the Station Fuel Inspector whenever filter cartridges are being replaced.

4006. BULK FUEL RECEIPTS. A Supply Department Fuel Inspector shall attend all receipts of bulk fuels.

1. Quantity Control

a. All official gaugings and temperature readings concerning bulk fuel receipts or other transactions affecting contractor accountability or reimbursement shall be taken jointly by the contractor and a Supply Department Fuel Inspector or his/her designee.

b. Physical Receipt. A qualified fuel plant operator, attended by a Supply Department Fuel Inspector or his/her designee, shall receive all bulk receipts of fuel as follows:

(1) Obtain applicable receipt documents from the carrier:

DD Form 250, Inspection Report (rough)	1 copy
Carrier's Delivery Slip	1 copy
Refinery Bill of Lading	1 copy
State of Arizona Tax Form (regular and unleaded gas only)	1 copy

(2) Review receipt documents to ascertain correctness of entries, carrier's name, product, carrier's vehicle number, contract number, shipping order number, bill of lading number, gross and net quantities, loading temperature, and API gravity.

(3) Navy seals will be inspected to ensure that they are intact and to verify serial numbers. After inspection, seals will be removed and placed in trash cans for disposal.

(4) All bulk fuel receipts shall be sampled at the top of the tanks for fuel color determinations and at the drop-outlets for sediment and water content. Any fuel found to be "OFF" on color, or containing sediment or water, notify the Fuel Inspector.

(5) A Fuel Inspector or his/her designee shall visually inspect each compartment of the carrier's equipment (truck and trailer) to ensure that fuel is up to the correct calibration markers and that the calibration markers are properly sealed. Broken or missing calibration seals will be reported to the Station Fuel Inspector immediately. The Fuel Inspector will also place an entry on the carrier's delivery ticket noting the location of broken or missing calibration marked seals and require the carrier to sign above the entry.

(6) After receipt of fuel, a Fuel Inspector will endorse receipt documents acknowledging receipt by the Supply Officer.

(7) The Fuel Storage Operator will secure all receiving lines by capping or plugging all receiving hoses and closing all receipt valves from the off-loading point, through transfer valve pits, and including the valve at the storage tank.

c. Post Receipt Gauging. After a sufficient length of time to permit dissipation of surface agitation (a minimum of 1 hour), the Fuel Storage Operator will regauge the receiving tank(s), take a water cut, and take temperature readings. The Fuel Storage Operator will record start and finish innage readings, water findings, and observed temperatures on a receipt for fuels and lubricants certification form certified by the Fuel Inspector and the Fuel Storage Operator. The contractor's representative (Fuel Storage Operator) will retain a copy of the receipt certification form for record purposes.

d. Ordering Fuel. Estimating requirements and placing orders for products covered by the contract is the responsibility of the Supply Officer or a designee.

2. General Instructions

a. Aviation fuels may be received aboard this station via commercial truck and trailer and commercial pipeline. The instruction that follows will treat each mode of receipt in the order of volume. By referencing drawings to itself with no cross connection to the other system, and so identified by adequate signs that any error in receiving aviation fuels into the wrong system will be declared to be gross negligence on the part of the operator. It is the responsibility of qualified fuel farm operators to receive all aviation fuels and ground products as expeditiously as possible without sacrificing safety for speed.

b. A Fuel Inspector will attend all receipts of fuel, acting in the interest of the Supply Officer and this Station. It is to be understood that the Fuel Inspector's function is NOT to receive fuel but rather to ensure the adherence of all safety factors. The Fuel Inspector is vested with the authority to:

(1) Curtail any operational function that is unsafe.

(2) Question the validity of documents or the government seals that accompany the fuel.

(3) Initiate action if the quality of the fuel is suspect. (The inspector will endorse for all aviation petroleum products and ground products received and consigned to the Supply Officer.)

3. Receiving Functions, Step-by-Step (Tank Truck and Trailers)

a. Secure the electrical switch devices for that particular tank or tanks to be used.

b. Secure the valves on the issue line from the pumps.

c. In the presence of the inspector, take a gauge and temperature reading of the receiving storage tank in which that particular load of fuel will be deposited.

d. Open the receiving line valves at the tank and manifold for pipe alignment.

e. Position the truck and trailer to the correct off-loading stubs and ground or bond the truck and trailer.

f. Receive from the driver the Material Inspection and Receiving Report, DD Form 250 and verify the type of petroleum product and to whom consigned. Retain this document and keep it in your possession as it is your only justification for receiving and taking possession of the fuel.

g. Starting on top of the truck and then the trailer:

(1) Verify the seal number on each seal with the list of seal numbers contained on the DD Form 250 and as the seal is verified, remove it entirely and dispose of it in one of the receptacles provided for its disposal. NOTE: Do not use bare hands in removing the seals.

(2) Do not let the driver remove any seals at any time for any reason. These seals are our assurance that the quality and quantity of the fuel has not changed since loading.

h. If any seal is found broken or not conforming numerically with the DD Form 250 listing, turn the DD Form 250 over to the inspector with those seals that may have been removed; wait until the inspector gives further instructions. The inspector will initiate an investigation.

(1) Using a clean, clear glass receptacle, draw a small quantity of fuel from the hose connections on the truck and the trailer. Visually inspect these samples for:

(a) Color.

