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USAF HISTORICAL STUDIES: NO. 123

HISTORY OF THE AIR FORCE CIVILIAN TRAINING PROGRAM
1941-1951

USAF Historical Division
Research Studies Institute
Air University
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F O R E W O R D

The purpose of this study is to trace the evolution of the Air Force civilian training program from its beginnings in the spring of 1941 to the end of 1951. In this ten-year period many significant developments in civilian training took place as a result of the great expansion of Air Force personnel strength brought about by World War II and the Korean War-- and of the great advances in military aviation made possible by new scientific and technological developments. The size, complexity, and highly technical nature of the operations necessary to develop and sustain modern airpower came to require the services of large numbers of skilled civilian personnel in a wide variety of occupations. This study endeavors to cover all phases of the training program developed by the Air Force to meet the varied training needs of its large force of civilians, except those needs involving civilian flying training, i.e., the training of such civilian personnel as ferry pilots and flying instructors.

This study was written by Dr. Edwin L. Williams, Jr., of the USAF Historical Division, Research Studies Institute, Air University, Maxwell Air Force Base, Alabama. Like other historical Division studies, it is subject to revision, and additional information or suggested corrections will be welcomed.

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Chapter I

BEGINNINGS OF CIVILIAN TRAINING IN THE AIR CORPS

In the period prior to World War II the Air Corps had no civilian training problem; consequently, it had organized no comprehensive civilian training program. Labor was plentiful and it was a simple matter to hire fully qualified workers--training was the responsibility of the individual concerned with getting a job. Privately owned and operated trade and vocational schools, as well as state and city-owned institutions, were adequate to meet the training needs of the period. At this time the War Department had only to request a mechanic from the Civil Service Commission; the Commission then consulted its register, selected the top man, processed him, and sent him to the installation where he was to be employed.

As late as the summer of 1940 there was no concern in the Air Corps over the supply of trained civilian personnel. A system of apprentice training, a slow process which produced several hundred apprentices every year, was used to provide the relatively small number of trained employees needed. Also a few National Youth Administration boys were given six months of training preparatory to being used as mechanic helpers. But with the outbreak of World War II in 1939 and the growing demand for labor by private industry and by government agencies, the situation had begun to change. Beginning in September 1940, the total number of airplanes authorized by Congress rose almost in geometric progression. In the winter of 1940-1941 with the Civil Service register cleared of eligibles

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and the demand for skilled labor growing everyday it was obvious that the Air Corps had one of the major civilian training problems in the government services--one necessitating a full-fledged training program.¹

Recognizing the newly developed need for a comprehensive training program Secretary of War Henry L. Stimson appointed Mr. Lawrence A. Appley to study the situation with a view to formulating a policy and a program for War Department civilian training. Mr. Appley discovered that the prevailing belief of the War Department was that it had no training responsibility in regard to civilians since it was the function of the Civil Service Commission to provide qualified workers who could be put on the job immediately; he also found that only a few scattered sections of the War Department actually had any real comprehension of the labor market. Also there was no organization at the top of the War Department for dealing with civilian training.²

As a result of the report made by Mr. Appley Secretary Stimson issued a War Department Memorandum for Chiefs of Bureaus, Arms, and Services, 10 July 1941, establishing a specific policy on civilian training.³ This directive laid down the basic policies for the training of civilian employees of all the components of the Army including the Army Air Corps. It set forth an approved civilian training policy which was to attain the following objectives:

1. An integrated over-all War Department training program which would provide civilian personnel with the knowledge, skill, habits, and attitudes required to maintain normal or emergency work schedules and to equal or exceed performance records.

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2. The same careful consideration for the training of civilians as was given to that of soldiers.

3. A genuine high caliber civilian morale.

4. Training for the promotion of civilian personnel who showed capacity for advancement.

5. A flexible basic training policy readily adaptable to local and changing conditions.

6. Training activities which would provide for both long-range and immediate needs.

Under the provisions of this directive the War Department was to assume the responsibility for determining the training required by its civilian personnel, and for the performance of as much of that training as possible, soliciting the aid of outside agencies when necessary or most advantageous. The directive also made it the responsibility of the chiefs of the various branches to provide for the training needs of civilian personnel in their organizations.

The War Department recognized that it was now impossible for the Civil Service Commission to furnish fully qualified personnel. Therefore, although the Commission would continue to provide the best qualified personnel possible, the chiefs of the branches (such as the Chief of the Air Corps) were to see that the necessary training was provided. It was the responsibility of each chief of branch to determine the training methods most suited to his particular situation. Staff positions and divisions were to be established in the War Department and by the chiefs

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of the branches for the purpose of giving advice and assistance in carrying out the training responsibility.

Finally, as a procedure to be followed in providing training for individuals falling under any civilian classification, the directive set up the following six steps:

(1) A clear definition of the jobs to be done by positions.

(2) Establishment of the standards of performance required for jobs to be done.

(3) Designation of the actual training required to develop the above performance.

(4) Selection of the sources of training to be used--such as training in the shop during production hours (on-the-job-training), training in the shop outside of production hours, training in special classrooms and laboratories located on the premises (on-reservation training), or training in classrooms and laboratories located elsewhere (off-reservation training).

(5) Determination of the training required to enable an employee to establish performance standards.

(6) Maintenance of progress reports on all civilian personnel.⁴

The memorandum also indicated that a supplement showing the organization authorized for the purpose of carrying out the prescribed training program was to be issued. This supplement--War Department Civilian Training Memorandum No. 1, October 20, 1941, Subject: Organization--authorized the following positions in order to implement the civilian training:

(1) Director of Civilian Training, Office of the Secretary of War.
Mr. William H. Kushnick, announced as the full-time incumbent by a letter

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of 29 September 1941, was to serve in an advisory and coordinating capacity.

(2) Supervisor of Civilian Training, Office of the Chief of a Branch.

Where civilian personnel was engaged in numbers sufficient to warrant a full-time assignment, the chief of a branch was authorized to appoint a supervisor of civilian training to his staff. Where smaller numbers of civilian personnel were involved, a part-time appointment was authorized.

