CHAPTER 3
PETROLEUM PLATOON LEADER

REVIEW YOUR RESPONSIBILITIES

A fighting force can move and fight only as long as it receives required supplies when and where they are needed. Your platoon supplies the fuel needed to sustain the attack. You and your platoon sergeant are responsible for supervising the receipt, storage, and issue of bulk petroleum whether your unit is authorized FARE, a FSSP, 10 miles of hose line, or 90 miles of multiproduct pipeline. You also may supervise the receipt, storage, and issue of packaged products if your company commander decides to place them with your sections instead of with the Class II, IV, and VII sections. Packaged petroleum operations are covered in this chapter. You are concerned mainly with mission accomplishment, accountability, quality surveillance, pollution control, fire and safety, and pilferage and sabotage. Whenever possible, control measures or suggestions are included in this chapter. See Table 3-1 for some key publications.

ESTABLISH A CLASS III SUPPLY POINT

You may supervise a forward Class III supply point, which may maintain 55,600 gallons of bulk fuel for light infantry units in the brigade support area. You may supervise a main supply point, which may store up to 302,600 gallons of bulk fuel to support heavy division units in the division support area. In both cases, your duties are much the same. Your tasks are listed below.

- Conduct a reconnaissance of sites proposed by higher HQ. Site selection may be constrained by local host nation policy.
- Recommend supply point location. Table 3-2 lists recommended distances between FSSP components. FM 10-69, Chapter 11, describes required terrain features.
- Request engineer support to prepare the site. Depending upon the situation and availability of equipment, your unit may be required to perform this task.
- Review the flow of product and vehicles through the supply point. Ensure a one-way traffic plan is maintained. Determine if you can safely cut out some steps or combine some of them.

NOTE: The FSSP can handle two types of fuel when properly divided and manifolded.

SUPERVISE BULK PETROLEUM RECEIPT AND DISTRIBUTION

Bulk petroleum accounts for over half the total tonnage moving into theaters of operations. To supervise receipt and distribution operations at Class III supply points, refer to FM 10-69, Chapter 13. Your tasks are listed below.

- Notify section chiefs of tank vehicle arrival times.
- Prepare delivery and distribution schedules to avoid delays. Vehicle backup increases the danger of being a target.
- Ensure that soldiers use DA Form 3857 (Commercial Deliveries of Bulk Petroleum Products Checklist) to receive petroleum from commercial sources.
- Total the quantity received data listed on DA Form 3643 (Daily Issues of Petroleum Products).
- Inspect all connections, hoses, and valves daily before, during, and after operations,
- Ensure that a sample log is maintained on all sample fuel.
- Inspect the tanker. Review DA Form 2765-1, DD Form 1348-1, and DD Form 1970 (Motor Equipment Utilization Record).

Table 3-1. Key petroleum publications

PUBLICATION	SUBJECT AREAS
FM 10-68	Operation of aircraft refueling systems and equipment, defueling and refueling operations for fixed wing and rotary wing, fuel quality surveillance, fire fighting, and safety
FM 10-69	FARE system, tank vehicles, safety, railcar operations, packaging and storage, quantity and quality surveillance, receipt, storage, issue, and transportation
FM 10-71	Operation and maintenance of tank and pump unit, 5,000-gallon tanker series, 49C 1,200-gallon tanker, HEMTT 2,500-gallon tanker vehicle
FM 10-427	Set up of petroleum field operations

Table 3-2. Recommended distances between FSSP components

FROM	TO	FEET *
Receiving manifold	Receiving pump	60
Receiving pump	Manifold on first tank	60
10,000-gallon tank	10,000-gallon tank	40
20,000-gallon tank	20,000-gallon tank	60
Manifold on last tank	Discharge pump	60
Discharge pump	Filter/separator	40
Filter/separator	First fuel-servicing nozzle	60
Fuel-servicing nozzle	Fuel-servicing nozzle	25
Last fuel-servicing nozzle	First 500-gallon drum filling point	75
500-gallon drum filling point	500-gallon drum filling point	50
Last 500-gallon drum filling point	First bottom-loading point	75
Bottom-loading point	Bottom-loading point	75

***NOTE**: Terrain and situation may alter the recommended distances.

- Supervise rigging and derigging of 500-gallon fuel drums by soldiers with MOS 77F. See Figure 3-1. Also refer to FM 10-564 for additional guidance on rigging the 500-gallon fuel drum. Ensure soldiers follow all safety measures.

NOTE: Do not free-fall airdrop a full collapsible drum.

- Incorporate issue procedures from FM 10-69, Chapter 13, in your section SOP.
- Total the daily issues listed on DA Form 3643, and enter the total on your daily stock status report.
- Determine if loss or gain figures fall within the allowable loss or gain ranges. Investigate any unacceptable range deviation immediately to determine the cause.
- Ensure all safety measures are taken prior to receiving or issuing fuel.

