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INTELLIGENCE REPORT

ON

JAPANESE CHEMICAL WARFARE

271333

VOLUME IV

JAPANESE CHEMICAL WARFARE

SUPPLY SYSTEM AND STORAGE INSTALLATIONS

Office of the Chief Chemical Officer

GHQ, AFPAC

APO 500

TOKYO, JAPAN

15 May 1946

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Introduction

The purpose of this report is to present a comprehensive precis of the chemical warfare supply system of the Japanese Army and Navy with an analysis of their offensive and defensive potential as reflected in general supply policies and records of storage and distribution of chemical warfare materials and materiel.

Information on supply organization and procedures was compiled from interrogation of the ex-officers of the various bureaus, departments, and units concerned. Official records of the Army and Navy were destroyed in August 1945 on the direction of Imperial Headquarters. Consequently data on the actual distribution of supplies during the war were similarly gained from interrogation of the ex-officers who had been directly associated with the execution of these responsibilities. Private records, though in most cases fragmentary, in the hands of these individuals, or estimates compiled by them, proferred in substantiation or expatiation of declared supply policies and procedures, were, in lieu of official documents, accepted upon satisfactory establishment of their credibility, and, where considered significant, incorporated in this volume. Intelligence gathered by investigators who prepared other volumes of this report was resorted to as a correlation-bases in the process of counter-checking information submitted, and forestalling deliberate falsification or attempts at misleading reservation. Every possible check having been made to insure their accuracy, the information delineated and conclusions derived therefrom, it is believed, are essentially correct.

No separate chemical warfare service existed with the Japanese Armed Forces. In the Army responsibility for storage and distribution of general chemical warfare supplies was divided among four services--ordnance, intendance, medical, and veterinary--each of which maintained its own depots. Air depots stored principal stocks of chemical bombs. Navy supplies were stored in the naval store departments and aeronautical depots of the naval stations. Japanese inventories of significant stocks of chemical warfare materiel in these installations were, in most cases, verified by Unit Chemical Officers or C & S Technical Intelligence Teams, and are tabulated in this volume; the lack of definite confirmation, in the case of a few installations, is attributed to the difficulties experienced by investigating personnel in positive identification of some items, and to the fact that the arrival of qualified CWS personnel at some of the less accessible targets found destruction of materiel already executed without accurate identification. The wide dispersal of stocks throughout scattered warehouses, public buildings, caves, tunnels, and open areas was cited by many investigators as having made specific designation of the targets themselves, in some instances, an uncertain process. In this connection, even the Japanese depot personnel were often vague, maintaining that comparatively little

[redacted]

attention had been paid to chemical warfare supplies during the latter part of the war, and that lacking the records which had been destroyed, they were forced to locate stocks haphazardly. Lack of definitely prescribed methods of storage in all but a few installations was emphasized in reports of target investigation; this was largely due to the apparently frantic decentralization of stocks that took place with the intensification of air raids during the war.

Although significant stocks of Air Force chemical warfare supplies are tabulated in this volume, the investigation of Air Force depots and supply procedures is detailed in separate reports by Chemical Section ATIG, Adv. Ech., FEAF on file in Air Documents Division, T-2, Wright Field, Dayton, Ohio.

Cumulative records of all chemical warfare supplies located in the Japanese homeland are compiled in the CWS section of Report of Captured or Surrendered Enemy Equipment and Supplies, Hq Eighth Army, issued monthly.

[redacted]

KEY:

Ⓧ - CW AMMO, WEAPONS, VEHICLES, BULK TOXICS

Ⓠ - GAS MASKS, PROTECTIVE CLOTHING

⊕ - MEDICAL ANTI-GAS SUPPLIES

Ⓥ - VETERINARY ANTI-GAS SUPPLIES

Chi-lin

Voroshilov

Artem

Vladivostok

Chonjin

Wonsan

JAPAN SEA

KOREA

Taegu

Pusan

WEST ARMY DISTRICT

MIDLAND ARMY DISTRICT

CENTRAL ARMY DISTRICT

NORTHERN ARMY DISTRICT

HOKKAIDŌ

Otaru

Sapporo

Hakodate

Aomori

AOMORI

AKITA

Akita

Morioka

IWATE

NORTHEAST ARMY DISTRICT

YAMAGATA

MIYAGI

Yamagata

Sendai

Yonezawa

Fukushima

FUKUSHIMA

Koriyama

HONSHŪ

Niigata

NIIGATA

Nagaoka

PACIFIC OCEAN

Takaoka

Kanazawa

ISHIKAWA

TOYAMA

Toyama

Nagano

GUMA

Maebashi

TOCHIGI

Utsunomiya

Kiryu

Mito

NAGANO

Matsumoto

IBARAKI

Fukui

FUKUI

SAITAMA

Urawa

GIFU

Kofu

TOKYO

CHIBA

Chiba

YAMANASHI

Tokyo

KANAGAWA

Yokohama

Yokosuka

Gifu

Ichinomiya

Nagoya

SHIZUOKA

Shimizu

AICHI

Okazaki

Shizuoka

EAST ARMY DISTRICT

Toyohashi

Hamamatsu

Tsu

MIE

EASTERN COAST ARMY DISTRICT

(Bulk Toxics)

Matsue

TOTTORI

Tottori

KYŌTO

Kyoto

Otsu

SHIGA

OSAKA

Osaka

Nara

WAKAYAMA

Wakayama

HYŌGO

Isuyama

OKAYAMA

Okayama

Hime

Kobe

HIMEJI

HIROSHIMA

Hiroshima

Tadanoumi

Kure

Takamatsu

KAGAWA

TOKUSHIMA

Tokushima

Matsuyama

EHIME

Kochi

KOCHI

SHIKOKU

SHIKOKU ARMY DISTRICT

Omine

YAMAGUCHI

Yamaguchi

Shimonoseki

Moji

Kokura

Yawata

Fukuoka

FUKUOKA

Saga

SAGA

Sasebo

NAGASAKI

Kurume

Omuta

OITA

Oita

Nagasaki

Kumamoto

KUMAMOTO

KYŪSHŪ

MIYAZAKI

Miyazaki

KAGOSHIMA

Kagoshima

JAPAN

GENERAL HEADQUARTERS
ARMY FORCES IN THE PACIFIC
AND
SOUTHWEST PACIFIC AREA

MAP I — PRINCIPAL ARMY HOME-ISLAND DEPOTS
FROM WHICH CW SUPPLIES WERE DISTRIBUTED

[redacted]

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SECTION I - Outline of Army Supply Organization

A. General

1. The Imperial Headquarters, (Dai Hom Ei) responsible to the Emperor, exercised the functions of supreme command. (Figure 1).

2. The Ministry of War, (Rikugun Sho), its chief directly responsible to the Emperor, was the administrative and supply agency of the Army. The Minister of War controlled the procurement and supply of all military equipment, carrying out his functions with the assistance of Staff and Operational Bureaus. (Figure 2)

3. The Staff Bureaus acted in an advisory capacity, making recommendations to the Minister of War in matters of policy-formulation and general procurement based on anticipated requirements as indicated in General Staff (Sambo Hombu) plans of operations.

4. The Operational Bureaus were the agencies responsible for the actual implementation of the policies and plans approved by the War Minister, and as such controlled the depots, arsenals, military laboratories, and civilian manufacturing plants. The chiefs of the Operational Bureaus, like those of the Staff Bureaus, were responsible directly to the Minister of War.

5. The General Staff consisted of five sections: General Affairs (administration), Operations, Intelligence, Transport, and Historical. The Assistant Chief of the General Staff (Sambo Ji Chou) also held the title of Inspector General of Line of Communications, (Heitan Sokan) in which capacity he was charged with the responsibility for supervision of field supply; in the execution of this function he was assisted by the heads of War Ministry Bureaus. Thus the chief of the Intendance Bureau (Keiri Kyoku) of the War Ministry held the position of chief of Field Intendance in the office of the Inspectorate General of Line of Communications. (Heitan Sokangu) This complicated system of dual-capacity personnel was not uncommon throughout the high command and served to effect necessary liaison between coordinate-level offices. Disparities between General Staff estimates of anticipated requirements and War Ministry Bureau estimates of possible attainments were reconciled by the War Minister largely through the instrumentality of the dual-capacity-personnel system.

6. The Services of the Army, each of which handled some items of Chemical Warfare supplies, were:

a. Ordnance - supply and maintenance of arms and ammunition (including Chemical Warfare weapons and munitions); engineer, signal, and transport equipment; decontaminating apparatus and vehicles.

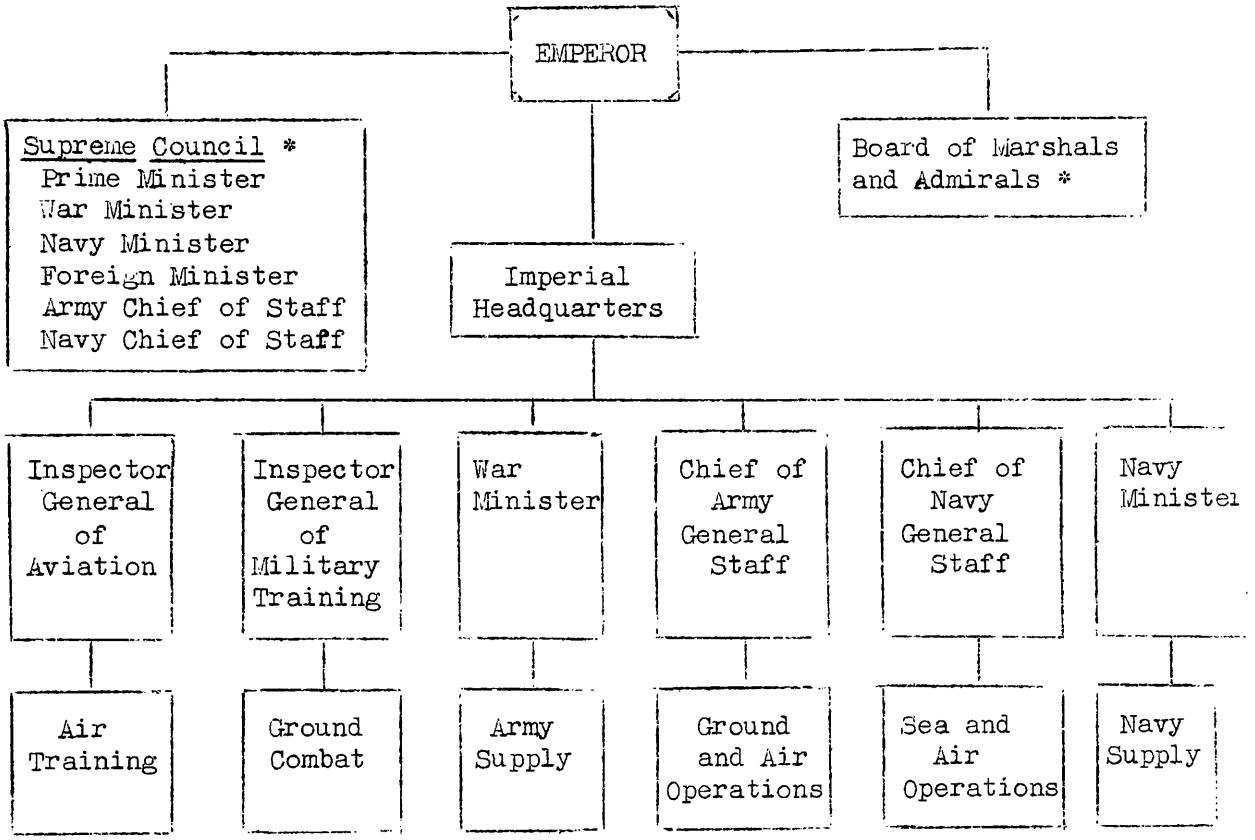


Figure 1. - Organization of Japanese High Command

* Advisory capacity

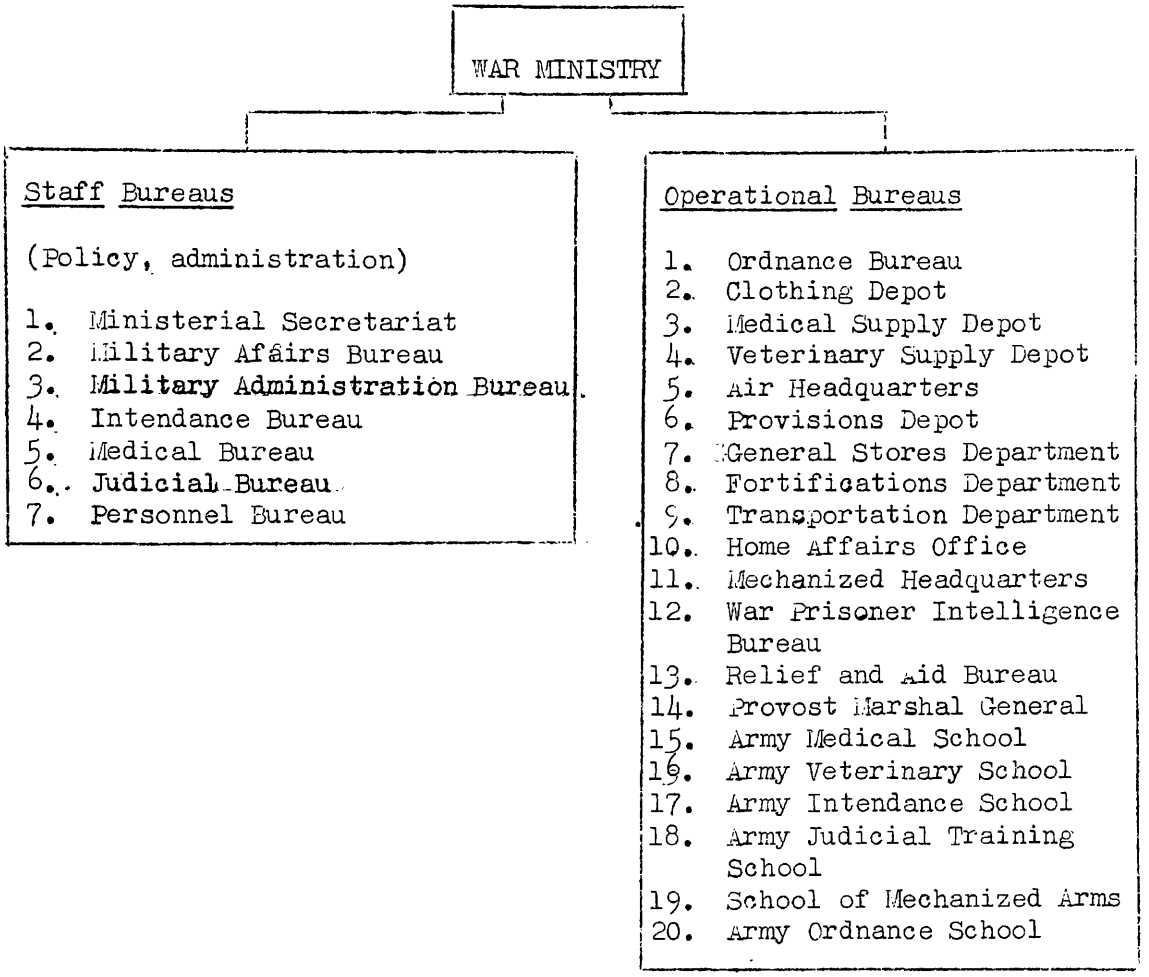


Figure 2. - Organization of War Ministry

b. Intendance - supply and maintenance of rations and forage, clothing, and pay; gas masks and protective clothing were handled by this Service.

c. Medical - supply and maintenance of medical supplies, including medical anti-gas equipment (gas casualty kits, oxygen respirators, etc.)

d. Veterinary - supply and maintenance of veterinary supplies, including a few items of veterinary anti-gas equipment.

