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Economic Intelligence Report

CIVIL DEFENSE IN POLAND

CIA/RR ER 60-24

September 1960

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

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CIVIL DEFENSE IN POLAND*

Summary

Poland has been conducting civil defense preparations since about 1950. The USSR has furnished some guidance for these preparations, and it must be assumed that the broad aspects of the program have had Soviet approval. Increased civil defense efforts have been evident in Poland since 1956.

Civil defense has been given more publicity in Poland than in other countries of the Soviet Bloc. Published or broadcast statements indicate that civil defense officials consider warning, shelter, evacuation, supply, and training to be the principal components of a civil defense system. Publicity also has been given to civil defense achievements, referring to the accomplished preparation of "many" air-raid shelters, to training completed and in progress, to the manufacture in Poland of civil defense supplies, and to past research in the civil defense field.

A priority system governs the preparations made for Polish civil defense. This system places the defense of important cities and installations before that of the public at large -- a fact that is not publicized. Industrial cities and important factories have been active in organizing for civil defense and in providing air-raid shelters. Preparations in smaller cities and throughout rural areas are essentially unmentioned and probably exist in less organized fashion where they exist at all.

As in other countries of the Soviet Bloc, the responsibility for Polish civil defense preparations has been assigned to a staff subordinate to the Ministry of Internal Affairs. The staff is composed of headquarters personnel who are assigned at all levels of government from the national to the city level. Local civil defense operative units are based largely on civilian groups the peacetime functions of which are related to civil defense. Such groups include fire and police departments, medical agencies, and the like. In addition, the Poles have been organizing military civil defense units, most of which units probably are reserve battalions.

* The estimates and conclusions in this report represent the best judgment of this Office as of 1 August 1960.

The first civil defense training conducted in Poland was given to industrial workers and in government offices. The Polish paramilitary society, firefighting organizations, the Red Cross, schools, and the Boy Scout movement have been used in promoting and conducting training. Civil defense training programs for the general public have not been very effective in urban areas and probably have been negligible in rural areas. Staff and supervisory personnel, however, have been training for several years in civil defense schools and courses. Descriptions of drills and competitions for operative civil defense units have appeared in Polish publications during the past 2 years. Again, the units most frequently identified have been those from industrial enterprises.

Announced Polish civil defense goals, published statements on air-raid shelters, and information from former residents combine to demonstrate that Poland has been constructing new air-raid shelters and rebuilding World War II shelters for some time. As in several other countries of the Soviet Bloc, the most frequently reported new shelters are basement shelters in masonry buildings, shelters in important industrial installations, and shelters for personnel important to government and civil defense control. There is not enough information available from which to derive a definitive estimate of the present capacity of air-raid shelters in Poland. The amount of shelter furnished with filter ventilation is unknown, but the manufacturing of ventilators and filters is reported as well as the installation of this equipment in some instances.

A civil defense warning system based on alert by the military forces has been or is being developed in Poland. Sirens were installed in larger cities, beginning about 1955. Blackout in case of air alert is still planned, and some preparatory steps already have been taken. Fire defense volunteers are enrolled in large numbers, and it is reported that expanded firefighting forces will be stationed outside Warsaw in case of mobilization to fulfill civil defense roles after air attack.

Civil defense preparations similar to those in the USSR are being developed as part of a long-term Polish defense program. Although the more important elements of the Polish population already have some protection, the majority of the population is unprotected and largely untrained. There is little evidence that a state of emergency readiness is planned in the near future. Continuing efforts have been undertaken, however, to improve the Polish civil defense situation through expanded training, increased construction of air-raid shelters, and other measures.

I. Concept and Missions

During 1958 and 1959, Poland indulged in publicity concerning civil defense that probably is unique among members of the Sino-Soviet Bloc. A number of radio broadcasts and newspaper interviews outlined the broader concepts of Polish civil defense.

A. Effectiveness Against Atomic Attack

In the published material on civil defense in Poland that has been examined, stress is placed principally on "modern" defense against air attack and atomic weapons, with occasional mention of the possibility of chemical or biological attack.

Complete protection against nuclear attack is recognized as impossible. For example, the national civil defense commander in Poland stated that there is no "absolute, one-hundred-percent defense" for the population against presently available means of attack. 1/* Polish publications have pointed out that, although the greatest possible number of people should be protected, the accomplishment of civil defense preparations in Poland would serve only to greatly curtail "losses." 2/ Potential loss of life would be reduced by more than one-half if Polish cities were to complete planned preparations for atomic defense, in the opinion of unidentified "specialists." 3/

B. General Mission

Polish publicity most often has stressed the saving of lives and the minimizing of casualties as a mission of civil defense. Although certainly a valid aim, this stress on the possibility of survival probably is used to encourage public support on humanitarian grounds and as an appeal to self-interest.

In one instance the civil defense commander of Warsaw used a sentence reminiscent of Soviet statements on civil defense missions. He said, "The basic tasks of civil defense in the event of war will include the protection of the urban population from air attacks, helping the wounded, protection of state and public property, /and/ the protection of industry." 4/ Inasmuch as civil defense preparations in places of work generally have preceded all others in the Soviet Bloc, it is suggested that the two tasks mentioned last actually may have the higher priority.

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C. Necessary Measures

In general, Polish publicity concerning civil defense measures of protection is similar to that concerning civil defense goals -- it stresses, almost exclusively, the protection of the population. The principal means for protecting the population are said to be urban evacuation and the use of air-raid shelters. 5/ The elevation, in Polish publicity concerning civil defense, of urban evacuation to a parity with the use of air-raid shelters is unique among the countries of the Soviet Bloc. (A limited strategic evacuation concept was introduced in the USSR in 1958, but thus far only brief statements on the subject have been found in Soviet civil defense literature.)

Polish civil defense evacuation has been stated to apply particularly to "all children, their teachers, the sick, aged persons, cripples, and so on." 6/ One newspaper article implied that preparation for evacuation might be limited to "exposed centers" 7/ -- probably meaning likely target cities.

The Poles envision a number of specific measures, prepared or projected, as the principal components of the civil defense system. These measures include, in addition to preparations for partial urban evacuation, the following: (1) the preparation of a suitable alert system capable of informing the people in time of threatening danger from the air, (2) the construction of an "appropriate" number of air-raid shelters and protected places resistant to the action of atomic weapons, (3) instruction and training for the entire population in defense against air attack and atomic weapons, (4) the preparation of civil defense forces and means suitable for rescue work and rendering assistance to people in contaminated areas, 8/ (5) the creation of a blackout system for the entire country, (6) furnishing the population with appropriate civil defense equipment, and (7) the development of a command system for controlling civil defense "forces and means." 9/

D. Organizational Responsibility

The civil defense organization in Poland is called Local Antiair Defense (Terenowa Obrona Przeciwlotnicza -- TOPL). At the national level there is the national civil defense headquarters, or Main Command of TOPL (Komenda Glowna TOPL), under the Ministry of Internal Affairs (Ministerstwo Spraw Wewnecznych). According to published information, this Main Command is responsible for directing and coordinating all the work in preparation for air and atomic defense.

At the provincial level the responsibility rests with TOPL commands under the presidiums of the peoples councils. 10/ Cities and industrial districts also have local commands of TOPL.

Large industrial plants have trained civil defense organizations, 11/ the setting up of which is the responsibility of a TOPL office in the ministry to which the plant is subordinate. 12/

Military units of TOPL are subordinate to the Main Command of TOPL 13/ but are "under the framework" of the Internal Security Forces (Wojska Wewnetrzne). These units are said to have appropriate equipment and to be trained for action in contaminated areas. 14/ It is implied that they have the mission of rescue work in areas damaged by air attack. 15/

General civil defense training for the population, although under TOPL direction at all levels, is based on the cooperation of a number of organizations and governmental units. Included are the Polish paramilitary society (League of Soldiers' Friends -- Liga Przyjacial Zolnieiza), the Polish Red Cross (Polski Czerwony Krzyz), the ministries of education and higher education, firefighting organizations, and others. 16/

II. Organization*

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civil defense was controlled by the Ministry of Defense (Ministerstwo Obrony Narodowej), it was legally subordinate to the Chairman of the Council of Ministers. On 4 December 1954 a Council of State decree transferred civil defense activities to the Ministry of Internal Affairs. 20/

It is probable that Soviet-Polish coordination in civil defense matters has increased since the change in jurisdiction. 21/ About 50 Polish civil defense officials have taken courses in the USSR, 22/ usually at the Leningrad School for Local Antiair Defense. 23/ According to one report, a group of Soviet civil defense colonels was sent to Poland in 1955 to "organize and direct the Polish headquarters on nuclear defense." 24/

A. National Civil Defense Headquarters (Main Command of TOPL)**

The Polish national civil defense headquarters, or Main Command of TOPL, is under the direct control of a Deputy Minister of the Ministry of Internal Affairs. The Commander-in-Chief (Colonel Alexander Cesarski), the Chief of Staff (Major Stanislaw Gruntowski), and the

* 17/. See the chart, Figure 1, following p. 6. 18/
** 25/. For the organization of the Main Command of TOPL, see the chart, Figure 2, following p. 6. 26/

Chief of the Mobilization Department (Lieutenant Colonel Stepnowski) constitute a Command Council (Kolegium Kiernownicze) for policy formulation. In addition to carrying out general responsibilities for supervising staff and subordinate units, the Main Command of TOPL conducts annual inspections of provincial headquarters and submits annual reports to the Minister of Internal Affairs and to the government before the budget debate. [redacted] the following subordinate departments at headquarters, estimated to employ 100 persons: 50X1

1. The organizational department is divided into general and operational sections and has responsibility for developing civil defense doctrine.

