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## Statement of Quartermaster Intelligence Interest, August 1960

Office of the Quartermaster General, Department of the Army

Robert Bolin , depositor

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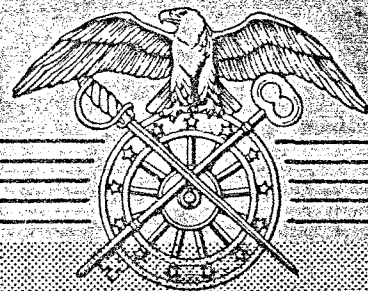
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THE QUARTERMASTER GENERAL  
OFFICE  
QUARTERMASTER GENERAL  
FORT LEE, VA.

AUGUST 1960



*Quartermaster Corps*  
DEPARTMENT OF THE ARMY  
OFFICE OF THE QUARTERMASTER GENERAL

## FOREWORD

The Statement of Quartermaster Intelligence Interest reflects the over-all interest of the Office of The Quartermaster General in intelligence data, and is intended as an aid to persons engaged in the collection, processing, and dissemination of intelligence.

Subjects covered in this Statement represent the maximum extent of Quartermaster Corps interest, and therefore include subjects for which the Quartermaster Corps has primary collection responsibility as well as subjects of user-interest. On some subjects the Statement of Interest reflects the maximum extent of detail that may be required, and, accordingly, the field collector must read it in the light of any specific guidance that indicates how much of this detail is required on any particular area.

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## CHAPTER I - GROUND FORCES

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MISSION, DOCTRINE AND CAPABILITIES (CONVENTIONAL AND UNCONVENTIONAL WARFARE).

Mission and role of the Quartermaster Corps or other elements which perform missions similar to the U. S. Quartermaster Corps. Include: general policy and administration.

QUARTERMASTER ORGANIZATION (ARMY, MILITARIZED SECURITY FORCES/QUASI-MILITARY FORCES).

### a. Structure

- (1) Top echelon of the Quartermaster Corps. Relations between the QMC and over-all command structure.
- (2) Total quartermaster personnel strength, by grade and specialty.
- (3) Disposition of headquarters of the Quartermaster Corps and of quartermaster units at home and abroad.
- (4) Depot system, including locations and missions of installations.

### b. Personalities

Significant personalities within the Quartermaster Command. Include: full name, aliases, title and rank, branch of service, present position, date and place of birth, nationality and origin, education, religion, politics, languages, past career, special aptitudes, character, and pertinent data on wife and children.

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c. Tactical Organization and Role. (Peace, Conventional and Unconventional Warfare)

- (1) Name all quartermaster-type support and service units, such as:
  - (a) Clothing and individual equipment.
  - (b) Petroleum.
  - (c) Bakery, subsistence, refrigeration.
  - (d) Laundry, bath and related decontamination.
  - (e) Reclamation, maintenance and salvage.
  - (f) Remount.
  - (g) Recovery and disposition (graves registration).
  - (h) Airborne support (aerial supply, parachute rigging and maintenance, etc.).
  - (i) Amphibious support.
  - (j) Direct and general support.
- (2) Give the organization, personnel strength and role of each quartermaster-type service unit (including Table of Organization). Include: the organization and role of each for maintenance, reclamation and salvage operations.
- (3) Describe the use made of quartermaster-type service units under various situations (for both conventional and unconventional warfare). Specifically:
  - (a) Describe the procedure by which protective clothing and equipment (such as radiation shields, capes, ointments, etc.) are issued for use in the event of atomic attack. If clothing is impregnated in the field, is it done at unit level or higher echelon?



- (b) Describe the organization, distribution and operation of decontamination centers for personnel and equipment and discuss the use of laundry, bath, and disinfection equipment. Include plans and methods for collecting and transporting CBR contaminated clothing to decontamination or laundry points.
  - (c) Describe the system for the identification, recovery and disposition of deceased personnel and their effects; and the handling of contaminated CBR casualties.
- (4) Provide TOE to show all quartermaster-type depot units, such as:
- (a) Clothing and general supplies.
  - (b) Subsistence.
  - (c) Petroleum.
  - (d) Equipment repair (general and airborne).
  - (e) Parts supply.
  - (f) Sales.
- (5) Discuss the differences in the use made of quartermaster-type depot units under various situations (for both conventional and unconventional warfare).

d. Reserve and Mobilization System.

Give the categories of quartermaster-type reserve units. Include exact unit designation and strength of each. Give the mobilization potential of each unit.

3. TRAINING

a. Schools and Installations

- (1) List schools and installations which provide training for Army personnel in quartermaster fields of interest. Include subjects in the fields of:
  - (a) Clothing.

- (b) Subsistence (bakery, refrigeration, butchery, nutrition, etc.)
  - (c) Petroleum (handlers, laboratory technicians, etc.).
  - (d) General equipment and parts repair and maintenance.
  - (e) Supply procedures.
  - (f) Depot operations.
  - (g) Sales.
  - (h) Laundry, bath, decontamination and disinfection.
  - (i) Recovery and disposition (graves registration).
  - (j) Cataloging.
  - (k) Airborne support (aerial supply, parachute rigging and maintenance, etc.).
  - (l) Amphibious support.
  - (m) Packaging.
  - (n) Research and development.
- (2) Indicate: name, role, location, curriculum (training literature and graphic training aids), staff, size of classes, annual output, expansion potential and the use of quartermaster individual and organizational equipment. Include extent and type of utilization of civilian schools.

b. Foreign Schools and Units

Indicate: schools and units which provide training of Army personnel in quartermaster subjects. Include: extent and type of utilization of foreign schools and units for training; and the use of foreign instructional material.