Each of these Services was represented by its respective Bureau in the Ministry of War and by its staff on the lines of communication, army, division, and unit headquarters. Their specific Chemial Warfare responsibilities are delineated separately in this report.

7. The Line of Communications units in the Japanese Army established supply and evacuation centers along main supply routes extending from the communication zone, or from the base ports of an oversea force, forward into the areas of the front-line divisions. Their functions included establishment of depots for the handling of all classes of supplies; forwarding of personnel and animal replacements; evacuation and salvage.

8. The geographical army organization of Japan proper at the time of the surrender is shown on Map 1.(Gunkan Ku) The Home-Islands (Hondo) were divided into eight army districts with the distribution of the principal depots of the four Services of the Army as shown. Each of these depots, together with numerous branch and sub-depots not shown on the map, stored and distributed its supplies under the direction of its respective Operational Bureau in the War Ministry.

B. The Supply Services

1. Ordnance

a. General

The Ordnance Bureau (Heiki Hombu) was an independent directorate of the War Ministry, its chief responsible directly to the Minister of War. Its organization is shown in Figure 3. Estimates of requirements originating with the Army General Staff were transmitted to the War Minister for approval and implementation, final agreement between these two agencies as to production figures being reached on the basis of carefully considered recommendations of the Ordnance Bureau, necessitating oftentimes a compromise on divergent programs. The production schedule having been established, the procurement, manufacture and storage of the materiel became the responsibility of the Bureau. Besides handling many items of Chemical Warfare materiel, Japanese Ordnance included Signal and Engineer equipment in addition to what we consider regular ordnance supplies.

b. Standard Chemical Warfare Supplies

The Army's standard items of Chemical Warfare supplies manufactured by the Ordnance Bureau and distributed from its depots are the following:

Candles and Grenades:

Candle, T-97, Aka (red - DC)
" T-98, Aka, small size
" T-98, Aka, medium size
" T-99, Aka, medium size
" T-100, Aka, medium size
" T-1, Aka, large size
" T-100, Aka, projecting
" T-94A, Smoke, small size
" T-94B, Smoke, small size
" T-94A, Smoke, floating
" T-94B, Smoke, floating
" T-99, Smoke, projecting
" T-89, Tear Gas
Grenade, Frangible, Cha (brown - AC)
" T-98, Incendiary

Flame-Throwers:
Flame-thrower, T-93, portable
Flame-thrower, T-100, portable
(Flame-throwing tanks were experimental)

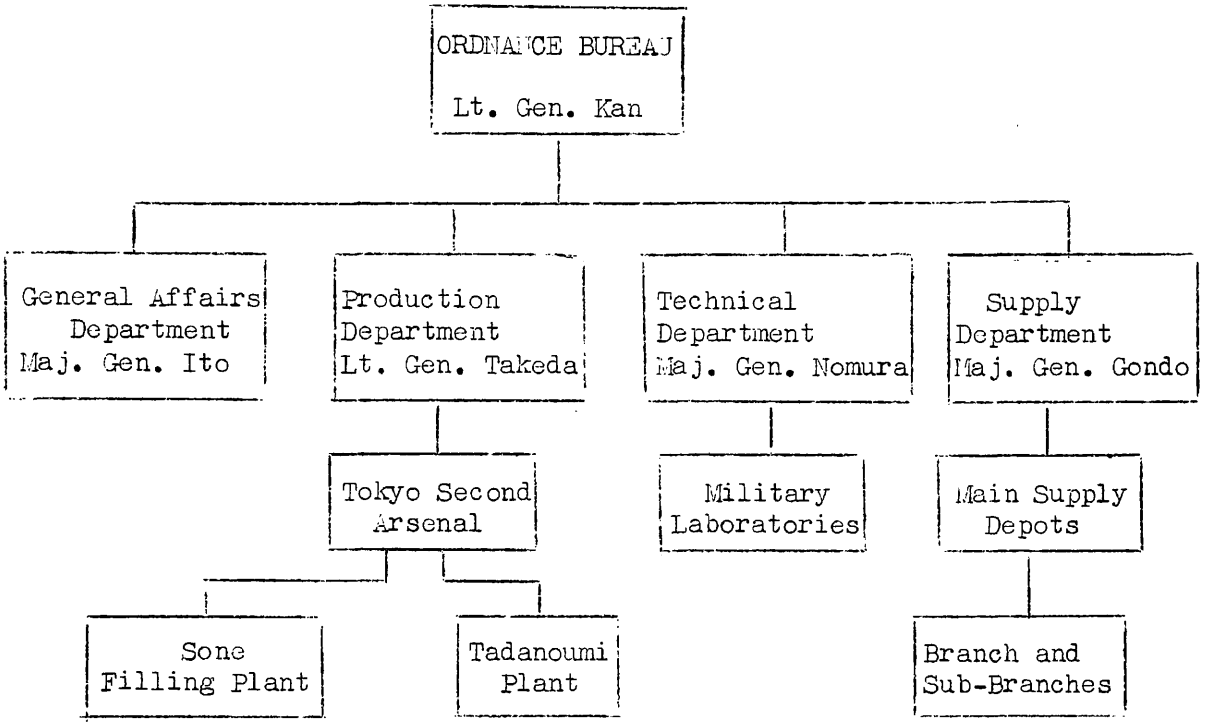


Figure 3. - Organization of Ordnance Bureau

Decontaminating Equipment:
Pouch, Decon, T-95 (bleach powder)
Box, Decon, 7 Kg (bleach powder)
Vehicle, decon, T-94-A
" decon, T-99-A
" decon, T-99-B
" decon, T-99, modified
Apparatus, decon, T-1A, pack-type
Apparatus, decon, T-1B, pack-type

Detector Kits:
Detector, Gas Scout, T-96
Detector, Gas, T-95
Detector, carbon-monoxide, T-100

Shell:
T-92, "Kii" ("Yellow"-blister gas), 150 mm.
T-92, "Aoshiro" ("blue-shite" - choking gas and smoke), 150 mm.
T-93, "Aka" ("red" - diphenylcyanarsine), 150 mm.
(T-4 150 mm. howitzer)
T-92 Kii, 100 mm.
(T-92, 100 mm. cannon)
T-92 Aoshiro, 100 mm.
(T-14 100 mm. cannon)
T-93 Aka, 100 mm.
(T-91 100 mm. howitzer)
T-92 Kii, 75 mm.
(T-38 field gun)
T-92 Aoshiro, 75 mm.
T-92 Aka, 75 mm.
(T-41 mountain gun)
T-90 Incendiary, 75 mm.
(T-41 mountain gun)
T-95 Incendiary, 100 mm.
(T-91 100 mm. howitzer)
T-95 Kii, 90 mm.
T-95 Aka, 90 mm.
(T-95 mortar)
(Screening-smoke fillings were used in all the above shells).
Other chemical shells were manufactured on an experimental scale only and were not standardized.

Bombs: (Stored in Air Force depots)
T-97 Vomiting Gas, 15 Kg
T-97 Blister Gas, 15 Kg
T-97 Incendiary, 12 Kg
T-97 Blister Gas, 50 Kg
T-100 Blister Gas, 50 Kg
T-100 Incendiary, 50 Kg
T-10 Smoke, 50 Kg

Miscellaneous Equipment:
Sniff Set, T-96
Siren, Gas, small size
Siren, Gas, large
Unit Gas Mask Tester, T-98

Miscellaneous Equipment (Cont'd)
Gas Spreader, T-94A (trailer)
Gas Spreader, Hand, T-100
Gas Mask Repair Kit, T-97
Chemical agents and bulk-containers

C. Homeland Depot Organization

The Chemical Warfare materiel distributed by the Ordnance Bureau was stored in six main Ordnance supply depots and their branch or sub-branches, all located on the island of Honshu and responsible to the Supply Department of the Bureau, where complete inventory records were maintained on the basis of weekly reports rendered to that office. Supply of materiel to overseas forces and to Homeland units on the island of Honshu was hanneled through the six main depots and their branches (Map 1.):

(1) Tokyo main depot - six branhes and fifteen sub-branches
(2) Sendai main depot - two branches and three sub-branches
(3) Nagano main depot - two branches and three sub-branches
(4) Nagoya main depot - seven branches and four sub-branches
(5) Osaka main depot - five branches and five sub-branches
(6) Hiroshima main depot - eight branches and nine sub-branches. The lion's share of chemical warfare offensive materiel found in Japan was stored in this installation.

Three additional Ordnance depots situated outside the island of Honshu were operated under their Army District Headquarters and supplied only their respective District units:

Sapporo - island of Hokkaido
Kokura - island of Kwushu
Zentsuji - island of Shikoku

Detailed accounts of the above depots are given in a later section of this report.

d. Channels of Supply

Requisitions for supplies from overseas forces passed through channels shown in Figure 4. Chemical Warfare weapons and munitions were stored in the Field Munitions Depot (Yasen Heiki Sho) of field armies; decontaminating vehicles in the Field Motor Depot. (Yasen Jidosha Sho)

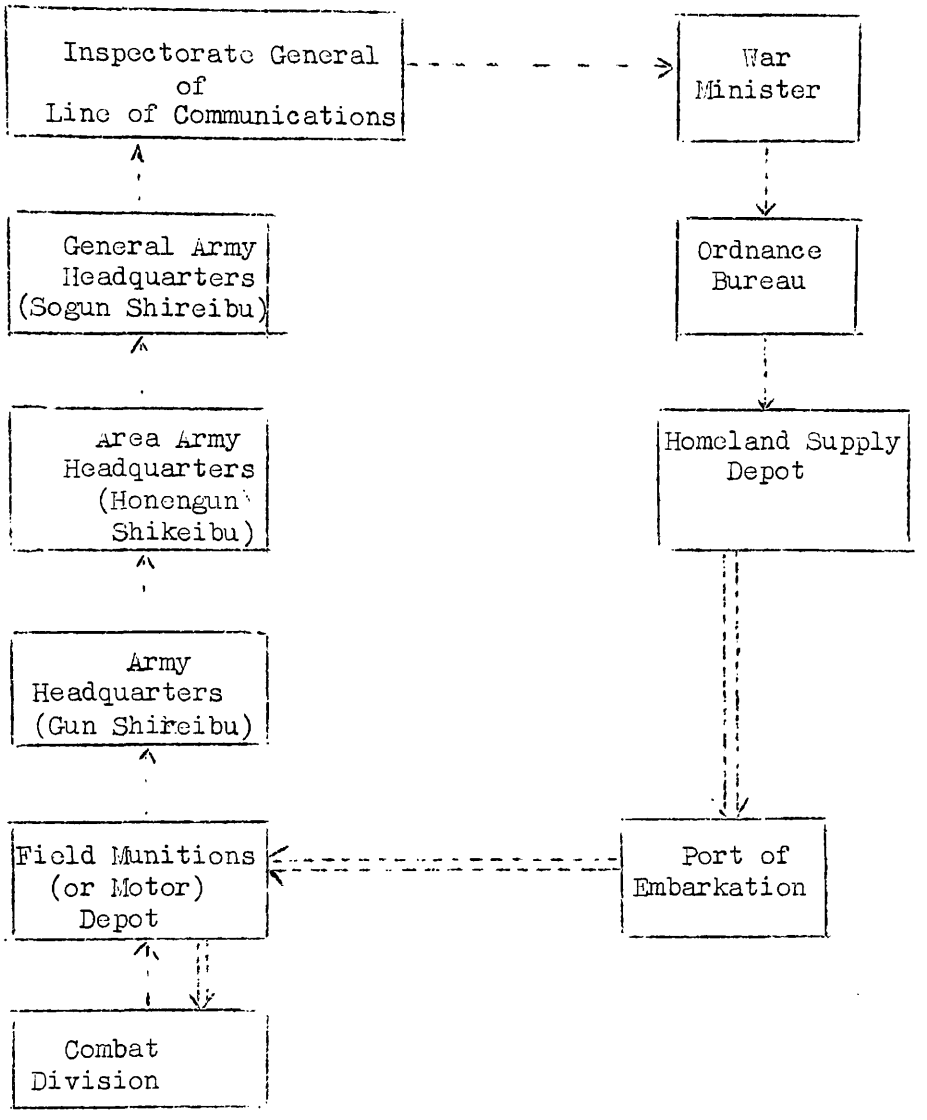


Figure 4. - Channels of Ordnance Supply.

- - - - Requisition proceeds through channels to the War Ministry.
------- War Ministry issues directive to deliver.
======= Physical movement of supplies.

Homeland units on the island of Honshu requisitioned through their respective Army Headquarters to the War Minister and were supplied from the main depot or branch nearest the unit.

Requisitions from units on the islands of Hokkaido, Kyushu, Shikoku, and Korea were made through District Army Headquarters (Gunkan Ku Shireibu) and supplies issued directly from their respective depots without going through Ordnance Bureau channels. Replenishment of stocks in these District Army depots, however, was effected by requisition through the Ordnance Bureau.