(3) Civilian Training Officer, Field Establishment. The commanding officer of a field establishment employing civilian personnel was authorized to appoint to his staff a civilian training officer, either full or part-time, depending on the extent of the program required.

(4) Staff Assistants. Where it was necessary to expedite and broaden the training program the chiefs of branches and the commanding officers might authorize and designate staff assistants for the supervisors and for the civilian training officers.

This supplementary memorandum directed that the functional relationship of the directors and the supervisors of civilian training should be continuously close, and that a similar relationship should be established between a supervisor and the civilian training officers in the field establishments of his branch.⁵

Civilian training became an increasingly important part of civilian personnel administration in the War Department, especially as manpower shortages developed. Mr. Kushnick, as Director of Civilian Personnel and Training for the War Department, reported directly to Mr. John W. Martyn, principal administrative officer of the department. Kushnick also served as chairman of the Secretary of War's council on Civilian Personnel which considered all major questions of civilian personnel policy and made recommendations thereon.⁶

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Meanwhile the Army air arm had begun to develop its own civilian training program in order to meet the problems created by the employment of large numbers of untrained civilian personnel hired as a result of the great expansion program authorized by Congress. A beginning had been made even before the War Department issued the Memorandum of 10 July 1941 announcing the basic policy for civilian training. Early in March of 1941 the Chief of the Training and Placement Section, Civilian Personnel Division, Office of the Chief of the Air Corps (OCAC), was selected, and in May the Chief of the Training Unit in that section was appointed. During the following summer three training specialists were added. This organizational set-up for civilian training pertained only to departmental employees; not until 1943 was the Training Branch established in Headquarters AAF to handle civilian training in the field as well as for departmental employees.

The Chief of the Training and Placement Section, OCAC, was instructed to survey and analyze the training needs of civilian employees; to recommend and help select training officers, training supervisors, and instructors; and to coordinate, supervise, and direct the training of these specialists. Training officials were to analyze and develop training methods and standards, materials for training texts, examinations and tests, films, and charts as the need for them was foreseen; and to coordinate the training of civilian personnel with that of military personnel wherever practicable. Training officials were also to coordinate the Air Corps training program with that of the War Department and to act as liaison officers on Air Corps civilian training affairs with the Navy, the Civil Aeronautics Authority, the Civil Service Commission, the United States Office of Education, and other official and private agencies.

The Chief of the Training and Placement Section prepared a draft memorandum entitled "Training Civilian Personnel in the Air Force" which

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was given the approval of the Chief of the Civilian Personnel Division, CCAC. CCAC training officers visited the Maintenance Command and its depots to study training plans, and to consult and advise depot commanding officers and their staffs. Plans were drawn up recommending a complement for Maintenance Command training positions and a standard depot training and placement staff.

When Secretary Stimson appointed Mr. Appley consultant on training* in the spring of 1941, he called on the Civilian Personnel Division, CCAC, and its Training and Placement Section to furnish the latter information concerning War Department and Air Corps training programs and plans. Air Corps officers also advised the consultant relative to the content of the War Department training memorandum of 10 July 1941.⁷

War Department and Air Corps representatives participated in a meeting of the Advisory Committee to the Survey of Personnel Needs and Training Facilities of Federal Defense Agencies held at Wesley Hall in Washington, D.C., 2 July 1941. At this meeting training experts from the War Department, the Navy Department, the Department of Labor, the Civil Service Commission, the Office of Production Management, the Civil Aeronautics Authority, Glen L. Martin Co., American Air Lines, United Air Lines, and the Air Corps discussed the problem of training aircraft maintenance mechanics. It was agreed that operating officials could not just sit back and wait for the Civil Service to furnish qualified mechanics since they were not available any longer--hence operating officials should get together and agree on a real training program.

* See above, p.2

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Methods of training were discussed and Mr. Appley described the training under way at Middletown where mechanic learners were at work full time on the production line performing the simple operations they learned in training classes held after their working hours. At this time the War Department had a total of 20,000 men in training in its field establishments or at schools in adjoining cities. In summarizing the discussion, Civil Service Commissioner Arthur S. Fleming pointed out that it was necessary to go further than then existing practices in breaking down jobs into specialized operations (especially as a basis for training people with no previous experience and putting them into production as soon as possible), and to make more job analyses. He predicted that there would be a heavier load on the pre-employment schools and pointed out the need for closer liaison between these schools and the operating officials. He emphasized that the latter must realize the need for all-out training. Finally he pointed out that the production and delivery of planes in itself was not enough, there must be civilians available for their maintenance. Hence the greatest personnel problem in the defense program was that of training adequate civilian personnel.⁸

The planning and development of civilian training for the Air Corps as a whole received a great impetus from a conference of Maintenance Command training officers held at Wright Field on 3-6 September 1941. The work accomplished at the meeting marked the first stage of progress in the evolution of a comprehensive civilian training program in the Air Corps. It met the requirements of the Maintenance Command and OCAC by making recommendations providing for: 1) the establishment of a flexible civilian

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training organization, 2) the drafting of a temporary training directive authorizing the commanding officers of depots to conduct certain kinds of civilian training, 3) a system of occupational analyses and standards of performance, 4) and a system of training and placement records and reports.⁹

The recommendations committee was made up of the depot training officers assisted by representatives of OGAC and of the United States Department of Education. The three major recommendations of this committee were those dealing with a tentative training directive, training records and reports, and occupational analyses.