PROCUREMENT AND SUPPLY SYSTEM (PEACE AND WAR)

a. Procurement

Planning and control of procurement of quartermaster items. Include: supply doctrine and concepts; basis for computing supply requirements; and procurement procedures for Class I through IV, and Class VI supplies.

b. Supply Catalog

Development, maintenance and use of supply catalogs which contain item identification and supply management data for assigned Clothing and Textile Materiel, Subsistence, Repair Parts and General Supplies items of supply. Furnish data on existing items and new items entering the Federal Catalog System under varying conditions.

c. System of Storage and Issue

- (1) System of storage and issue of Classes I through IV, and Class VI quartermaster supplies.
- (2) Policy and machinery for requisition and supply of all types of quartermaster materiel in terms of conventional and unconventional warfare. Include the extent to which reliance is placed upon the use of locally procured supplies, PX and commissary goods, and captured materiel.
- (3) Unit supply, re-supply, and supply movement requirements of quartermaster materiel under varying conditions.
  - (a) Indicate the location of QM supply points (including base depot, supply points and pipeline systems) and describe the relationship of the supply point to the next higher level of supply.
  - (b) Indicate the levels of all classes of quartermaster supplies, in days of supply at various points in the supply system.
  - (c) Indicate prescribed ration, clothing, POL, and other scales (including allowances by item) for use as a basis of computing requirements. If there are no

prescribed scales, indicate the basis for the requisitioning and supply. Include storage and weight requirements per man, or per unit, per day.

(d) Discuss the variations of supply requirements for different troops, areas, seasons, and work.

(4) Discuss modifications, proposed or actual, in systems of supply, military storage, and in quartermaster services related to possible use of CBR warfare.

d. Supply Movement Requirements

(1) Discuss the handling and transport of quartermaster supplies. Include: method of packaging, handling, preservation, breakdown, and issue.

(2) Indicate evidence of supply failures.

(3) Describe the services and functions of the Quartermaster in support of the movement of troops.

e. Evacuation

(1) System of collection, segregation and classification of all technical service materiel in the combat zone.

(2) System of evacuation of quartermaster equipment, and the handling of captured materiel.

## CHAPTER II - QUARTERMASTER EQUIPMENT

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### 5. CLOTHING, INSIGNIA, INDIVIDUAL EQUIPMENT AND HERALDIC ITEMS

#### a. Uniforms

Describe all uniforms of ground force personnel and quasi-military (officers and enlisted), for both summer and winter. Include: dress; service; field or combat; work/fatigue; women's services.

- (1) Uniform components to be included are: coats, jackets, overcoats, shirts, trousers, headgear, neckwear, footgear; handwear, underclothing, and accessories.
- (2) Provide:
  - (a) Tables of initial issues and replacement rates.
  - (b) Manuals and regulations.
  - (c) Size tariffs.
  - (d) Samples (indicate place and date of manufacture).
  - (e) Photographs and charts (preferably in color).
- (3) If details requested above cannot be provided, the following points (where applicable) should be covered:
  - (a) Kind of material and color.
  - (b) Design (including tailoring; lapel and collar detail; types, number and location of pockets; country of origin, etc.).
  - (c) Locations of insignia, braid, piping, etc; manner of wearing; and manufacturer's markings.

b. Insignia

- (1) Indicate the rank structure of the Army, to include comparison between rank system and United States Army structure; also exact terminology for each rank and variations within ranks.
- (2) List all significant markings of grade, branch of service, arm, unit, and specialty and/or duty assignment. Include: insignia, colors of arm or service, piping and braid, buttons, and any other accessories of wear (exclusive of clothing items) which serve as distinguishing markings (such as articles for the use of distinctive military escorts, color bearing units, and service schools). Provide regulations, manuals, photographs, samples, etc.
- (3) If details requested above cannot be provided, the following points (where applicable) should be covered:
  - (a) Type of item (shoulderboards, lapel tabs, devices, brassards, chevrons, stripes, piping, buttons, etc.).
  - (b) Kind of materials (metal, embroidered, woven, etc.).
  - (c) Manner of wearing (where, how, and for what occasions) and placement (size and number of stars, stripes, bars, etc.).
  - (d) Colors of item.
  - (e) Manufacturer's markings.

c. Individual Equipment

- (1) Types of individual equipment include: helmets/helmet liners; cartridge belts; bandoleers; field packs and other web equipment; canteens, knives, forks, spoons, cups, mess kits; ponchos; blankets; and identification tags.

(2) Provide:

- (a) Table of initial issue and replacement rate.
- (b) Manuals and regulations.
- (c) Size tariffs (where applicable).
- (d) Samples (indicate place and date of manufacture) and/or photographs and charts (preferably in color).
- (e) Specifications, test reports and brochures for special purpose items.

(3) If details requested above cannot be provided, the following information (where applicable) should be covered:

- (a) Dimensions, weight, shape, size, and material.
- (b) Manufacturer and manufacturer's markings.

d. Special Purpose Clothing and Individual Equipment

(1) Describe all special purpose items for use in arctic, jungle, desert, mountain, ski, amphibious, armored, paratroop, camouflage, etc. Include: sleeping bags, immersion suits, personal heating devices, packboards, individual cookers/stoves; headnets, wading boots, mosquito netting, ointments, skis, climbing devices, axes, ballistic-resistant items, anti-mine boots, fleshburn, sunburn, camouflage items, etc.

(2) Provide:

- (a) Manuals and regulations.
- (b) Samples (indicate place and date of manufacture).
- (c) Photographs and charts (preferably in color).
- (d) Specifications, test reports and brochures.
- (e) Details of construction, closures, seams, insulation principles, and other unusual characteristics.

e. Protective Clothing and Individual Protective Equipment

- (1) Describe all items of clothing and individual equipment used for protection against CBR contamination and/or for decontamination, such as capes, goggles, footwear, bedrolls, etc.
- (2) Provide:
  - (a) Nomenclature and model number (if known), country of origin, and date of manufacture.
  - (b) Physical description (color, construction, dimension, weight, size, materials used, and markings).
  - (c) Sketches and photographs.
  - (d) Agents against which protection is afforded, and time of effectiveness.
  - (e) Type of impregnant and impregnation process; type of fabric coating; and special packaging.
  - (f) Comfort and performance variation with temperature.
  - (g) Specific use, and efficiency (such as quick-opening capes).

f. Heraldic Items

- (1) Provide regulations, manuals, photographs, samples, etc. of decorations, emblems, flags, and heraldry. (Ribbon samples should include a six-inch length, if possible.)
- (2) If details requested above, cannot be provided, the following points (where applicable) should be covered:
  - (a) Description (including exact color shade).
  - (b) Significance and/or basis of award.
  - (c) Manner and occasions of display.
  - (d) Manufacturer's markings.