2. Intendance

a. General

The Intendance Service was responsible for clothing, rations, forage, contracts, pay, and construction of army buildings. The Intendance Bureau (Keiri Kyoku) of the War Ministry was a staff organization, responsible to the Minister of War, combining the administrative functions of the U.S. Quartermaster Corps and Finance Department. On the same level in the War Ministry and interlocked with the Intendance Bureau by the system of dual-capacity personnel mentioned earlier in this report was the Clothing Depot, (Hifuku Sho) an operational unit whose chief was responsible directly to the War Minister. The Army Clothing Depot controlled the manufacture and distribution of all military clothing. Commanded by a Lt. General, it was similar in organization to the Ordnance Bureau, consisting of a General Affairs Section, Production and Supply, Research and Education sections. Estimates of requirements for protective clothing and gas masks were included in the general clothing requirements originating with the General Staff. These were presented to the War Minister, who transmitted them to the Intendance Bureau for necessary study and recommended revisions based on the Clothing Depot's estimate of capabilities. The revised program having been approved by the War Minister, its implementation became the responsibility of the Clothing Depot. Specifications for the anti-gas items were established by the Sixth Military Laboratory of the Ordnance Bureau. (Kikugun Dairoku Kenkyujo)

b. Standard Chemical Warfare Supplies

The standard items of Chemical Warfare Supplies handled by the Army Clothing Depot are the following:

Gas Masks, types 95, 96, and 99
Carbon Monoxide Gas Mask, type-97
Horse Gas Mask, type-96
Dog Gas Mask
Heavy Protective Suit, Type-96
Light Protective Suit, Type-96
Protective Cape
Horse Leggings
Horse Cape

c. Homeland Depot Organization

Clothing Depot supplies were distributed from the Tokyo Main Depot (Tokyo Honsho) and its six branches (Map 1.):

(1) Sapporo branch depot - Sapporo, Hokkaido
(2) Sendai branch depot - Sendai, Honshu
(3) Tokyo branch depot - near Tokyo, Honshu
(4) Nagoya branch depot - Nagoya, Honshu
(5) Osaka branch depot - Osaka, Honshu
(6) Hiroshima branch depot - Hiroshima, Honshu

Supplies to overseas forces and to Homeland units on the islands of Honshu, Hokkaido, and Shikiku were issued from the Tikyo Main Clothing Depot and its six branches. Kyushu units drew supplies directly from a depot in Fukuoka city, Kyushu under the immediate control of the Western District Army.

d. Channels of Supply

Overseas forces requisitioned gas masks and protective clothing as shown in Figure 5. Kyushu requisitioned only through its District Army Headquarters without going through Tokyo channels except for replenishment of depot stocks.

3. Medical

a. General

The relation between the Medical Bureau (Imu Kyoku) and the Medical Depot (Eisei Zairyo Sho) was anologous to that between the Intendance Bureau and Depot already described with the same system of dual-office personnel.

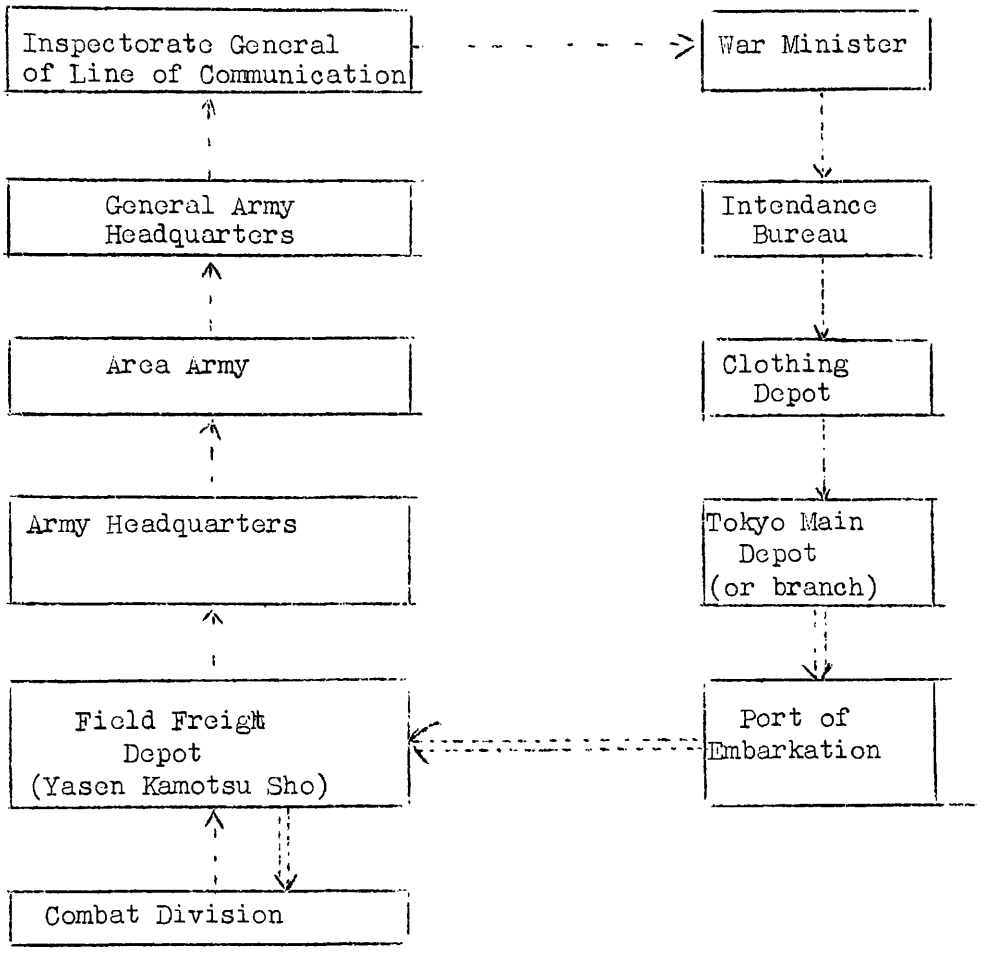


Figure 5. -- Channels of Intendance Supply for Overseas Forces.

The chief of the Medical Bureau also acted in the capacity of chief of Field Medical Service in the office of the Inspector General of Line of Communications (Assistant Chief of General Staff)

b. Standard Chemical Warfare Supplies

The standard items of Army medical anti-gas supplies handled by the Medical Depot are the following:

Decontaminating Pouch-chloramine T
Gas Mask, Head-wound type
Gas Casualty Kit for Medical Personnel:
  Type A (for officers)
  Type B (for NCO'S)
  Type C (for privates)
Unit Gas Casualty Kit
Medical Unit Gas Casualty Kit
Hospital Gas Casualty Kit
Oxygen Inhalator, portable (Dreiger type)
Oxygen Respirator, non-portable
Decontamination Truck, personnel
Decontamination apparatus, personnel (horse-carried)

c. Homeland Depot Organization

Medical anti-gas supplies were stocked in the Tokyo Main Depot and its six branches (Map 1.):

(1) Sapporo branch depot - Sapporo, Hokkaido
(2) Sendai branch depot - Sendai, Honshu
(3) Tokyo branch depot - Tokyo, Honshu
(4) Nagoya branch depot - Nagoya, Honshu
(5) Osaka branch depot - Osaka, Honshu

  Hiroshima sub-branch - Hiroshima, Honshu
(6) Fukuoka branch depot - Fukuoka, Kyushu

d. Channels of Supply

Same as in Figure 5, medical anti-gas supplies in the field having been stocked in Field Medical Depots (Yasen Eisei Zairyo Sho) and Line of Communications Hospital, to be discussed in the following section of this report.

4. Veterinary

a. General

The staff unit of the Veterinary Service in the War Ministry was the Horse Administration Section (Basei Ka) of the Military Administration Bureau (Heimu Kyoku) (Fig 2.), the chief of that section also serving as Chief of Field Veterinary Service in the Inspectorate General of Line of Com-

munications. The Veterinary Supply Depot was the operational headquarters.

b. Standard Chemical Warfare Supplies

The Veterinary Supply Depot was responsible for the following standard items of anti-gas equipment:

Veterinary Gas Casualty Kit, T-98A
Veterinary Gas Casualty Kit, T-98B
Veterinary Unit Gas Casualty Kit, T-98
Veterinary Hospital Casualty Kit, T-98
Veterinary Decon Truck, T-98, experimental

c. Homeland Depot Organization

The Veterinary Main Depot was situated in Tachikawa about 25 miles from Tokyo. Its branches were (Map 1.):

(1) Sapporo branch depot - Sapporo, Hokkaido
(2) Sendai branch depot - Sendai, Honshu
(3) Nagoya branch depot - Nagoya, Honshu
(4) Osaka branch depot - Osaka, Honshu
(5) Tsuyama branch depot - Tsuyama, Honshu
(6) Kurume branch depot - Kurume, Kyushu

All the Homeland veterinary depots were under direct control of the Tokyo headquarters.

d. Channels of Supply

Since all Homeland veterinary depots were centrally controlled, veterinary anti-gas supplies were requisitioned through Tokyo headquarters.

Field supply procedures are taken in the following section.

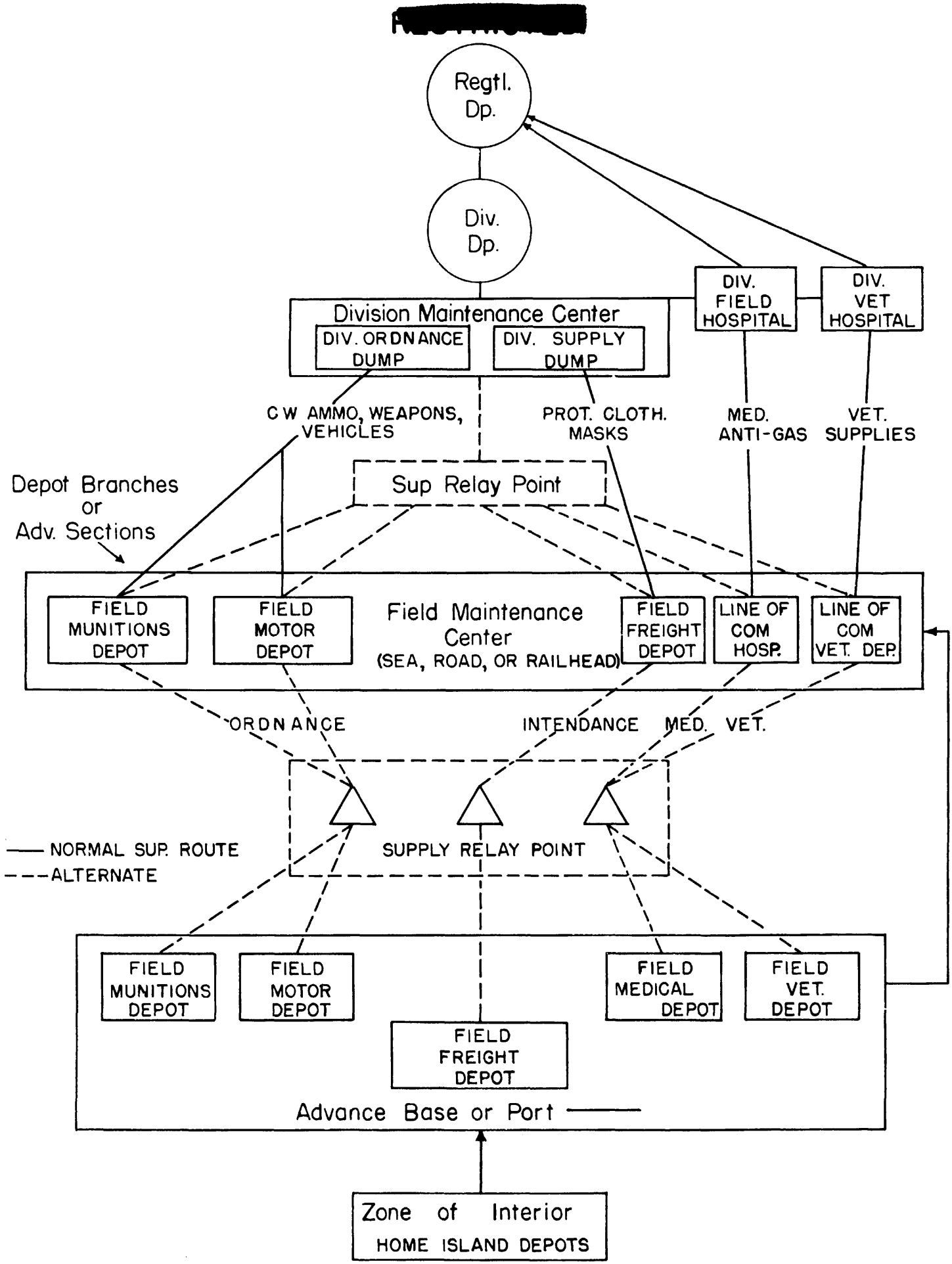


FIGURE 6 — FIELD SUPPLY SYSTEM

SECTION II - Outline of Army Field Supply

A. General

The services represented in the War Ministry by their respective bureaus, and on the General Staff by the dual-capacity personnel from the same bureaus, had their staffs on the lines of communication, army, and smaller unit headquarters. Each of the services was responsible in the field for the storage and supply of the Chemical Warfare materiel and equipment procured by that service... The general plan of field supply and layout of lines of communication are shown in Figure 6. The constant characteristic of Japanese field supply systems was the extreme flexibility of organization made necessary by the wide variance of tactical operations. Provisions for the requirements of irregular operational exigencies were readily effected by appropriate changes in disposition, organization and equipment of units with little regard for allowances prescribed in mobilization orders. It is to be noted, then that the plan of field supply diagrammed in Figure 6 had many modifications as required by the dictates of particular operations.

Supply relay points were introduced as needed to change method of transportation and maintain reserves between the dilivery centers, their organization depending on their locations and the amounts of supplies to be reloaded or dumped.

Branch depots or advanced sections were established with the advance of the forces being supplied, each base depot capable of establishing several forward installations.

1. Ordnance

The field ammunition depots stored ad supplied all types of ammunition, including Chemical Warfare weapons ad munitions, each depot capable of setting up five branch depots or advanced sections. The field motor depots supplied and maintained motor vehicles, including decontamination and gas-spreading vehicles.

Authorized allowances of Chemical Warfare equipment handled by Ordnance are given in Figure 7; materiel other than that listed was supplied as requisitioned.

Figure 7. - List of Authorized Chemical Warfare Equipment supplied by Ordnance.

Equipment	Infantry	Cavalry	Artillery	Engineer	Transport	Division Decon Co. (Mtzd or Pack)	Sep. Gas Bn.	Sep. Gas Co.	Individual Soldier
Gas Siren, small	1 per Bn 4 per Regt			1 per Regt			2	1	
Gas Siren, portable	1 per Co. 3 per Bn. 12/Regt			1 per Co. 3 per Regt			4	1	
T-100 flame-thrower portable				8 per Regt.					
T-94A Decon vehicle (tankette & trailer)							2	1	
T-99A Decon vehicle (for clothing & equip)						1			
T-99B Decon vehicle						1			
T-1A, apparatus, decon, pack type						1			
T-1B, apparatus, decon pack type						1			
T-95 Decon box, (Bleaching powder box)	6 per Co. 18/Bn. 72/Regt.	6/Sq. 12/Regt	18/Btry 54/Bn. 162/Regt.	6 per Co. 18/Regt.	6 per Co. 12/Regt.	24	120	60	1

Figure 7. - List of Authorized Chemical Warfare Equipment supplied by Ordnance (Continued)

Equipment	Infantry	Cavalry	Artillery	Engineer	Transport	Division Decon Co. (Mtzd or Pack	Sep. Gas Bn.	Sep. Gas Co.	Individual Soldier
T-98 Gas Mask Tester for unit	1 per Bn 4/Regt	1/Regt.	1 per Bn. 4/Regt	1 per Regt	1 per Regt	1	1	1	
T-94 gas spreader (Tankette & trailer)							2	2	
T-96 Gas detector for gas scout	3 per Co 9 per Bn 36/Regt.	2/Squad 4/Regt.	2/Btry 6/Bn. 18/Regt.	3 per Co 9/Regt.	2/ per Co		6	3	
T-95 Gas Detector	1 per Bn 4/Regt.			1/Regt.			4	2	
T-100 Hand Gass Sprayer							30		
Gas Mask Repair Kit, T-97	1 per Bn	1 per Regt	1/Bn 1/Regt	1/Regt.	1/Regt.	3	3	1	
T-A "Kii" container blister gas							12	6	

The available records of stocks of Chemical Warfare equipment in overseas army depots at the time of the Japanese surrender are tabulated in Figure 9. Records of the other services which supplied Chemical Warfare materiel bear out the abiding contention of Japanese officials that the Manchurian and China armies were best prepared for gas warfare, defensively and offensively.