(b) Sediment.

(c) Water.

(2) If the color is an off-color:

(a) DO NOT connect the unit.

(b) Inform the inspector of the results and await the inspector's decision.

(3) If either sediment or water is found:

(a) Drain it until the fuel is CLEAN and CLEAR.

(b) If the fuel DOES NOT clean up, stop the operation and ask the inspector to review the samples.

(c) Corrective action will be initiated by the inspector.

i. The Plant Operator will perform an API gravity check on all receipts aviation fuel and ground products and compare with that on the DD Form 250.

j. Have the driver connect the truck and trailer to the correct off-loading stubs only after it is determined that the fuel is CLEAN and CLEAR.

k. When the fuel hoses have been connected and the valves on the truck (lever controlled valve and the internal valve - safety valve) have been opened to charge the hoses with fuel:

(1) Check each coupling connection for leaks.

(2) Remake the connection if leaks are in evidence.

(3) After leaks have been secured, open the control valves at the receiving stubs for the respective receiving tanks, open valve leading to the trailer first and when flow is established, open valve leading to the truck tank.

l. Approximately 45 minutes of flow time are required to off-load a truck and trailer of aviation fuel (approximately 8,600 gross gallons).

m. Disconnect the truck and trailer in the reverse order of connecting by:

(1) disconnecting the hose at the truck and trailer.

(2) raising the open end of the hose to shoulder height and walking toward the off-loading stub, letting the drained open end of the hose play out back over your shoulder.

(3) draining the hose thoroughly and capping or plugging the open end, whichever is appropriate.

(4) securing the valves at the off-loading stubs.

(5) securing the grounding cables.

(6) At this time, the inspector will endorse the carrier's delivery ticket and receive from the driver:

(a) a copy of the delivery ticket endorsed by the driver showing off-loading date and time

(b) a copy of the refiner's loading form, likewise endorsed, dated, etc.

(c) a copy of the State of Arizona Motor Gasoline Tax form (for unleaded fuel only)

(d) These documents are to be combined with the DD Form 250 (government document)

n. Secure the valves on the receiving lines at the tanks.

o. Processing of the Receipt for Fuel and Lubricants form. After being certified by the Fuel Inspector, the original of this form is to be delivered to the Fuel Branch Inventory desk, along with the paperwork in paragraph m(6) above, for final processing.

p. DO NOT issue fuels from storage tanks that have been just filled, but DO cause the tank to be dormant for a period of at least 24 hours, when possible, to settle out any and all contaminants that the fuel might have picked up from the pipeline or rolled up from the bottom of the tank.

4. Receipt via pipelines

a. General

(1) 98% of the fuel used aboard this station is transported to this station via a pipeline terminating in two pipeline company-owned storage tanks, terminal storage Y-1 and Y-2.

(2) The main pipeline is a multi-product line and that in itself generates quality control problems that are not found in transporting aviation fuel products via tank truck and trailer.

b. Additional surveillance is required in water control, settle off time, and in transferring product from tank to tank.

(1) The pipeline company is responsible for:

(a) Depositing batches of product into the tanks.

(b) Removal of all water prior to transferring the product to the custody of MCAS Yuma.

(c) All sampling of the new product and a laboratory analysis is required before any transfer of product to MCAS Yuma.

(d) Maintenance of all equipment within their fenced compound and that portion of the six inch pipeline traversing government property to reach and support the two tanks within their compound.

(2) Inspector of Navy Materials, Defense Fuel Region, South Petroleum/Chemical (DFRS (Pet/Chem)), transfer of custody at destination by:

(a) Processing of the shipping report form (required to put the product on the line).

(b) Reviewing the batch cut records (made when the batch is diverted from the main line and again when the batch is terminated).

(c) Disallowing any transfer of product to ready for receipt storage as a result of an unsatisfactory laboratory analysis.

(d) The accomplishment of the Material Inspection and Receiving Report (DD Form 250) reflecting quantities received.

(3) The Fuel Branch participates to the extent that:

(a) All witnessing of tank gauges conducted by the pipeline contractor after the product has been declared to be acceptable by DFRS (Pet/Chem) immediately before and immediately after the transfer of any sum of petroleum products from the pipeline terminal storage to designated ready for receipt (RFR) storage under the custody of MCAS Yuma Refueling Contractor shall be for the specific purpose of attesting to the quantity of product removed.

(b) An additional witnessing occurs at the time the Refueling Contractor's personnel gauge the RFR storage before and after each receipt of product.

(c) For determining the API gravity value of the residual quantity of product remaining in a storage declared to be "Ready for Receipt" and a similar API evaluation by the Refueling Contractor's personnel and for any laboratory test as required.

(d) A recap of those discharged quantities as partials to the final absorption of the loaded quantity.

(e) The net quantities discussed in (b) through (d) above are computed to net quantities predicated on Volume II, Table 6B of American Society for Testing Materials (The Institute of Petroleum) (ASTM-IP), which is strictly for the financial accounting on the government's part.

(f) An additional quantity is shown and computed on Table 6B of ASTM-IP and is for tariff purposes only.

(g) Periodically a sum representing a gain or loss is shown in the recap section, paragraph (d) above, and the pipeline contractor in the transportation of the aviation petroleum product.