2. The training department has under it the public training section, responsible for training the entire population; the staff training section, which supervises courses and excercises for command and staff personnel at all echelons; and the Central Training Base at Otwock, which employs about 25 instructors. Two types of courses, of 3 months duration each, are given at the base, one for staff members at national and provincial headquarters and another for employees of industrial plants, ports, and the like.

3. The operational department includes sections for operations, communications and warning, and planning and mapping. It is responsible for developing civil defense plans consistent with the characteristics of the areas involved and for planning the warning system to include coordination with the air force and the preparation of wireline and radio links.

4. The technical department includes sections for construction of air-raid shelters and technical installations. It is responsible for preparing shelter plans and serves as the approving authority for production of civil defense equipment in industrial plants.

5. The finance department plans and supervises civil defense expenditures.

6. The research department is said to engage in research on foreign civil defense preparations and to receive instructional and training material from the USSR and other countries of the Soviet Bloc.

7. The mobilization department is responsible for preparing plans for the mobilization of manpower and equipment for civil defense purposes. Increased activity was noted in this department in 1956 as a result of the planned organization of civil defense "reserve battalions." The department in 1956 also had at least temporary responsibility for planning urban evacuation.

Figure 1

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Poland: Organization of Civil Defense

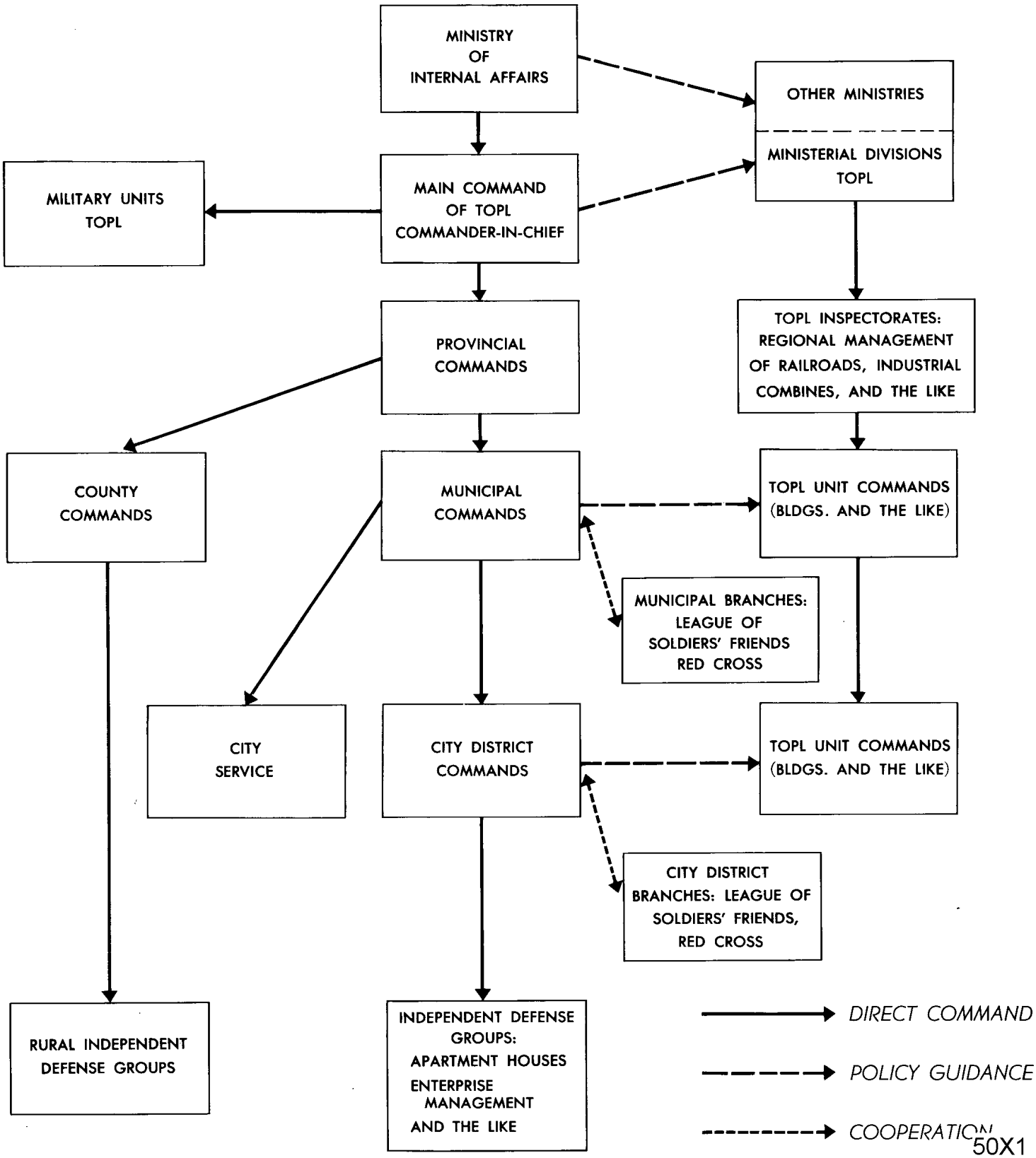

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Figure 2

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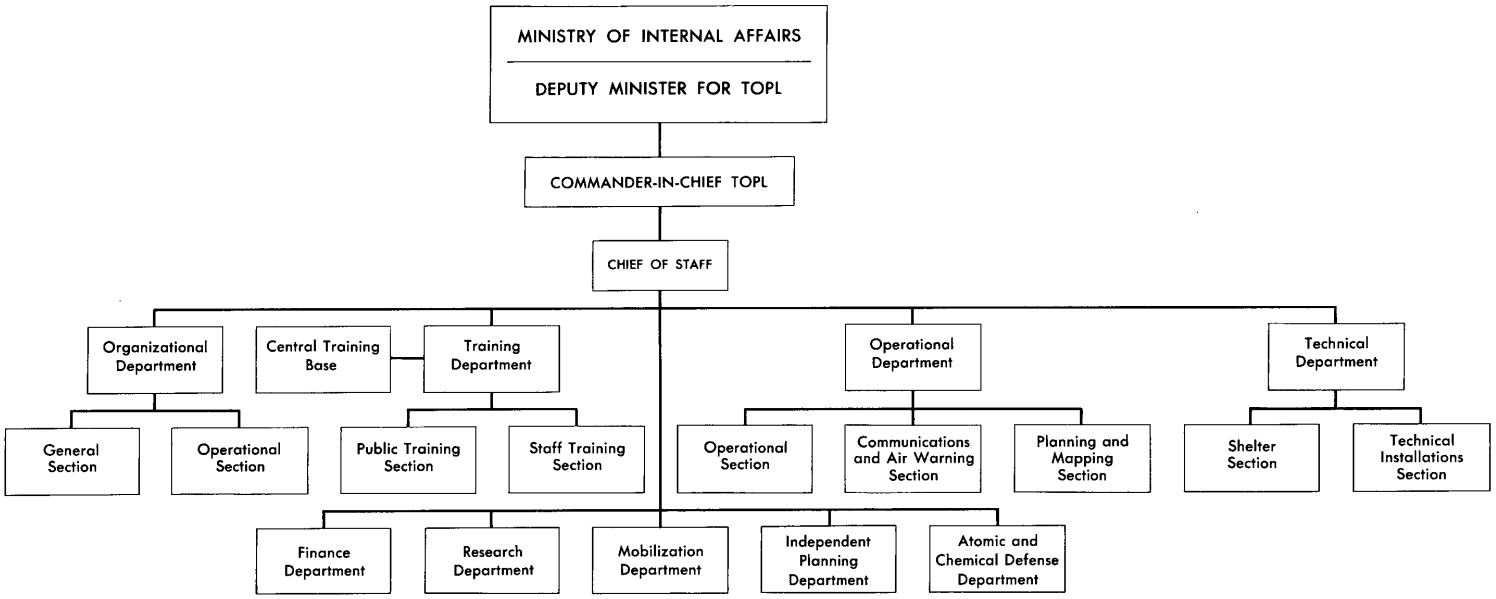
Poland: Reported Organization of the National Headquarters of Civil Defense



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8. The function of the independent planning department is not clear. [redacted] it prepares plans for the development of air defense "networks." 50X1

9. The atomic and chemical defense department operates in close coordination with scientific and technical establishments and has planned for production of "antiatomic equipment."