Interrogation of Ordnance supply officers drew complete disavowals of any recollection of quantities of blister gas shell shipped to China although they admitted shipments had been made as early as 1939. The following estimates of toxic shell supplied the Kwangtung Army in Manchuria were submitted as being only rough estimates:

150mm Vomiting Gas (DC) Shell	20,000
100mm " " " "	20,000
90mm " " " "	100,000
75mm " " " "	30,000
150mm Blister Gas Shell	10,000
100mm " " "	10,000
90mm " " "	50,000
75mm " " "	20,000

No toxic munitions of any type were stored in depots of the Homeland Defense Armies; only small quantities of vomiting and tear gas munitions had been issued for training purposes. Stocks of other Chemical Warfare materiel in the depots of Homeland armies are listed in Figure 10.

2. Intendance

The field freight depots (also called field supply or cargo depots) stored and supplied rations, forage, and clothing, including gas masks and protective clothing. Depot stocks of Chemical Warfare equipment were maintained on the basis of the following table of authorized allowances:

Equipment	Per 100 men or horses	Reserve
Gas Masks (T-95, 96, or 99)	100	5%
Protective Cape (paper)	100	10%
Protective Suit, heavy	6	
Protective Suit, light	60	
Horse Gas Mask	100	5%
Horse Protective Cape	100	10%
Horse Leggings	50	

Figure 8 . - Table of Authorized CW Equipment Supplied by Intendance

Equipment	Manchuria	North-China	Central China	Pacific	Total
T.100 or T.93 Flame thrower, portable	500	100	100	50	750
T.96 Gas detector for gas scout	5,000	1,000	1,000	500	7,500
T.95 Gas detector	1,000	500	500	200	2,200
T.100 carbon monoxide detector	500	200	200	100	1,000
T.98 Gas Mask tester for unit	100	50	50	30	230
T.97 Repair kit, gas mask	50	20	20	10	100
Small size siren	200	50	50	50	350
Portable Siren	500	100	100	50	750
T.95 Decon Pouch	500,000	100,000	200,000	50,000	850,000
Candle, Vomiting Gas, T-97 and 98	50,000	10,000	10,000	20,000	90,000
Candles, Screening Smoke (all types)	520,000	255,000	255,000	345,000	1,315,000
Grenade, Frangible, incendiary	8,000	4,000	4,000	4,000	20,000
Grenade, frangible, smoke	10,000	5,000	5,000	5,000	25,000
Grenade, frangible, hydrocyanic acid	4,000			2,000	6,000

Figure 9. - Stocks of Chemical Warfare Equipment (Ordnance) in overseas depots at close of war.

Equipment	District: Northern	North-Eastern	Eastern	East Coast	Central	Midland	Shikoku	Western District	Total
M.100 or M.93 Flame-thrower Portable	100	50	300	100	100	30	20	300	1,000
M.96 Gas Detector for gas. scout	600	600	3,000	400	2,500	200	200	2,500	10,000
M.95 Gas detector.	50	50	300	50	300	30	20	200	1,000
M.100 Carbon monoxide detector	50	50	300	50	200	30	20	200	900
M.98 Gas Mask tester for unit	30	20	200	30	150	10	10	150	600
M.97 Repair Kit for gas mask	20	20	120	20	100	10	10	100	400
Small size siren	20	10	100	30	40	10	10	50	250
Portable siren	70	40	250	100	100	20	20	200	800
M.95 Decontaminating box	5,000	2,000	10,000	3,000	8,000	1,000	1,000	10,000	40,000
Frangible Incendiary Grenade	1,000	2,000	5,000	2,000	3,000	3,000	1,000	4,000	21,000
Frangible Smoke Grenade	1,000	2,000	5,000	2,000	3,000	3,000	1,000	4,000	21,000
Smoke candle (all types)	10,000	30,000	200,000	100,000	100,000	100,000	20,000	150,000	710,000

Figure 10. - Stores of Chemical Warfare Equipment in Homeland Army Depots at Close of War

After 1944 the stocks of protective suits actually maintained by the armies were about 20 percent of the above allowances. The Kwangtung and China Armies, however, had full authorized stocks at the time of the surrender.

3. Medical

Field medical supply depots stored and supplied medical anti-gas equipment and also handled veterinary anti-gas materiel where no separate veterinary depot was established. In the Kwangtung Army, for example, both were stocked in the same depot. On a line of communications for a single army (corps) both the medical and veterinary supplies were stored in the field freight (intendance) depot.

The table of authorized medical anti-gas equipment appears in Figure 11 on the following page.

Item	Indiv. (Non-med) Soldier	Indiv. (Medic) Soldier	Inf. Bn. (or similar unit	Medical Bn.	Field Hospital	Line of Com. Hosp.
Decon. Pouch (Chloramine T)	1					
Gas Mask (Head Wound Type)			16	150	80	
Medical Gas Casualty Kit:						
Type A (for Officers)		1				
Type B (for Non-coms)		1				
Type C (for privates)		1				
Unit (First Aid) Gas Casualty Kit			1			
Medical Unit Gas Casualty Chest				3		
Hospital Gas Casualty Chest					2	2
Oxygen Inhalator, Portable (Dreiger type)				3	2	
Oxygen Respirator, non-portable				9	6	
Personnel Decontamination Apparatus (horse-carried)				1		
Personnel Decontaminating Truck				1		

Figure 11. - Table of Authorized Chemical Warfare Equipment Supplied by Medical Service

Until early 1944 complete authorized allowances of medical anti-gas equipment were issued to all units leaving the Homeland, except southwest Pacific armies which carried almost no medical anti-gas equipment except individual equipment. Records of distribution of supplies to field forces (Figures 12 - 22) show the Homeland and Manchurian armies were issued the major portion of the materiel producted. The entire 1945 production, although much smaller than in the preceding years, went to Homeland armies.

4. Veterinary

Field veterinary depots (generally one per area army) normally stored all veterinary anti-gas equipment except those items which were the responsibility of Intendance. Stocks were maintained on the basis of the following authorized allowances:

a. Vet. Gas Casualty Kit A (50-horse kit) - one per Veterinary Officer
b. Vet. Gas Casualty Kit B (50-horse kit) - one per Veterinary non-commissioned officer
c. Vet. Gas Casualty Kit (200-horse kit) - one per Veterinary officer
d. Vet. Hospital Gas Casualty Kit (500-horse kit) - two per Division Veterinary Hospital

At the close of the war only the Kwangtung Army had its complete authorized allowances. Japanese veterinary officers of the War Ministry maintained that priority in all anti-gas supplies was given the Kwangtung Army "to keep it fully prepared in case gas were used by the Russians." Other field armies (Chosen, Taiwan, China) had 90 to 100 per cent of their authorized veterinary anti-gas equipment, while Pacific armies "stocked none at all, because we knew the Americans would not use gas warfare". Presumably as an anti-gas measure against the possibility of its use on the mainland by forces other than American, Homeland field armies were fully equipped with authorized allowances.

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Mainland Armies	West							300,000
	Central	100,000	200,000	500,000	400,000	400,000	560,000	280,000
	Eastern Coast							110,000
	East							350,000
	Northeast							110,000
	North							100,000
Overseas Armies	Central Pacific					10,000	25,000	
	Halmahera					200,000	50,000	
	Rabaul				20,000	2,000,000	1,000	
	New Guinea				20,000	150,000		
	Singapore			10,000	50,000	200,000	200,000	
	Philippines				50,000	100,000	40,000	
	Formosa	2,000	5,000	300,000	20,000	12,000	10,000	
	South China	10,000	30,000	20,000	10,000	2,000	5,000	
	Central China	30,000	100,000	50,000	40,000	20,000	20,000	
	North China	20,000	50,000	50,000	30,000	10,000	10,000	
	Manchuria	150,000	150,000	500,000	300,000	150,000	150,000	
	Korea	3,000	10,000	55,000	5,000	2,000	5,000	10,000

Figure 12. - Distribution of Decon Pouch to Field Armies.

[redacted]

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							1500
	Central							1200
	Eastern Coast	600	800	755	300	200	800	300
	East							1700
	Northeast							300
	North							400
Report of Supplies Overseas	Central Pacific					30	30	
	Halmahera					100	90	
	Rabaul					60		
	New Guinea					90		
	Singapore				110	120	150	
	Philippines				55	60	90	
	Formosa	9	15	35	55	6	30	
	South China	35	35	9	46	6	15	
	Central China	50	70	30	70	60	75	
	North China	30	55	30	55	30	45	
	Manchuria	270	330	400	280	150	100	
	Korea	6	12	30	15	30	15	80

Figure 13. - Distribution of Head-wound Gas Mask to Field Armies.

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							1,800
	Central							1,800
	Eastern Coast							450
	East					2,200	120,000	2,400
	Northeast			400	200			400
	North							400
Overseas	Central Pacific					130	40	
	Halmahera					200	150	
	Rabaul					100		
	New Guinea					140		
	Singapore				40	250	220	
	Philippines				15	260	70	
	Formosa	10	12	120	10	20	50	
	South China	20	20	10	10	30	20	
	Central China	110	35	40	30	100	100	
	North China	70	20	20	15	30	50	
	Manchuria	100	170	350	200	400	250	
	Korea	5	15	40	10	20	15	300

Figure 14. - Distribution of Gas Casualty Kit A to Field Armies.

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							1,600
	Central							1,600
	Eastern Coast							400
	East			800	400	2,000	24,000	2,200
	Northeast							350
	North							350
Overseas	Central Pacific					100	100	
	Halmahera					180	300	
	Rabaul					90		
	New Guinea					130		
	Singapore				80	230	450	
	Philippines				30	250	140	
	Formosa	20	24	240	30	20	100	
	South China	40	40	20	20	30	400	
	Central China	220	70	80	60	90	200	
	North China	140	40	40	30	30	100	
	Manchuria	200	340	700	400	350	500	
	Korea	10	30	80	20	15	30	

Figure 15. - Distribution of Gas Casualty Kit B to Field Armies

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							3,000
	Central							2,500
	Eastern Coast							800
	East			2,800	1,000	6,250	60,000	4,000
	Northeast							600
	North							600
Overseas	Central Pacific					250	250	
	Halmahera					1,500	750	
	Rabaul					500		
	New Guinea					750		
	Singapore				250	1,000	1,250	
	Philippines				125	500	375	
	Formosa	75	75	1,125	125	50	250	
	South China	125	125	75	50	50	125	
	Central China	750	250	250	250	500	625	
	North China	500	125	125	125	250	375	
	Manchuria	750	1,250	2,500	1,250	1,000	1,750	
	Korea	50	100	250	75	250	75	500

Figure 16. - Distribution of Gas Casualty Kit C to Field Armies.

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							150
	Central							200
	Eastern Coast	150	200	185	350	100	500	60
	East							350
	Northeast							50
	North							50
Overseas	Central Pacific					10	10	
	Halmahera					100	30	
	Rabaul					20		
	New Guinea					30		
	Singapore				10	40	50	
	Philippines				5	20	30	
	Formosa	3	3	45	5	2	10	
	South China	5	5	3	2	2	5	
	Central China	30	10	10	10	20	25	
	North China	20	5	5	5	10	15	
	Manchuria	30	50	180	90	100	110	
	Korea	2	4	10	5	10	5	100

Figure 17. - Distribution of Unit Gas Casualty Kit to Field Armies.

[redacted]

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							48
	Central							36
	Eastern Coast							12
	East			10	6	40	70	42
	Northeast							18
	North							18
Overseas	Central Pacific							
	Halmahera							
	Rabaul							
	New Guinea							
	Singapore							
	Philippines							
	Formosa							
	South China							
	Central China	1	3	2		5	2	
	North China	1	1	2	1	2	2	
	Manchuria	4	3	10	3			24
	Korea							24

Figure 18. - Distribution of Medical Unit Gas Casualty Kit to Field Armies.

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							20
	Central							16
	Eastern Coast							6
	East							20
	Northeast							12
	North							8
Overseas	Central Pacific							
	Halmahera							
	Rabaul							
	New Guinea							
	Singapore				4			
	Philippines				2			
	Formosa				2			
	South China	1		1	2			
	Central China	3		4	2			
	North China	2		2	2			
	Manchuria	4	5	8	8	10		
	Korea							10

Figure 19. - Distribution of Hospital Gas Casualty Kit to Field Armies.

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Homeland	West Central Eastern Coast East Northeast North	36	20	30	30	20		
Overseas	Central Pacific							
	Halmahera							
	Rabaul							
	New Guinea							
	Singapore				8			
	Philippines				4			
	Formosa				4			
	South China	2		2	4			
	Central China	7		8	4			
	North China	5		4	4			
	Manchuria	10	13	16	19			
	Korea				4	5		

Figure 20. - Distribution of Oxygen Inhalator (portable) to Field Armies.

[redacted]

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							20
	Central							20
	Eastern Coast							10
	East	20	55	30	20	30	50	30
	Northeast							8
	North							10
Overseas	Central Pacific							
	Halmahera							
	Rabaul							
	New Guinea							
	Singapore							
	Philippines							
	Formosa				3			
	South China	2		2				
	Central China	8		6	3			
	North China	6		3	2			
	Manchuria	12	20	12	10	10		
	Korea				3			10

Figure 21. - Distribution of Oxygen Respirator to Field Armies.

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							10
	Central							8
	Eastern Coast							2
	East	2	2	3	3	20	20	10
	Northeast							2
	North							3
Overseas	Central Pacific							
	Halmahera							
	Rabaul							
	New Guinea							
	Singapore							
	Philippines							
	Formosa							
	South China							
	Central China							
	North China							
	Manchuria			70				
	Korea							4

Figure 22. - Distribution of Decon Apparatus (horse-carried) to Field Armies.