## 6. RATIONS

### a. Ration Types

Type of rations to include:

- (1) Non-packaged garrison and field rations.
- (2) Standard packaged rations (combat, emergency, etc.).
- (3) Special purpose rations (prisoner of war, hospital packs, jet pilots, etc.).
- (4) Ration supplements (hot and/or cold weather, indigenous fruits and vegetables, etc.).

### b. Specifications and Requirements

#### (1) Provide

- (a) Ration scales, menus, bread formulas, etc.
- (b) Prescribed areas and conditions of use.
- (c) Samples of packaged rations and/or photographs with specifications.
- (d) Test acceptability reports.

#### (2) If details requested above cannot be provided, the following information (where applicable) should be covered:

- (a) Item identification. Include: labels or outer markings, percentage and type of perishable and nonperishable or synthetic foods, and other components (cigarettes, fuel tablets, etc.).
- (b) Net weight, caloric content and adequacy.
- (c) Method of preparation and field feeding techniques.

- (d) Type of packaging (can, bottle, barrel, box or bag).
- (e) Efficiency of container (types of seams or closures, variation of packaging successes or failures).
- (f) Methods of protection against decontamination (special packaging or seals).

## 7. ORGANIZATIONAL EQUIPMENT AND SUPPLIES

### a. Organizational Equipment

#### (1) Types of organizational equipment include:

- (a) Mobile kitchens and bakeries; refrigerator semi-trailers; kitchen butchery, refrigeration; and bakery equipment and supplies (food and water containers, cutlery, etc.).
- (b) Portable field bath and laundry units; fumigation chambers and delousing outfits; special decontamination units for personnel and/or equipment; laundry, dry cleaning, bath, and disinfection and decontamination equipment and supplies (soaps, detergents, water softeners, disinfectants, etc.).
- (c) Mobile shoe, clothing and textile repair vehicles; salvage, repair, and maintenance equipment and supplies for shoes, clothing, tentage, parachutes, saddlery, POL drums and cans, and mechanical and office equipment.
- (d) Materials-handling equipment (warehouse cranes, gas- or electric-powered, solid- or pneumatic-tired, up to and including 20,000 lb. capacity, sluing or fixed boom; warehouse tractors, gas- or electric-powered, solid- or pneumatic-tired, all capacities; forklift truck, gas- or electric-powered, solid- or pneumatic-tired, all capacities and lift heights; platform truck, self-side loading and stacking, all capacities; straddle truck,

gas, all capacities; tiering truck, electric, rider-type, all capacities; hand trucks; conveyors; pallets; skids and sleds; etc.).

- (e) Equipment for special operations, such as is used in arctic, desert, jungle, and mountain warfare.
  - (f) Petroleum-handling equipment and supplies (drums, cans and other type containers; portable storage tanks; dispensing equipment; laboratory test equipment; can cleaning equipment; fuel tablets, synthetic fuels, etc.).
  - (g) Remount equipment and supplies (animals, packsaddles, supply wagons, pack kitchens, carts, special CBR protective equipment, etc.)
  - (h) Tents, temporary and/or portable shelters; inflatable shelters; special CBR protective shelters; space heaters; lanterns and stoves.
  - (i) Office equipment and supplies; mobile printing presses, and furniture.
  - (j) New materials for dissemination, detection, identification, notification, mapping and protection.
- (2) Provide regulations, manuals, photographs and/or samples, etc.
- (3) If details requested above cannot be provided, the following information (where applicable) should be covered:
- (a) Specifications (including parent vehicle, special fittings, etc.).
  - (b) Capacity
  - (c) Manufacturer and manufacturer's markings.
  - (d) Method of operation and maintenance.

- (e) Method of packaging items to prevent rust, corrosion, etc.
- (f) Packing and crating techniques for shipment, by type.
- (4) For CBR decontamination equipment, discuss:
  - (a) Specific use of the item.
  - (b) Description of decontaminants used.
  - (c) Capacity, rate of delivery, and number of personnel, pieces of clothing and individual equipment, or food and POL packages decontaminated in one hour.

b. Parachutes and Airdrop Equipment and Supplies

- (1) Types of aerial supply equipment to include:
  - (a) Personnel and cargo parachutes and packs.
  - (b) Special devices (such as deceleration cushions, anti-toppling devices, shock-absorbers, devices for automatic release of cargo, etc.).
  - (c) Aerial supply containers, including bags and slings and special lightweight packaging materials.
  - (d) Parachute drying and packing equipment.
  - (e) Drop platforms and webbing assemblies.
  - (f) Airplane loading equipment.
  - (g) Tie-down system in planes.
  - (h) Devices to assure landing of supplies and equipment in a small ground area.
  - (i) Equipment used for special airdrop operation (such as required in arctic regions).
  - (j) Free-fall equipment.

(2) General specifications. Discuss in detail:

(a) Parachutes(personnel and cargo). Indicate: construction (materials, size, shape, quality of workmanship, hardware, pack); specifications (rate of descent, maneuverability, stability); method of testing (time and place of known tests and evaluation of results) and service life (years of use from date of manufacture, number of jumps before it becomes unsafe. tests conducted to determine efficiency of used chutes).

(b) Airdrop equipment. Indicate: construction (materials, size, shape, etc.), use, efficiency and service life.

(3) Discuss airplanes, helicopters, missiles and other airborne vehicles used for the movement of supplies. Include details of:

(a) Craft range and air field requirements.

(b) Maximum cargo capacity, cargo space, size of doors.

(c) Tie-down system, and specifications of special cargo handling and drop equipment.

c. Repair Parts

Discuss in detail:

(1) Policy of inventories on a quantitative and monetary basis with respect to condition and purpose for which held, e.g., peacetime operating stock; mobilization reserves, etc.

(2) Identification, inspection and classification of serviceable and unserviceable parts.

(3) Supply management techniques, including distribution policy, inventory control procedures, and requirements computation methods.

(4) Standardization policies.

- (5) Methods of packaging repair parts to prevent rust, corrosion, etc.
- (6) Packing and crating techniques for shipment, by type.