B. Military Units of TOPL

Polish publications have noted that Poland has military units of TOPL and also have stated that such specially organized and trained civil defense units exist in the USSR and in other European Satellite countries. 27/

The concept of military civil defense battalions was introduced in Poland in 1956. A cadre of officers was sent to the USSR for civil defense training in the same year. This civil defense corps reportedly will consist of three regular battalions stationed at Warsaw, Katowice, and Szczecin and about 40 reserve battalions. 28/ The three regular battalions were organized in 1957. Although they were Internal Security Forces for the purposes of administration and discipline, they were subordinate to TOPL for operations and training. 29/ The battalions will be subordinate to regional headquarters should they be called up in an emergency. 30/

Within a civil defense battalion, there are reported to be the following subordinate units: (1) a heavy earth-moving equipment company (literally, "bulldozer company"); (2) an antinuclear and antichemical company; (3) a motor transport company; and (4) a services company the functions of which include communications and supply. 31/

C. Provincial Commands of TOPL

There are 17 provinces (wojewodztwos) in Poland, and each has a civil defense headquarters employing about 5 to 10 persons. 32/ According to one report, the provincial civil defense command functions additionally as the command for the provincial capital city. 33/ Warsaw, the capital of Poland, is reported to have special status under the national headquarters. For civil defense purposes, the city is divided into two sections, Warsaw and Praga, each having a civil defense headquarters. 34/

D. City and County Commands

About 50 city headquarters of civil defense are reported in Poland. 35/ The city headquarters at Gliwice had 10 employees in

1956 [redacted] 36/ A large city may have subordinate district commands if the city is so divided for civil defense planning. 37/ As in the case of provincial capitals, it is probable that capital city commands of counties are identical with the county headquarters. 38/ 50X1

City services of a civil defense nature are stated to include those for (1) security, (2) medical aid, (3) fire defense, (4) rescue, (5) warning and information, and (6) disinfection and decontamination. 39/ "Special TOPL services" (Specjalne Sluzby TOPL) have been formed, using such organizations as the Health Service, the fire departments, and the Citizens' Militia as bases. 40/

Aid from a variety of Polish agencies has been sought to support the general civil defense training effort. The League of Soldiers' Friends, the Polish Red Cross, firefighting organizations, the Union of Polish Scouts, the Society for General Knowledge, aero clubs, the Union of Socialist Youth, the Union of Rural Youth, the ministries of education and higher education, the army, trade unions, the press, and radio and television media are all listed in one periodical as being asked to participate in a drive to expand civil defense training for the general public. 41/ Specific mention has been given to the civil defense training accomplished by the League of Soldiers' Friends, the Red Cross, the fire department, and the Union of Polish Scouts.

The use of so many organizations in civil defense training seems to have made necessary special committees for coordination. According to one publication, coordinating committees, "on the basis of a statute and their own plans of operation ... function under the leadership of the appropriate commands of TOPL." 42/ These committees are made up of representatives of the organizations listed in the preceding paragraph.

E. Industrial Civil Defense

Industrial civil defense is specially organized in Poland and probably has a much higher priority than civil defense for the general population. Each ministry is reported to employ five civil defense specialists, one of whom must be an engineer. 43/ This group is responsible for preparing civil defense directives in its field and issues orders to its subordinate units or installations. 44/

[redacted] the specific duties of civil defense offices of the various ministries included "enforcing all TOPL headquarters orders, supervising the construction of air-raid shelters, selecting personnel for warden courses, maintaining a current list of all air-raid wardens of organizations subordinate to the ministry, 50X1

procuring protective equipment such as gas masks, and keeping TOPL headquarters informed of all civil defense activities within their ministry." 45/ Additionally, industrial construction organizations employ civil defense monitors to insure the inclusion of civil defense measures in building plans. 46/

Plant managers in Poland (as in the USSR) are responsible for all civil defense preparations in their installations. 47/ A subordinate official, however, usually is specifically charged with civil defense preparations. 48/

The organization of civil defense in plants includes units for the following functions: (1) protection of order, (2) firefighting, (3) medical services and first aid, (4) rescue work, (5) disinfection and deactivation, 49/ (6) communications, (7) emergency repair and construction, and (8) camouflage and blackout. 50/

III. Instructions and Training

A. Staff and Command

A number of Polish civil defense officers were trained in the USSR, and Soviet officials have visited Poland to give guidance in civil defense preparations, as noted above.* Staff training also is conducted at a Polish civil defense installation near Warsaw. Courses are of 3 months duration. 51/ Continuing staff training also has been indicated in the form of periodical tactical exercises (without troops) at the national and regional levels. 52/ (This type of training is consistent with that prescribed for civil defense officials and headquarters in the USSR.)

In 1958 a special 10-week course was organized at the Polish Institute for Nuclear Research by the civil defense command. The purpose of the course was stated to be the preparation of an adequate cadre with knowledge of atomic defense problems. Students were to be familiarized with principles of dosimetry and decontamination and "basic provisions pertaining to radiological defense." The classes are evidently small -- the Polish periodical describing the activity noted that 18 students of the second group attending completed the course with favorable results. Graduates are to conduct training courses in their home regions, using the knowledge gained in this special course. 53/

* See II, A, p. 5, above.

B. Industrial Civil Defense

[redacted] "In general, civil air raid defense in Poland was well organized within industrial installations -- especially those producing military equipment." 54/ Publicity given to civil defense training exercises in Poland frequently mentions units from industrial plants. 50X1

At least two special courses in civil defense have been reported for plant leaders. One is a 3 months course at the national civil defense training base, 55/ and the other, for "wardens," is a 3 or 4 weeks course that takes into account special problems peculiar to the installations of particular ministries. Since 1953, graduates of the latter course are reported to have numbered 20,000 annually. 56/

Training of instructors and steps toward the organization of civil defense appear to have been general in Polish industry and transportation during 1953-55. 57/ Mass training for the workers, however, several times was reported to be primitive, cursory, and frequently boring.

Since 1955 the training of teams and workers has been intensified, and workers from many plants report taking civil defense courses and the occurrence of periodic air raid drills. 58/ Courses for workers have become compulsory, 59/ and workers in one plant were threatened with discharge for nonattendance. 60/ Defense measures against atomic weapons are now a part of instruction.

Publicity given civil defense in Poland also indicates rather well-advanced training preparations in industrial units. In mid-1958 the Polish civil defense commander-in-chief stated that "several" hundred thousand factory workers were organized and trained. 61/ Drills and competitions, specifically including industrial civil defense units, were given publicity during 1958 and 1959. 62/

Both interrogation reports and publicity, therefore, agree that there is increasing activity in civil defense training for industrial and other economic enterprises, although some reports still note poor performance at particular installations.

C. City Services and Civil Defense Battalions

Specific details of training for operative units of a city or region and for civil defense battalions have not been publicized in Poland. It is not demonstrable whether this omission is a reflection of Polish security restrictions or of a lack of activity. Descriptions of civil defense drills in Poland strongly suggest that such units are trained sufficiently to engage in rather full-scale exercises.