		1939	1940	1941	1942	1943	1944	1945
Homeland	West							
	Central							
	Eastern Coast							
	East							
	Northeast							
	North							
Overseas	Central Pacific							
	Halmahera							
	Rabaul							
	New Guinea							
	Singapore							
	Philippines							
	Formosa							
	South China							
	Central China							
	North China							
	Manchuria			51				
	Korea			6				

Figure 23. - Distribution of Personnel Decon. Truck to Field Armies.

B. Chemical Warfare Units

1. Divisional

The standard triangular division had no organic gas or decontamination unit. Specially trained personnel in all divisions, however, were designated as decontamination personnel in addition to their other duties. Infantry and artillery battalions were equipped to project the standard toxic gas shell (75 mm, 90 mm, 100 mm, 150 mm) and smoke munitions. The blister gas shell employed against the Chinese were allegedly projected by infantry and artillery units almost exclusively, although separate gas companies and battalions had been activated in both China and Manchuria as early as 1937.

The "strengthened" (modified) divisions were organized with an organic decontamination unit, pack or motorized, equipped (Figure 7) for area and clothing-equipment decontamination. (Available details of Chemical Warfare units organized as prescribed in mobilization orders appear in Vol VI of this report)

2. Separate

a. Field Gas Battalion (Yasen Gasu Tai)

The extreme flexibility in organization and strength of Japanese field units common throughout the war is evidenced in the organization of the Field Gas Battalion which operated with the China Expeditionary Force from the battalion's activation in China in October 1937, until its deactivation in August 1940. Attached to a field army, it consisted of 2 motorized gas-assault and decontamination companies, and four horse-drawn gas-assault companies, equipped to operate as a complete unit or separately under division control. The tables of organization and equipment appear in Figures 24 and 25, submitted by Col. Toyoaki Morita, C.O. of the unit, who maintained that the unit was equipped only for decontamination and employment of harassing-gas ad smoke candles, in addition to infantry combat. Toxic munitions were drawn from and army field gas depot (Yasen Gasu Sho) established as a an advanced section of the field muni-tions depot. (Details of the field gas depot could not be gained from Col. Morita or from interrogation of ordnance personnel in the Demobilization Ministry in Tokyo. At the time of the writing of this report personnel of the field gas depot had not yet been re-atriated from China.)

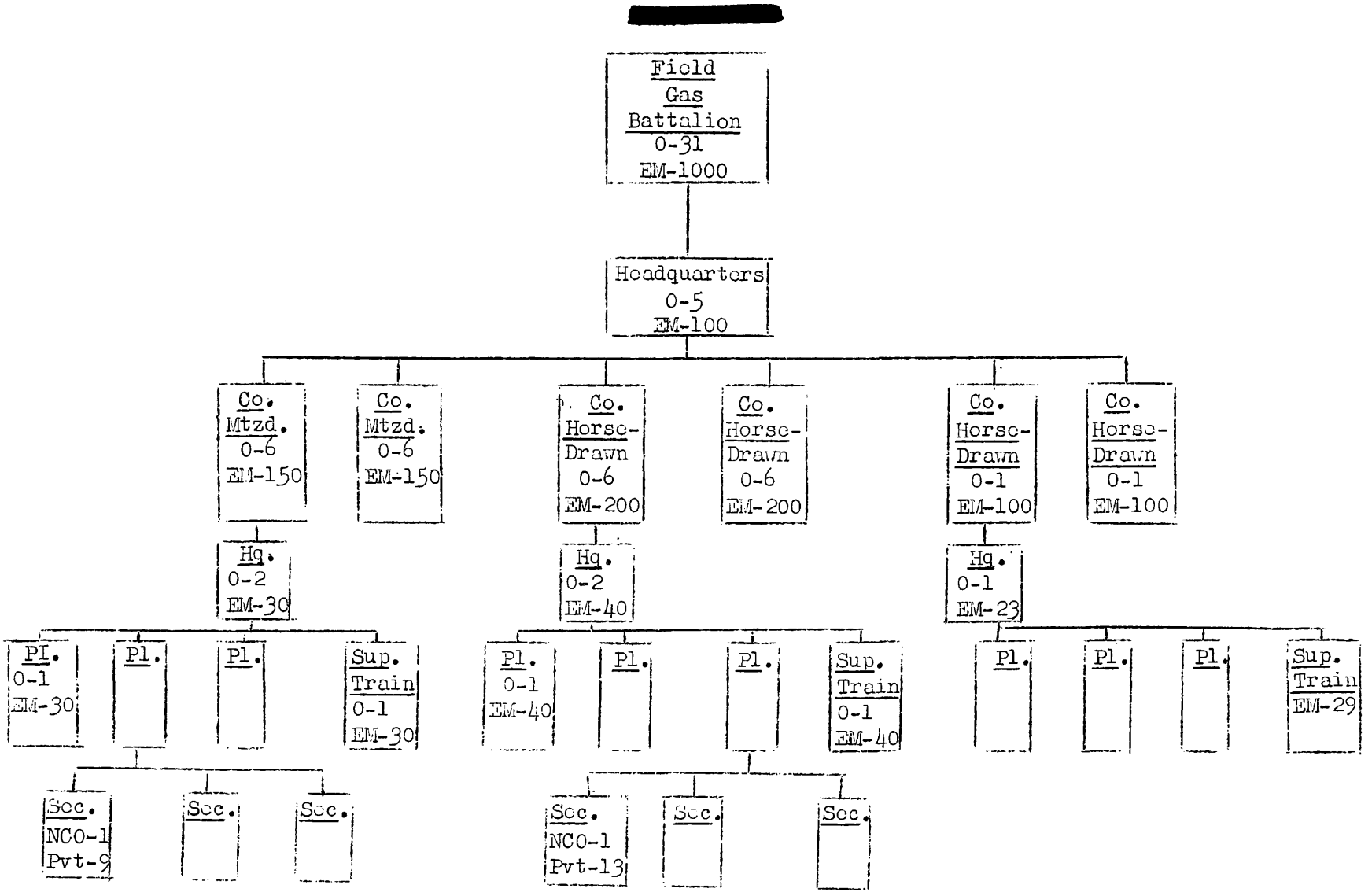


Figure 24. - Organization of the Field Gas Battalion.

		Bn Hq	1st Co	2d Co	3d Co	4th Co	5th Co	6th Co	Total
C.W. Equipment	Bleaching Powder	100 Kg	300 Kg	300 Kg	200 Kg	200 Kg	100 Kg	100 Kg	1,300 Kg
	Horse Mask and Cape				70	70	23	23	186
	Protective Suits	5	10	10	10	10	5	5	55
	Protective Cape	105	156	156	206	206	101	101	1,031
	Gas Masks	105	156	156	206	206	101	101	1,031
	Non-toxic Smoke Candle	200	300	300	400	400	200	200	2,000
	Tear Gas Candle T-97	100	150	150	200	200	100	100	1,000
	Vomiting Gas Candle T-97,98	100	150	150	200	200	100	100	1,000
Weapons & Ammo	Grenade	210	312	312	412	412	202	202	2,062
	Heavy M.G.	2,000			6,000	6,000	2,000	2,000	18,000
	L.M.G.	2,000	10,000	10,000	13,000	13,000	3,000	3,000	54,000
	Rifle Ammo.	10,000	24,000	24,000	22,000	22,000	10,000	10,000	122,000
	T-3 Heavy M.G.	1			3	3	1	1	9
	T-92 Light M.G.	2	10	10	13	13	3	3	54
	T-38 Rifles	50	120	120	110	110	50	50	610
Vehicles	Tankette, T-97 (W/decon trailer)		10	10					20
	Trucks	5	20	20					45
	Command Cars	3	1	1					5
Horses	Pack Horses				60	60	20	20	160
	Saddle Horses				10	10	3	3	26

Figure 25. - Table of Equipment of Field Gas Battalion.

[redacted]

SECTION III - Inventories of Army Chemical Warfare Supplies in Homeland Main Depots and Branches, and Tokyo Second Arsenal.

A. General

The inventories of Chemical Warfare materials and materiel tabulated in the following pages are compiled from data submitted by the Japanese officers who had commanded the individual depots and branches. At each of the important installations where appreciable quantities of Chemical Warfare supplies were stored, the Japanese inventories were verified by Unit Chemical officers of CWS Intelligence Teams. In the case of many of the smaller installations or those where comparatively insignificant stocks were stored together with quantities of other equipment, disposition oftentimes by destruction or other means had already been made by non-CWS disposal parties before proper identification and verification of the items ould be effected. In oneinstance, for example, gas-spreading and decontaminating tankette-trailers mistaken for fuel-trailers were diverted into Ordnance channels. Difficulties encountered in proper identification of some materiel by Unit Chemical Officers and in the fact that main depot stocks were sometimes indistinguishable from those in the depots of homeland defense armies often caused inaccuracies in reports rendered to higher headquarters. The wide dispersal of stocks by the Japanese throughout scattered areas in warehouses, public halls, schools, underground magazines, caves, dugouts, and open dumps, following initiation of American air raids, made even the location of much equipment a slow process. Decentralization of supplies by Japanese depot commanders apparently was carried out with a lack of regulated ordinance, since location of particular types of equipment by the Japanese themselves often proceeded in haphazard fashion, depending largely on the memory of depot personnel. This was especially true of Chemical Warfare supplies, which in 1944 were relegated to lowest priority. Some items, attractive as curios or easily converted to utilitarian purposes, passing into souvenir channels before proper measures of disposition could be executed, never appeared in S-4 inventories. forwarded. It is believed, however, that the inventories listed, showing Chemical Warfare stocks in the homeland main depots, branches, and sub-branches (including supplies in Tokyo Second Arsenal) as of the beginning of the Occupation are reliable, every possible check having been made to insure their accuracy.

It should be noted that these inventories do not include supplies in the hands of homeland Defense Armies considered in the previous section of this volume.

[redacted]

B. Notes on Storage in Important Installations

1. Okuno Shima (inventory on Page 53)

This is an island approximately one mile long, one-half mile wide, situated two miles from the town of Tadanoumi, Hiroshima Ken, Honshu. It was the site of the Tadanoumi plant of Tokyo Second Arsenal, the production of which is taken up in Volume III of this report.

"Toxics* were stored in bulk without apparent regard for our concept of safety precautions. One large storage tank was installed under a roof without surrounding walls except for a flimsy mesh of split bamboo. This tank contained approximately 90 metric tons of mustard. Numerous other tanks were installed in a building which was rapidly falling to pieces, which had originally been used as a filling-room for drum stock. These tanks were or 10 metric-ton capacity and varied from completely empty to completely full. Leakage was evident in several instances. Relatively small quantities of various agents had been drummed and placed in covered storage. Drums appeared to have been sturdily constructed but had deteriorated to a considerable extent. It was stated that no supplies of empty drums were available on the island. Cave storage was utilized to a considerable extent."

2. Omine Branch Depot (inventory on Page 51)

This was a branch of the Hiroshima Ordnance Depot. "Located** in Yamaguchi Ken, Honshu near the town of Omine-higashibun, it was an abandoned coal mine, the bunneling of which covers a distance of approzimately two miles. The passage way is 8 feet high and 10 feet wide, piled along the sides to the top with boxes of shell placed on dunnoge. In general, the boxes were in good condition, but some had begun to rot at the time of the investigation due to water seepage through the walls of the tunnel. The shells themselves also showed signs of rust. Munitions were received from the Hiroshima Ordnance Supply Depot for storage. Although shipping

* From : Memo from Capt. McDonald to Col. Burns, Hq Sixth Army, ' Nov 45.

** From : Weekly Intelligence Report, Cml Section 32d Inf Div, 24 Nov 45.

tickets on the boxes showed the consignee to be 'Manchurian Army', Japanese officials maintain that no outgoing shipments were ever made to this consignee during the war."

3. Tadanoumi Branch Depot (inventory on Page 50)

This was a branch of the Hiroshima Ordnance Depot which stored large quantities of general ordnance materiel in addition to Chemical Warfare munitions and equipment. "Chemical* supplies were stored in warehouses and caves together with larger quantities of ordnance materiel. Supplies in warehouses were in good condition, but those in caves had been exposed to dampness."

4. Chiba Branch Depot (inventory on Page 43)

This was a branch of Tokyo Ordnance Depot storing small arms, armored vehicles, and ammunition in addition to the variety of Chemical Warfare materiel.

CWS Technical Intelligence Team #6 reported that although the installation was spread over a large area many buildings had been destroyed by air raids. About 80 per cent of the equipment was reported stored out of doors.

5. Other Installations

Reports received on other supply depots concurred in the general description of stocks having been widely dispersed throughout scattered installations of all sorts in the attempt to minimize loss from air-raid damage. Hastily excavated caves were utilized to a large extent for storage of ammunition, while other supplies were stocked with apparently little regard for prescribed method in warehouses, schools, public building, and in some cases out-or-doors.

*Intelligence Report, 5250th Technical Intelligence Co., Unit #2, 1 December 1945.

Table I - Inventory of Chemical Warfare supplies in Tokyo Ordnance Depot and Branches.

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Tokyo		Itabashi Ku, Tokyo	Flame-thrower, T-100	62
			Gas Detector, T-96	521
			Gas Detector, T-94	9
	Chiba Branch	Chiba City, Chiba Ken	Flame-thrower, T-93	109
			Tankette, T-94A	73
			Trailer, decon, T-94A	17
			Trailer, gas-spreader, T-94A	63
			Tankette, T-97A	45
			Gas Spreader, hand, T-100	962
			Gas Siren, small	69
			Gas Siren, portable	476
			Vesicant container, T-A & B	47
			Canister, coll. prot, T-97	11
			Canister, coll. prot, T-94	11
			Gas Detector, T-96	17,500
			Gas Detector, T-95	170
			Decon box, T-95	1,600
			Prot. ointment, tube, esp.	2,000
	Akabane Branch	Oji-Ku, Tokyo	Gas Detector, T-96	5
			Decon box, T-95	360
			Gas Siren,	3
			Candle, smoke, T-99	2,758
			Candle, smoke, T-99 large	128
			Candle, smoke, T-99 small	282
			Candle, smoke, T-94 train.	28,895
			Candle, smoke, T-99 train.	1,086
	Yokoshiba Dump	Chiba Ken	Tankette, T-94A	5
			Trailer, decon, T-94A	50
			Trailer, gas-spreader, T-94A	10
			Tankette, T-97A	10
			Canister, coll. protector	15
			Gas Detector, T-95	71
	Sawara Dump	Katori Gun, Chiba Ken	Flame-thrower, T-100	65
	Sano Dump	Kamitsuga-Gun, Tochigi Ken	Flame-thrower, T-100	11

Table I - Inventory etc. (Continued)

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Tokyo	Hachioji Dump	Kukimura, Tokyo	Flame-thrower, T-93	1
	Ishioka Dump	Kiiharu Gun, Ibaragi Ken	Gas Spreader, hand, T-100	1,406
			Gas Spreader, hand, T-95	640
			CO Detector, T-100	108
	Kanuma Dump	Kamitsuga Gun, Tochigi Ken	Flame-thrower, T-96	11
	Yamanashi Branch	Kusakabe-machi, Yamanochi Ken	Gas Detector, T-96	1,220
			Flame-thrower, T-100	1
	Tana Filling Plant	Yokonama, Kanagawa Ken	Grenade, frangible, incend.	1,600
			Candle, smoke T-94, small	6,820
			Candle, smoke T-94, large	1,568
			Candle, smoke T-94, floating	1,375
			Candle, smoke T-99, S-P	5,015

Table II - Inventory of Chemical Warfare supplies in Sendai Ordnance Depot and Branches.