## CHAPTER III - MILITARY ECONOMICS

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### 8. QUARTERMASTER INDUSTRIES

#### a. Organization and Structure

Organization and structure of military and civilian industries producing quartermaster end-items. In addition to industries producing standard military items of clothing, subsistence, equipment, POL, and general supplies, information is required for the following types of industries:

- (1) Food processing (bakeries; butcheries; meat packers; grain and flour mills; canneries, and dehydrated, dried, frozen, irradiated, and synthetic food).
- (2) Ice-making facilities.
- (3) Tanneries and leather goods.
- (4) Textiles, fibers, canvas, webbing, etc.
- (5) Chemical industries (plastics, paints, insecticides, artificial fibers, dyes, elastomers, protective coatings, cleaning agents, pesticides, repellents, and fertilizers).
- (6) Laundries, dry cleaning plants, ice and refrigeration plants.
- (7) Packing and crating (including POL and food container fabrication).
- (8) Petroleum fields and refineries.
- (9) Paper, paper and fabric bags, light metals and alloys.

#### b. Production and Capacity

Include: current annual output by end-item; statistical data on production for a number of years; manufacturing methods; mobilization potential; sources of supply of materials (including the use of substitute materials); and dependency on foreign sources.

- (1) For bakeries, include information on bread formula and flour extraction rate.
- (2) For POL refineries, include a breakdown by type and quantity of refined products.
- (3) For meat packing, include use and disposal of by-products.

c. Individual Plants

Include:

- (1) Type of industry, name, location, and ownership and/or operational control.
- (2) Characteristics of plant (modern or obsolete); degree of automation; size, layout; and construction (wood, brick, etc.).
- (3) Production data (including output by item); size of labor force; production norms, etc. (Include description of over-all difficulties being encountered in meeting both quantity and quality standards.)
- (4) Source of raw material and power.
- (5) Manpower information, to include: significant labor shortages; wage and hour schedules; availability of men for heavy labor, their age groups, and endurance; utilization of women and child labor; skilled labor requirements and availability.

d. Role of Industry in the Economy

Relative importance as an employer of labor.

e. Relationship with Government

Regulations governing imports and exports. Other controls and policies affecting the industry, and extent of government ownership.



9. DOMESTIC CONSUMPTION AND FOREIGN TRADE

a. Domestic Consumption

Give information on the availability, distribution and quality of key consumer goods in the country as a whole and/or in specific areas. Include: foodstuffs, clothing, fuel, and QM-type housekeeping items. Indicate:

- (1) Shortages and/or surpluses (stockpiles and inventories of consumer goods or raw materials such as food, fibers and POL; quantities issued and in reserve; location of stock).
- (2) Items rationed.
- (3) Percentage of items produced in the country (which items).
- (4) Consumption pattern.

b. Foreign Trade

- (1) Indicate to what extent the domestic production of basic food, clothing, household goods and fuel items are supplemented by the import of either finished, semi-finished, or raw products.
- (2) State sources of imports of all items of Quartermaster interest.

10. AGRICULTURE, LIVESTOCK AND FOOD

a. Agriculture

Describe the current outlook for successful harvests of key agricultural products in the country as a whole and/or in specific areas. Give comparison with former years.

b. Livestock

Describe the livestock situation in the country as a whole or in specific areas (including those used for food and/or pack animals). Include: increases or decreases in livestock; animal breeding programs; fodder availability; etc.

c. Food

- (1) Provide food balance sheets, crop calendars, and imports not included in food balance sheets.
- (2) Describe the efforts of the government to increase agricultural production in the country as a whole and/or in specific areas.
- (3) Indicate food consumption patterns and/or shortages among urban population; among rural population.
- (4) Indicate foods found in the foreign area which would be acceptable for U. S. Army use; and foods generally used in the United States which would not be acceptable to the indigenous population.
- (5) Describe the extent of distribution and marketing practices. Include: cooperations or associations; government-controlled or private open city markets; cash crop practices; means of moving food from farm to urban areas.

## CHAPTER IV - STORAGE

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### 11. COVERED STORAGE

#### a. Types of Covered Storage

Includes transit sheds, warehouses, etc.

#### b. Information Requirements

- (1) Number or name, location, and owner or operator.
- (2) Type and details of construction (wood, brick, etc.).
- (3) Dimensions (length and width, number of floors, and height between floors).
- (4) Capacity in square feet (floor load capacity, total usable floor area, and total capacity).
- (5) Details on humidity control system, including square footage of warehouse space so controlled.
- (6) Number and size of cargo doors and loading platforms.
- (7) Materials-handling (i.e. trucks, conveyers, etc.) and special equipment.
- (8) Availability of rail and road connections.
- (9) Present use.

### 12. COLD STORAGE

#### a. Types of Cold Storage

Includes cool, cold, and frozen storage space.

b. Information Requirements

- (1) Number or name, location, and owner or operator.
- (2) Present use.
- (3) Construction and layout.
- (4) Machinery and equipment.
- (5) Storage capacity (differentiate between chilled and frozen storage space, and give cubic storage capacity of each).
- (6) Daily ice-making capacity.

13. GRAIN STORAGE

a. Types of Grain Storage

Includes all grain elevators and storage facilities.

b. Information Requirements

- (1) Number or name, location and owner or operator.
- (2) Present use.
- (3) Type of construction.
- (4) Total storage capacity (in tons).
- (5) Dimensions and capacity of loading berth and normal handling capacity per hour.
- (6) Handling equipment.
- (7) Processing and milling facilities.

14. OPEN STORAGE

a. Open Storage Sites

Includes areas which are adjacent to transportation facilities, and which are presently in use or particularly suitable for open storage.

b. Information Requirements

- (1) Size and approximate capacity (in acres).
- (2) Type of surface.
- (3) Accessibility by rail and road.
- (4) Current use.

15. UNDERGROUND STORAGE

a. Underground Storage Sites

Includes all facilities used for or suitable for storage (including caves or mines in or near urban areas).

b. Information Requirements

Indicate: name, type, location, and owner or operator; capacity or size; ventilation system and mechanical-handling equipment.