INSPECT PETROLEUM TANK TRUCKS AND TANK SEMITRAILERS

Use Table 3-3 to help identify and correct fuel-handling component malfunctions on petroleum tank trucks and tank semitrailers. If your unit is authorized petroleum tank vehicles, your soldiers must perform the daily PMCS identified in the applicable TMs before each operation. Use Table 3-4 to check on the daily preventive maintenance required on tank vehicles.

VERIFY ACCURACY OF BULK PETROLEUM INVENTORY

As the officer responsible for bulk petroleum stocks in Class III supply points, mobile filling station sites, bulk storage facilities, or tank farms, you must verify the results of monthly inventories conducted by your petroleum inventory control specialists. Your tasks are listed below.

- Ensure that an all-level sample is taken of all storage facilities and tank vehicles. Ensure DA Form 1804 (Petroleum Sample) is completed and attached to the sample container.
- Check on the determination of the API gravity.
- Review volume correction to 60 degrees Fahrenheit using the petroleum volumetric tables cited in FM 10-69, Appendix B.
- Review DA Form 4702-R (Monthly Bulk Petroleum Accounting Summary). This form serves as the supporting document for adjustment

4. PERSONNEL.

Two men can rig the load (one to four drums) in 5 to 15 minutes.

5. PREPARATION.

Align drums side by side in a row.

6. RIGGING.

a. Sling set (10,000-pound or 25,000-pound capacity).

(1) For one drum:

(a) Route one outer and one inner sling leg (1 and 3) to the same side of a drum and the other two sling legs to the other side.

(b) Rotate the hub so one clevis is at the top.

(c) Loop the chain end of sling leg 1 through the clevis and insert link 3 in the grabhook.

(d) Repeat this procedure for sling leg 3 using the same clevis.

(e) Attach sling legs 2 and 4 to the opposite side of the drum in the same manner

(2) For two drums:

Figure 3-1. Sample extract from FM 55-450-1 of materials, personnel, and procedures required to rig and derig 500-gallon fuel drums

Table 3-3. Troubleshooting chart for tank vehicles

AUXILIARY ENGINE		
Malfunction	**Proable Cause**	**Corrective Action**
Cranks too stiffly.	Incorrect oil.	Change to recommended oil.
Will not start when cranked.	Faulty ignition.	Check spark plug for fouling. Check for broken or defective wiring.
	Faulty fuel system.	Check fuel supply and grade. Fill tank with correct grade of fuel.
Power drops under load.	Restricted exhaust line.	Check muffler, exhaust pipe, and spark arrester.
	Governor not adjusted.	Adjust governor or notify organizational maintenance.
	Faulty fuel system.	Check fuel supply and grade. Fill tank with correct grade of fuel.
Backfire at carburetor.	Incorrect fuel.	Refill with correct fuel.
	Dirty sediment bowl.	Clean sediment bowl.
Low oil pressure.	Oil too low or diluted.	Drain and fill with correct grade of oil.
High oil pressure.	Oil too heavy.	Drain and fill with correct grade of oil.
Excessive oil consumption (blue smoke).	Oil too viscous or diluted.	Drain and fill with correct grade of oil.
	Too much oil.	Drain to proper level.
	Oil filter tube cap leaks air.	Check gasket for condition and proper fit. If defective, notify organizational maintenance.
Knocks	Oil too low or diluted.	Drain and fill with correct grade of oil.

CENTRIFUGAL PUMP		
Malfunction	**Proable Cause**	**Corrective Action**
Fails to deliver product or delivery is slow, erratic, and inadequate.	Air is leaking into the pump or connections.	Tighten all connections. Replace gasket.
	Pump has lost prime or has not been primed.	Prime pump.
	Clogged line strainer or lines.	Clean strainer or lines.

Table 3-4. Preventive maintenance checks for petroleum tank vehicles

ITEM	PROCEDURES
Auxiliary engine	Inspect for leaks and cracks in fuel, oil, and exhaust lines. Check for unusual noises. Check the level of oil and fuel. Inspect fuel shutoff valve and sediment bowl for leaks, dirt, and damage.
Battery	Inspect for tight connections and corroded terminals. Check the electrolyte level.
Filter/separator	Inspect for leaks and damage. Check pressure differential each time you use the filter/separator.
Filter/separator dump valve or manual water drain valve	Open valve and drain water. Leave valve open until fuel appears.
Fire extinguisher	Inspect controls, nozzles, tubing, connections, and mountings for leaks, corrosion, and damage. Check date of last weight test. Have extinguisher weight-tested if necessary.
Grounding assembly and nozzle bonding wire	Inspect for cable breaks, tight connections, and firm mountings.
Hoses, hose reels, and nozzles	Inspect for bulges, blisters, tears, cuts, gouges, soft spots, tightness, and leaks.
Line strainers	Inspect for leaks. (Check weekly.) Inspect for sediment. (Check quarterly.)
Manhole and filler cover assembly	Inspect for loose or missing parts and tight mountings. Check the pressure on the vacuum relief vent.
Meter, instrument panel, and pressure gages	Inspect for broken lens and missing or broken levers. Check for proper operation.

actions. The operating SOP outlines the procedures for emergency issues while the inventory is being conducted. Normally the inventory is scheduled, customers notified, and operations discontinued until the inventory is completed.