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Sendai	Main Depot	Sendai City	Candles, smoke, T-94	18,630
	Morioka Branch	Shibanami Gun, Iwate Ken	Gas Detector, T-95	2
			Gas Detector, T-96	50
			CO Detector, T-91	5
			Decon box	3,132
	Yamagata Dump	Takashima, Yamagata Ken	Gas Detector, T-95	10
			Gas Detector, T-96	50
	Yokote Branch	Hiroshika Gun, Akita Ken	Shell, mortar, smoke, T-94	2,250
	Tokizawa Dump	Uri Gun, Akita Ken	Candles, smoke, T-99	16,240
			Candles, smoke, T-94 small	8,230

Table III - Inventory of Chemical Warfare supplies in Nagano Ordnance Depot and Branches.

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Nagano	Takata Branch	Takata, Niigata Ken	Decon box, T-95	76
	Okaya Branch	Okaya, Nagano Ken	Flame-thrower, T-100	23
			Gas Siren, small	150
			Gas Siren, portable	9
			Gas Detector, T-96	300
			Gas Detector, T-95	15
			Decon box	48

Table IV - Inventory of Chemical Warfare supplies in Nagoya Ordnance Depot and Branches.

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Nagoya	Shizuoka Branch	Kurihara machi, Shizuoka Ken	Flame-thrower, T-93	9
			Flame-thrower, T-100	30
			Gas Detector, T-96	326
			Gas Siren, portable	6
	Okazaki Branch	Okozaki, Aichi Ken	Flame-thrower, T-100	4
			Decon box, T-95	620
	Toyohoshi Branch	Toyohoshi, Aichi Ken	Flame-thrower, T-100	3
			Trailer, decon, T-94A	6
			Trailer, gas-spreader, T-94A	30
	Kasugai Branch	Kasugai, Aichi Ken	Decon vehicle, T-99	3
	Ogaki Dump	Ogaki, Nagoya Ken	Decon box, T-95	52
	Seto Dump	Seto, Nagoya Ken	Canister, coll. prot., T-97	5
			Gas Detector, T-96	423
			CO Detector, T-91	33
			Decon box, T-95	67
			CO Detector, T-100	8
			Gas Mask Tester, T-98	1
	Sekigahara Dump	Tamamura, Gifu Ken	Candles, smoke, T-94 large	25
			Candles, smoke, T-94 small	12,313
			Candles, smoke, T-94 float	231
			Candles, smoke, T-99, S-P	4,459

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Table V - Inventory of Chemical Warfare supplies in Osaka Ordnance Depot and Branches.

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Osaka	Ozaki Branch	Ozaki-machi, Osaka Ken	Flame-thrower, T-93	31
			Flame-thrower, T-100	75
	Kawanishi Branch	Kawanishi-machi, Hyogo Ken	Trailer, decon, T-94A	10
			Trailer, gas-spreader, T-94A	22
	Uji Branch	Uzimac hi, Kyoto Ken	Candles, smoke, T-94 small	4,319
			Candles, smoke, T-99, S-P	7,360
			Candles, smoke, T-99 float.	42
			Candles, smoke, T-99 large	71
			Decon box, T-95	4,220
			Gas Detector, T-95	950
	Hirakata Branch	Hirakata-machi, Osaka Ken	Gas Detector, T-96	3
			Gas Siren, small	1
	Himezi Branch	Himezi, Hyogo Ken	Candles, smoke T-99 S-P	744
			Candles, smoke T-94 small	964
			Candles, smoke T-94	20
			Candles, smoke T-94 medium	629
	Mizuma Dump	Osaki-machi Osaka Ken	Gas Siren, portable	227
			Gas Siren, small	105
			Canister, cell prot, T-94	22
			Decon box, T-95	192
	Shijonawate Dump	Shijonawate-mura, Osaka Ken	Gas Detector, T-96	95
			Gas Detector, T-95	19
	Fukui Dump	Fukui Fukui Ken	Gas Detector, T-96	20
			Gas Detector, T-95	2
	Tsuruga Dump	Tsuruga, Fukui Ken	Decon box, T-95	266
	Hozono Filling Plant	Kawanishi-jura, Kyoto Ken	Grenade, frangible, incend.	440
			Shell, smoke, 90mm, T-94	16,410

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Table VI - Inventory of Chemical Warfare supplies in Kokura Ordnance Depot and Branches.

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Kokura		Kokura, Fukuoka Ken	Shell, smoke, 90mm	50,000*
			Shell, mustard, 75mm	200,000*
			Shell, mustard, 100mm	210,000*
			Candles, smoke, T-94A	72,000
			Candles, smoke, T-94B	30,000
			Candles, smoke, T-94 large	378
	Nagahama Branch	Kokura, Fukuoka Ken	Shell, mustard, 100mm	80,000*
	Hachiya Dump	Hachiya-machi, Fukuoka Ken	Flame-thrower, T-100	62
	Shitami Dump	Shitami, Fukuoka Ken	Flame-thrower, T-2	2
	Hida Dump	Hida, Oita Ken	Tankette, T-94A	6
			Trailer, Decon, T-94A	5
			Tankette, T-97A	1
	Hanoinu Dump	Hanoinu-dzuka, Fukuoka Ken	Tankette, T-94A	4
			Trailer, decon, T-94A	5
			Tankette, T-97A	2
	Kawasaki Dump	Kawasaki, Oita Ken	Tankette, T-97A	4
	Toyotsu Dump	Toyotsu Mura, Fukuoka Ken	Tankette, T-97A	3
	Mitsuma Dump	Mitsuma Mura, Fujuoka Ken	Trailer, decon, T-94A	1

* Empty

[redacted]

Table VII - Inventory of Ch emical Warfare supplies in Hiroshima Ordnance Depot and Branches.

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Hiroshima		Hiroshima Ken	Tankette, T-97A	5
			Trailer, decon, T-94A	3
			Decon box, T-95	450
			Gas Detector, T-96	100
			Canister, coll prot, T-97	2
			CO Detector, T-100	50
	Tadanoumi Branch	Tadanoumi machi, Hiroshima	Candle, vomiting Gas, T-100, S-P	398,869
			Candle, vomiting gas, T-100, medium	65,604
			Candle, comiting gas, T-100, small	29,003
			Candle, vomiting gas, T-98, medium	271
			Candle, vomiting gas, T-98, small	9
			Candle, tear gas, T-89	141,630
			Stick, Tear gas, T-89	141,072
			Candle, smoke, T-94B, large	34,734
			Candle, smoke, T-94A	3,296
			Candle, smoke, T-94 float.	4,842
			Candle, smoke, T-94A small	129,484
			Candle, smoke, T-94B small	30
			Candle, smoke, T-99, S-P	489,981
			Candle, smoke, T-38B, small	24,510
			Candle, smoke, T-93 special	1,002
			Container, blister gas, T-A	3,578
			Container, blister gas, T-B	858
			Container, Hydrocyanic acid, T-A	704
			Flame-thrower, T-100	1
			Decon box, T-95	1,212
	Awa Shima sub-Branch	Awa Shima	Candle, vomiting gas, T-1, large	33,166
			Candle, vomiting gas, T-99, large	11,258

[redacted]

Table VIII - Inventory etc. Cont'd

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Hiro-shima	Awa Shima sub-Branch	Awa Shima	Candle, vomiting gas, T-98, small	44,650
			Candle, vomiting gas, T-98, medium	430
	Hachi-honmatsu Branch	Kawakami-mura, Hiroshima Ken	Shell, vomiting gas, 100mm Howitzer	1,198
			Shell, mustard, 100mm how.	1,796
	Omine Branch	Omine, Yamaguchi Ken	Shell, vomiting gas, 75mm	54,798
			Shell, vomiting gas, 100mm	5,780
			Shell, vomiting gas, 150mm	3,000
			Shell, mustard, 75mm	9,300
			Shell, mustard, 100mm	6,096
			Shell, mustard, 150mm	5,000
	Okayama Branch	Okayama, Okayama Ken	Candle, vomiting gas, T-100	49
			Candle, smoke, T-94A	2,795
			Candle, smoke, T-94 training	10,594
			Container, blister gas, T-A	70
			Flame-thrower, T-100	12
			CO Detector, T-100	38
			Canister, coll prot, T-97	54
			Gas Detector, T-96	5,000
			Decon box, T-95	19,876
	Tsuyama sub-Branch	Tsuyama Okayama Ken	Candles, smoke, T-94A	386
			Flame-thrower, T-100	8
	Kasaoka Branch	Kasaoka, Okayama Ken	Gas Detector, T-96	500
			Gas Detector, T-95	30
			Gas-spreader, hand, T-95	188
	Kaidaichi Branch	Kaidaichi, Hiroshima Ken	Flame-thrower, T-100	3
			Decon box, T-95	159
	Ninoshima Branch	Ninoshima, Hiroshima Ken	Shell, smoke, T-13, 150mm	14,825
			White Phosphorus, bulk	15 metric tons
	Sangenya Branch	Okayama Okayama Ken	Shell, smoke, 75mm	2,725

[redacted]

Table VII - Inventory etc. Cont'd

Ord. Depot	Branch or sub-Branch	Location	Items	Quantity
Hiro-shima	Sangenyo Branch	Okayama, Okayama Ken	Grenade discharger, T-89	14,040
			Candle, smoke, T-99, S-P	3,363
			Candle, smoke, T-94A	6,620
			Candle, smoke, T-94B	62
			Candle, smoke, T-94 floating	54
			Candle, vomiting gas, T-98 medium	203
			Candle, vomiting gas, T-98 S-P	30
			Candle, vomiting gas, T-98 small	100
			Candle, vomiting gas, T-100 S-P	110
			Grenade discharger, T-10th year	500

Table VIII - Inventory of Chemical Warfare supplies in Tokyo Second Arsenal.

	Plant or Storage Dump	Location	Items	Quantity
Tokyo Second Arsenal	Tadanoumi Plant	Okuno Shima, Hiroshima Ken	Mustar, bulk, German method	580 metric tons
			Mustard, bulk, French method	480 " "
			Mustard, bulk, unfreezable	620 " "
			Lewisite, bulk	910 " "
			Hydrocyanic acid	15 " "
			Diphenylcyanarsine	440 " "
			Hexachloroethane	60 " "
			Candle, smoke, T-94, floating	14,485 ea
			Candle, smoke, T-94, large	3,364 ea
			Cylinders (empty) for AC	6,300 ea
			Drums (empty) for L	200 ea
			Drums (empty) for H	1,850 ea
	Omishima Dump	Omishima, Ehime Ken	Diphenylcyanarsine	595 metric tons
			Chloracetophenone	7 " "
	Sone Filling Plant	Kokura, Fukuoka Ken	Shell, smoke, 75mm	500 ea
			Shell, incendiary, 90mm	500 ea
			Grenade, incendiary	565 ea
			Shell, empty, 150mm	2,630 ea
			Shell empty, 100mm	5,735 ea
			Shell, empty, 90mm	7,584 ea
			Shell, empty, 75mm	7,881 ea

[redacted]

Clothing Depots

Items	Tokyo Main	Sapporo Branch	Sendai Branch	Tokyo Branch	Nagoya Branch	Osaka Branch	Hiroshima Branch	Totals
Gas Mask (T-95,96,99)	88,430	21,265	20,982	63,670	2,200	24,500	2,032	223,079
CO Gas Mask, T-97	800	550	770	900	500	1,000	35	4,555
Horse Gas Mask, T-96	1,500	25	105	700	300	900	100	3,630
Dog Mask	50	----	70	25	----	15	----	160
Protective suit, heavy	500	80	25	650	35	110	50	1,450
Protective suit, light	25,000	5,000	3,500	18,700	10,000	800	1,250	64,250
Protective Cape	60,540	84,355	500	26,070	350	9,000	340	181,155
Horse Leggings	1,050	700	500	1,850	1,500	1,950	105	6,655
Horse Cape	950	105	170	800	200	100	50	2,375

Table IX - Inventory of Chemical Warfare Stocks in clothing depots (as of beginning of Occupation)

[redacted]

[redacted]

Table X - Inventory of Chemical Warfare stocks in Medical Depots
(as of beginning of Occupation)

Items	Tokyo Main	Sapporo Br Depot	Sendai Branch	Tokyo Branch	Nagoya Br Depot	Osaka Branch	Fukuoka Branch	Total
Decon Pouch	9,500		11,200	10,200	2,800	18,210	61,032	112,942
Headwound Gas Mask		336	1,402	2,104	400	79		4,321
Med Gas Casualty Kit A				72				72
Med Gas Casualty Kit B				290				290
Med Gas Casualty Kit C			10					10
Unit (First Aid) Gas Casualty Kit	6		12	775			52	845
Medic Unit Gas Casualty Kit				20	4			24
Hospital Gas Casualty Kit		1		20	2	1	24	48
Oxygen Inhaler (Non-portable) (Compressed oxygen container)	2		36	30			64	132
Decon Truck		1		2				3
Decon Installation (Horse Mounted)				1			149	150
Oxygen Respirator (portable)			39	30	6	23		98

[redacted]

[redacted]

Table XI - Inventory of Chemical Warfare stocks in Veterinary Depots
(as of beginning of Occupation)

Items	Tachikawa Main Depot	Sapporo Branch	Sendai Branch	Nagoya Branch	Osaka Branch	Tsuyama Branch	Kaumo Branch	Total
Vet. Gas Casualty Kit, T-98A	369	34						403
Vet. Gas Casualty Kit, T-98B	6	15		45				66
Vet. Unit Gas Casualty Kit, T-98	768			10				778
Vet. Hospital Gas Casualty Kit, T-98	261	22		17			50	350
Vet. Decon Truck, exp.	2							2

[redacted]

Table XII - Inventory of Air Force CW Bombs (as of 1 Aug 45)

Items / Air Force Depots	Type 100 50 Kg Aerial Bomb *					Type 97 15Kg Aerial Bomb		Type 93 1Kg Aerial Indendiary Bomb	Type 97 12Kg Aerial Incendiary Bomb	Trial T-1 20 Kg Aerial Smoke Bomb
	Case (empty)	Incendiary Bomb	Smoke Bomb	Kii(Yellow) Type Bomb	Ao(Blue) Type Bomb	Case	Aka(Red) Type Bomb			
Yorii	0	268	0	0	0	0	0	5600	172	0
Kanno	0	0	0	0	0	0	0	164	583	500
Himeku	0	566	0	0	0	0	0	555	24,569	0
Koto	0	290	0	0	0	0	0	0	14,400	0
Sone	47,487	1,035	1,993	(955)	(448)	(258)	(3000)	50	0	0
Fukuma	0	599	0	0	0	0	0	0	0	0
Tachiarai	0	545	0	0	0	0	0	0	0	0
Kumanosho	0	499	0	0	0	0	0	0	0	0
Total	47,487 (empty)	3,802	1,993	(955)	(448)	(258)	(3000)	6,369	39,724	500

Note: Figures in parentheses indicate bombs destroyed by Japanese prior to Occupation.