D. Drills and Demonstrations

Civil defense drills and demonstrations have been reported from Poland since 1955. 63/ According to a published article, equipped personnel of the TOPL services paraded on May Day 1958 in 11 communities. 64/ An air-raid drill in Wroclaw in June 1958 involved militia, fire departments, the Polish Red Cross, and "forces" of TOPL. Activity during the drill included sounding of sirens, troops appearing in protective clothing, simulated firefighting, rendering first aid, a disinfecting operation by the "chemical section," and rescue work by an "engineering section." This "atomic" drill lasted 4 hours but was criticized as not being entirely successful, because the general public was not prepared to participate. 65/

Units of TOPL and "corresponding formations from factories and ports" took part in civil defense exercises in Czestochowa in September 1958. 66/ In Gdansk a civil defense exercise in 1958 involved 1,500 persons from local services and groups from "some" installations. 67/

Ninety civil defense units from all parts of Poland competed at Lodz in August 1959. Competition was by sections, including sections for communications, firefighting, first aid, decontamination, and deactivation. 68/

E. General Public

The League of Soldiers' Friends in Poland, with about 1 million members, 69/ frankly acknowledges that it is patterned after the Soviet Voluntary Society for Cooperation with the Army, Air Force, and Navy (Dobrovol'noye Obshchestvo Sodeystviya Armii, Aviatsii i Flotu -- DOSAAF), an organization that is heavily involved in popular civil defense training in the USSR. Evidence indicates that the League of Soldiers' Friends has been given similar missions, as follows: (1) premilitary training for Polish youth; (2) training its own members in military specialities (radio communications, vehicle operation, seamanship, and the like); and (3) assisting in the civil defense training program. 70/

Another large organization that fulfills a role in Polish civil defense training is the Polish Red Cross. This society, with more than 2 million members, 71/ conducts first aid training for the population. 72/ In 1957 it was stated that the Red Cross would give assistance for medical civil defense training as part of the larger training program under the general supervision of the League of Soldiers' Friends. 73/

Revived after the 1956 "peaceful revolution," 74/ the Polish Boy Scout movement also has been enlisted to engage in civil defense training. 75/ Special efficiency badges are to be awarded to scouts completing civil defense training in a variety of subjects. After training, it is expected that scouts will take part regularly in civil defense exercises. 76/

The numbers of the general public in Poland trained in civil defense are unknown and, on the basis of presently available information, do not appear to be substantial. In early 1958, Polish publicity on civil defense decried the general lack of public knowledge of civil defense, although "several hundred thousand members" of TOPL units had been trained and "many" civilians had received training given by the League of Soldiers' Friends and the Red Cross. 77/ The "several hundred thousand" trained most probably are workers in important plants rather than the general public. 78/ One published article seemed to reflect an element of apathy on the part of the Polish public, stating that a special law was now needed compelling people to take part in civil defense work. 79/

Only general statements on popular training appeared in the Polish press during 1958 and 1959. An article published in early 1959 notes that training was given to "several thousand" instructors and teachers and to more than 1,000 persons from the instructors' cadre of the Polish scouts and also that training in civil defense was given in various specialist courses organized by the League of Soldiers' Friends, the Red Cross, firefighting organizations, and others. 80/ The coverage of the article seemed to indicate that the year 1958 was used for instructor and operative training rather than for universal public training. An exception probably is the inclusion of air defense training for students. 81/ In January 1959 the training of 40,000 young people in air and atomic defense was publicized in Warsaw. 82/ These and several thousand adults were said to have been trained by the League of Soldiers' Friends, industrial enterprises, and the Red Cross.

It can be concluded only that Poland is making preparations for civil defense training for the general public but that truly universal civil defense training was only at an early stage in 1959.

IV. The Category System

It is becoming increasingly evident that several countries of the Soviet Bloc, including Poland, assign a civil defense category to each city and economic installation. This category determines the civil defense preparations to be carried out in the city or enterprise.

A. City Categories

It is only reasonable that Polish cities should conduct varying civil defense preparations depending on the possible size and type of attack. It would be illogical, for example, to invest in massive blast shelters in a town not large enough or important enough to justify heavy air attack. Similarly, complex rescue organizations and communications need not be organized in smaller communities, where the most probable attack would involve targeting of specific points such as bridges, powerplants, or small factories.

The city category system has only been hinted at in open Polish publications. Particularly, special civil defense procedures, which stress the importance of certain localities, have involved evacuation and shelter preparations. For example, the commander-in-chief of Polish civil defense stated on one occasion that "evacuation of particularly exposed* centers" and other measures would greatly limit losses. 83/ A civil defense pamphlet published in 1958 connects projected evacuation with the population of larger cities* but notes that shelters capable of withstanding the effects of atomic weapons at short distances from the blast are being provided for the personnel who must remain in the city to perform essential functions. 84/

[redacted] the existence of a list of cities, originating from the national civil defense office in 1958, which listed the cities in three categories -- special, first, and second. [redacted] Warsaw, Gdynia, Gdansk, Katowice, Gliwice, and Bytom were among those in the "special" category, and the cities of the first and second category that were recalled ranged downward in population to as low as 31,000.** 50X1 50X1 50X1

[redacted] Poland was divided into two zones, "A" and "B," in late 1957. Zone "A" included cities and 50X1

* Analyst's underlining.

** An East German civil defense document states that categorization of cities in East Germany is to be accomplished, taking into account their "political, economic, and geographic structure and their significance to the defense of the country." The document also states that the classification of cities and of production and supply installations, by the degree of air attack danger and vulnerability, is intended to establish the extent of required protective measures. 86/ Czechoslovak cities also are categorized by degree of importance for civil defense. 87/ Because civil defense in the European Satellites is guided by the USSR, it is highly probable that the Polish category system is based on a like principle.

industrial areas that are likely targets of atomic attack, and zone "B" included the rest of the country. 88/*

[redacted] 50X1

[redacted] city TOPL head- 50X1

quarters were maintained in cities with more than 40,000 population. 91/ Polish population figures for 1957 indicated that there were 49 cities in Poland with a population of more than 40,000. 92/ This information does not necessarily mean that only all points with a population of more than 40,000 are estimated to be likely atomic targets. Factors other than size probably influence the estimated target importance of a city and the civil defense measures planned.

B. Plant Categories

Polish industrial plants (and probably other economic installations such as ports, mines, rail terminals, and communications installations) are assigned to civil defense categories (I through IV).

Installations in Category I are said to include industrial plants engaging in military production or those that could be converted for military manufacture. Also included are powerplants and steel mills and plants manufacturing machine tools, electrical equipment, locomotives and railroad cars, and chemical products.

Plants in Category II are those of less importance to national defense, such as cable plants, large repair shops, construction material plants, and some mines.

Plants in Categories III and IV are described only as those less important to the national defense effort. 93/**

Industrial plants in Category I are required to meet the following civil defense specifications:

1. Electric power -- two separate sources of electricity, each capable of furnishing 100 percent of the electrical needs of the plant. Each line would have an independent transformer room.

* The East German manual mentioned in the second footnote on p. 13, above, also refers to a "zoning" of the entire country in addition to the classification of cities. Secondary zones are implied to be "less endangered areas" that are of civil defense significance for storage and warehousing purposes. 89/

** Czechoslovak, 94/ Soviet, 95/ and Hungarian 96/ plants also are categorized for civil defense purposes, and an East German planning document 97/ indicates an extensive civil defense scheme based on the categorization of industrial plants and other economic installations in East Germany.

2. Water -- two sources, each capable of fulfilling all needs of the plant. The general inadequacy of Polish water systems has prevented realization of this requirement. Some plants have projected deep wells.

3. Air-raid shelters -- underground gas-proof shelters for 50 to 60 percent of the workers on the largest shift. Plans have been developed to adapt basements or to build trench shelter for the rest of the work force.

4. Required civil defense installations (other than the above shelters) include a civil defense command post, first-aid posts (both in shelters), a decontamination bathing point, an observation point, a clothing decontamination point, a vehicle and rail decontamination point, civil defense storage facilities, and a chemical-bacteriological-radiological laboratory.

Industrial plants in Category II are required to meet the following civil defense specifications:

1. Electric power -- there must be two sources of power, but only one transformer installation is required.

2. Water -- same as for Category I.

3. Air-raid shelters -- underground gas-proof shelters for 40 to 50 percent of the workers on the largest shift. Facilities for the rest of the work force are the same as for Category I.

4. Other required civil defense installations -- same as for Category I.

Industrial plants in Category III are required to meet the following civil defense specifications:

1. Electric power -- same as for Category II.

2. Water -- same as for Category II.

3. Air-raid shelters -- underground gas-proof shelters for 25 to 40 percent of the workers on the largest shift. Facilities for the rest of the work force are the same as for Categories I and II.

4. Other required civil defense installations -- same as for Category I.

Industrial plants in Category IV are required to meet the following civil defense specifications:

1. Electric power -- no special requirements.

2. Water -- no special requirements.

3. Air-raid shelters -- underground gas-proof shelters for 25 to 30 percent of the workers on the largest shift.

4. Other installations -- plans for these were reported to be only "paper" plans.

C. Shelter Categories

Poland (as well as some other countries of the Soviet Bloc 98/) has a variety of designs for air-raid shelters divided into four types according to protective strength. 99/ Types I and II probably are bunkers. Type III is said to be able to withstand 11.4 pounds of pressure per square inch (8 metric tons* per square meter). 100/ The meager description that is available of Type IV makes it appear to be generally similar to the lightest basement shelter in the USSR, with 16 centimeters (cm) (6.3 inches) of concrete for the roof. [redacted] 50X1
[redacted] it can "withstand pressures" of 5 pounds per square inch (3.5 tons per square meter). 50X1

V. Types of Civil Defense Construction

A variety of shelter types may be expected to result from the category system in Poland. References to variations in shelter strength and in specifications for air raid shelters have not been found, however, in open Polish publications, although numerous defectors describe varying types of air-raid shelters.