(4) The processing of an additional local form entitled "Receipt for Fuels and Lubricants" on which custody of all petroleum products are transferred to station's refueling-defueling contractor.

(a) This form is to be considered a historical record of the product's movement (transfer from pipeline to the MCAS Yuma Refueling Contractor).

(b) Requires the endorsement of those individuals participating in the physical gauging of the "Ready for Receipt" storage before and after the fact of transferring.

(c) A copy of this "Receipt for Fuel and Lubricants" form will be retained by the Station Fuel Inspector.

(d) The Fuel Accounting Section receives the original copy of the "Receipt for Fuel and Lubricants" form from the Fuel Storage Operator and records the net quantity of fuel moved out of the pipeline to contractor storage. When the DD Form 250 arrives, the quantity figure, if different; is changed to coincide with the "Receipt for Fuel and Lubricants" form to show exact gallons received.

4007. CONTAMINATED FUELS-DEFUELS

1. Contaminated or Suspected Contaminated Fuel. Activities that receive contaminated fuel from fuel suspected of being contaminated will report the information immediately to the Station Fuel Inspector or the Fuel Inspector on duty at extension X2478/2312 or the Supply Department Duty NCO after normal working hours at extension X2756. Immediate and positive investigation and corrective action will be initiated by any of these individuals and the Supply Officer will immediately be advised of the circumstances and the corrective action taken.

2. Recovery of Contaminated Fuels. All fuels declared to be or suspected of contamination will be defueled from the aircraft into a defueler only. Defueling of all aviation fuels known to be good fuel.

a. It will be permissible to use the defueler for defueling aircraft under certain conditions as outlined below.

(1) All fuels defueled, e.g. Jet Fuel JP-5, must be immediately deposited in an underground storage tank containing that particular petroleum product.

(2) At no time, repeat, at **NO** time will fuels defueled from aircraft by the defueler be pumped into a refueler for reissue. The fuel must be returned to storage.

b. Credit for Defuels

(1) Do not give credit for defueled contaminated fuels.

(2) Issue credit for defueled good fuel to squadrons permanently deployed, squadron and station aircraft.

(3) Do not issue credit for one time visiting aircraft unless authorized by the Supply Officer or a designee.

4008. DISPOSAL (SALES) AND ACCOUNTABILITY OF CONTAMINATED FUEL AND WASTE OIL. Location, Area 311, Fuel Storage. Tanks D-1, D-2, and D-3 shall be used as the primary storage for the accumulation of contaminated fuels and waste oil. These particular tanks will be used to issue contaminated fuels and waste oil to a private contractor authorized by the Defense Reutilization Management Office (DRMO), with proceeds going to the Special Recreation Service Fund. Marine Corps Property will make up the necessary paperwork portraying the gross gallons and monetary value. The fuel storage operator will gauge tanks D-1, D-2, and D-3 before and after each issue to the private contractor and fill out a three part crank box ticket certified by the fuel storage operator, the contractor, and a fuel inspector. One copy will go to the DRMO of the quantity received, the second copy goes to the Station Fuel Inspector to be filed, and the original goes to the Fuel Accounting Section for accountability.

4009. INVENTORY PROCEDURES

1. Inventory of all petroleum products shall be at the discretion of, and as required by, the Supply Officer but not less than once a week and then on Friday morning.

2. The inventory shall be obtained by physically using a plumb bob and tank thermometer for gauging each storage tank.

a. Use an approved gasoline finding paste spread thinly on the plumb bob tape.

b. Smear water finding paste on the lower portion of the bob, (weight) for detecting and recording the water content for each storage tank.

c. Submerge the bob in the fuel until the bob just touches the bottom of the tank, (do not let it tilt as it will produce an erroneous reading); the bob must be vertical and this can be determined by feel.

d. Remove the bob and read the footage to the nearest one eighth inch; this reading is to be obtained at the point where the fuel has changed the color of the gasoline finding paste. Record this footage reading.

e. Wipe the paste off the tape and all of the fuel down to the plumb bob.

f. Hold the plumb bob in one hand, place it parallel to the tape and determine the footage to the nearest one-eighth inch for the water content.

NOTE: If water is found, that quantity must be recorded and deducted from the overall quantity of the fuel as it was found on plumbing the tank.

g. Add the thermometer to the plumb bob tape and take temperature readings from the center of the top one-third of the fuel, from the very center of the quantity of fuel in the tank, and a third temperature reading from the center of the lower one third of the fuel.

h. Hold the thermometer for a period of five minutes at each level to allow the thermometer to stabilize itself to the temperature of the fuel at that level.

i. Record these temperatures; use an average of these temperatures for determining the net quantity for each tank. Correction factors are found in ASTM'S Petroleum Measurement Tables, Volume II, Table 6B with the factors correlated to the correct API for that particular petroleum product.