The tentative directive recommended by the committee was issued in a slightly revised form on 18 September 1941 as a Maintenance Command directive, subject: Standardization of Civilian Training at Air Corps Depots. It was substantially the War Department Memorandum of 10 July 1941 reworded so as to be specifically applicable to the Maintenance Command. It also emphasized the need for training key personnel; strengthened the position of the training officer; required periodic statistical reports on depot training programs; and required the coordination of training with recruitment and placement. The fact that the Maintenance Command issued this directive was significant in that it constituted a recognition of the urgency of the training program, and put a single standardized program into operation in place of several independently developed programs.¹⁰

The proposed Periodic Training Progress Report, as recommended by the committee of training officers and their advisors, was to be a monthly report on the status of training in the depots. It would include the

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number of employees in off-the-job training by classifications, and the training hours each month in each classification; a breakdown showing the enrollment and various types of training; enrollment in various courses of training, etc. This was the beginning of a reporting system which started out to be simple though detailed, and with time became more lengthy and more complex.¹¹

Development of Occupational Analyses: Its
Importance to the Training Program

The recommendation that occupational analyses be made in a standardized form and used by all the depots was of the utmost importance in the development of the Air Corps Civilian Training program. The training officers attending the conference agreed unanimously to adopt the job analysis form (Utah plan) developed at Salt Lake City and Ogden, and indorsed the procedure by which each depot had been assigned the project of compiling job analyses of specific types of occupations or jobs. Each depot was to use its own form in developing analyses until the over-all system--as per the Utah plan--should be available.¹²

No phase of the development of the Air Corps civilian training program was more significant for the future than the early start made in compilation of occupational analyses in February 1941. The Ogden Air Depot and the vocational school authorities of the state of Utah worked together in starting this project, receiving very valuable assistance and guidance from the U.S. Office of Education through Mr. George Sanders, Special Representative, who was detailed to Ogden to do this job.

As soon as some material was made available for tests Mr. Sanders was detailed to the Office of the Chief of the Air Corps to develop the

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same program for the whole depot system. In June occupational analyses were allotted by depot--Middletown was to handle the machine overhaul positions; Sacramento, instruments; and Fairfield, fuselage disassembly. Mr. Sanders visited each depot and advised with the foremen of the different departments, making a record of their standard practices in occupational analyses. Out of this procedure there gradually developed certain standard analyses which were found to be common to all depots.¹³

These occupational analyses were made up to two parts: one, the breaking down of an occupation into its jobs; and two, the breaking down of those jobs into their operations. Basically the analysing of an occupation in detail was involved to determine the various steps which made it up, and to put that analysis on paper.

In addition to the breakdowns, a fully completed occupational analysis also included Operation Sheets, Information Sheets, and generally a list of the tools and equipment necessary for the job. The Operation Sheets were actually further analyses consisting of a step-by-step breakdown of each operation making up a job. The Information Sheets provided necessary technical and related information, serving to supplement textbooks or to take their place when they were not available. Later the term job analysis came to be used to include all the items included under the formal term occupational analysis, and for all practical purposes, replaced the older term. Therefore the term job analysis will be used for the remainder of this study.

The importance of job analyses as the basic step in setting up a majority of the civilian training courses, especially in maintenance, is

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obvious. The job analyses were necessary in order to determine what the specific jobs and/or operations were which a worker performed in an occupation; they determined what knowledge and information of a technical nature the workman must have to do the job correctly; and they determined what should be taught, both in theory and in practice.¹⁴

The job analysis program laid the foundation for a vast development of training materials and methods. In the beginning especially, the analyses provided effective instructional outlines for those mechanics who were forced to be instructors despite their lack of training and experience in the art of teaching. They made training quicker and more efficient by indicating a step-by-step procedure which allowed trainees to progress as fast as their abilities allowed. They provided instructional material which was simpler and more teachable than the technical orders. They made specialized training possible by showing the specialization to be found in each occupation. Since the analyses defined a job in terms of itself, they made possible the establishment of minimum performance standards. Also by indicating the exact nature of a job and making it possible to break the job down into very simple operations or steps, the analyses made it possible to use low grade, unskilled, physically handicapped, old, and female workers to accomplish jobs which were complex in their entirety. The development of job analyses made possible speeded-up, specialized training, and the substitution of the specialist for the general mechanic in the production line. None of the things which went into the development of civilian training were more fundamental than the job analysis program which got underway in 1941.¹⁵

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Organization of the Air Service Command:
Its Rapid Expansion

On 17 October 1941, a little more than a month after the September training conference, an organizational change replaced the Maintenance Command with the Air Service Command. The Air Service Command, as first established, consisted of the headquarters at Wright Field; the four old, established depots--Fairfield, Middletown, San Antonio, and Sacramento; two new depots, Ogden and Mobile, not yet in production; and a dozen sub-depots.¹⁶

Conferences were held in November 1941 for the purpose of working out a program of civilian training for employees in the subdepots of the Air Service Command and to present it to the Bureau of Education, Department of the Interior, and the State Directors of Vocational Education in those states where approved contract schools were located. At a conference held in the office of Mr. L.S. Hawkins, Director of Vocational Training for Defense Workers, Bureau of Education, on 7 November 1941, agreements were worked out between representatives of the ASC and state and federal vocational training officials to facilitate the training of Air Corps depot and sub-depot personnel in contract and private trade schools under the supervision of the State Boards of Vocational Education.¹⁷

It was fortunate that the foundations had been thus laid for a comprehensive, command-wide training program in the ASC, for the entry of the United States in World War II in December 1941 brought about an accelerated expansion of the Air Corps which made the training problems facing the command more formidable than ever.* In the 10-month period from

* In 1941 the Air Corps goal was upped by 54 to 84 groups, and after Pearl Harbor the goals were set still higher.

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31 March 1941 to 31 January 1942 the total number of civilian personnel employed by the four original depots increased from 8,524 to 38,526. By December 1943 the six depots and twelve subdepots of ASC had expanded to a great complex of eleven major depots and 238 subdepots; the Miami Air Depot and the Atlantic and Pacific Overseas Air Service Commands were in operation; 46 specialized depots had been established; and there were various other subinstallations.¹⁸ The greatest demand for labor in the Army air arm came from the ASC which employed more than one half the total number of civilians working for the AAF. About 75 percent of these were the skilled workers engaged in maintenance and supply activities.¹⁹

Discontinuance of the Apprenticeship
and NYA Programs for Civilian Training

As mentioned earlier,* the rather leisurely apprenticeship training program, with its four-year training period, was quite effective in time of peace. It was found to be quite inadequate, however, to meet the expanding training needs of the period 1941-1943; in order to speed up output greater specialization than was possible under the apprenticeship program was needed. As early as 29 June 1941 Lt. Col. John N. Clark, Sacramento Air Depot, wrote to the Chief, Maintenance Command, that continuation of this program was impractical since the large number of aircraft factories and the scarcity of trained personnel in the aircraft field had resulted in a situation in which men with less training and experience than the apprentices were receiving high salaries in industry. Furthermore, within the depot itself the morale of apprentices suffered when men with only two years of experience in "related industry" were hired as junior mechanics at twice the wage which they, with their specialized training in aircraft work, were receiving.