SUPERVISE HELICOPTER REFUELING

The FARE system was designed to refuel helicopters in forward combat areas. FM 10-68, Chapter 4, and FM 10-69, Chapter 5, describe FARE components, site selection criteria, equipment layout, and operational step-by-step instructions. Your tasks are listed below.

- Select a site which is flat or has only a slight slope. In sandy desert areas, your operations office may have to arrange for engineers to treat the area with a dust suppressant.
- Requisition materials needed to rig the FARE for helicopter external load. Refer to Figure 3-2 for a sample list of required rigging materials.

- Plan the FARE layout so that helicopters do not have to land or take off downwind. (It is very dangerous to try to land or take off when the helicopter tail is to the wind.)
- Ensure that helicopters being refueled are at least 80 feet apart. The recommended distance is 100 feet.
- Provide three fire extinguishers for each FARE system. (Fire extinguishers are not components of the FARE system.) Used fire extinguishers should be taken to the nearest engineer unit for recharge or replacement on an RX basis.
- Specify the amount and type of refueling support required.
- Ensure all aircraft passengers disembark and disperse at least 50 feet from the aircraft during refueling.

ESTABLISH MOBILE FILLING STATIONS

You can use the FARE to refuel motor convoys or ground vehicles. Tank and pump units may also be used to support mobile filling stations. See FM 10-69 for more information on FARE and tank and pump units. Your tasks are listed below.

- Require that refueling points be at least 25 feet apart.
- Make it SOP that soldiers check the nozzle screens for dirt, test the hose, and take a visual sample from each nozzle.
- Require FARE operators to check vehicle dispatch against vehicle markings. Verify identification card of vehicle operator. This is necessary because no DA Form 2765 request document is required.
- Include daily issues recorded on DA Form 3643 in the totals recorded each day on the monthly DA Form 3644 (Monthly Abstract of Issues of Petroleum Products and Operating Supplies).

SUPERVISE HOSE LINE OPERATIONS

Hose lines can transport from 500 to 550 barrels of fuel per hour over rough terrain where it would be costly to build roads and rail nets. Hose lines relieve congestion on roads and rail networks. FMs 10-20 and 10-69 describe how to lay, operate, retrieve, and repair the hose line. Your tasks are listed below.

- Request a crane or 5-ton wrecker to load and off-load hose line flaking boxes. Do NOT use forklifts to lift the boxes.
- Require or assign a petroleum supply specialist to monitor changes in hose line pressure at all times. Changes in pressure readings or in the sound of the 350-GPM pump often indicate breaks, leaks, closed valves, or lack of suction.
- Schedule hose line patrols.
- Ensure that fire extinguishers and spill control materials are available before each operation and when the system must be shut down to repair leaks.

SUPERVISE PIPELINE OPERATIONS

If you are the platoon leader of a pipeline operating platoon, you are responsible for supervising the movement of large volumes of bulk petroleum through 90 miles (150 kilometers) of multiproduct pipelines for extended periods. Use FM 10-18 as a format guide for preparing consumption graphs, monthly pipeline schedules, and daily pumping schedules and pumping orders. Your tasks are listed as follows.

- Develop a consumption graph for each product.
- Prepare a monthly pipeline schedule.
- Prepare a daily pumping schedule or pumping order.
- Establish a petroleum batching sequence.
- Ensure line soldiers sample and test the product in the pipeline as they follow the progress and arrival time of interfaces between product changes.
- Require that flowmeters be verified semiannually.

CONTROL PIPELINE CORROSION

If you are a platoon leader in a petroleum pipeline and terminal operating company, you will be tasked to develop or review a corrosion control program to prevent fuel contamination. Corrosion control procedures are prescribed in TM 5-678 and MIL-HDBK-201B. Your tasks are listed below.

- Require that soldiers inspect the pipeline and manifold system weekly for signs of corrosion or deterioration.
- Have corrosion inhibitors in petroleum products tested semiannually for effectiveness according to procedures in FM 10-20.
- Require that soldiers apply protective paint to the pipeline according to procedures in TM 5-678.

FORWARD AREA REFUELING EQUIPMENT (FARE)

1. APPLICABILITY.

This load is suitable for the CH-47 helicopter at speeds of 100 KIAS.

2. LOAD DESCRIPTION.

a. Forward area refueling equipment (FARE) consisting of:

(1) Generator, 1.5kW (1 each).

(2) Hoses, fuel with reels (2 each).

(3) Hoses, fuel with carrying bags (2 each).

(4) Assembly, pump (1 each).

(5) Extinguishers, fire (3 each).

b. LIN H94824; weight: 820 pounds.

3. MATERIALS.

a. Net, helicopter, cargo-carrying, external (5,000-pound capacity).

b. Webbing, nylon, 1/2-inch tubular.

c. Cord, nylon, type III.

4. PERSONNEL.

Two men can prepare and rig this load in 15 minutes.