A. Basement Shelters

Although basement shelter designs in Poland differ in several details, the descriptions [redacted] generally are consistent with one another and with known Soviet designs. 50X1

Instructions commonly call for shelters to be built during new construction as part of the basements of apartment houses. 101/ Shelters also have been built in other new structures such as plants, stores, and government buildings.

* Tonnages are given in metric tons throughout this report.

A typical Polish basement air-raid shelter (see the sketch, Figure 3* 102/) contains one or more shelter rooms, a lavatory, a filter-ventilation room, an emergency exit tunnel, and an entrance with double airtight doors of steel or reinforced concrete. 103/ Various ceiling thicknesses are given -- in a typical case the ceiling was stated to consist of reinforced concrete 20 cm (7.9 inches) thick. The length of the escape tunnel usually is determined by the height of the building -- it must be one-half as long as the building is high. In a number of cases, ceilings for basement shelters have been reported of reinforced concrete ranging in thickness up to 80 cm (31.5 inches). 104/ Some ceilings are of three layers, with sand 105/ or sawdust concrete 106/ between the shelter roof and the finished first floor.

B. Detached Underground Shelters

The detached underground shelter in Poland is similar to the basement type but may be described as an underground light bunker. [redacted] Its use is most often associated with industrial plants, but its design probably also is intended for residential areas where basements are inadequate or nonexistent. 50X1

[redacted] this type of shelter is required to meet the following civil defense specifications (see the sketches, Figure 4* 108/ and Figure 5* 109/): 50X1

1. A capacity of 100 to 200 people.

2. Two entrances.

3. The ceiling to be reinforced concrete with resistance of 4,500 kilograms per square meter (6.4 pounds per square inch) and to be covered with at least one-half meter (19.7 inches) of earth.

4. Outer walls to be 72 cm (28.3 inches) thick and inner walls 51 cm (20.1 inches) thick. The walls usually are of brick.

5. Shelter rooms not to exceed 40 square meters (431 square feet) in area. Six-tenths square meter (6.5 square feet) of floor area and 1.4 cubic meters (49.4 cubic feet) of air space per person.

6. Water tanks both for drinking and for sanitary purposes, the drinking-water tank to contain 1 liter (1.06 quarts) of water per person.

* Following p. 18.

7. Electric lights supplied with electricity from the normal lines and flashlights to be provided for emergencies.

8. Ventilation through ducts induced by a fan that can be operated by electric power or by hand. Expansion chambers and filter canisters are part of the ventilating system.

C. Observation Shelters

As in Hungary, a small one-man or two-man shelter has been designed for Polish workers who must remain at their jobs during air attacks. Such workers probably include essential guards and those required to maintain watch on furnaces in foundries and on distribution boards in powerplants.

A shelter of this type is essentially an anchored concrete cone with vision slits and a small iron door (see the sketch, Figure 6* 110/). The only equipment specified for these shelters was a flashlight (in 1958). 111/

D. Light Command Posts**

A variation of the light bunker or "independent shelter" is the reported command post shelter for industrial establishments in Poland. Its variation consists principally of special equipment and a room arrangement suitable for civil defense operations (see the sketch, Figure 7* 113/). Decontamination showers and clothing changes are prescribed for those who must enter from contaminated surroundings.

E. Heavy Bunkers

Heavy bunkers probably are used for major civil defense, air defense, and government headquarters in Poland. These bunkers may be similar to bunkers built in Hungary and sketched in Soviet civil defense literature 114/ (see the sketches, Figure 8* 115/). Such shelters are characterized by extremely heavy construction -- walls about 4 meters (13 feet) thick and full appointments. 116/ The latter may include a complete filter ventilating system, an emergency generator, telephone and radio communications, a deep well for water supply, and stocks of food.

F. Other Types of Civil Defense Structures

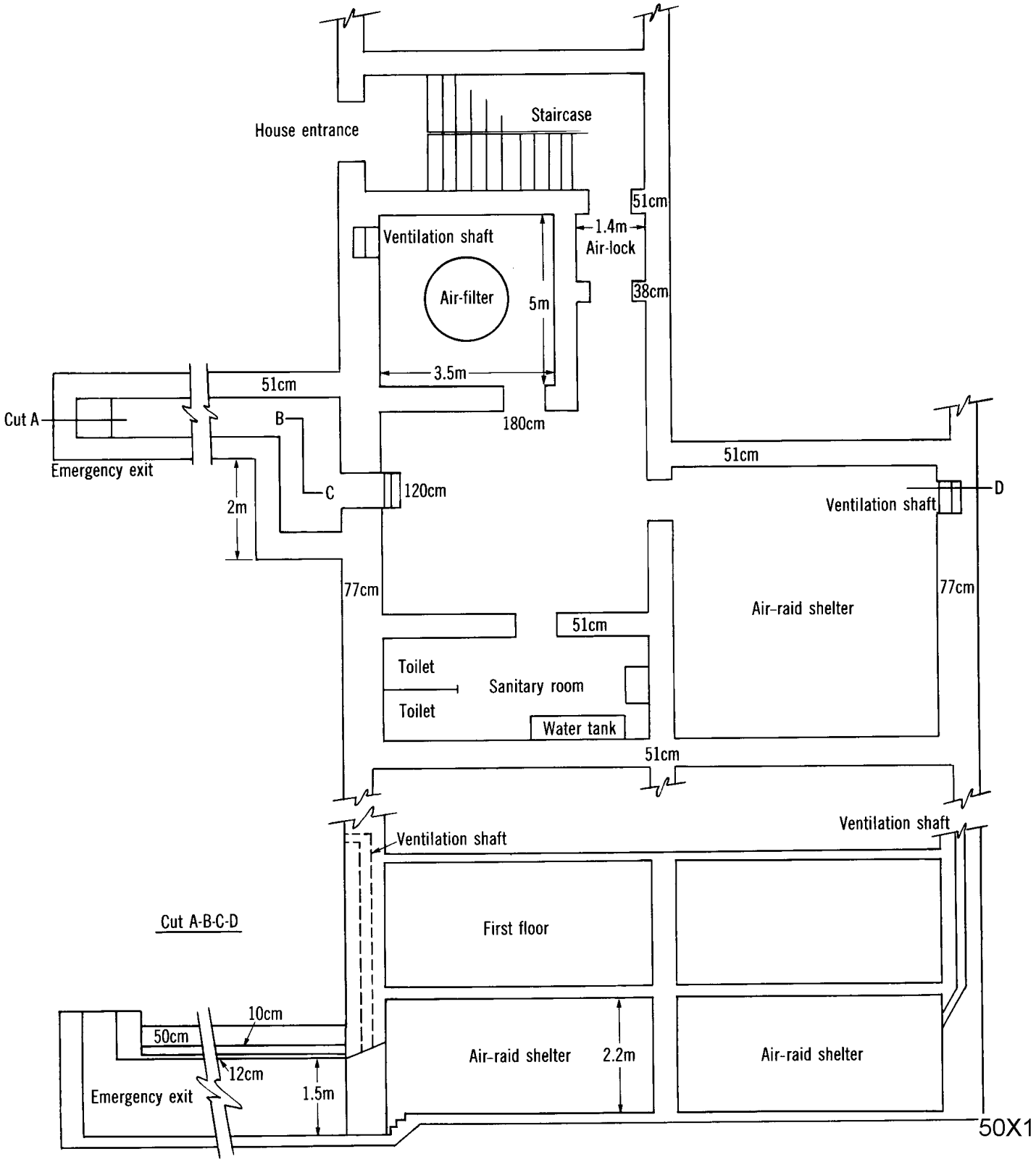
A number of other types of civil defense structures have been reported from Poland, including protected medical aid points, vehicle