* See above, p. 1.

Colonel Clark also pointed out that the apprenticeship program had become impractical from the point of view of depot production. Production was confused by the apprenticeship training method of shifting apprentices from section to section to give them comprehensive training. In essence, the apprenticeship training program could not possibly turn out trained and specialized aircraft mechanics at anything approaching the numbers in which they were needed. Despite various measures taken in an attempt to adapt it to emergency conditions the apprenticeship training program was forced out of the general training program of the ASC.²⁰ There was not enough time to train the old type all-around mechanic who could do any job; now it was necessary to break maintenance (and supply work) down into narrow specialties which could be mastered by new and inexperienced employees in a relatively short time through an intensive course of training based on careful job analysis.

For quite different reasons the National Youth Administration Training Program also failed to meet the training needs brought on by the war emergency. This program had been adopted by the depots in 1940 with misgivings. It was accepted because the apprenticeship training program did not produce enough trained personnel, because it provided a place for the less skilled workers--and because any scheme which would produce trained workers had to be tried. However the NYA Training Program turned out workers only in the hundreds, not in the thousands as they were needed.

Under the NYA Program the trainees were youths who had passed the Civil Service Mechanic Learner examination and whose names were listed on

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the Civil Service register as eligible. A residence center was set up for the trainees within the vicinity of a depot but not on the military reservation. The remuneration of the trainees came entirely from NYA funds. Part of their instruction was received in the depot shop under the supervision of experienced Air Corps mechanics and part in supplemental classes conducted by NYA instructors. Upon successful conclusion of six month's training they were classified as mechanic-learners, and after one month's experience they were eligible for promotion to the position of mechanic helper.

Although the NYA Program worked fairly well at some depots it proved to be unsuccessful on the whole. Military personnel tended to look on the program with disfavor. Public opinion opposed the continuance of "relief" programs at a time when jobs were opening up. In addition the NYA had become a political issue by 1940 and there was a question as to whether or not it should be abolished.

Finally the NYA training program failed because it had become an unsuitable type of training by the time it got underway. The shops in the depots had become too crowded and busy for the mechanics to give instruction to trainees with little or no mechanical experience. The trainees were shifted from section to section with little regard to foremen. In some cases the majority of the trainees were unable to meet Civil Service requirements.

Thus after a year and a half of trial the NYA training program was abandoned as impractical. It did, however, provide a model for a combined work experience and related instruction program on which later depot training programs were to be based.²¹

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As it became obvious that the apprenticeship training program and the National Youth Administration Training Program were turning out an inadequate number of trained workers the depots, acting independently, organized other training programs to meet their needs. For some time the depots had supplemented the above-mentioned training program with short courses developed and used as the need arose. In 11 December 1940 a conference of depot commanding officers was called to consider means of recruiting and training workers and to discuss the problems growing out of the multiplicity of training structures existing within the depots. On 7 April 1941 letters were sent to the depots inquiring into the status of training at the various installations--exclusive of the apprenticeship and NYA training programs. Out of this recognition of the situation grew the development of the independent training programs by the depots in 1941.

Middletown Air Depot started an independent program in February 1941; San Antonio in May; Fairfield in late June; and Sacramento in June or July. The 10 July Memorandum issued by the War Department was of assistance in that it gave the training programs a higher official status, and the supplement to the memorandum authorized a definite organization for training at the depots. These programs were significant in that the standardized Air Service Command training program was to develop from them.²²

Government Aid in the Development
of the Air Corps' Civilian Training Program

A factor of major importance in the new training developments was the great assistance given by the National Defense Training Program, using

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funds appropriated by Congress to be used for the vocational education of defense workers.²³ By the enactment of the Second Deficiency Appropriation Act, 1940, approved 27 June 1940, Congress provided that \$15,000,000 should be used for the vocational training of workers "in occupations essential to the national defense and preemployment refresher courses for workers preparing for such courses selected from the public employment registers . . ." Not over two percent of this appropriation was to be used for the administrative expenses involved in carrying out the purposes of the act. Plans for such training were to be submitted to the United States Commissioner of Education for approval. The vocational training duties of the Commissioner were to be carried out under the supervision of the Federal Security Administrator.²⁴ On 1 July 1940 the Program for the Vocational Education of Defense Workers came into official existence as the means for the implementation of the aforesaid training legislation.

Although the funds provided by Congress were for the vocational training of a wide range of defense workers (i.e. shipyard workers, ordnance plant workers, welders, aircraft mechanics), the depots met the requirements of the legislation, and federal funds were available for their use. In addition to financial help they received cooperation from established schools and assistance from trained vocational school administrators.

This program was administered by an agency designated as VEND, Vocational Education for National Defense, generally referred to as Vocational Training for National Defense. This agency was formerly the Trade and Industrial Education Service of the United States Office of Education. It was headed by Mr. L. S. Hawkins, who bore the title of Director of Defense Training, United States Office of Education. He

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worked with Mr. William H. Kushnick, Director of the Division of Civilian Personnel and Training, Office of the Secretary of War.

In each state the program was headed by a state director of vocational training for defense workers. In many instances this official had been and continued to be the regular state director of vocational training in charge of the state's peacetime vocational training program. He was solely responsible for the operation of the defense training program in the state.²⁵

It was not until mid-1941 that the depots began to use the funds and services made available to them through VLND. There are two explanations for the delay--the depots had not been informed of the availability of federal funds for the training of civilian employees, and they hoped that the Defense Training Schools set up in the states, although not connected with them, would prove a source of acceptable workers. This hope was unfulfilled: depot workers had to be trained specifically for depot work in order to attain satisfactory results.