NOTE: Each petroleum product is refined to specific API gravity ranges.

j. Record the sum total of the net quantities of each petroleum product to the inventory sheet as the "on hand" quantity for that particular day. Deduct this sum from the sum total of the quantity carried forward from the previous inventory, plus the total of all receipts for new fuel, plus the total quantity of any fuel that may have been returned to that particular storage.

k. The resulting quantity, after subtracting, will be that sum of fuel that must be accounted for. This accountable sum of fuel is, of course, to be compared with and evaluated against the sum total of all the issue slips or transfers of fuel to other activities for each fuel being accounted for. From this evaluation, you determine the gain or loss.

l. Beneath this inventory accounting, places have been provided for recording the accumulative totals of all receipts, all issues, all gains, all losses, for each product for the quarter. At the end of each quarter, clear the inventory and start afresh.

3. The on-hand quantities referred to in subparagraph j above should include those sums of fuel contained in the refuelers. On a weekly, monthly, and quarterly basis, an additional quantity must be added to this

sum and that quantity is the total capacity of the pipelines for each system (NOTE: The lines in each system are integral; therefore, the word system as used above will denote a product for each system, i.e., JP-5 jet fuel, etc.). The "On hand" quantities for each weekly, monthly, and quarterly inventories are to be recorded to the kardex as true quantities. (See paragraph 2.1. above.)

4. Notes

a. Commercial tank truck and trailer of fuel waiting to be off-loaded will be off-loaded after the official inventory.

b. If a pipeline movement of petroleum products has been accomplished on the final day or any one accounting period and for which signatures have been obtained on a local form entitled "Receipt for Fuels and Lubricants" (transfer of custody from military to contract), this represented sum will be inventoried and processed to the kardex as a true sum. When the smooth DD Form 250 (corrected copy) and DD Form 1149 showing dollar value arrives, it will be changed to show actual amount received from signed copies of the receipt ticket.

c. A daily inventory is held on all ground products (unleaded gas and diesel fuel) as well as those periods depicted in paragraph 3 above.

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 5

RECORDS AND REPORTS REQUIRED

CHAPTER 5

RECORDS AND REPORTS REQUIRED

5000. INVENTORY CONTROL. The contractor will prepare a weekly, monthly, and quarterly inventory control record on forms provided by the Supply Officer for each product covered by the contract. The original of the inventory control record shall be submitted to the Fuel Branch Inventory Control Clerk by 0900 each day. Issue documents shall be sorted into batches by product. Documents shall be carried in an envelope to prevent loss or damage for each stack of issue documents bound between two hard cards secured by rubber bands. Daily inventories will be prepared on all ground products as well as weekly, monthly, and quarterly.

5001. DAILY LOG SHEET. The contractor shall be responsible for the maintenance of the Daily Log Sheet, specifically designed to account for and portray truck movements for each day in two parts. This form shall, in the upper or first part, list all of the POL products in the physical custody of the contractor and is to include defuels and dry runs (service extended, but no issue) and an area for totals.

1. The horizontal nomenclature, positioned over columns, is to reflect gallons issued, aircraft serviced, and top-offs. Under defuels, portion is to reflect aircraft serviced, quantity defueled, good/bad fuel, and the final disposition of the fuel (returned to storage, tank number according to product), or issued to Crash Crew if fuel is known or suspected to be contaminated.

2. Record the sum total by product under gallons issued, the sum total of aircraft serviced for each product in the column provided for aircraft serviced, etc., with the result reflecting each truck movement by the product.

3. Total each vertical column.

4. The second portion of the form will be used to show the accumulated totals of each product and is to include and show dry runs, defuels, napalm, and contaminated fuel. Position the product list across the top, horizontally and below and in a vertical list on the left hand side, list issues, aircraft serviced, top-offs, defuels, and dry runs.

5. Enter the quantities and aircraft service sums under the correct product and aircraft service box for each product and service.

6. To perpetuate and accomplish this portion of the form for accumulated totals, add the total of each product and service for the day being accounted for to the total as reflected in the accumulate

totals portion of the form to the previous day's totals for that particular day. Do not accumulate totals past any calendar month. Start a new accumulation beginning with the first day of each month.

7. This form, being designed to reflect the physical actions of any one day and for developing other specifics, will be subject to revision whenever values have been firmly established and additional information may be required. Each entry must be accurate.

8. The original of the form noted above will be given to the Fuel Branch Inventory Control Clerk for review with the daily submission of issue documents. Errors or omissions in aircraft services and products/quantities will be immediately resolved with the individuals submitting the form and issue documents.

9. A copy of the form noted above will be given to the Station Fuel Inspector along with the daily dispatch log sheets. The Fuel Branch personnel will extract information from the daily dispatch log sheets and match it to the form mentioned above. Errors will be brought to the attention of the Contractor's Refueler Manager and corrected as necessary. Contractor's individual response time will be verified on a daily basis. After the contractor's daily form and dispatch logs have been verified for accuracy, the Station Fuel Inspector will initial and retain them on file for one month, after which they will be turned back over to the contractor who will keep them on file for a period of two years.

5002. FILTER-SEPARATOR LOG. The contractor shall submit the plant filter-separator logs to the Station Fuel Inspector on the first workday of each month portraying the pressure readings and differential pressure for each filter-separator/ monitor for the month just completed. The Fuel Storage Operator will immediately bring to the attention of the Station Fuel Inspector any significant increase/decrease of differential pressure noted as it occurs.