* Following p. 18.
** 112/

50X1

Figure 3

Poland: A Basement Air-Raid Shelter



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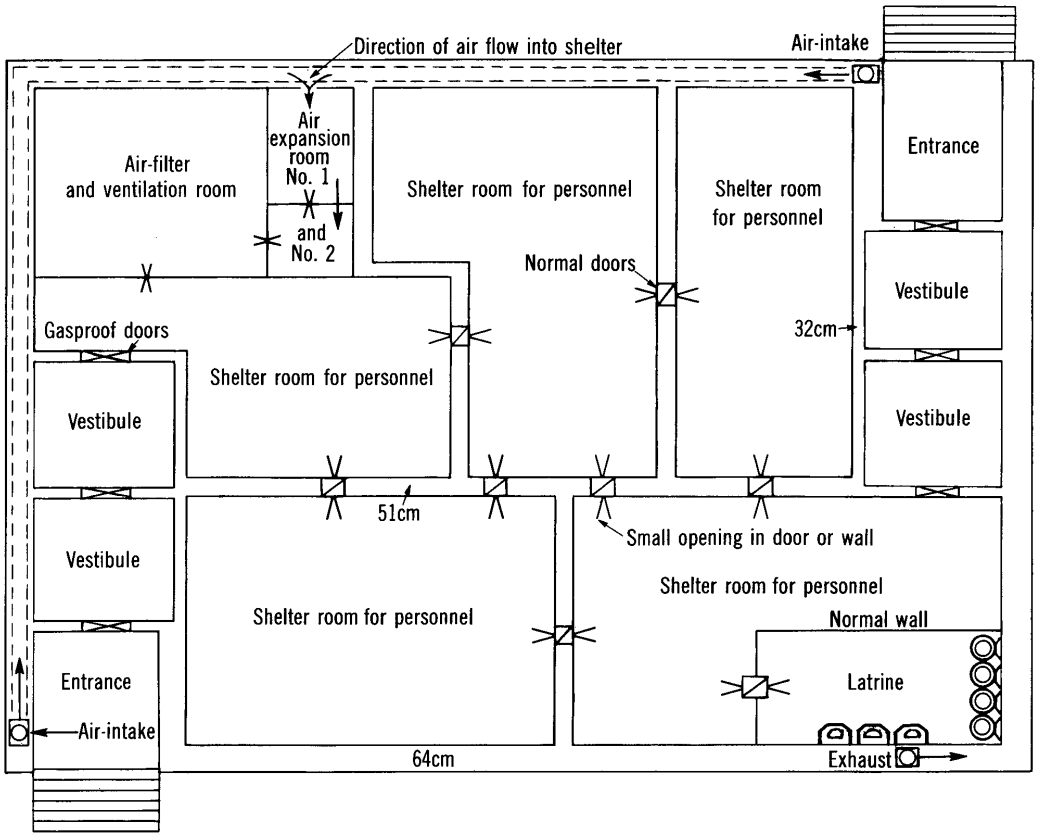
50X1

Figure 4



Poland: Typical Layout of an Independent Air-Raid Shelter

50X1

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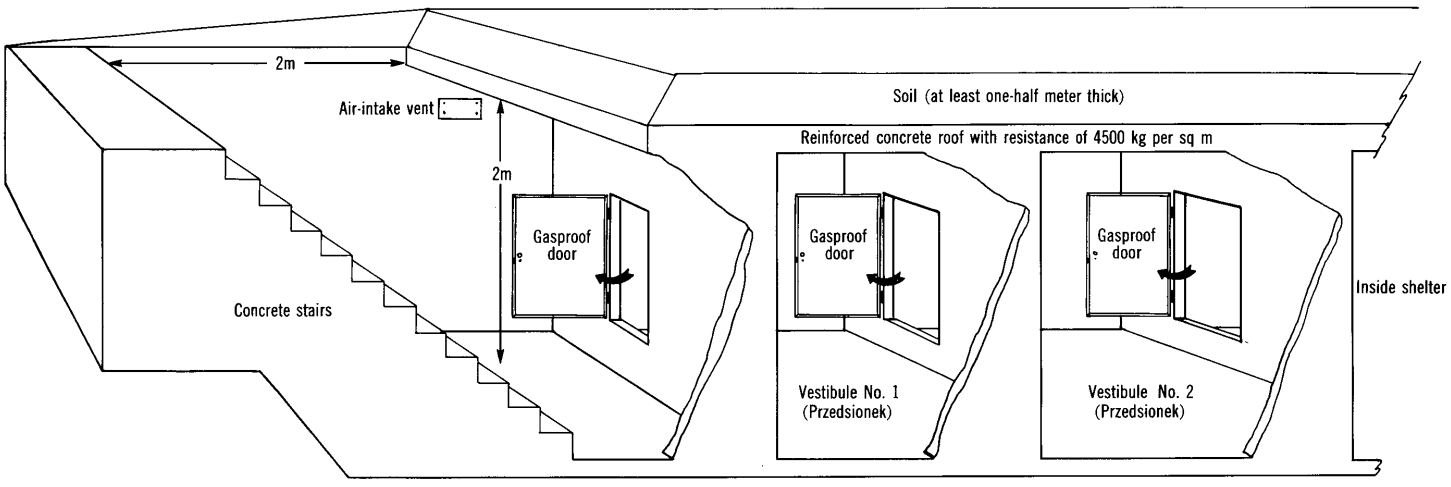
Figure 5 50X1



Poland: Double Vestibule Entrance of an Independent Air-Raid Shelter 50X1

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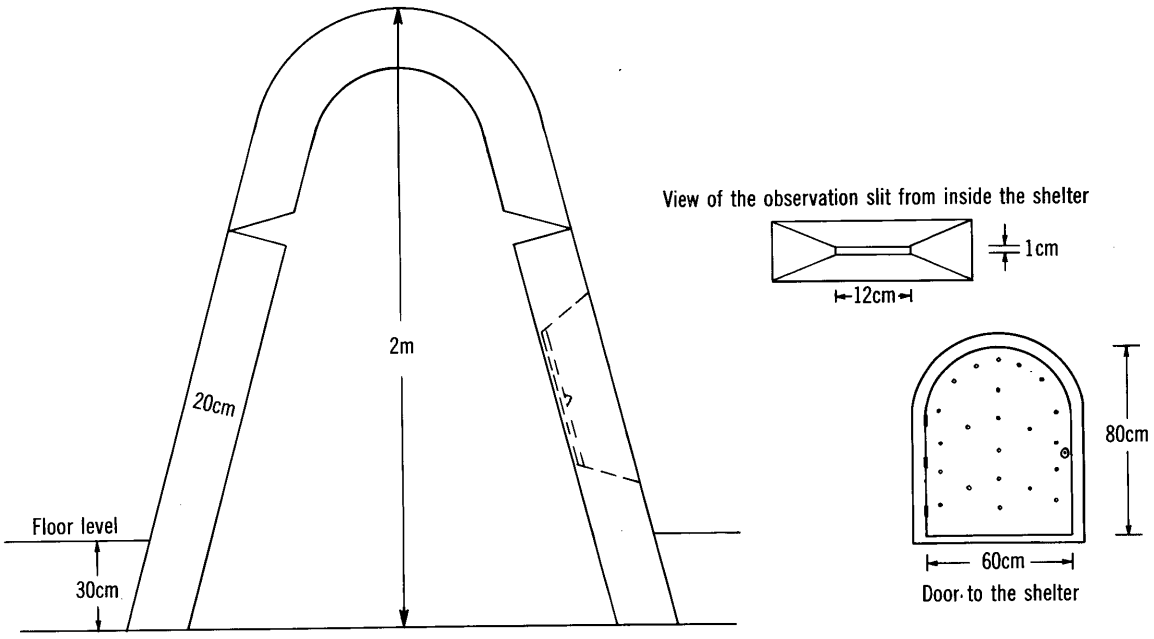
[redacted]

Figure 6

50X1



Poland: Observation Air-Raid Shelter

[redacted]