16. POL STORAGE

a. POL Bulk Storage

Information to include: number of tanks or other containers; capacity of each tank in barrels; location; ownership and control; type of tank (above or below surface); condition; products stored (gasoline, diesel fuel, etc); source of supply; method of supply (pipeline, water, rail, highway); normal stock levels; dispensing system; stock rotation policy; fire-fighting equipment; and the availability and use of indigenous labor.

b. Warehouses and Sheds

For warehouses and sheds suitable for or used for the storage of POL packaged products, discuss: type of product stored; capacity (in square feet); means of distribution; facilities for handling drums and packaged products; and fire-fighting equipment.

c. Missile Fuel Storage

For storage facilities at missile sites used for POL-based fuel, discuss: number and type of containers; capacity; location; layout; supply and handling; fire-fighting equipment.

## CHAPTER V - MILITARY GEOGRAPHY AND SOCIOLOGY

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### 17. PHYSICAL GEOGRAPHY

The effects of the physical environment on quartermaster operations.

#### a. Surface Configuration, Soils, and Rock Types

Surface configuration, soils, rock types and the possibility of earthquakes and volcanic activity as they affect the location of drop zones, open and underground storage sites, graves registration operations and cross-country movement.

#### b. Surface Drainage and Water Resources

Surface drainage and water resources as they affect food service and laundry and bath operations; as well as all operations listed above.

#### c. Vegetation

- (1) Use of vegetation for concealment, camouflage, dunnage and temporary shelters.
- (2) Possibility of conflagration (report seasons and distribution).
- (3) Requirements for protective clothing (presence of allergen and poisonous plants).

#### d. Weather and Climate

Data on weather and climate as they affect clothing, individual equipment, temporary shelter, food and water requirements; storage and movement of supplies, and maintenance of supplies and equipment.

#### e. Flora, Fauna, and Disease

Plants, insects and animals of medical importance, include: scientific name, common name, distribution, prevalence, relationship to health or sanitation, and method of control.

- (1) Indicate types of insects, pests, and animals against which protection, disinfection and/or decontamination are required, including the geographic distribution of these fauna and current measures of control.
- (2) Indicate any protective measures used by the indigenous population against insects, animals and pests.
- (3) Indicate incidence and distribution of debilitating epidemics such as dysentery, Asian flu, etc.

f. Maps, Map Data and Charts

- (1) Armed Forces maps showing depots and storage installations of Quartermaster interest. (As indicated in Chapter IV.)
- (2) Terrain maps for the siting of open storage dumps and air drop zones.
- (3) Transportation maps:
  - (a) Capacity maps of railroads, highways, waterways, ports and harbors, and airfields.
  - (b) Distribution, size and capacity maps of POL pipeline systems.
- (4) Economic maps:
  - (a) Maps of POL storage facilities.
  - (b) Maps of distribution of quartermaster industries (as indicated in Chapter III).
- (5) Urban area maps:
  - (a) Maps of covered, cold, open, POL, and grain storage.
  - (b) Maps of location of quartermaster service activities (as indicated in Chapter I).



## 18. SOCIOLOGY

### a. Population

Population of individual urban areas and rural districts. Include statistics of:

- (1) Over-all population which reflects civil aid requirements (i.e. men, women and children separated into age groups).
- (2) Availability of indigenous labor (i.e. men, women, and children separated into age groups and special skills).

### b. Food

- (1) Food habits and customs.
  - (a) Number of meals per day and relative importance of each.
  - (b) Seasoning used.
  - (c) Traditional foods; daily foods which are basic regardless of season; seasonal variations in food.
  - (d) Sample diet; characteristic beverages (including alcohol).
  - (e) Religious taboos.
  - (f) Cooking methods and equipment.
  - (g) Infant feeding - period before weaning, formulas, milk supplements and substitutes - after weaning.
  - (h) Have people ever used powdered milk and eggs?
- (2) Special diet groups (heavy workers, babies, etc.).
- (3) Local relief programs and standards.
- (4) Rationing systems.
- (5) Food collection systems.

- (6) Extent of use of cafeterias and restaurants, large/small.
- (7) Extent of industrial or communal feeding.
- (8) Milling:
  - (a) Scope of operation (private, group or association).
  - (b) Use of by-products, viz bran from rice.
  - (c) Regional customs in processing - such as use of calcium carbonate in milling of rice and addition of flours other than wheat to flours.
  - (d) Enrichment of milled products.
  - (e) Customary degree of milling for each grain (% reduction).
- (9) Breweries:
  - (a) Proportion of cereal crop used.
  - (b) Yield of brewers yeast.

c. Clothing

- (1) Native garb and seasons of change-over.
- (2) Size tariffs.
- (3) Patterns of consumption and rationing.

d. Customs

- (1) Manner of observance of national holidays.
- (2) Burial traditions, and customs affecting search and recovery.

e. Government

Governmental and private agencies and organizations acting in the fields of labor relations; agriculture; industry; transport; and native affairs.

## CHAPTER VI- TRANSPORTATION

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### 19. POL PIPELINES

#### a. Pipeline System

- (1) Condition and adequacy of POL pipeline system for peace and wartime needs.
- (2) Control, organization and administration of POL pipeline system.
- (3) Source and quantity of supply (indigenous or imported).

#### b. Existing Pipelines

Indicate: name, type (specific use), size, aboveground or buried, throughput capacity, products carried, terminals and construction points, alignment and international connections, ownership, rail and tank-truck loading facilities, and berth outlets in port areas.

#### c. Pipelines Under Construction

Indicate: location, distribution, size, and estimated date of completion.

### 20. PORTS AND HARBORS (COASTAL AND INLAND WATERWAYS)

#### a. Location and Capacity

For each port and harbor give: location, and military capacity in tons per day, including ship capacity (with tanker berths) and/or turn-around time. Distinguish between general cargo and POL ports.

#### b. Facilities

Indicate:

- (1) POL pipelines (including berth and sea lines). Report on: location, dimension, pumping rate and connections with both wharf and POL storage tank facilities.

- (2) Mechanical-handling facilities. Report on: number and capacity of cranes, portable conveyors, fork lift trucks and other equipment.
- (3) Storage facilities. Include all requirements listed in Chapter IV.

21. COASTS AND LANDING BEACHES

Location of beaches most suitable for landing operations and capabilities (in tons of cargo per day). Capacities for unloading large tankers (32-65 DWT) by submarine pipeline over the beach.