5. PREPARATION.

a. Secure two fire extinguishers to inside frame of fuel hose reels with 1/2-inch tubular nylon webbing. Secure the two fuel hose reels together with type III nylon cord.

b. Spread a 5,000-pound-capacity net on the ground. Center the two fuel hose reels on the net. Place pump assembly on either side of reels. Place a 1.5kW generator, with 5-gallon gas can attached, on the opposite side of reels. Place fuel hose carrying bags in front of reels. Secure the two carrying bags with the remaining fire extinguisher together with type III nylon cord. Secure net carrying bag to top of reels.

6. RIGGING.

a. Place four grabhooks onto apex fitting.

b. Tape lifting legs of net with masking tape every 2 to 3 feet.

7. HOOKUP.

Hookup man stands alongside load.

Figure 3-2. Sample extract from FM 55-450-1 of materials, personnel, and procedures required to rig the FARE

- Ensure that line scraper operations are conducted periodically to remove rust, scale, and other debris, according to procedures in FM 10-20.
- Verify that sand traps have been cleaned.

CONTROL ENVIRONMENTAL POLLUTION

Petroleum spills present a threat to your soldiers, the mission, and the environment. Whether you are a petroleum platoon leader, a supply platoon leader, or a platoon leader in a terminal or pipeline operating platoon, you must prepare or update an oil spill prevention control countermeasures plan according to CFR 40, AR 200-1, and oversea host nation regulations. Include in your plan detailed descriptions of spill countermeasures and applicable spill control materials from Table 3-5. FM 10-71 details spill control procedures to follow when loading or unloading petroleum tank vehicles. Your tasks are listed below.

- Schedule cleanup drills so that section personnel become expert at spill cleanup.
- Require daily inspections of storage, handling, and transfer equipment.
- Ensure that section personnel document regular equipment checks on DA Form 2404 (Equipment Inspection and Maintenance Worksheet).
- Report immediately, through command channels, any offshore oil and hazardous substance discharges of 50 gallons or more.
- Request engineer support to construct containment devices. CFR 40 lists specific construction requirements.
- Submit a spill report according to CFR 40, through command channels, for any oil spills of 1,000 gallons or more or whenever two oil spills occur in a 12-month period.
- Dispose of mixed petroleum and water according to the unit SOP and EPA regulations.
- Dispose of sludge according to instructions in AR 200-1.

SUPERVISE PACKAGED PETROLEUM STORAGE AND DISTRIBUTION

Set up separate areas for each product and type of package to simplify inventory and stock control of packaged petroleum products. Figures 3-3 through 3-5 illustrate suggested storage layouts for 5-gallon cans, 55-gallon drums, and 500-gallon collapsible drums. Your tasks are listed below.

- Ensure that high-flash and low-flash products are stored separately.
- Require that containers be inspected before they are placed in storage. Table 3-6 lists other inspection checks.
- Check that no containers are stored in direct contact with the ground.
- Ensure that packaged lubes stored outdoors are covered with tarpaulins or stored in sheds.
- Ensure that stocks are rotated so that oldest stocks are issued first.
- Inspect containers weekly for damage and leaks. Use Tables 3-7 and 3-8, which list can and drum deterioration limits.
- Supervise the yearly inventory of packaged products.
- Adjust inventory discrepancies according to AR 735-5.
- Require gate guards to collect matches and lighters from customers.
- Inspect vehicles making deliveries and picking up items.

Table 3-5. Material and equipment to control spills

ON SHORE
• Containment curbs, berms, and retaining walls.
• Oil draining pans or tubs under tank vehicle receiving manifolds, tank car bottom outlets, pumps, drain lines, pump station valves, flanges, and joints. Ensure containment systems at tank truck loading or unloading areas can hold, at a minimum, the capacity of a single tank truck compartment.
• Culverts, gutters, and other drainage systems.
• Sumps or spill diversion and retention ponds.

Table 3-5. Material and equipment to control spills (continued)

- Guide wire across 10,000- and 50,000-gallon fabric tanks to help prevent overfilling.
- Drain pipes at the base of fire walls around each collapsible fabric tank.
- Absorbents, adsorbents, and detergents.
- Truck vacuum pump.
- Bulldozers.
- Sand barrels.

ON WATER

- Floating containment booms.
- Chemical dispersants.
- Watercraft.
- Containment systems.
- Absorbents, adsorbents, and detergents.