50X1

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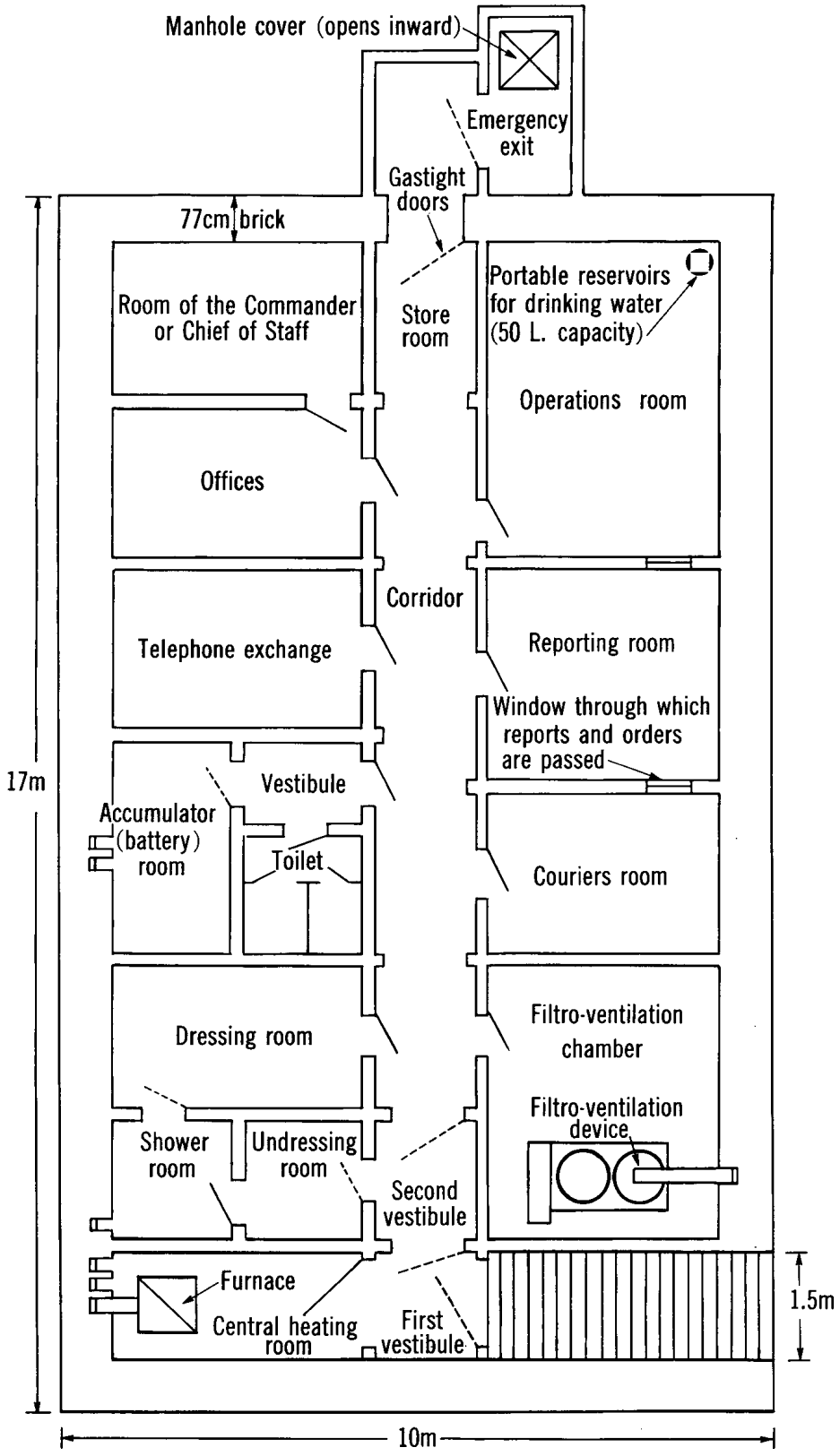
50X1

Figure 7



Poland: Light Command Post

50X1

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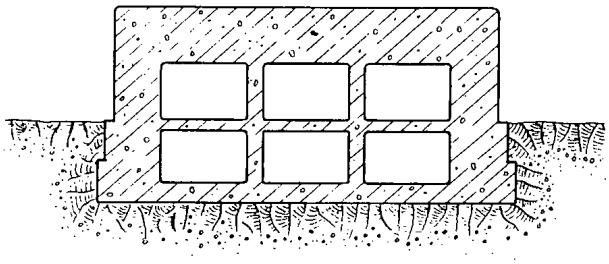
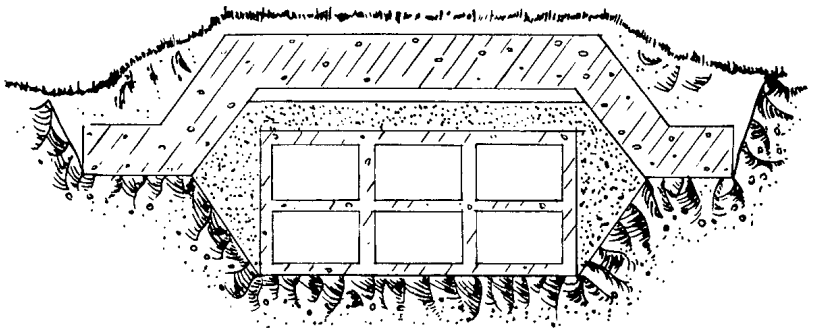
Figure 8



Solid-Type Shelter



Layer-Type Shelter

USSR: Heavy Air-Raid Shelters

50X1

29084 9-60

and personnel decontamination points, and permanent and emergency trench shelters. The trench shelters are covered with earth and are lined with concrete or wood.

G. Filter Ventilators for Air-Raid Shelters

Filter ventilators for Polish air-raid shelters are reported to be of the Soviet type. As designed, these include an air intake, a dust filter, antichemical filters, a fan and a motor, and the necessary ducts for air distribution. Exhaust vents are customarily located in lavatories. When operating properly, the air pressure inside the shelter should be slightly higher than outside.

VI. Implemented Air-Raid Shelter Construction

As in other countries of the Soviet Bloc, security measures in Poland prevent an accurate assessment of the amount of air-raid shelter built and fitted for use. It is certain that some shelters have been constructed, and many have been reported (see the map, Figure 9*).

A. Command Posts

Civil defense command posts have been constructed for Warsaw and for each of the 17 provinces in Poland. [redacted] 50X1
[redacted] these posts were equipped with air-raid shelters and 50X1
cost more than 5 million zlotys** each. Supporting information has been received which indicates that such command posts are located in Szczecin 118/ and near Katowice. 119/ The latter is described as a particularly heavy underground bunker. A third command bunker is reported to be in Gdansk. 120/

A recent Polish news story describes the opening of a new civil defense school building near Warsaw as containing a "training command post." 121/ [redacted] an underground 50X1
headquarters command post for TOPL was to be built in this area. 122/

B. Plant Air-Raid Shelters

Interrogation reports are in general agreement that the construction of air-raid shelters in Polish plants has enjoyed a higher

* Following p. 20.

** Except where otherwise indicated, zloty values in this report are given in terms of 1957 zlotys and may be converted to US dollars at the rate of 4 to 1. This rate of exchange, however, does not necessarily reflect the dollar value.

priority than that accorded to shelters for the general population. Plant air-raid shelters are located in about 40 Polish cities and towns, [redacted] and a number of defectors state that they worked on planning and designing of industrial air-raid shelters. 123/ 50X1

C. Basement Shelters

Preparation of air-raid shelters in basements of masonry buildings has been carried on in Poland for several years. Defectors occasionally report that general orders for providing such shelter during the course of new construction are not always followed. Since 1957, however, increased attention has been given to this matter.

According to a Wroclaw newspaper in 1957, the Polish Council of Ministers "ruled" that any building containing 3,000 square meters (32,000 square feet) must have an air-raid shelter. It was noted that such regulations in the past had not been carried out in all cases. 124/ Similarly, it was reported that in 1957 a letter from Warsaw directed that all new apartment houses designed to house four or more families had to be equipped with air-raid shelters. The specifications were described as "rigid," and it was stated that there were only occasional defects in construction. 125/

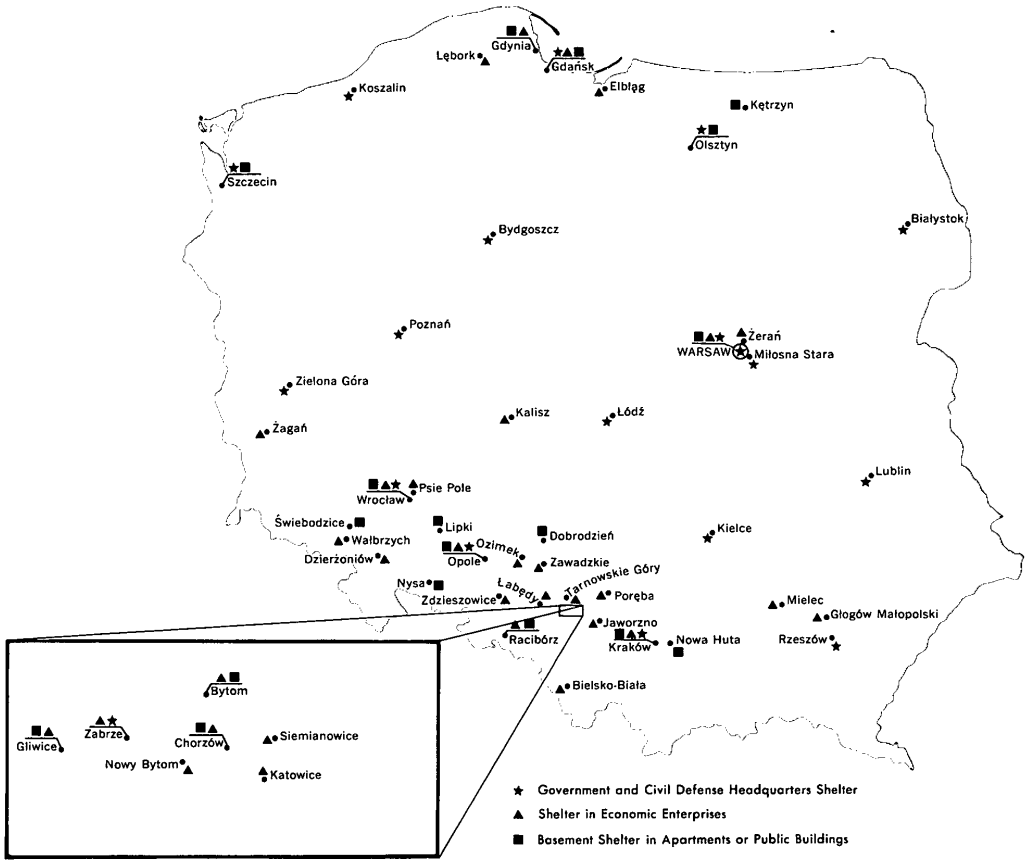
Poland is unique among the countries of the Soviet Bloc in having published or broadcast information about air raid shelters. The head of Polish civil defense stated in 1958, "Air raid shelters are ... being constructed. In ... shelters constructed in new housing, ... the requirements of antiatomic defense are being taken into consideration. In old housing districts, so-called separate shelters will be constructed." 126/ He also stated, "There are many antiaircraft shelters in towns ... ." 127/ In 1959 a Polish pamphlet contained the following statement: "Shelters are constructed in every newly constructed apartment or office building." 128/