*Kii - blister gas

Ao - phosgene

Aka - diphenylcyanarsine

(Investigation of Air Force Depots and supply procedures subject of separate reports by Cml Section ATIG, Adv. Ech., FEAF on file in Air Documents Division, T-2, Wright Field, Dayton, Ohio.)

[redacted]

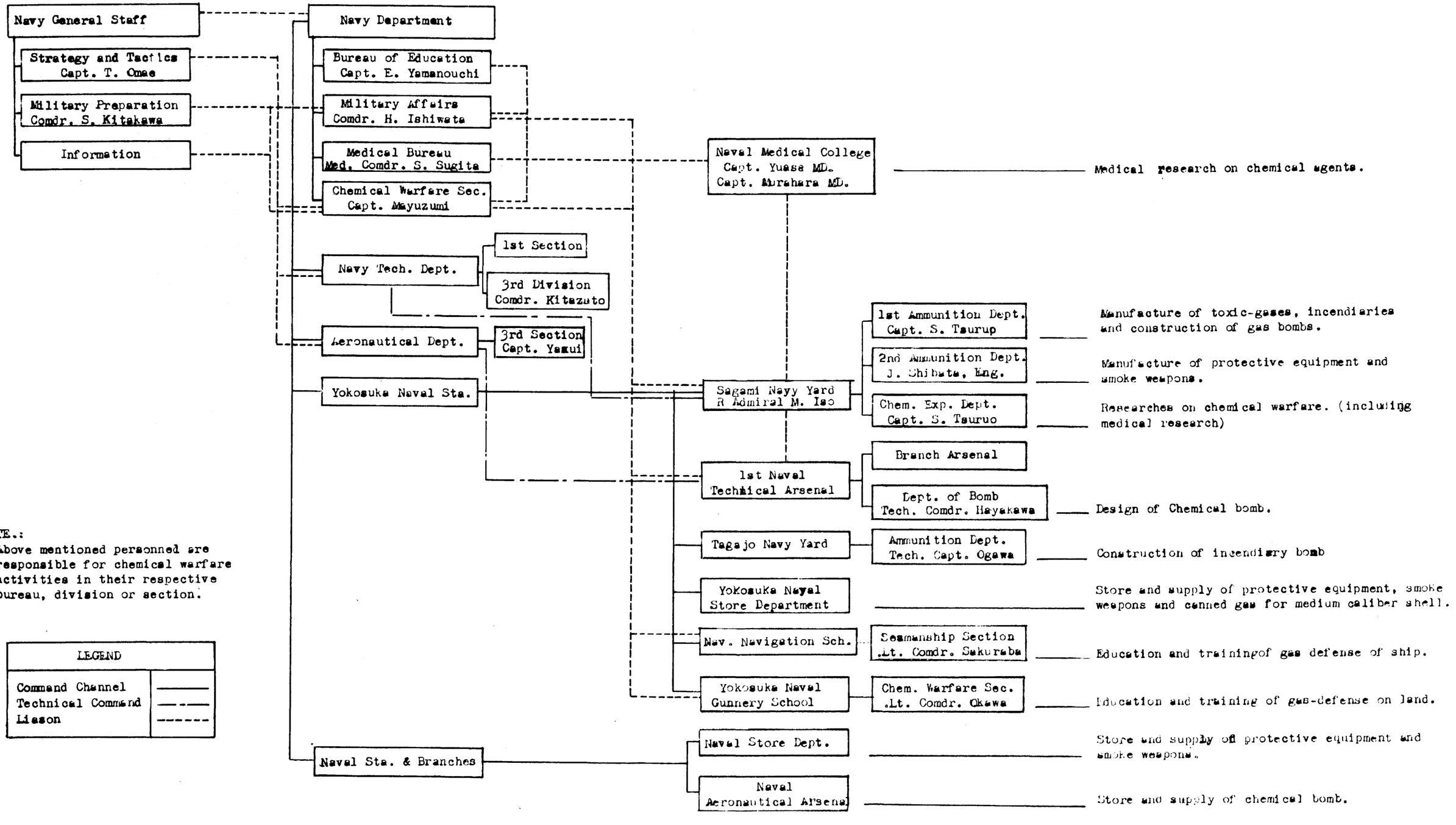
Summary Table of Army Bulk Toxics and Toxic Munitions in Main Depots and Branches

Mustard, bulk (all types	1,680	metric tons
Lewisite, bulk	910	" "
Hydrocyanic acid, bulk	15	" "
Diphenylcyanarsine, bulk	1,035	" "
Chloracetophenone, bulk	7	" "

Shell, mustard, 75 mm	9,300 ea
Shell, mustard, 100 mm	7,892 ea
Shell, mustard, 150 mm	5,000 ea
Shell, vomiting gas, 75 mm	54,798 ea
Shell, vomiting gas, 100 mm	6,978 ea
Shell, vomiting gas, 150 mm	3,000 ea
Candle, vomiting gas (all types)	583,722 ea
Candle, tear gas (all types)	282,702 ea

FIGURE 26

NAVAL CHEMICAL WARFARE ORGANIZATION
(1 AUG. 1945)



NOTE.:
Above mentioned personned are responsible for chemical warfare activities in their respective bureau, division or section.

LEGEND	
Command Channel	———
Technical Command	— — —
Liason	-------

SECTION IV - Navy Chemical Warfare Supply

A. General

In the Japanese Navy, as in the Army, there was no unified organization (prior to April, 1945) for the execution of chemical warfare responsibilities. Directed at the highest level by the Minister of the Navy, who was responsible for all Navy supply, the manufacture, storage and distribution of chemical warfare supplies was, however, less decentralized than in the Army. The Naval Technical Department, its chief responsible directly to the Navy Minister, exercised technical control of the agencies charged with the procurement and manufacture of chemical warfare materiel and equipment: the First Department of the Sagami Naval Yard directed the manufacture of chemical agents, including bombs, and toxic-gas bombs; the Second Department controlled the manufacture of protective equipment and smoke munitions. On the same level with the Technical Department, the Aeronautical Department had charge of the First Naval Technical Arsenal, which filled some incendiary bombs. Storage and distribution of chemical warfare supplies was directed by the Naval Stations, responsible to the Navy Minister, through the Naval Store Departments (depots) and Naval Aeronautical Arsenals (Figure 26).

The Naval Chemical Warfare Section, established in April, 1945, consisted of one captain, two medical officers, one technical officer, and ten junior officers. With the Deputy Chief of the Bureau of Military Affairs at its head, it was responsible to the Navy Minister in an advisory capacity with respect to the following:

1. Survey of the actual distribution of anti-gas equipment.

2. Distribution of available anti-gas equipment to the various land forces.

3. Standardization of chemical warfare equipment, and means of increasing production of standard items.

4. Prevention of carbonmonoxide poisoning in underground positions.

5. Promotion of chemical warfare consciousness. Not actually assuming its functions until May, 1945, the Chemical Warfare Section was reported to have made no appreciable accomplishments before the cessation of hostilities. Its records were destroyed in August, 1945.

B. Standard Naval Chemical Warfare Material

1. Shell

Shell, incendiary (rubber-thermit), T-3 for T-94 40 cm gun
Do. for 36 cm. gun
Do. for 20 cm. gun
Do. for 15.5 cm. gun
Do. for 14 cm. gun
Do. for 12.7 cm. gun
Do. for short 20 cm. gun
Do. for short 12 cm. gun

Shell, incendiary-shrapnel (WP), for 12.7 cm. gun
Do. for 12 cm. gun

Shell, smoke, 12.7 cm.
Shell, tear gas, 8 cm.
Blister gas can for 12, 12.7, 14, 15 cm. shells
Vomiting gas can " " " " " " "
Tear gas can " " " " " " "

2. Bombs

Bomb, incendiary, 32 Kg, T-99, MK-3, No. 3
Bomb, incendiary, 60 Kg, T-3, MK-3, No. 6
Bomb, incendiary, 70 Kg, T-3, MK-6
Bomb, incendiary, 250 Kg, T-2, MK-3, No. 25
Bomb, blister gas, 60 Kg, MK-1, No. 6
Bomb, tear gas, 60 Kg, MK-1, No. 6
Bomb, vomiting gas, 60 Kg, MK-1, No. 6

3. Protective Equipment

Mask, gas, T-2, Mod. 1
Mask, gas, T-93, Mod. 1
Mask, gas T-93, Mod. 2
Mask, gas, T-93, Mod. 3
Mask, gas, T-93, Mod. 4
Mask, gas, diaphragm, T-97 (Mod. 1, 2, 3, and 4)
Mask, oxygen, T-3
Suit, protective, light, T-3
Protective cape
Gas detector, T-2, 3, and 4
Decontaminating set, MK. 3
Decontaminating set, MK. 4
Decontaminating kit, personel, MK. 5
Water purification kit (poison destroyer), MK. 5

4. Miscellaneous

Smoke generator, T-1
Smoke generator, 40 Kg.
Smoke pot, 30 Kg.
Candle, smoke, 1 Kg.
Grenade, frangible, smoke

C. Tables of Allowances of Naval Chemical Warfare Materiel.

1. For ships

	Per 100 men	Reserve
Gas Mask	100	10
Protective Suit	3	--
Oxygen Mask	3	--
Gas Detector	3	--
Decon Set, MK 3	100	20
Decon Set, MK 4	80	10

2. For land forces

	Line forces	Service forces
Gas Mask	100 %	100 %
Protective Suit, T-88	5 %	5 %
Protective Suit, T-3	50 %	30 %
Protective Cape	75 %	50 %
Decon Set, MK. 3	100 %	50 %
Gas Detector	1 per Co.	1 per Co.

D. Naval Store Departments

1. General

The naval store departments (depots) of the naval stations and branches stored and supplied all Chemical Warfare equipment except air force bombs. (Figure 26). Bulk toxics were stored in Sagami Navy Yard and the Yokosuka Naval Store Department.

a. Yokosuka naval store department, located in Yokosuka, Kanagawa Ken, supplied Yokosuka Naval Station Forces, 4th Fleet, and Southeastern Area Fleet. Its branches and their locations were:

(1) Kasumigaura --- Ibaragi Ken
(2) Sendai --- Miyagi Ken
(3) Nagoya --- Aichi Ken
(4) Tateyama --- Chiba Ken
(5) Onagawa --- Miyagi Ken
(6) Yokkaichi --- Mie Ken
(7) Yokohama --- Kanagawa Ken
(8) Chickijima --- Ogasawara Ksland
(9) Ikego Storehouse --- Kanagawa Ken
(10) Seya Storehouse --- Kanagawa Ken

b. Kure naval store department, Kure, Hiroshima Ken, supplied Kure Naval Station Forces and the South-western Area Fleet. Its Branches and their locations were:

(1) Tokuyama --- Yamaguchi Ken
(2) Takamatsu --- Kagawa Ken
(3) Sukumo --- Kochi Ken
(4) Hoji --- Fukuoka Ken
(5) Saeki --- Oita Ken

c. Sasebo naval store department, Nagasaki Ken, supplied Sasebo Naval Station Forces and the China Sea Fleet. Its branches and locations were:

(1) Fukuoka --- Fukuoka Ken
(2) Nagoshima --- Kagoshima Ken
(3) Nagasaki --- Nagasaki Ken
(4) Kanoya --- Kagoshima Ken
(5) Tomie --- Nagasaki Ken
(6) Oshima --- Kagoshima Ken

d. Maisuru naval store department, Kyoto Fu, supplied Maizuru Naval Station Forces.

e. Osaka Naval store department, Osaka Fu, supplied Osaka Minor Naval Station Forces.

f. Ominato naval store department, Aomori Ken, supplied Ominato Minor Naval Station Forces.

g. Chinkai naval store department, Chosen (Korea), supplied Chinkai Minor Naval Station Forces. A branch was located in Kyobun Island.

h. Tokao naval store department, Taiwan (Formosa), supplied Tokao Minor Naval Station Forces. It had a branch in Kiirun, Taiwan.

2. Inventory of bulk toxics

All the bulk toxics in the hands of the Japanese Navy were stored in the Sagami Navy Yard and the Yokosuka Naval Store Department, both under the command of the Yokosuka Naval Station. The following table shows the quantities of bulk toxics held in storage by the Navy as of 1 Sept, 1945. Navy officials maintained none had been destroyed prior to the Occupation.

		Toxic Gas (metric Tons)					
Installation	Location	H	L	CG	DC	DM	CN
Sagami Navy Yard	Samukawa, Kanagawa Ken	43	-	5	25	--	1.1
Sagami-Hiratsuka Br.	Hiratsuka, Kanagawa Ken	0.1	6.6	-	75	2.1	--
Sagami-Nishiki Br.	Nishiki, Fukushima Ken	--	-	-	--	--	35.5
Yokosuka Store Dept,	Kami-seya, Kanagawa Ken	--	-	-	--	--	75

Table XIII - Inventory of Bulk Toxics Stored by the Navy

3. Inventories of Materiel and Equipment

Complete inventories of each of the naval store departments (depots) and branches from Japanese sources were unavailable. Japanese naval officers maintained that all records having been destroyed prior to the Occupation, it was impossible to compile complete data before demobilization of naval departments had been effected; it was further pointed out that only comparatively small quantities of protective equipment were stored in the depots and their branches because of the drop in production of chemical warfare materiel, the supply of which, during the closing months of the war, was inadequate to meet actual demand. "Accordingly no sooner had the manufactured chemical warfare materials been stored in the Naval Stores Depots than the greater part of them were supplied forthwith to the Naval Units."

Interrogation of Japanese naval supply officers elicited the unanimous contention that no toxic munitions were ever supplied to the fleets or air units. Of those stored in the aeronautical arsenal depots considerable quantities had been dumped at sea prior to the Occupation on orders from Imperial Headquarters. Figures for munitions destroyed by the Japanese are indicated in the inventories on the following pages. No toxic-filled shells were stored or supplied by the Navy during

the war, according to the statements of the officers interrogated, nor were any to be found in the depots. No smoke or incendiary shells were stored in any naval depots at the close of the war.