22. INLAND WATERWAYS

a. Inland Waterway System

Location and military transport capacity in ton miles per day; seasonal variations.

b. Waterway Crafts

Tankers and tank barges for POL transport. Indicate: number, capacity, and discharge rate (barrels per hour); condition; products transported (crude, black, clean, mixed); distribution; ownership; and season of use.

23. RAILROADS AND HIGHWAYS

a. Rail and Highway System

Route location and military transport capabilities in ton miles per day; indicate seasonal variations.

b. Equipment

POL tank cars and trucks and refrigerated cars, trucks and trailers. Include (where applicable) information on: number, capacity, rail gauge, present condition, distribution, ownership, products transported, and loading and unloading equipment.

24. AIRBORNE LANDING AND DROP AREAS

a. Landing Areas

Areas suitable for the landing of paratroops, cargo-type aircraft, and gliders. Include: location, size, site characteristics, and access to main routes and urban areas.

b. Airdrop Zones

Areas suitable for drop zones. Give drop zone identifications, homing and marking devices, and methods.

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## CHAPTER VII - RESEARCH AND DEVELOPMENT

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### 25. RESEARCH AND DEVELOPMENT CAPABILITY, ORGANIZATION AND FACILITIES

#### a. Capability and Emphasis

- (1) Level of scientific achievement in areas of Quartermaster interest.
- (2) Indicate whether major research and development efforts are directed toward the modernization of an existing force, or whether emphasis is being placed on designing materiel to conform to a national strategic plan to be implemented in a future time-frame (e.g. 10 years).

#### b. Organization and Facilities (in areas of QM interest)

- (1) Organization structure, to include: interrelationship and method of coordination between organizations; method of originating projects, and procedures followed throughout the research and development cycle; policies and practices concerning duplicate research projects; extent of cooperation between organizations; method of dissemination of ideas; and name and location of all installations, including types of research being conducted, caliber and number of personnel.
- (2) Governmental structure for planning, controlling, supervising, or advising research and development outside of the Armed Forces which affect research in Quartermaster areas of interest. The extent of governmental control and influence on research and development. Capabilities to convert civil research and development to military projects when necessary.
- (3) Research and development organizations and facilities within the Armed Forces, and such organizations controlled or supervised by or for the Armed Forces which conduct research in areas of Quartermaster interest. Include method and extent of coordination between the military, governmental and nonmilitary organizations.

- (4) Scientific academies and higher educational institutions (civilian and military) engaged in research and development of Quartermaster interest. Their relationship to the governmental research and developmental structure.
- (5) Industrial organizations and facilities engaged in research and development of Quartermaster interest and their relationship to the governmental research and development structure. Indicate specifics of type and extent of research, name and ability of the individual organization.

c. Personnel and Training

- (1) Biographical data on significant civilian and military scientists, engineers, technicians, doctors of medicine, designers, and researchers associated with quartermaster research and development programs. Information should include: name; nationality; date and place of birth; home address; languages; physical description and photograph; titles or military rank; civilian office or branch of service; occupation and position with manufacturing, testing or research activity; and education.
- (2) Critical shortages of scientific personnel in quartermaster research fields.
- (3) Military and civilian training of scientists and technicians used in quartermaster research, particularly in the higher schools and in postgraduate work. Numbers of scientists and engineers graduated.

d. Research Publications

In areas of Quartermaster interest, supply scientific and technical, medical, industrial, and trade documents in the form of books, handbooks, journals, periodicals, price list, business catalogs and manuals (training and field; government and private), papers from scientific meetings and conferences, brochures and advertising data from industrial fairs, industrial and commercial telephone directories, and one- and two-language-type scientific dictionaries.

e. Scientific Conferences and Industrial Expositions

Scientific conferences and industrial expositions of Quartermaster interest ; discuss or forward:

- (1) Preprints, abstracts or summaries of papers presented, and name of author.
- (2) Highlights of discussions on papers presented, particularly indications of originality of research approach and experimentation, and any specialized equipment.
- (3) Indications that work or data presented were incidental to a novel, long term research objective, a production problem or a new industrial application.
- (4) Method of approach to theory or experimentation.
- (5) Extent of fraternization between Soviet Bloc and Western personalities, including restrictions.
- (6) Personal contacts and conversations, professional competency, views and reactions to papers presented or comments thereon.
- (7) Significant descriptive literature and photographs (including nameplates) of scientific instruments and equipment, industrial tools and machinery, quality, workmanship and specifications of equipment.

f. Scientific and Research Parties or Expeditions

For scientific and research parties or expedition, discuss:

- (1) Purpose, composition, equipment and techniques. (Describe all items of quartermaster equipment or subsistence and include performance evaluation.)
- (2) Destination and mode of transportation. (Describe and evaluate mode of transport of supplies, particularly POL and subsistence items.)
- (3) Military significance or implication of deficiencies in logistical support.



- (4) Results, including copies of reports, brochures and equipment design and evaluation for subjects of Quartermaster interest.

## 26. REQUIREMENTS

Scope of required information for all quartermaster research projects including:

### a. Details of Research Projects

- (1) Details of research and development projects. Include: specifications, designs, blueprints, photographs, or other descriptive material of the items under development.
- (2) Status and progress of projects. Include: current phase of research and development, and successes or failures encountered in any phase; plans for continuation or cancellation of projects; and planned and actual dates for each phase of research and development from concept to reproduction.
- (3) Details concerning location, use, and characteristics of all special equipment necessary to research and development facilities.

### b. Research Subsidy

Means and extent of research subsidy by the government. Include: breakdown of funds allotted to various fields of interest; public and private funds allotted for research and development; breakdown of funds allotted to various fields, organizations, and/or scientists; prizes, awards and scholarships for scientific research and development, and the recipients.

## 27. INDIVIDUAL RESEARCH PROJECTS

For each of the individual fields of research listed below, report all detailed information as stated under REQUIREMENTS, above.

a. Food Research

Information is required for all research projects being conducted in the field of subsistence, such as in:

(1) Nutrition.

- (a) Composition of food - to include protein, fat, mineral, vitamin content, percentage moisture.
- (b) Stability
- (c) Description of end-item.
- (d) Acceptability - general or limited to special groups or areas.
- (e) Standards of quality control, and enrichment and fortification practices.
- (f) Iodinization of table salt.