On at least two occasions, concern has been publicly expressed over vandalism in apartment shelters. For example, a Warsaw broadcast of 8 May 1958 stated, "Last year, thousands of cases of damage and theft of equipment from shelters were noted. Motors for filters and ventilation were destroyed as well as various other equipment, including wash basins and even toilet bowls ... ." 129/ In the same year a "letter to the editor" in Warsaw complained that tenants in new housing could not use basements for storage, because of air defense regulations. The editor's reply stated that basement space would be made available to the tenants "as soon as special defense equipment is installed." 130/

50X1

Figure 9

Poland
Locations of Reported Air-Raid Shelter Preparation



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50X1

[redacted] 50X1

some basement shelters were under construction in principal cities as early as 1952. There is, however, a discernible increase in the amount of such construction reported since 1956.

The designs of basement shelters, when described, are generally consistent with one another, with shelter descriptions from other countries of the Soviet Bloc, and with sketches appearing in Bloc manuals. Many of the Poles describing basement shelter were formerly connected with the construction industry, either as designers and engineers or as workers in building trades.

D. Filter Ventilators

Although some major air-raid shelters in the Soviet Bloc (such as tunnels or bunkers for government use, communications, and major plants) are reported to be provided with filter ventilation, basement air-raid shelters have not often been reported to be so equipped. Evidence from Poland, however, indicates that filter ventilating equipment is being installed in basement air raid shelters. The installation of filter ventilation in shelters significantly increases the protection afforded against radioactive fallout as well as against chemical and biological agents.

Evidence that filter ventilation is being installed in Polish basement air raid shelters since 1957 includes the following: (1) the news releases mentioned above* concerning vandalism in connection with ventilator motors in Polish shelters and the installation of equipment, (2) several interrogation reports in which defectors describe the installation of filter ventilator systems, 131/ and (3) [redacted] Polish plants are manufacturing filter ventilating equipment for installation in air raid shelters. 132/ 50X1 50X1

E. Statements on Amount of Shelter

Several factors operate against making a definitive estimate of the amount of air-raid shelter presently available in Poland. These include the following: (1) Polish security restrictions on civil defense information, (2) reliance on individual reporting by defectors or repatriates who can have only individual knowledge of one or a few specific installations, and (3) the lack of any reporting from many areas of the country. The volume of individual reports of shelter

* See C, p. 20, above.

preparation is substantial, however, and several additional factors, which follow, indicate a considerable amount of construction.

1. Orders -- decrees or orders to build air-raid shelters in plants or dwelling units have been reported several times and in at least one instance have been mentioned in a Polish publication.

2. Published statements -- Polish press accounts or radio broadcasts have stated or implied that "many" or "thousands" of air-raid shelters exist and that construction is continuing.

3. Estimates by defectors -- one Polish engineer stated in 1958 that, in his opinion, only about 10 percent of the urban population was provided with adequate air-raid shelters. This figure did not include industrial employees. [redacted] 70 percent of industrial establishments were equipped with air-raid shelters. 133/ 50X1

Standards reported for shelter construction indicate, however, that formal shelter is to be provided for only about 40 percent of the workers on the largest shift in a plant. (In 1960, Poland had 13.9 million urban residents and 2,972,000 industrial workers. 134/) Another engineer defector "figured" that shelter built to 1958 may have been adequate for 3.5 million persons. 135/

On the other hand, [redacted] 50X1
[redacted] from 1952 until 1957, command posts and factory shelters 50X1
were being constructed but that very limited amounts of shelters in basements were prepared. [redacted] basements were 50X1
generally constructed under new masonry dwellings. 136/

4. In addition to new construction, [redacted] 50X1
suitable World War II shelters have been cleaned out, repaired, and readied for use. As with new shelters, most of these older shelters are in major urban areas or at industrial installations.

VII. Other Aspects of Civil Defense

A. Fire Defense

The Polish firefighting organizations have made an impressive recovery from the situation at the end of World War II, when the retreating Germans confiscated or destroyed most mobile firefighting equipment. Initially, new equipment was purchased abroad. The national firefighting headquarters was transferred from the Ministry of Communal Economy to the Ministry of Internal Affairs in December 1954, at about the same time that Polish civil defense was subordinated to

applied to defense information such as that on state reserves and civil defense probably account for the paucity of information.

Polish civil defense officials several times have made statements to the effect that an essential part of civil defense preparations includes "the stocking of resources for rescue work" and providing "the civilian population with appropriate equipment." The commander-in-chief of Polish civil defense noted on one occasion that Polish industry was "turning out a number of means and installations necessary for anti-atomic defense." He specifically mentioned protective clothing and geiger counters. 158/ Detection instruments were displayed at a Polish civil defense exhibit in November 1958.

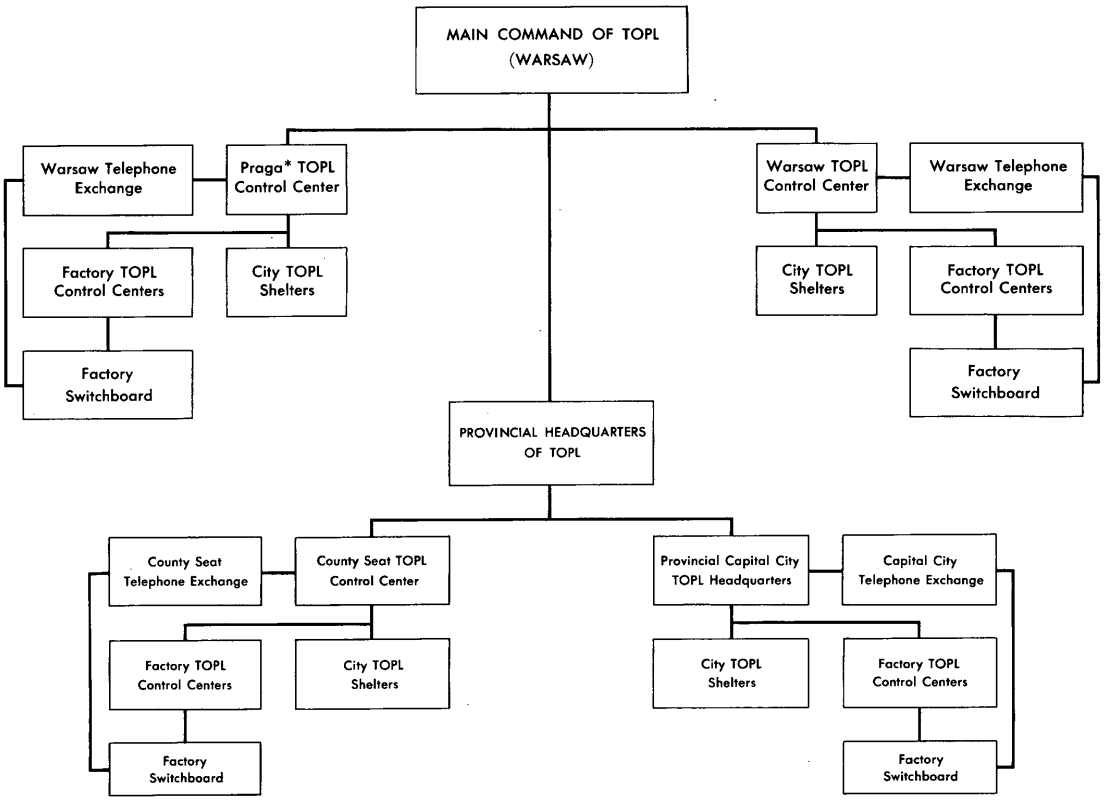
50X1

The primary recipients of civil defense supplies thus far are believed to be various civil defense headquarters and major plants. No supplies have been reported being issued to the general public.

50X1

Figure 10

Poland: Organization of TOPL Wire Communications System



*For civil defense purposes, the city of WARSAW is divided into two sections, WARSAW and PRAGA.

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50X1

Next 8 Page(s) In Document Denied

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50X1