5003. REFUELER DISCREPANCY REPORT. This report will be completed by Supply Department Fuel Inspectors to record and report deficiencies in refueler equipment as found. Upon receipt of a Refueler Discrepancy Report, the contractor will retire the refueler for corrective action. Upon completion of corrective action, the contractor will endorse and return the report to the Station Fuel Inspector. The Station Fuel Inspector or a designee will re-inspect the refueler and approve its return to service and record the number of hours that a particular refueler was out of service.

5004. REFUELER INSPECTION AND MAINTENANCE RECORD. The contractor will utilize "Inspection and Maintenance Record, Mobile Refueler" form for daily mechanical check-off of each refueler. By taking immediate corrective

action on those discrepancies noted by their own check-off, the contractor will minimize the receipt of Refueler Discrepancy Reports from the Fuel Inspector's office and will be able to maintain efficient, safe mobile equipment. The contractor will pay particular attention to filter pressure differential readings and record the readings daily. The contractor will maintain refueler inspection and maintenance records on file. In addition, it is required that this daily inspection form provide information relative to down time for mechanical repairs. This record must be factual; to be factual, report repair time as "Out of Service". For those times the equipment is not actually used for service, but is mechanically sound, report such time as "Not Used". The contractor will record the pressure readings daily on NAVWEPS Form 11240/1. Retain these forms, starting a fresh form each month, until such time as a filter change occurs, at which time:

1. Opposite the final pressure entry, insert the fuel meter totalizer reading.

2. Start a new form, even though it is the middle of the month, and enter the fuel meter totalizer reading as a start reading for that particular meter/refueler.

3. The objective is to be able, at any one point in time, to establish the total amount of product (fuel) dispensed through a particular set of filter media, particularly through the media that failed.

4. A Filter Separator-Fuel Monitor Pressure Graph will also be filled out each month in accordance with reference (b) for each refueler.

5005. FUEL SURVEYS AND DOWNGRADES

1. The requirements for surveying fuel can only originate from certain causes, i.e.:

a. The inadvertent mixing of aviation fuels that automatically causes the mixture to become chemically contaminated.

b. Quantities of fuels lost in extracting water from the sumps of refuelers and storage tanks.

c. The careless overfilling of storage tanks and refuelers.

d. The mechanical failure of the automated shut-off devices in the bottom loading components of refuelers.

e. Through the failure or rupturing of fittings and pipes or in tank cleaning.

2. Surveys as generated from causes shown in paragraph 6005.1.f 6005.1.e. will require a written justification with a complete explanation as to the cause of the loss. If those losses, as the result of 6005.1.a, c., and d. (caused by negligence) exceed 0.005% of through-put for that particular fuel, the Supply Officer shall have cause for requiring reimbursement of that sum exceeding 0.005%.

3. Documentation shall consist of a letter of request citing date, justification, particulars, and endorsed by the contractor and local manager accompanied by a crank box ticket showing the type of product, quantity, and current price per unit of issue properly endorsed by the contractor's manager and dated. NOTE: This crank box ticket shall not be considered and used as a truck movement. Submit the requested survey to the Station Fuel Inspector.

4. The Fuel Branch Inventory Desk will prepare a DD Form 1149 to accomplish the survey and reconcile the inventory recap, accordingly, to reflect gain or loss.

5. At no time shall fuel be downgraded without an approval from the Defense Fuel Supply Center.

5006. OTHER REPORTS. The contractor shall submit such other reports pertaining to operations as may be required from time to time by the Supply Officer or a designee.

1. A local form, Marine Corps Air Station Yuma (MCASY) 10340/12, identified as the Daily Log Sheet, used by the refueling contractor for recording requested service calls and dispatching refuelers and a defueler is of paramount importance. This form, in addition to being dated for each day's service record, is to contain and be maintained for:

a. Each squadron by squadron prefix, Visiting Aircraft Line (VAL), and for the issue of JP-5 and will also include defuels and dry runs.

b. Additional information on each sheet will be as follows:

(1) Name of driver/operator.

(2) Truck number.

(3) Squadron number.

(4) Type of aircraft.

(5) Type of fuel.

(6) Time of service call.

(7) Time of response

(8) Dispatcher's initials

(9) Time of return from a service call and after topping off the refueler or emptying the defueler

(10) Number of aircraft serviced

(11) Number of gallons issued

(12) Number of top-offs for that particular service call

(13) Remarks section

2. These daily log sheets are to be submitted with the day's receipt and issue documentation and are to be used by the Fuel Branch for:

a. Pinpointing errors that occur in the issue documentation.

b. A cross-check on sums of fuel issued to any one squadron.

c. To evaluate elapsed time turn-around (cyclic) for any one refueler and all of the service equipment from the time of departure/dispatching to respond to a call from service until the unit has returned, been topped-off (replenished), and is declared ready to be dispatched on another service call.

d. To evaluate response time, time of receipt of call to the time of departure/dispatching.

NOTE: This area of time (response time) is limited by the terms of the contract and will be a continuing area of surveillance.

e. To determine realistic fuel consumption figures pertaining to various types of aircraft for planning purposes.

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 6

QUALITY CONTROL AND SURVEILLANCE

CHAPTER 6

QUALITY CONTROL AND SURVEILLANCE

6000. GENERAL. The purpose of this chapter is to ensure that the petroleum products issued will be of the best possible quality. To achieve this desired quality, our efforts must fall into two general areas:

1. The prevention of contamination which is concerned with proper storage, transfer or handling, and dispensing of the fuels or oils.