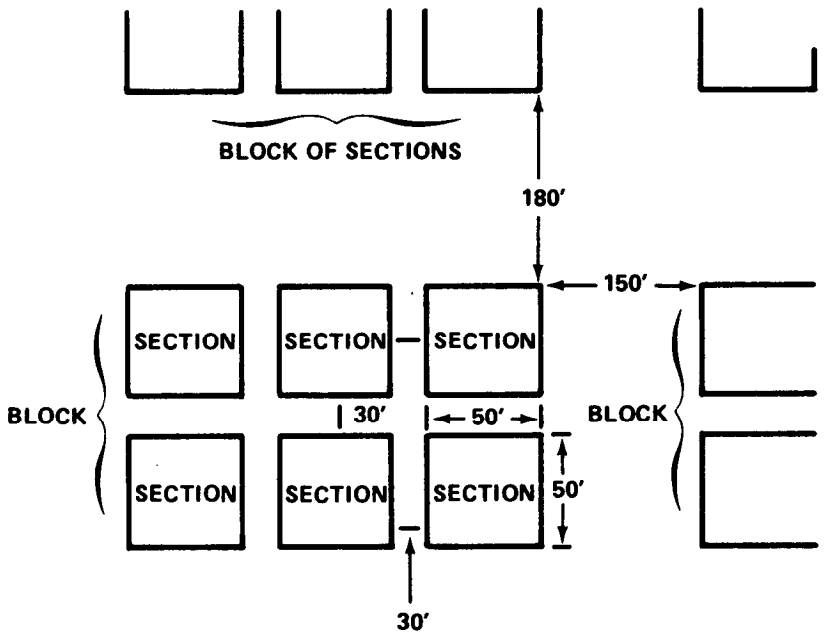

Figure 3-3. Storage layout for 5-gallon cans

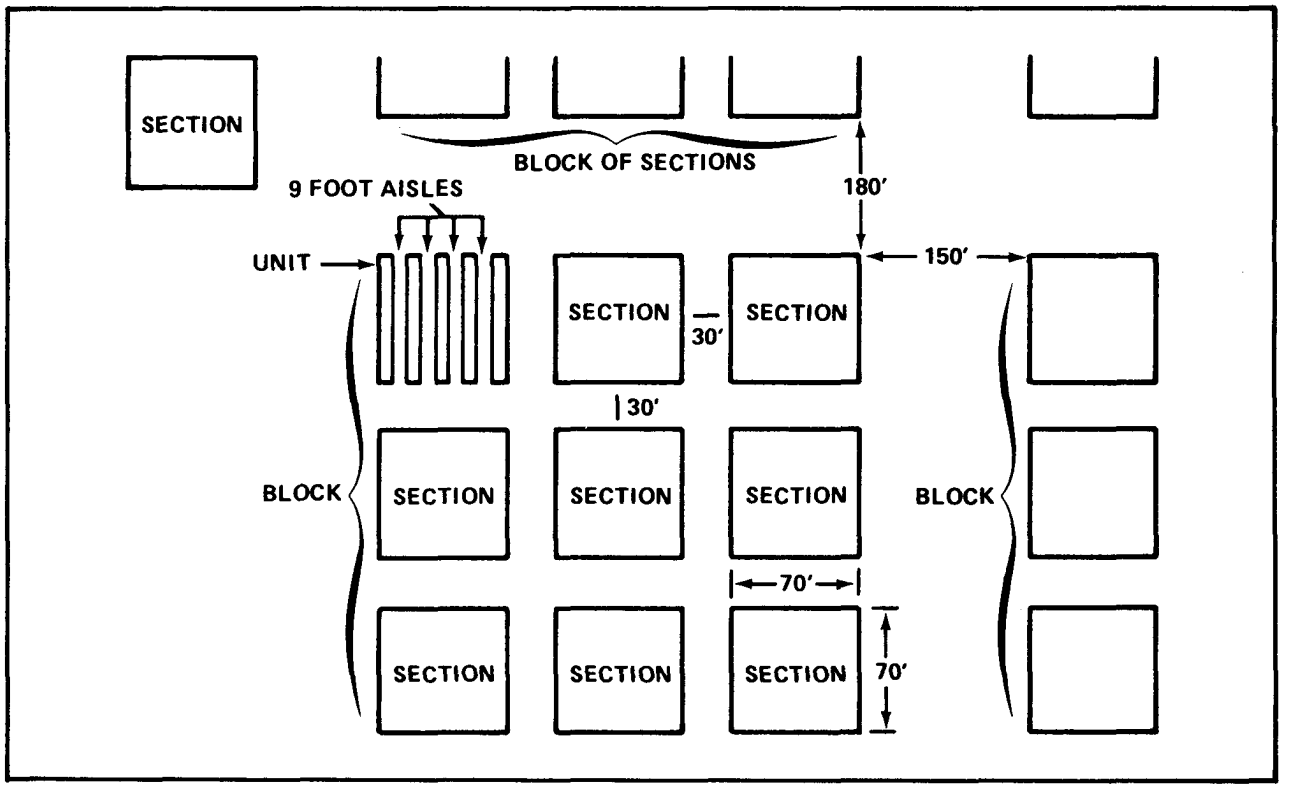

Figure 3-4. Storage layout for 55-gallon drums

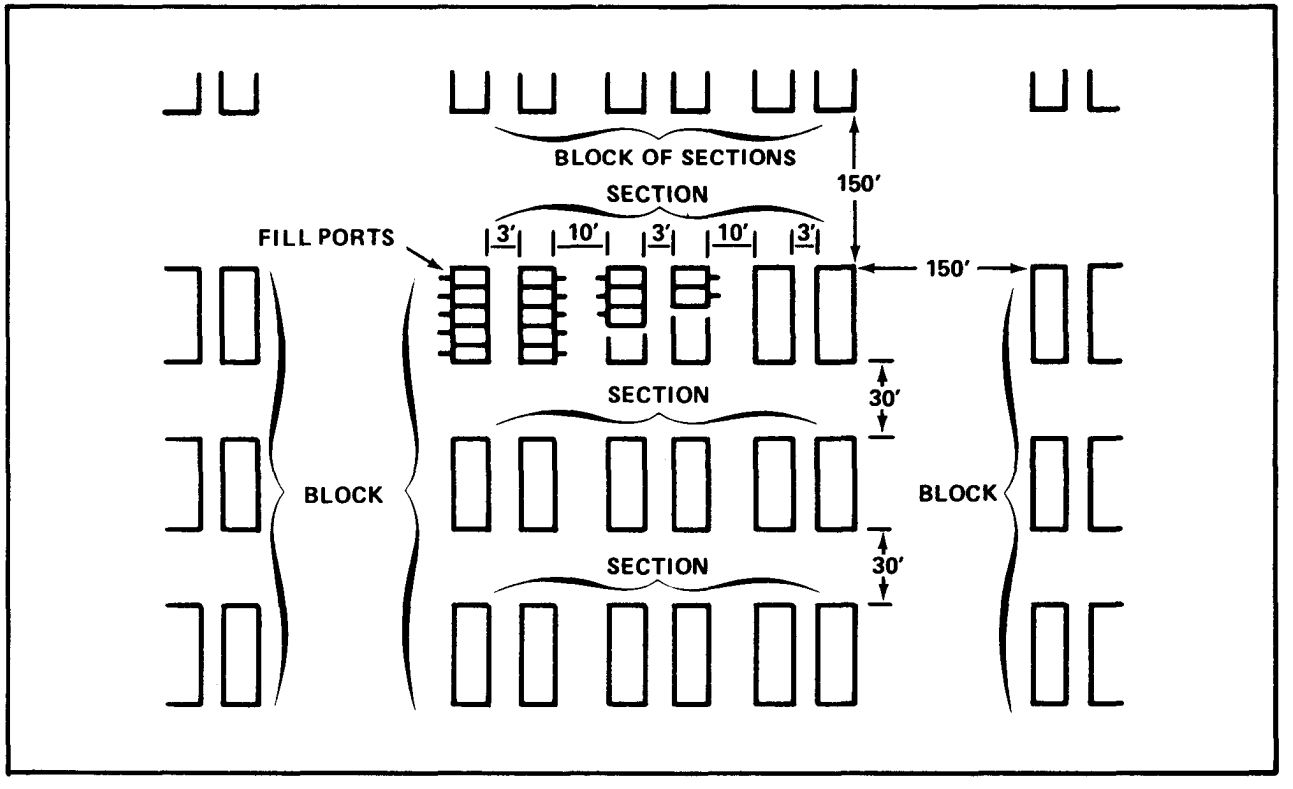

Figure 3-5. Storage layout for 500-gallon collapsible drums

Table 3-6. Inspection checklist

- Are drums stored on their sides? This prevents rainwater from collecting and rusting container tops and seeping through bungs to contaminate the product.
- Are the bungs positioned horizontally?
- Do drum bungs and vents face outward? This makes it easier to detect leaks.
- Are pallets or dunnage and tarpaulins used to store and cover containers that are stored outside?
- Are different products and grades stored separately?
- Are stocks rotated so that the oldest products can be issued first?
- Are stocks with similar filling dates stored together?
- Have all packages which were opened for spot-checking been marked to show that they had been opened?
- Are stained cartons marked to indicate that leaking containers have been removed? This will prevent reinspection.
- Are drums stacked too high?

Table 3-7. Serviceability inspection checklist for 5-gallon cans

PART	EQUIPMENT REQUIREMENTS	DENTS ALLOWED	HOLES ALLOWED	ALLOWABLE CONDITION OF METAL SURFACES
Body	Dents can be removed if the metal will not be weakened. Contaminants must be removable by cleaning. (Asphalt, tar, or similar substances cannot be removed.)	No more than six, less than 1/2 inch deep.	None	Rust on outside. Must be removable by buffing or sandblasting. Rust on inside. Must be removable by cleaning with solvent or caustic washing.
Chime		Less than 1/2 inch long.	None	
Flange	Threads must not be crossed, stripped, rusted, or worn.		None	
Vent tube	Use only in an emergency if tube is broken or bent.		None	
Handle assembly	Use only if it can be carried without hurting hands. Discard if badly smashed or broken.			