In mid-1941 both the San Antonio and the Sacramento Air Depots began to use National Defense Training funds. The arrangements were made by the depot commanding officer or his authorized agent directly with the state director or with someone to whom he had delegated authority.

There were several different set-ups which might be agreed upon between a commanding officer and a state director: the establishment from scratch of a vocational school for the use of a subdepot; the conversion of an existing public school for depot use; contracting with a privately owned and operated school for conversion to depot use; the introduction of new courses in a school, public or private, already used by a depot;

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and the rental of space for setting up a new school or for the expansion of one already in use. An agreement having been concluded, it was sent to VEND in Washington for approval. On approval the U.S. Office of Education directed the U.S. Treasury to deposit to the account of the state board of vocational education in the state treasury sufficient money from funds appropriated by Congress to cover the expense of the training set-up agreed upon for a given period of time.

Under such arrangements all the costs of the off-reservation or tied schools were paid for out of the National Defense Training funds with the exception of the salaries of the students and the cost of their transportation, which items were paid for by the depot. The depot was responsible for procuring the students; for specifying in detail the contents of the courses; for assisting the school in finding qualified instructors; and for helping to obtain printed materials and equipment used for instruction purposes.

These schools were administered by local directors appointed by the local or state board of education. They were to administer the schools in accordance with the policies of VEND and at the same time in accordance with the plans and specifications agreed upon by the depot commanding officers and the state directors. The major responsibility of the local directors was to turn out students who met the requirements of the depots.

This vocational training aid given by the United States Office of Education and the state vocational education boards, working through VEND, was of great importance to the depots. Although there were times

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when the set-up did not operate smoothly due to the system of dual controls and the various problems which inevitably arise in an emergency program established on a vast scale, the program in general worked well and to the great advantage of the depots. The depot training programs showed a critical need of experience in the administration of vocational training; the National Defense Training Program provided the depots with money and with people experienced in vocational education and educational administration.²⁶

In addition to the act of June 27, 1940, which provided funds to be used in the vocational training of persons engaged in defense work, and under the authority of which the National Defense Training Program was set up, an act of July 2, 1940, authorized and permitted the employment of persons lacking the necessary job qualifications and permitted these persons to be trained. Section 5 of this act provided in part as follows:

"The President is authorized, with or without advertising, through the appropriate agencies of the government . . . (3) to provide for the procurement and training of civilian personnel necessary in connection with the protection of critical and essential items of equipment and material and the use and operation thereof; . . ."²⁷ This legislation gave the depots a firm legal basis for the procedure of hiring unqualified personnel and putting them on the payroll while they were in training for productive work. It was necessary for the depots to follow this practice and to pay substantial salaries to non-producing trainees in order to compete with private concerns and with other government agencies in the rapidly expanding labor market.

The Independent Depot Training Programs:
Their Contribution

As previously mentioned, the four original depots started independent training programs in the first half of 1941 after they found the apprenticeship and NYA training programs inadequate to meet their needs. As it happened each of the four depots experimented with a different phase of the over-all training problem. In-service training was featured at the Middletown Air Depot; at the San Antonio Air Depot (SAAD) a large school* was set up and operated jointly by the State of Texas Vocational School Department and the Air Depot. At the Sacramento Air Depot (SAD) a widespread program encompassed the integration of vocational and other schools within a radius of 100 miles. Civilian training at Fairfield Air Depot was confined to some 15 courses in basic maintenance work. No off-reservation training facilities were used by Fairfield Air Depot, and the depot did not actually put an integrated training program into operation until December 1941.²⁸

The Middletown Air Depot training program was carried on in an in-service on-reservation school. The trainees were secured from the Civil Service registers of general mechanics helpers with six or more months of experience in some mechanical trade. They received six hours a day of on-the-job instruction under the supervision of skilled mechanics in the shops, and two hours of classroom instruction in related courses. Middletown's training program grew rapidly--it started on February 1941; by 10 April there were 750 trainees and 40 instructors, and by 1 October 1941 the school had trained and put in production some 2,200 general mechanics

* This type of school was commonly called a tied-school.

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helpers and junior mechanics; and on this date Middletown started a class of 2,000 trainees, instructed by 180 part-time instructors.

The Middletown program had three outstanding virtues which made for effectiveness in training: 1) Workers were trained in the area and with the machinery which they were to use in production, 2) Middletown made effective use of visual aids in training, being among the first to do so, 3) and the related training courses were carefully worked out so as to clearly relate the classroom training with the on-the-job training and to synchronize the two.²⁹

San Antonio Air Depot was the first of the depots to establish an off-reservation school. As there was no precedent for this type of training, the school suffered the vicissitudes of an initial period of trial and error for about six months after it started functioning on 1 May 1941. Located in the city of San Antonio it was organized as a pre-employment training center following collaboration of the Depot and the state and city vocational educational authorities on the plans. Trainees were procured through the Texas State Employment Service and employment by the depot was contingent on completion of the course and being admitted to the Civil Service register. Well qualified instructors were supplied by SAAD and by the 48th Subdepot. Mr. F. T. Economy, foreman of the electrical department of the repair shops, conducted the school.*

The program of the school consisted of three courses--a 1020-hour basic course for the training of learners and helpers; and a 960-hour advanced course for the training of juniors and journeymen in the theory and practice

* Mr. Economy was later commissioned Major and played an important part in the SAAD civilian training program as Training and Placement Officer, SAAD.

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of a specific trade; and a 960-hour supervisory training course which covered such items as layout and job assignment, reports and records, loyalty, ethics, and leadership. The San Antonio program of training got away from the old apprenticeship idea of training all-around mechanics, and developed in the direction of training in narrowly specialized operations in order to permit the rapid utilization of trainees in production operations organized on the assembly line plan. It also developed from a pre-employment to a pre-service training program as it became evident that trainees must be employed and put on the payroll before they were ready for production line work if the Air Corps was to be able to compete with other prospective employers in the tight labor market.