2. Inspecting for contamination which concerns those inspections made and samples which are taken upon receipt, transfer and dispensing of the fuels and oils.

6001. PREVENTING CONTAMINATION. Contamination, as used here, includes any substance found in the fuel in excess of that permitted by laboratory analysis. It includes water, sand and dirt, microbiological growth and other contaminants.

1. Low extremes of temperature will invariably result in water being found in the bottom of refuelers and storage tanks. A portion of this water may be attributed to condensation of moisture laden air in partially filled tanks. The balance of the water accumulates from fall-out of dissolved or entrained water in the fuel. Water shall be controlled by being drained off as it accumulates.

2. Sand and dirt contamination can be found anywhere, but are of particular concern in this region due to the airborne powder like sand. Preventing contamination by sand can be accomplished by the following:

a. Do not transfer petroleum products to aircraft or refuelers during sandstorms unless ordered to by higher authority. Refuelers may be bottom loaded if the nozzle and adapter are free of sand.

b. After off-loading trucks and trailers, the bulk fuel hoses must be drained and capped or plugged.

c. Every effort must be made to prevent the entrance of dust or sand into any fueling component being serviced. Plug all orifices and cover any exposed parts. The purpose here is not only to prevent the introduction of sand into the product, but also to prevent the premature failure of the mechanical components themselves.

d. After a sandstorm, clean the following items before use:

(1) Refueling nozzle tubes, strainers, and nesting tubes.

(2) Any other articles that may contact fuels being transferred.

3. Microbiological growth is supported by and dependent upon the presence of dirty, stagnant or salt water, iron oxides, or mineral salts. The microorganisms are non-aerobic. They don't require oxygen to survive and thus are able to live under the surface of the fuel. These growths can invade some aircraft fuel cell lines causing corrosion of the metal structural members of the aircraft as well as fouling the cell probes and other parts in the fuel system.

a. The most effective control over microbiological growth is the prevention of disposal of water in fuel storage containers. Drain off water as it accumulates.

b. Next in effectiveness is the use of filters to eliminate particulate matter which may become the nucleus for accumulation of minute particles of water.

4. Other contaminants include sodium sulfonate and sodium naphthelate which are produced during catalytic processing of petroleum. They have no effect on the fuel itself, but do cause a destructive poisoning of the filters.

5. An additional source of contamination is from the fuel transfer hoses, in the form of dust, plasticizer materials (used in the manufacture of hoses), and particles of rubber and thread sealer. Before installing new or used hoses, follow this procedure:

a. Cap one end of the hose, elevate the open end and nearly fill the hose with fuel of the type to be used in the hose. Work the hose up and down to obtain a flushing action. This action is called pickling. Let this hose stand full for a minimum of 72 hours, one week is preferable.

b. Drain the hose thoroughly but retain a sample of the fuel in a clear glass for color evaluation.

c. If the resulting sample is off color, repeat the washing operation until the sample matches the clean fuel.

d. For refueling equipment, re-circulate the truck's petroleum through the hose until the nozzle screens remain clean.

6. General precautions for prevention of contamination include the following:

a. Arrange product movements and transfers so that the maximum settle-off time may be obtained.

b. After this settle-off time, each storage tank shall be stripped of water.

c. Before each transfer, water shall be drawn off regardless of the settle-off time.

6002. INSPECTION FOR CONTAMINATION. Good fuel handling practice and certain regulations require periodic inspection and sampling of petroleum products at various times. These inspections and samplings will occur as follows:

1. Upon receipt of fuel via the pipeline, samples will be taken from the storage tank by the pipeline contractor's personnel and will be submitted to their laboratory for analysis.

2. A Quality Surveillance Representative from DFRW will witness the above sampling and at a convenient time will take samples which will be submitted to the Naval Laboratory at Point Loma, California, and abide by their instructions.

3. Other inspections and precautions concern being sure that:

a. The fuel is in the correct tank or truck.

b. The fuel is adequately filtered into the fuelers.

c. The refueler tanks are free of contaminants, the tank liners are intact, filters are adequate, hoses and nozzles are sound.

4. Fuel Branch personnel have the authority to curtail or stop any fueling operation which may endanger personnel or equipment.

a. When remedial action is required, it will be necessary that the Supply Officer be informed, through channels, of the incident and of the proposed corrective action prior to initiating the corrective action.

b. An additional responsibility for Fuel Branch personnel covers inspection for seals on fuel loads and missing or incorrect documents accompanying the fuel.

6003. FUEL SAMPLING

1. Any sample improperly taken or contained cannot be declared to be representative of the fuel in question. For truly representative samples, follow this procedure:

a. Using the same type fuel as being sampled, rinse each sample bottle three times and drain thoroughly making sure to rinse the polyethylene cap and insert within the final wash material from the bottle.

b. Samples will be drawn through a sampling tube connection located between the filter units and the dispensing points at the JP-5 load racks.

c. Prior to sampling storage tanks, wash the sampler cage and chains, then check the cork for secure mounting and excessive wear.

d. Use sampling techniques as illustrated in the ASTM Manual "Measurement and Sampling of Petroleum and Petroleum Products" for sampling storage tanks.