Table 3-8. Serviceability inspection checklist for 55-gallon drums

PART	EQUIPMENT REQUIREMENTS	DENTS ALLOWED	HOLES ALLOWED	ALLOWABLE CONDITION OF METAL SURFACES
Body	Numerous small dents are acceptable. Condition of paint of no importance.	Up to 3 inches deep if not more than six dents in body. No restriction on length.	None resulting from rust. Others up to 3/4 inch in greatest dimension acceptable if not more than four holes in body.	*Exterior.* Must be free of severe pitting that would weaken drum structure. *Interior.* Must be free of pitting. (If product residue prevents the deterioration, drum will be considered acceptable until it is cleaned and inspected.)
Chime	Should be tight on both types of drums. Reinforcing metal strips should be in place on 16-gage drums.	*16-gage.* None greater than 1/4 inch deep with no restriction on length or number. *18-gage.* None greater than 3/4 inch deep and 5 inches in length with no more than four dents per chime.	*16-gage.* No holes allowed and no ruptures acceptable if they separate reinforcement from chime. *18-gage.* No holes allowed and no ruptures acceptable.	See information for body, above.
Flange	No defective thread, gasket seat, or weld.	None	None	*Exterior.* Moderate rusting if gasket seat and threads are not impaired. *Interior.* See information for body, above.
Head	Must be restorable to approximate original contour.	Up to 2 inches deep if not more than two dents per head.	None resulting from rust. Up to 3/4 inch if not more than one hole per head. None located within 2 inches of flange weld or chime.	See information for body, above.
Hoops	Should be restorable to approximate original shape.	None greater than 5/8 inch deep; no limitation in number.	Up to 3/4 inch, not to exceed three holes per hoop.	See information for body, above.
Side Weld	No indication of cracking or deterioration.	Up to 2 inches deep, not to exceed three dents per weld.	None	See information for body, above.

PERFORM QUALITY SURVEILLANCE

You must take samples and test them if petroleum products are to be released as suitable for their intended use. Minimum sampling and testing requirements from MIL-HDBK-200G are listed in Tables 3-9 and 3-10. Quality surveillance specialists must test products upon receipt and before shipment. They must also inspect and test all stored products for serviceability and possible contamination. Your tasks are listed below.

- Ensure that the same grade of product is kept in a tank car, truck, or semitrailer. Plan the flow so that only one type of product is stored or distributed by each type of equipment.
- Make it SOP that soldiers clean line strainers and nozzle screens daily.
- Ensure that aviation fuel flows through a filter/separator before it is issued from a petroleum tank vehicle. Change filters every 2 years or when changing type of fuel being used. Maintain a pressure differential log. See FMs 10-20, 10-68, and 10-69 for more information on the use of a filter/separator.
- Drain water daily before and after every operation.
- Make it SOP that dust caps or plugs are placed over any loading or dispensing hoses or nozzles not in use.
- Make sure that bulk fuel has been tested before it is allowed to enter a pipeline.
- Ensure that soldiers follow the first-in, first-out rule when issuing packaged petroleum products. This prevents deterioration due to prolonged storage.
- Ensure that contaminated or off-specification fuel is segregated.
- Determine the source of any contamination and the feasibility of removing it so that you can reclaim the product.
- Set up prescribed points or time intervals for sampling and testing petroleum products. FM 10-70 prescribes these procedures.
- Determine the source of contamination and take corrective action to prevent reoccurrence.

MONITOR STORAGE AND HANDLING OF COMPRESSED GASES

Compressed gas cylinders are potentially hazardous. A gas cylinder explosion can equal that of a bomb. Store all compressed gas cylinders away from petroleum products and ammunition. Soldiers must use extreme caution when lifting, storing, and transporting gas cylinders. Storing and handling precautions are described below.

- Place valve protection safety caps on all small cylinders.
- Close the valves on all empty as well as full cylinders.
- Store empty cylinders separately from full ones.
- Allow 50 feet of space between storage sheds for flammable gas and other buildings. DOD 4145.19-R-1, Chapter 5, lists criteria for open-sided and enclosed storage sheds.
- Store acetylene cylinders in a separate building or within a solid wall compartment.
- Fasten cylinders in racks or cradles when they are to be moved, and brace them so they do not overturn or strike other objects.

COORDINATE LOCAL PURCHASE

In peacetime, packaged products, especially acetylene and oxygen cylinders, are often obtained through local purchase. While local procedures may vary, the request and issue flows are basically the same. You coordinate requirements with the Class III item manager in your supporting MMC. The requisitions are then sent through the DOL item manager to the finance office for a check on fund availability. Upon approval of the requisitions, local purchase of the items is authorized. The requisitions are then sent to the contracting division for purchase from an authorized source. Then, depending on time and distance factors, your soldiers may either pick up supplies at the contractor or vendor storage area or from the installation DOL warehouse.

MAINTAIN RETURNABLE AND REFILLABLE CYLINDERS OR CONTAINERS

Supported units should turn in an equal number of empty cylinders for full ones. If the unit has no empty container, it must submit a request for a cylinder or container before the gas can be issued. Requests for government-owned containers must show Advice Code 2S. Requests for vendor-owned containers must show Advice Code 2Y. Your storage activity must mark the appropriate manufacturer control number on vendor-owned containers. Supported units must turn these containers in to your stock control activity when the units are transferred permanently.