Inventories of the main naval store departments submitted by Unit Chemical Officers and CWS Technical Intelligence Teams are shown in the following tables. Stocks located in the numerous branch depots and dumps are not listed separately, since in many cases the wide spread decentralization of supplies made positive identification of stocks with specific targets impossible; some stocks were reported, for example, as having been located in "scattered areas" with no specific installation designated. The comparatively small stocks of general protective equipment found bear out the contention that the shortage of such materiel at the close of the war had become marked.

Table XIV - Inventory of Yokosuka Naval Store Depot

Gas Masks (all types)	25,000 ea
Protective suits	2,000 ea
Protective capes	150 ea
Gas Detectors	180 ea
Bleach powder	200 metric tons
Bomb, incendiary-shrapnel, 250 Kg	127 ea
Bomb incendiary, 60 Kg	50 ea
Bomb, mustard, 60 Kg	3,000 ea

(30,000 medium calibre vomiting and tear gas cans for shells were destroyed prior to Occupation)

Table XV - Inventory of Kure Naval Store Depot

Gas Masks (all types)	2,000 ea
Protective suits	7,000 ea
Protective capes	22,400 ea
Gas Detectors	200 ea
Bleach powder	400 metric tons

[redacted]

Table XVII - Inventory of Sasebo Naval Store Depot

Gas Masks (all types)	7,640 ea
Protective suits	300 ea
Protective capes	18,000 ea
Gas Detectors	100 ea
Bleach powder	800 metric tons
Shell, 75 mm (empty0	3,550 ea
Candles, smoke, 1 Kg	400 ea
Candles, T-99, S-P	10,700 ea
Sniff set, T-A	200 ea
Sniff set, T-B	250 ea
Bomb, smoke floating, 2 Kg	750 ea
Smoke generator, 40 Kg	8,000 ea
Smoke pot, 30 Kg	120 ea
Grenade, frangible, incendiary	1,460 ea

Table XVIII - Inventory of Maizuru Naval Store Depot

Gas Masks (all types)	18,000 ea
Protective suits	500 ea
Protective capes	6,200 ea
Bombs, smoke, 2 Kg	6,820 ea
Bombs, smoke, practice, 1 Kg	580 ea
Bombs, illuminating, T-96	545 ea
Candle, illuninating, T-90	1,000 ea
Candle vomiting gas	1,200 ea
Candle, smoke	600 ea
Grenades, tear gas, small	5,050 ea
Grenades, tear gas, large	6,200 ea
Smoke generator, 40 Kg	149,930 ea

Table XVIII - Inventory of Osaka Naval Store Depot

Gas Masks (all types)	8,300 ea
Protective suits	300 ea
Protective capes	50 ea
Bomb, smoke, 2 Kg	1,000 ea
Smoke generator, 40 Kg	850 ea
Candle, smoke, 1 Kg	500 ea

Table XIX - Inventory of Ominoto Naval Store Depot

Gas Masks (all types)	5,200 ea
Protective suits	500 ea
Protective capes	350 ea
Gas detectors	400 ea
Candle, smoke, T-A, No. 1	150 ea

[redacted]

[redacted]

E. Naval Aeronautical Arsenals

1. General

Depots of the naval aeronautical arsenals stored and supplied all types of chemical bombs used by the Naval Air Force. These depots, like the naval store departments, were under the command of their respective naval stations. (Figure 26)

2. Inventories

The following tables list the significant stocks of chemical bombs in the aeronautical depots at the time of the termination of hostilities. Quantities of mustard bombs destroyed by the Japanese prior to the Occupation, as determined by interrogations, are indicated. Confirmation of Japanese inventories by Unit Chemical Officers, CWS Technical Intelligence Temas, or other sources were made in all but a few isolated instances in which positive verification, because of improper identification of materiel or target, or late arrival at the target, was precluded.

Table XX - Inventory of Chemical Bombs in 1st Naval Aeronautical Arsenal

Depot	Location	Bombs (Incend)	Quantity
Natsushima	Miyagi Ken	250 Kg	64
"	" "	32 Kg	200
Yatabe	Sbaragi Ken	250 Kg	20
"	" "	60 Kg	30
"	" "	32 Kg	68
Kasumigaura	Sbaragi Ken	32 Kg	369
Tsukuba	" "	32 Kg	258
Konoiki	" "	32 Kg	75
Kashima	" "	32 Kg	66
Kitaura	" "	32 Kg	12

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[redacted]

Table XXI - Inventory of Chemical Bombs in 2d Naval Aeronautical Arsenal

Depot	Location	Bombs	Quantity
Katori	Chiba Ken	Incend., 250 Kg	66
		" 32 Kg	132
Johara	Chiba Ken	" 250 Kg	11
		" 60 Kg	50
		" 32 Kg	220
Kisarazu	Chiba Ken	" 32 Kg	107
Tateyama	Chiba Ken	" 250 Kg	60
		" 32 Kg	120
Atsugi	Kanagawa Ken	" 250 Kg	30
		" 32 Kg	120
		" 70 Kg	2,397
		Mustard, 60 Kg	8,850*
Seya	Kanagawa Ken	Smoke, 10 Kg	6,112
		" 20 Kg	4,880
		" 32 Kg	4,132
		Incend., 10 Kg	2,120
		" 20 Kg	200
		" 32 Kg	1,020
		" 60 Kg	1,692
		" 70 Kg	3,000
		Mustard, 60 Kg	5,680
Fujieda	Shizuoka Ken	Incend., 250 Kg	50
		" 32 Kg	260
Oi	Shizuoka Ken	" 32 Kg	160
Yokosuka	Kanagawa Ken	" 32 Kg	700

* Destroyed prior to Occupation.

[redacted]

[redacted]

Table XXII - Inventory of Chemical Bombs in 11 th Naval Aeronautical Arsenal

Depot	Location	Bombs	Quantity
Naruo	Osaka Fu	Incend., 32 Kg	160
Yamato	Nara Ken	" 32 Kg	30
Himeji	Hyogo Ken	" 250 Kg	66
		" 32 Kg	240
Fukuchijama	Jyoto Fu	" 32 Kg	161
Kure Area	Hiroshima Ken	" 250 Kg	1,112
(Hachihonmatsu,		" 60 Kg	239
Kirigushi,		" 32 Kg	873
Kawakami)		" 70 Kg	2,904
		Mustard, 60 Kg	11,344
Saijo	Hiroshima Ken	Incend., 32 Kg	310
Matsuyama	Ehime	" 32 Kg	514
Swakuni	Yamaguchi	" 32 Kg	500

Table XXIII - Inventory of Chemical Bombs in 12th Naval Aeronautical Arsenal

Depot	Location	Bombs	Quantity
Usa	Oita Ken	Incend., 250 Kg	98
		" 32 Kg	750
Tsuiki	Oita Ken	" 250 Kg	20
		" 30 Kg	35
Oita	Oita Ken	" 250 Kg	14
		" 60 Kg	523
		Mustard, 60 Kg	2,351

[redacted]

Table XXIV - Inventory of Chemical Bombs in 21st Naval Aeronautical Arsenal

Depot	Location	Bombs		Quantity
Omura	Nagasaki Ken	Incend.,	250 Kg	48
		"	60 Kg	31
		"	32 Kg	267
Sasebo	Nagusaki Ken	"	60 Kg	1,883
		Mustard,	60 Kg	5,000
Hakata	Fukiwha Ken	"	60 Kg	67
Fukuoha	Fukiwha Ken	"	60 Kg	7

Table XXV - Inventory of Chemical Bombs in 31st Naval Aeronautical Arsenal

Depot	Location	Bombs		Quantity
Swano.	Kyoto Fu	Incend.,	32 Kg	100
(Ibijuru,		Mustard,	60 Kg	5,000*
Komatsu	Ishikawa	Incend.,	250 Kg	100

* Destroyed prior to Occupation.

Table XXVI - Inventory of Chemical Bombs in 41st Naval Aeronautical Arsenal

Depot	Location	Bombs		Quantity
Kataoka	Chishima Island	Incend.,	250 Kg	294
Mitsuwa		"	70 Kg	2,081
and Tennei		"	32 Kg	438
Karafuto	Karafuto Island	"	70 Kg	200
		"	32 Kg	95
Shibetsu	Hokkaido	"	250 Kg	110
Chitose,		"	70 Kg	2,080
Mihoro		"	32 Kg	325
		Mustard,	60 Kg	217
Ominato	Aomori Ken	Incend.,	32 Kg	903
		Mustard,		2,000*

* Destroyed prior to Occupation

Table XXVII - Inventory of Chemical Bombs in 51st Naval Aeronautical Arsenal

Depot	Location	Bombs		Quantity
Fusan	Korea	Incend.,	32 Kg	161
Chinkai	Korea	"	250 Kg	100
		"	70 Kg	136
		"	32 Kg	350
Heitaku	Korea	"	32 Kg	100

Table XXVIII - Inventory of Chemical Bombs in 61st Naval Aeronautical Arsenal

Depot	Location	Bombs		Quantity
Takao	Formosa	Incend.,	250 Kg	145
Tainan,	Formosa	"	70 Kg	2,755
Taichu		"	60 Kg	792
		"	32 Kg	2,574

[redacted]

Summary Table of Navy Bulk Toxics and Toxic Munitions in Main Depots and Branches

Mustard, bulk, French process	43 metric tons
Lewisite, bulk	65 " "
Phosgene, bulk	5 " "
Diphenylcyanarsine, bulk	100 " "
Diphenylaminechlorarsine	2.1 " "
Chloracetophenone	111.6 " "
Bomb, mustard, 60 Kg	27,449 ea
Bomb, mustard, 60 Kg	15,850 ea*
Candle, vomiting gas, (all types)	1,200 ea
Grenades, tear gas, (all types)	11,250 ea

* Destroyed by Japanese prior to Occupation.

[redacted]

SECTION V - Conclusions

1. The decentralized system of Japanese chemical warfare supply, while administratively sound and effective, it is believed would have proved less efficient than a unified organization if gas warfare had been initiated.

2. Only the China Expeditionary Forces and the Kwangtung Army in Manchuria had been equipped to wage gas warfare.

3. The Pacific armies were at no time during the war equipped to launch an immediate gas attack; defensively, they were not adequately equipped to withstand a large-scale attack.

4. Homeland Defense Armies, the China Expeditionary Forces, and the Kwangtung Army were given priority in issuance of available supplies from the homeland depots.

5. Stocks of offensive chemical warfare materiel were inadequate for launching a gas attack on anything more than a limited, or ineffective, scale.

6. Despite the large variety of equipment, stocks of defensive chemical warfare materiel were inadequate to meet the demands of large-scale gas warfare.

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Appendix A - List of Personnel Interrogated

1. Lt. Gen. Shimizu Torajio, Commanding Officer, Army Main Medical Supply Depot
2. Lt. Gen. Y. Nasu, Commanding Officer, Military Service Bureau
3. Maj. Gen. Gin-ichi Akita, Chief, General Affairs Dept, Army Main Clothing Depot
4. Col. K. Morita, Supply Section, Army Main Medical Supply Depot
5. Col. R. Suenaga, Supply Section, Army Main Medical Supply Depot
6. Col. S. Niimi, Chief, Genl. Affairs Section, Ordnance Administration Hqs.
7. Col. T. Kato, Chief, Veterinary Dept., Military Service Bureau
8. Col. S. Maeda, Sendai Ord. Supply Depot
9. Col. Y. Matsumota, Tokyo Ord. Supply Depot
10. Col. S. Sanakawa, Nagano Ord. Supply Depot
11. Col. E. Senda, Nagoya Ord. Supply Depot
12. Col. T. Yakata, Osoka Ord. Supply Depot
13. Col. G. Tayama, Hiroshima Ord. Supply Depot
14. Lt. Col. Ei-ichi Numazawa, Chief, Maintenance Depot, Army Main Clothing Depot
15. Lt. Col. M. Kusakari, Supply Section, Tokyo Main Ordnance Depot
16. Lt. Col. T. Sasaki, Supply Section, Ordnance Administration Hqs.
17. Lt. Col. Y. Inouye, Army Medical School
18. Lt. Col. T. Kunitake, 3d Section, Military Administration Affairs, Army General Staff Hqs.
19. Lt. Col. K. Arai, Supply Section, Veterinary Dept., Military Service Bureau
20. Lt. Col. H. Yamanaka, Tadanoumi Plant, Tokyo Second Arsenal
21. Maj. H. Akizuki, Medical Service Section, Medical Affairs Bureau
22. Capt. Kimura, Planning Section, Genl. Affairs Dept. Army Main Clothing Depot
23. Capt. R. Kinda, Supply Section, Tokyo Main Ordnance Depot
24. Capt. R. Takahashi, Supply Section, Tokyo Main Ordnance Depot
25. Capt. S. Nakamwa, Tadanoumi Br., Hiroshima Supply Depot
26. Capt. M. Maruta, Hachihonmatsu Br., Hiroshima Supply Depot
27. Navy Capt. S. Mayuzumi, Chief, Navy Chemical Warfare Section
28. Navy Capt. S. Tsuruo, 1st Department, Sagami Navy Yard
29. Navy Capt. R. Yazui, Navy Aeronautical Department
30. Comdr. Y. Kitazato, 3d Div., Navy Technical Department

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Appendix B - Troop and Animal Strength of Homeland Defense Armies at Surrender

	Units	Men	Horses
Combat Forces	1st General Army: Headquarters	653	18
	1st General Army: 11th Area Army (NE Army Dist)	50,920	3,512
	1st General Army: 12th Area Army (East Army Dist)	339,879	30,751
	1st General Army: 13th Area Army (Eastern Coast Army Dist)	88,077	4,493
	1st General Army: Total	479,529	38,774
	2nd General Army: Headquarters	604	18
	2nd General Army: 15th Area Army (Shikohu Army Dist)	73,938	1,779
	2nd General Army: 16th Area Army (West Army District)	306,210	25,945
	2nd General Army: Total	378,752	27,742
	5th Area Army (Northern Dist)	124,152	9,605
	Shipping Forces	122,135	- - -
	Miscellaneous	198,835	- - -
	Total	1,303,405	75,921
Service Forces	North Army Area Units	17,598	569
	North-east Army Area Units	23,875	792
	East Army Area Units	86,634	3,314
	East-sea Army Area Units	30,453	1,574
	Middle Army Area Units	(	(
	Chugoku Army Area Units	(60,764	(2,336
	Shikoku Army Area Units	(	(
	West Army Area Units	52,990	1,714
	Offices and Schools	102,468	15,250
	Total	454,762	25,549
	Grand Total	1,758,167	101,470

(Submitted by Lt. Col. Ken Arai,
General Bureau,
1st Demobilization Ministry)

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