(1) For commercial trucks and trailers, the sampling points will be at the "Drain Dry" point at the off-loading connections.

(2) Samples may be taken from the commercial pipeline for practice purposes only.

e. Samples will be taken in accordance with the frequencies established and will be delivered to the Navy Petroleum Testing Laboratory in Point Loma, California the last Thursday of each month.

(1) Refueler and load racks monthly samples will be taken no later than 1400 on the last Wednesday of each month.

(2) Storage tank 312 will be sampled and tested each month.

NOTE: Take duplicate samples from Y-2 before a pipeline receipt to establish the quality in case of doubt. A retain sample will be taken after each receipt and retained for 90 days or until supply has been depleted (whichever comes first). A comparison sample will be taken every quarter and sent to the Navy Laboratory.

2. Sample containers shall be provided by the Supply Officer and shall be of one quart (bottle) and one gallon (can) capacity as required. Sample bottles will have Bakelite cans with polyethylene inserts. Sample cans will be coated, scale and rust free. Identification of each sample container shall be as follows:

a. Use a cloth shipping tag. Enter the following information:

(1) Date.

(2) Type of fuel.

(3) Source of sample, i.e., tank number

(4) If aircraft sample, enter the Bureau Number, type, and the squadron number.

(5) Type of test required.

(6) Classification - routine or special

6004. CONTAMINATED DETECTORS

1. Reference (e) is the authority for the use of the contaminated fuel detector (for particulate matter) and water identified as MODEL CCFD MK III, a precision instrument and establishes the frequency of sampling and the sources of the samples.

2. These instruments are to be used by trained personnel only. Adhere to the instructions contained in reference (e).

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 7

SAFETY

CHAPTER 7

SAFETY

7000. GENERAL. Safety is a subject that attracts command attention in industry and within military agencies, particularly in the field of highly combustible materials. The preceding chapters stress safety in certain areas and procedures. It must be said that every physical action, performed with due consideration and respect for safety, in the receiving, storing, and the final issuing of highly combustible, unstable aviation fuels into aircraft has more than the intended purpose of protection for the individuals immediately involved. The ultimate safety extends to those highly trained pilots who MUST have clean, dry fuel and applied safety in order to perform their intended mission and return safely.

7001. HANDLING AVIATION PETROLEUM PRODUCTS. Paramount requisites for safety in the handling of aviation petroleum products must necessarily start will ALL individuals being constantly alert and being aware of everything that transpires in and about a fuel storage, a loading facility and while transporting fuels from loading source to and among parked aircraft where the final function of issuing fuel takes place.

7002. STATIC ELECTRICAL CHARGES. Static electrical charges are developed in refuelers while being loaded and while sloshing around in the tank while in motion. All fuel being pumped through hose lines, filters and pipelines generate static electric charges. Air, under velocity, around the body and wings of an aircraft create friction, which in turn, converts to static electrical charges in the aircraft. All aircraft refuelers will be equipped with bonding cables solely for the purpose of dissipating the accumulations of static electrical charges from the refuelers and the aircraft.

7003. LOCATION OF EMERGENCY CUT-OFF SWITCHES. There are twelve "RED" electrical emergency switches positioned strategically about the fueling area; one each at three JP-5 7003 loading facilities; one on the right side of the main control panel west of tank farm, building 313; one each at the two personnel gates south side of area 311; two on the fence line on the north side of area 311 (one by the JP-5 pumps and one by the emergency shower and eye wash station); one truck entrance-exit gate, one at the west end of building 302; one at the north entrance to building 301; and one at the main entrance (north side) to Southern Pacific pipelines compound. These "RED" switches are for emergency use ONLY in the event of a fuel spillage, ruptured pipelines or hoses, fire or for any other failure endangering life or equipment.

7004 PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

7004. FIRE CONTROL. If a fire should occur anywhere in the fuel complex, use the emergency switching system at the closest possible point to cut off all of the power to all of the pumps, then proceed as follows:

1. Go to the closest Fire Alarm and trip the lever and to the nearest telephone and dial 911.

2. Note the specific location of the fire, i.e., loading facility, truck parking area or office-workshop area. Then spread the word.

3. Without endangering yourself or others, make every effort to secure all of the valves to the storage tanks and facilities being used and make every effort to contain and control a fire or a spillage that could result in a fire until the Fire Department arrives. If a fire should occur, use the fire fighting equipment available. DO NOT use water; this will only result in spreading the fire.

4. Upon the arrival of the Fire Department, assist in controlling the spillage; in the event of fire, leave the area and let the Fire Department control the fire.

5. Only assist the Fire Department whenever and wherever they ask for assistance.

6. All available personnel will participate in the evacuation (as per reference (g)) of refuelers, commercial truck and trailers of fuel and railway tank cars. Those drivers who may be out on service calls will be required, upon their return, to leave their refueler parked either on the western leg of the evacuation plan or circumscribe the fuel activities and park their refueler on the northeast leg. In any event, all drivers are to assist in clearing the area of equipment. After the Fire Department has declared the fueling area safe and secure, the main switch panel board will have to be re-energized by resetting switch E-1 (Reference Operational Drawing E).