Table 3-9. Bulk petroleum sampling and testing requirements

WHEN TO SAMPLE	TYPE OF SAMPLE	TYPE OF TEST REQUIRED
Before filling railcars and tank vehicles.	Discharge hose sample	Visual check for appearance, water, and sediment.
Before discharge of railcars or tank vehicles.	Refueler all-level sample*	Visual check for appearance, water, and sediment.
Daily from all working tanks and from railcars and tank vehicles.	Collapsible tank bottom drainage outlet	Visual check for appearance, water, and sediment.
	Refueler sample	Aqua-Glo test of all aviation fuels.
Monthly from all working tanks.	Collapsible tank bottom drainage outlet	Laboratory analysis for water and sediment.
	Refueler sample	Aqua-Glo test of all aviation fuels.
Overseas areas. Every 6 months for aviation gasolines; every 12 months for jet fuels, automotive gasolines, and diesel fuels when fuel is dormant or suspected of being off-specification.	Upper, middle, and lower level sample	Laboratory tests: API gravity, distillation, flash and fire, copper strip corrosion, water, and sediment. Analysis for A and B-2 tests** must be forwarded to the base laboratory.
In CONUS. Every 6 months for aviation gasolines; every 12 months for automotive gasolines, jet fuels, and diesel fuels when fuel is dormant or suspected of being off-specification.	Upper, middle, and lower level sample	Laboratory tests: API gravity, distillation, flash and fire, copper strip corrosion, water, and sediment. Analysis for A and B-2 tests** must be forwarded to the base laboratory.

*For compartmented vehicles, a sample is required from each compartment.
**Refer to Table III of MIL-HDBK-200G.

Table 3-10. Packaged fuels sampling and testing requirements

TYPE OF FUEL	TYPE OF TEST REQUIRED *	WHEN TO SAMPLE
Aviation gasoline	Aqua-Glo and Set Aqua-Glo and Sediment (Visual) Color (Visual) API Gravity Distillation Copper Strip Corrosion	Daily, using Aqua-Glo kit. When identity is uncertain. Every six months for dormant stocks.
Jet fuels	Aqua-Glo Visual Appearance Color API Gravity Distillation Copper Strip Corrosion Flash Point (Except JP-4)	Daily, using Aqua-Glo kit. When identity is uncertain. Every 12 months for dormant stocks.
Automotive gasoline	Appearance Water and Sediment (Visual) Color API Gravity Distillation Copper Strip Corrosion	When identity is uncertain. Every 12 months for dormant stocks.
Diesel fuels	Color API Gravity Distillation Flash Point Viscosity Water and Sediment by Centrifuge	When identity is uncertain. Every 12 months for dormant stocks.

*As limited by test capability of the petroleum testing kit.

PREPARE OR UPDATE POL SAFETY PROGRAM

Petroleum products present unique fire, safety, and health hazards. As the petroleum platoon leader, you must review, update, or develop a fire fighting plan according to FM 10-69. Your tasks are listed below.

- Ensure that flammable liquids are stored at least 100 feet from wooden structures and 50 feet from noncombustible structures. Store compressed gases separately.
- Prohibit smoking within 100 feet of storage areas, FARE, or FSSP. Require gate guards to collect matches and lighters from those who enter the area.
- Ensure that the correct types of fire extinguishers are on hand and positioned ready for use. All soldiers should know the location of every fire extinguisher in the area.
- Examine fire extinguishers at least twice a year. Monitor dates when fire extinguishers were last inspected.
- Require that maps show critical shutdown valves, location of water supply, evacuation routes, and reporting areas following a fire alarm.
- Ensure that all vehicles and equipment are bonded and grounded prior to starting any operation. TC 11-6 gives details on how to ground equipment.
- Require that engineers construct a fire wall around each 50,000-gallon collapsible tank. The fire wall should be 4 feet high and 18 inches wide at the top, 73 feet long and 33 feet wide.
- Require all section soldiers to inspect all fittings daily for slippage or signs of leaks. They should also inspect all FSSP or FARE hoses daily for blisters, nicks, and cuts.
- Conduct night and day fire drills.

CONTROL PILFERAGE AND SABOTAGE

Fake invoices and tanker trucks with false bottoms can be used to pilfer bulk petroleum. Saboteurs can contaminate products. Packaged products can be hidden in trash or salvage disposal drums. You must devise a control program to prevent product loss. Your tasks are listed below.

- Locate vehicle turnaround areas near a guarded security gate.
- Require that all trucks entering and leaving the supply point pass through a security gate.
- Permit only one-way traffic.
- Have section soldiers document all cargo according to DOD 4140.25-M and current regulations.
- Require section supervisors to verify that no locks and seals have been tampered with before off-loading and after loading. Ensure that seals are applied whenever possible.
- Require that any discrepancies in the amount of petroleum loaded or discharged from commercial trucks be reported at once to you or your section chief and investigate discretion.
- Implement perimeter controls.
- Initiate a parcel check system for packaged petroleum products.
- Ensure physical security. Use guards, barriers, protective lighting, entry control checks, and intrusion detection devices, as applicable.
- Monitor and compare monthly gains and losses to determine patterns.