One of the most difficult problems was that of securing adequate late type equipment for the school to use for training purposes. This was solved by moving the advanced training course on-reservation where equipment was available. It later became Air Service Command policy to limit off-reservation schools to basic training, and to do all advanced training at on-reservation schools. All in all, San Antonio performed a valuable service to civilian training with the pioneer work it did in off-reservation, pre-service training. The Air Service Command's standardized program, which became a model for the USAF, owed a great deal to the San Antonio program.³⁰

On the other hand it seems that in 1941 the civilian training effort at Fairfield Air Depot was singularly unfortunate in that it was poorly organized and was beset by troubles from the beginning--lack of capable instructors, lack of suitable quarters, lack of proper handling and support by the depot commander, indifference to training on the top level, squabbles

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between foremen and instructors.³¹ The chief contribution of Fairfield was in its giving a very graphic illustration of the wrong way to run a civilian training program

On 14 April 1941, as a result of a conference between the Commanding Officer of Sacramento Air Depot, the Chief of the Training and Placement Section of the Civilian Personnel Division of the Air Corps, and the California State Director of Defense Training, the Director sent out letters to nineteen school districts inviting them to set up three months training programs under the Defense Training Program. These courses were to be for the specific purpose of preparing workers to become general helpers in the Depot. By the end of June 1941 fifteen high schools and colleges within a 100-mile radius of Sacramento Air Depot were offering some forty-seven classes in subjects prescribed by SAD. By the end of November 1,778 men had completed training and approximately 1,300 more were in training.

However, evidence indicated that the program was not a success--the students were only partially trained and evidently were not very satisfactory workers. This system of multiple off-reservation schools failed to produce the desired results because the trainees were not paid and were in no way under the jurisdiction of SAD--the State Director, representing the California State Department of Education, kept almost complete control over the program. Sacramento Air Depot had little more to do with the program than to indicate what courses were to be taught and to permit some of its employees to be used as instructors. The SAD system of off-reservation schools was widely scattered, which made problems of securing equipment

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difficult, and there was not even a coordinator to see that the different schools carried out the training policy of the Depot.

There was also a program of in-service training set up at SAD to replace the defunct apprentice program. This training was for newly hired employees—largely to orient them to their jobs. Since the files of this program were destroyed by fire it is hard to draw any valid conclusions as to its worth.

A final analysis of the Sacramento Air Depot training program in 1941 shows the existence of the following defects: 1) a lack of a specific and stable independent training organization, 2) insufficient well-qualified personnel being selected to head up the program, 3) difficulty between the Depot and the California State Department of Education and the State Director. The major difficulties were corrected early in 1942 when the old multiple off-reservation program was scrapped and a new one, the Mechanic Learners Program, was set up under which the trainees were paid by the Depot. Under the new set-up the Depot was also able to exert some influence over the State Director and the State Department of Education. Despite its troubles in 1941 SAD made progress in the development of a civilian training program and acquired a store of experience which would be valuable to future training programs.³²

In connection with the independent training programs developed by the four oldest depots in 1941, it should be mentioned that in addition to training personnel to meet their own expansion needs the depots were given a different and special type of training responsibility, that of training cadres of civilian personnel for the five new depots--Warner Robins, Oklahoma City, Rome, San Bernardino, and Spokane--which were to go into operation in 1942. In late 1941 the four old depots were assigned their

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cadre training responsibilities by a letter from Headquarters, Air Service Command, dated 17 November.

Each of the four depots was to have the responsibility of training a complete cadre of at least 1,000 civil service employees with attending supervisory personnel for one or more of the five new depots which were to be activated in 1942. The recently activated depots, Mobile and Ogden, were not considered ready to perform cadre training. Subsequently, however, Sacramento Air Depot was relieved of its cadre training responsibility and its assignment of training a cadre for Spokane Air Depot was transferred to Ogden. Although the provision of cadres for subdepots was familiar enough in depot experience, this call for a hurry-up job of cadre training on a great scale presented many problems and necessarily resulted in a good deal of experimentation before the program was completed. At the end of 1941 the cadre training program was still in the planning stage--it actually got underway in 1942 and was not completed until 1943.³³ The entrance of the United States into World War II in December 1941 further accelerated depot expansion and complicated the cadre training program.

What the depots achieved in 1941 in setting up training programs and getting them underway was obviously the first step in the successful solution of the tremendous training problem facing the Air Service Command in particular, and the air arm in general. By the enactment of the necessary legislation supplying federal funds and making available the advice and assistance of federal and state vocational training experts and the service of state and private vocational schools, Congress greatly aided the development of the civilian training program. Finally the War Department

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and the Office of the Chief of the Air Corps furnished the authority and guidance which would eventually weld the depot programs into a comprehensive civilian training program for the whole command. Working from these beginnings the ABC was able to expand its training program to meet wartime needs, and to develop the most effective civilian training program of any component of the AAF, one which became a model for the official AAF civilian training program.

Chapter II

DEVELOPMENT OF A COMPREHENSIVE AAF CIVILIAN TRAINING PROGRAM DURING
THE WAR YEARS

When the military establishment of the United States went all out on a wartime basis after Pearl Harbor the expansion of the Air Corps was tremendously accelerated and the total civilian personnel strength of the Air Corps in the continental United States, which was 62,418 in December 1941, rose to 274,980 in December 1942,¹ an increase of over 400 percent in 12 months. The largest employer of civilian personnel in the Army Air Forces (the Air Corps was reorganized as the Army Air Forces in March 1942) was the Air Service Command whose civilian personnel strength jumped from 31,292 to 207,603 in the twelve months of 1942, an increase of over 650 percent.²

The total civilian personnel strength of the AAF in the continental United States reached its wartime peak of 422,157 civilians employed by the various commands and other organizations of the AAF in October 1944.³ The civilian personnel strength of the ASC reached its peak a year earlier in October 1943 when it had 316,956 civilian employees, 88 percent of the entire civilian strength of the AAF at that time. In the last two months of 1943 the civilian personnel strength of the ASC began to decline; by December 1944 it had dropped to 210,075, and by August 1945 to 185,367; yet even at this latter date ATSC* still employed over 50 percent of the civilian personnel in the AAF.⁴

As has been noted, 75 percent of the civilian personnel in the employment of the ASC were skilled workers engaged in maintenance and supply activities.