7005. DEFUELING. All defueling of aircraft may be conducted on the flight line. The Station Crash Crew Branch will provide one fire fighting vehicle for all defuels that are not routine in nature. Routine defuels are those which utilize a sealed single point connection. In order to defuel aircraft, the requesting unit shall establish contact directly with the Station Crash Crew Branch, at 341-2385 for non-routine evolutions only, and the Refueling Contractor at 341-2234.

7006. REFUELING HAZARDS. Flight line refueling has and will continue to have a multiple number of hazardous areas. Specific procedures and precautions to prevent sources of ignition are as follows:

1. Shoes with exposed nails, metal plates, or hobnails shall not be worn.

2. Clothing of fuel personnel should be of non-static material.

3. No one will be inside aircraft while being refueled.

4. Do not fuel or defuel during an electrical storm.

5. Bond refueler and aircraft prior to handing refueling nozzle to crew chief.

6. Do not park any closer to aircraft than is absolutely necessary.

7. No maintenance work of any kind will be conducted on aircraft while refueling.

8. Be sure there are no kinks in the hose prior to refueling.

9. Be certain that no oxygen handling operations are in progress within 100 feet of refueling operations.

10. Do not refuel any aircraft while munitions are being loaded or off-loaded, or live munitions are aboard.

11. Be certain that aircraft radio and radar equipment is switched off before refueling has begun. Ensure that radar is not turned on until refueler is clear of area.

12. Do not drop or place nozzle on the ground.

13. Do not drag refueler hoses from one aircraft to another. Hang them up on the hooks provided.

14. Moving a refueler at any time from point to point with the internal valve open will not be allowed.

15. Be continuously aware of what is transpiring about the aircraft and the fuel nozzle connected to the aircraft.

7007. SMOKING. An area outside building 301 has been designated for smoking. Observe this regulation; any smoking other than outside of building 301 must be done beyond the confines of the fuel storage area, refueler parking areas and away from the off-loading area.

7008. NIGHT WORK. For night work, electric lanterns and flashlights in spark proof housings are permissible; all others are not permissible.

7009 PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

7009. PERSONNEL. In the event of fuel being spilled on one's person, the affected parts of the body will be immediately flushed with fresh water; then go to the dispensary for professional treatment.

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 8

AIRCRAFT REFUELING AND DEFUELING PRIORITIES AND PROCEDURES

PRIORITIES AND PROCEDURES FOR AIRCRAFT REFUELING, DEFUELING AND BULK STORAGE PLANT OPERATIONS AND MAINTENANCE

CHAPTER 8

AIRCRAFT REFUELING AND DEFUELING PRIORITIES AND PROCEDURES

8001. GENERAL. Fuel operations at the Marine Corps Air Station, Yuma are performed under contract per reference (a). The contractor's manning level is required to be equal to the highest flight operations day of the year and provide service twenty-four hours a day. The number of drivers available at any given time is based on the highest tempo of operations for aircraft refueling and defueling services. To provide for timely operations during peak operating periods, the contractor must be aware, in advance, of what the next day's workload will be. Since the planning for the following day's work force is based on flight schedules. Failure to comply will this order could result in servicing delays.

8002. PRIORITIES. Tenant and deployed squadrons who have submitted a daily flight schedule will be serviced before unscheduled aircraft refuelings. Unscheduled aircraft are defined as aircraft defuelings, VAL refuel/defuel, scheduled aircraft which have already been serviced or were not ready for service on schedule. There are several unscheduled events which will take precedence over scheduled aircraft. The following aircraft priorities are established:

Priority	
1	Search and Rescue (SAR) aircraft
2	Medical Evacuation (MEDEVAC) aircraft
3	Emergency defueling of aircraft leaking fuel, more than one quart per minute. Leak is creating an immediate danger to personnel and equipment.
4	"VIP" aircraft Codes 5 through 7, (Codes 1 through 4 are infrequent and scheduled).
5	Emergency defueling of aircraft leaking fuel of a quart or less per minute. Leak is creating a hazardous condition. Crash Crew standing by.
6	Scheduled aircraft.
7	Unscheduled aircraft, including VAL aircraft and aircraft defuelings.

No priority system is perfect, no can unusual or unforeseen circumstances be adequately provided for in this order. Therefore, the Fuel Branch representative (during working hours), or the Station Operations Duty

Officer (ODO) (after working hours), is authorized to direct temporary changes to the priority system. Changes will be for extraordinary reasons and will not routinely be made to defuel aircraft because main- tenance personnel are waiting for the refuel of an unscheduled aircraft or because time on a bombing range just become available.

8003. SCHEDULING. Tenant and deployed squadrons are responsible for submitting daily flight schedules by 1730 to Flight Clearance on work days. On Friday, the flight schedule will include Saturday, Sunday, and Monday. The work day before a holiday, the flight schedule will include the holiday and the first day after the holiday. The government must give the contractor two hours notice before the end of a work day for driver augmentation requirements for the following day(s). Failure to submit a flight schedule to Station Operations by 1730 will result in a squadron's aircraft being classified as unscheduled. MAWTS-1 will be exempt from the above flight schedule delivery times during the course of a WTI Class; however, will comply with an unsigned, rough schedule by 2200 daily.