(2) Preservation of food.

- (a) Extent of large scale preservation.
- (b) Home food preservation.
- (c) Types of preservation. Include details on: refrigeration (chill or freeze); pasteurization - sterilization; dehydration - sun, vacuum, roller, spray, etc; salting - other curing; fermentation; canning; special techniques peculiar to specific areas; graneries; radiation - sterilization or pasteurization; and use of natural resources viz cold cellar.

(3) Radiation sterilization.

- (a) Effects of ionizing radiation on bacteria, spores, foods, food components and food chemicals (additives).

- (b) Use of radiation in the drug, plastics and food fields: pasteurization; disinfection of insects, parasites; sprout inhibition; tenderizing; ripening.
  - (c) Food irradiation techniques: Gamma and X-ray sources; electron and beta sources; other source materials, process design, engineering and equipment; reactor development.
  - (d) Radiation dosimetry.
  - (e) Methods of packaging food for radiation preservation.
  - (f) Human feeding tests, troop feeding tests using irradiated foods.
  - (g) Wholesomeness of irradiated foods: Toxicity; induced radioactivity; acceptability.
- (4) Dehydration of foods.
- (a) Dehydration and rehydration methods.
  - (b) Processing methods and equipment.
  - (c) Types and uses of products.
  - (d) Techniques of compressing dehydrated foods, (e.g. by dry steam or by the incorporation of edible adhesives).
- (5) Synthetic foods.
- (a) Details of related research.
  - (b) Synthetic survival rations.
- (6) Dry products development.
- (a) Baking mixes and equipment.
  - (b) Cereals and grains development.
  - (c) Instant dry products.
  - (d) Synthetic or replacement products.

(7) Specialized feeding techniques.

(a) Feeding of jet flyers.

(b) Feeding of space explorers (transfer of food from package to mouth; use of animals in space feeding tests).

(c) Special diets developed to increase resistance to effects of radiation.

(8) Hydroponics.

b. Clothing, Textiles and Materials Research

Information is required for all research projects being conducted, such as in:

(1) Clothing, footgear, handwear, and individual equipment.

(a) Protective items of clothing (natural and CBR hazards, and fuel handlers).

(b) Clothing assemblies (field clothing) for cold-dry, cold-wet, hot-dry and hot-wet environments.

(c) Special purpose items (e.g. boots and helmets for tank personnel, space suits).

(d) Ballistic-resistant items.

(e) Thermal-resistant items.

(f) Clothing systems which reduce the logistical burden (i.e. expendable clothing).

(g) Size tariff research.

- (h) Footgear (insulated, ventilated): new designs, new methods of manufacture, foot measuring devices, mobile shoe production units. Direct-vulcanized molded soles and heels (machines, materials and methods).

(2) Textiles and materials.

- (a) Synthetic fabrics and fibers (physical characteristics; uses; newest developments; and blending techniques).
- (b) Materials repellent to liquid and oils, but permeable to air and water vapor.
- (c) Non-woven textiles.
- (d) Fabric treatments, finishes and coatings to resist wind, water, fire, degradation, or used to protect nylon and other synthetic fibers against exposure to sunlight.
- (e) Parachute fabrics (new webbings which maintain properties under repeated impact loading; new fibers with higher breaking strength than nylon without being brittle or that show better resistance than nylon or dacron to exposure to sunlight or have appreciably higher melting points than nylon; materials being used as energy dissipators to cushion loads in aerial delivery).
- (f) Unusual infrared properties of textiles, dyes, paints, leathers and plastics.
- (g) Paper and paper-based products used for clothing, tents, parachutes, etc.
- (h) Dyes and dyeing (new techniques, methods and formulas; special purpose for camouflage, fluorescent, etc.).
- (i) Leather tannage and finishes.
- (j) Tents, sleeping gear and individual equipment (insulating materials; improved designs; new closures).

c. Chemical Research

Information is required for all research projects being conducted, such as:

- (1) Pesticides, repellants, germicides, and fungicides.
  - (a) Stability of germicides (barrier material for packaging).
  - (b) Disinfectants used for fruits and vegetables.
  - (c) Germicides used in sewage and waste disposals and water (particularly in cold climates).
  - (d) Statistical investigations relevant to kinetics of microbiological deterioration.
  - (e) Fungicidal compounds with high biological activity, particularly colorless compounds.
  - (f) Formulations of fungicide compounds.
  - (g) Principal compounds being used as preservatives for cotton textiles, plastics, wood, twine and cordage.
  - (h) Interactions of fungicides with materials to which they are applied.
- (2) Plastics.
  - (a) Laminates, foams, cushioning materials, packaging materials.
  - (b) Use of plastics in clothing and protective equipment (e.g. sandals and anti-flash goggles).
- (3) Rubber
  - (a) For arctic use.
  - (b) PQL and acid-resistant.

- (c) High temperature elastomers.
- (d) Synthetic rubbers.
- (4) Paper.
  - (a) Packaging materials.
  - (b) Cushioning materials.
  - (c) Substitutes for other materials.
- (5) Metallurgy.
  - (a) Titanium alloys.
  - (b) High strength light alloys.
  - (c) Light metals for airdrop.
  - (d) Metals for body armor.
  - (e) Steel for arctic use.
  - (f) Tinplate for packaging.
  - (g) Aluminum for packaging.
  - (h) Steel for packaging.
- (6) Surface finishes and coating.
  - (a) Paints and varnishes.
  - (b) Organic finishes and coatings.
  - (c) Finishes for light alloys.
  - (d) Special resistant finishes.
  - (e) Abrasion-resistant finishes for magnesium.

- (f) Corrosion-resistant coatings for containers.
- (g) Corrosion-resistant coatings for metallic equipment.
- (7) Heating chemicals.
  - (a) Solid fuels (fuel tablets).
  - (b) Types not requiring atmospheric oxygen.
  - (c) Progress in radical new fuels and/or engine design.
- (8) Cleaning chemicals.
  - (a) Soaps and detergents.
  - (b) Special decontaminants (including CBR types).
  - (c) Materials for cleaning metal surfaces prior to use of preservatives.
  - (d) Materials for removing preservatives from metal surfaces.

d. Engineering Research

Information is required for all research projects being conducted, such as:

- (1) Baking and cooking.
  - (a) Simplified logistics techniques.
  - (b) Feeding techniques. Include data on front line feeding, and field kitchen capacities.
- (2) Refrigeration.
  - (a) Refrigerants used and operating pressures.
  - (b) Sub-cooled packaging.