* On 31 August 1944 the Air Service Command was combined with the Materiel Command to form the Air Technical Service Command. In this study the two designations, ASC and ATSC, will be used as the date of the action under consideration requires. (Walker, Procurement and Training of Civilian Personnel in the ASC, Part III, p.)

Since the supply of skilled labor had already been practically exhausted by 1941, the great expansion of the civilian personnel strength of the ASC necessarily entailed a great expansion of its civilian training program. Even when the rate of expansion slowed down and there came to be an actual decrease in the civilian personnel strength of the ASC there still remained great procurement and training problems arising from labor shortages which became critical by 1943. By this time the pool of skilled labor was exhausted and unskilled labor was in very short supply. It became necessary to make a greater use of female labor and of handicapped personnel.⁵ The necessity for training these people as replacements to meet the great turnover in civilian employees continued after the need for training the masses of new employees hired in the expansion period had ended. When hiring was limited to the maintenance of complements set by the freeze order of September 1943, and was further reduced at a later date by the drastic cutting of these complements, civilian training remained an important function of the ASC, and of the other commands and organizations of the AAF, because of the imperative necessity to raise each worker to his peak of efficiency. This necessity brought about changes in training methods and emphasis.⁶

Because the Air Service Command employed a majority of the civilian personnel in the AAF, and had such great training requirements, it was inevitable that it should lead the AAF in the field of civilian training.* Although the other AAF commands and organizations eventually developed

* As late as February 1944 the ASC, with 181,023 civilian employees as compared with 155,410 employed by all of the other commands and air forces, had 13,681 of its civilian employees in training as compared with 4,389 being trained by the rest of the AAF. (Daily Diary for 11 April 1944, Civ Pers Div, AAF Hq, File No. 121.02.)

rather comprehensive programs as part of an AAF-wide civilian training program, the history of the development of civilian training in the AAF during World War II was in very large measure a history of the development of the Air Service Command civilian training program.

Organization of the ASC Civilian Training Program

In October 1941 the Air Service Command was established and took over the depots, which were developing more or less independent training programs of their own.* It became apparent early in 1942 that an over-all training plan for use by all ASC installations should be formulated and issued as Headquarters policy in view of the activation of new depots and the growing recognition of the expanding training needs of the Command. Therefore Headquarters, Air Service Command, issued the "Plan for Air Depot and Sub-Depot Training" in March 1942. This plan was intended to effect greater uniformity of both administrative and operational training practices.

The March 1942 Plan was not issued under a regulation, authority being given to it by the inclusion of some half dozen pertinent directives of an earlier date. In addition to these directives the March Plan included an authorization for an air depot training complement. To implement and clarify this authorization there was included an organizational chart of the depot training complement, job descriptions of training personnel, and qualifications for top training personnel. A similar chart of the ASC training complement was also included in the plan.⁷

The air depot training complement authorization included in the March Plan had been originally issued on 27 November 1941. The authorization for an air depot training complement provided for the depot headquarters one

* For these first steps see above, pp. 22-8.

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Civilian Training Administrator P-5, and three Assistant Civilian Training Administrators, P-4. One of the assistants was to handle occupational analyses and instructional material, one was for foreman and instructor training, and one was to be the general assistant for subdepots and contacts with outside agencies. Depot headquarters was also to have one associate instructor P-3.

For the engineering department of each depot there was to be one Assistant Civilian Training Administrator P-4, one associate instructor P-3, and four assistant instructors P-2. The supply department of each depot was to have the same training complement. Restrictions as to numbers of junior instructors P-1 were removed; the number of appointments in this grade necessary to run the depot training program successfully and effectively was to be determined by the commanding officer of the depot concerned.

There was considerable dissatisfaction with this authorized complement and a few days after the March 1942 Plan had been issued it was examined and discussed by a group of civilian training officers at the San Antonio Conference on Civilian Training which met at San Antonio Air Depot on March 1942. Among other things the recommendations committee of the Conference recommended that one of the positions be adjusted from a P-4 to P-5 and that the others remain at P-4.

The pay of the top ranking civilian training administrators was the major problem in setting up the depot training staffs under this complement authorization. It was agreed that higher salaries were necessary, otherwise the depots would find it impossible to fill the complements with really able and experienced men. Hence it was also recommended that the salaries of almost all of the administrators be raised.

These recommendations were not, in general, followed by Headquarters, ASC, in a new authorization of positions on 10 July 1942 which retitled certain positions and changed the classifications of many from Professional (P) to Clerical, Administrative, and Fiscal(CAF). The reclassification was carried out in order to avoid the exclusion of good men from administrative positions in civilian training because of an erroneous impression that men who were not college or university graduates were not qualified to fill jobs in the Professional Grade. There was only one raise in grade and salary; the specialist in charge of foreman and instructor training was raised from P-4 to P-5.

The July authorization clarified a somewhat confused situation and implemented the Civil Service policy of equal pay for equal work. It kept depots from bidding against each other for qualified training personnel and effectively prevented extravagance.