- (c) Small capacity ranges: to  $-20^{\circ}$  F.
  - (d) Rotative refrigeration systems (not reciprocal).
  - (e) Lightweight low-capacity gas turbines.
  - (f) Refrigeration truck, trailer and car construction.
  - (g) Use of air as a refrigerant.
  - (h) Heat pumps.
- (3) Bath and laundry.
- (a) Bath units (water treatment and water heating systems).
  - (b) Laundry units (means of transporting; sleeping equipment cleaning techniques).
  - (c) Disinfestation units.
  - (d) Decontamination units.
- (4) Aerial delivery equipment.
- (a) Equipment designs and performance characteristics for: parachutes (personnel and cargo) and rigging equipment and techniques; parachute handling equipment and techniques; free-fall equipment and techniques; shock absorption units and materials; cargo platforms and containers; devices for parachute and load control; parachute safety and service life criteria; types of packaging and crating.
  - (b) High speed aerial delivery techniques.
  - (c) High altitude aerial delivery techniques.
  - (d) Ballistic delivery techniques.

- (5) Oversnow equipment.
  - (a) Skis and bindings.
  - (b) Ski poles.
  - (c) Snow shoes.
  - (d) Sleds.
  - (e) Other related equipment.
  
- (6) Psychological warfare equipment.
  - (a) Foreign language type font samples. (Grammar books, dictionaries, text books, periodicals, newspapers.)
  - (b) Printing papers and inks. (Qualities available; sources of supply; specifications.)
  - (c) Mobile printing presses.
  
- (7) POL containers and handling equipment.
  - (a) Collapsible containers. (Construction; capacity; products contained; static storage use; conversion applications; cold weather problems.)
  - (b) Bulk containers and tanks. (Capacities and use.)
  - (c) Dispensing equipment. (Characteristics of pumping equipment; hand pumps vs. power pumps; power source; filter-separator use; capacity; size and weight.)
  - (d) Hose. (Construction; cold weather problems.)
  - (e) Tube-in-strip. (Applications and extent of use; detailed construction of tube and fittings used.)
  
- (8) Individual rocketry.
  - (a) Platforms, individual jet propulsion equipment, etc.
  - (b) Capability or performance objectives.
  - (c) Fuels, propellant system, methods of ignition, toxicity of exhaust gasses, thrust controls, weight, size, and method of use.

(9) Logistic missile research.

- (a) Performance and design of missiles used for the ballistic delivery of supplies.
- (b) Payload and efficiency.

(10) Other equipment.

- (a) Materials-handling equipment.
- (b) Tent and shelter heaters . (Use of nuclear energy.)
- (c) Office machines and furniture.

e. Environmental Protection Research

Information is required for all research projects being conducted, such as:

(1) Climatic research.

- (a) Selection of personnel based on climate.
- (b) Effects of climate on equipment.
- (c) Storage conditions.
- (d) Ozone concentrations.
- (e) Radiation. (Long wave; ultraviolet; total solar.)

(2) Geographic research.

- (a) Terrain analysis methods with respect to movement or shelter.
- (b) Vegetation effects on equipment or movement.
- (c) Soil temperature.

- (3) Physiological research.
  - (a) Sleep.
  - (b) Skin sensitivity.
  - (c) Heat sensitivity.
  - (d) Locomotor reactions and stimulus relations.
  - (e) Touch or tactile sensitivity.
  - (f) Human engineering.
  - (g) Reaction time.
  - (h) Motor skill.
  - (i) Manual dexterity.
  - (j) Visual perception.
  - (k) Auditory perception.
- (4) Psychological research.
  - (a) Preference testing.
  - (b) Comfort scales.
  - (c) Indoctrination.
  - (d) Methods of writing instructions.
  - (e) Systems analysis.
  - (f) Consumer research.

f. Basic Research Support

Information is required for all projects which support basic research, such as:

- (1) Food chemistry.
  - (a) Natural flavor chemicals.
  - (b) Enzyme propagation of flavor.
  - (c) Synthetic flavor chemicals.
  - (d) Basic chemical changes in food processing.
- (2) Microbiology.
  - (a) Synthesis of chemicals by micro-organisms.
  - (b) Separation and characterization of cellulose or other enzymes.
  - (c) Effects of physical and chemical conditions on the germination of bacterial and fungal spores.
  - (d) Use of algae for food, air purification, oxygen and water productions, etc.
- (3) Entomology.
  - (a) Physiological and biochemical mechanisms governing insect behavior.
  - (b) Sensitive physical and chemical receptor systems in insects.
  - (c) Effects of natural and altered environments on insect survival.

- (4) High polymers.
  - (a) Molecular structure of polymers vs. physical and chemical properties.
  - (b) Fractionation techniques for preparing fractions of narrow molecular weight.
  - (c) Graft polymerization induced by ionizing radiation and other techniques.
- (5) Reflectance and transmission of radiant energy.
  - (a) Solar energy studies (particularly as applied to solar cooking and heating).
  - (b) High energy stress studies.
- (6) Energy transfer, absorption and dissipation.
  - (a) Physical changes occurring at impact and other stresses.
  - (b) Thermal conductivity of solids.
  - (c) High temperature physics and chemistry.
- (7) Automatic data processing systems.
  - (a) Progress in development of equipment.
  - (b) Application of ACPS to military logistics.

g. Packaging Research

Information is required for all research projects being conducted, such as:

- (1) Food packaging.
  - (a) Plastics.
  - (b) Laminations.
  - (c) Metal containers.
  - (d) Protection against insects and rodents.

(2) Containers.

- (a) Wood shipping containers. (Design; fungus proofing; substitute materials.)
- (b) Fiber shipping containers. (Design; fungus, insect and rodent control; substitute materials.)
- (c) Metal and plastic shipping containers.

(3) Packaging equipment.

- (a) Equipment for production of packaging materials.
- (b) Equipment for fabrication of containers.
- (c) Equipment for filling and closing containers.