However, it made difficult the procurement of the best qualified personnel available. Instructors in off-reservation schools and in factories, trainers without any administrative duties whatever, received salaries ranging between \$4,000 and \$5,000 a year, which were higher than the base pay of any but the top two administrators in a depot complement. This failure to provide salaries which would permit the procurement of the best vocational school men in the United States was the cause of certain weaknesses which appeared from time to time in the training programs of various depots. The 10 July authorization for air depot civilian training complements continued in effect through 1942 and into 1943.⁸

A really comprehensive and detailed system of civilian training was provided for when Headquarters, Air Service Command, published ASC Regulation

50-1, 18 January 1943, which was entitled "Plan for Civilian Training," and was issued as the policy and directive of the Command to be followed by operating echelons in carrying on the ASC civilian training program. The January 1943 Plan, as it was called, set up for ASC Headquarters and for the air depots training complements which were much like those authorized in the March 1942 Plan. For Headquarters, ASC, there was to be a civilian training coordinator and two training specialists, one in charge of instructional materials and the other handling field service for the whole command. The depot civilian training personnel included the Civilian Training Administrator (who was responsible to the Training Officer who was, in turn, responsible to the Depot Commander), and a staff made up of two civilian training specialists, one of them responsible for foreman and instructor training and the other for occupational analyses and instructional material; and four assistant civilian training administrators, one for the engineering department, one for supply, one for subdepots and outside contacts, and one assigned to headquarters and miscellaneous. In addition authority was granted to employ as many instructors as necessary in the positions of senior instructor, instructor, junior instructor, and instructor trainee. These instructor positions were also authorized for subdepots with the exception of that of instructor trainee. Authorization was also granted to use mechanics in all designations as instructors.

The January 1943 Plan for Civilian Training also included position descriptions and charts indicating the organization of the Command and air depot training complements.⁹ It authorized expanded civilian training complements and gave more details on the implementation of the authorizations than the March 1942 Plan. The two sections of the January Plan

which dealt with training complements and their organization, and with the functions and duties of the administrative and instructor personnel on the civilian training staffs on command, depot, and subdepot levels, constituted only a small part of the very comprehensive civilian training structure set up for the Air Service Command by the Plan. This "Plan for Civilian Training" was a large, well-printed, and profusely illustrated publication which set forth the training policy of the Air Service Command and gave detailed plans for the various types of training with which to implement this policy. It covered practically all the subjects dealt with in the March 1942 Plan,* expanding most of them, and gave consideration to many subjects not treated in the March Plan, such as Instructors, Training Equipment, References, and Communications.¹⁰

The greater authority of the January Plan, the impressive form in which it was published, and its greater size and scope were all indicative of the progress made by the ASC civilian training program since the issuance of the March Plan. It was also an indication of the increased prestige of civilian training program as a whole.¹¹ It constituted an admirable handbook and guide for civilian training. In its first pages were set forth the War Department objectives for civilian training and the functions and objectives of the Air Service Command. The section on the organization of civilian training defined the function and scope of the civilian training program and definitely fixed the authority and responsibility for carrying on civilian training in the Air Service Command.¹²

The January Plan divided civilian training into four major categories: Preservice training, in-service training, instructor training, and management

* It covered 288 pages where the March Plan covered only about 120 pages--the increase representing a considerable amplification and extension of the ASC civilian training program.

training. Preservice training was broken down into: a) preemployment training, the training of unpaid personnel in public schools for specific ASC occupations; b) mechanic learner and underclerk training, paid personnel being trained in public schools for specific ASC occupations; c) preinduction training, the training of men on a paid or unpaid status in depot or off-reservation schools for depot work prior to their induction into the Army.

In-service training was subdivided into: a) orientation training, the orientation of new employees and newly trained personnel by on-the-job training and by supplementary class training or both; b) production training, assignment of small numbers of inexperienced personnel to advanced personnel to do work under their guidance and finally to perform the work alone; c) upgrade training. Upgrade training was, in turn, divided into four subtypes as follows: (1) Training for more responsible positions accomplished by on-the-job training, or supplementary class training, or both; (2) training for improvement within rank, accomplished as above; (3) combination specialist training, the training of an employee in two or more blocks or phases of a specialty field; (4) cross training, the training of personnel in work in distinctly different departments or occupations. It was not the policy of ASC to approve cross training if the basic information from one field did not aid or supplement the other occupation.

Instructor training included the development of skills and technical knowledge, as well as the development of teaching skills and techniques. Instructor training was divided into two main types--the training of new instructors and the upgrading of those who already had work experience in their field.

Management training included the techniques of handling employees, scheduling their work, taking care of new developments in aircraft maintenance, conducting on-the-job instruction, etc. Upgrade training for existing supervisors and the training of new supervisors were both parts of the management [or supervisor] training program.

Since the ASC civilian training program had the objective of training employees to do certain specific tasks, and as all trainees did not learn at the same rate of speed, the Plan provided that progress charts were to be maintained to record each trainee's progress in learning his specialty.¹³

In its section on the organization of civilian training the January Plan included excerpts from ASC Memorandum 50-2, dated 20 August 1942, which explained the military technical training of the Air Service Command and the responsibilities of commanding officers in seeing that military personnel received training in the various AAF specialties, and their responsibilities in regard to the training of service groups. It was specified that on-the-reservation civilian training facilities should be made available for the training of military personnel.¹⁴

In its section dealing with trainees the January Plan gave consideration to such matters as turnover, expansion of personnel strength, recruiting, testing for selection of personnel, assignment of trainees, the training of women, salaries for mechanic learners, reclassification, standards of performance, draft deferment policy as applied to employees of the War Department, and per diem policy.¹⁵ This part of the Plan was very useful in standardizing policies and practices in handling trainees in the various depots.

A section of the Plan covered the control depot training program with provisions concerning engineering training, supply training, and training

in the control depot headquarters. At this time training programs for headquarters units had not been fully developed and it was suggested that headquarters training should be planned and conducted by the control depots to meet the individual needs.¹⁶

Other sections of the January Plan contained rather comprehensive provisions dealing with subdepot training, upgrade training, cooperative (off-reservation and contract) schools, preservice training, and management training.¹⁷ Included in this part of the plan were such useful guides as a sample of a cooperative agreement between an air depot and a public vocational school agreeing to do training for the depot, a list of the approved cooperating schools carrying on preservice training for 11 depots of the Air Service Command, and the names and addresses of two Air Service Command contract schools.¹⁸

Section J of the Plan took up instructional material and its development; also the development and use of training outlines, and their formal organization, and the revision of Technical Orders for training purposes. It was specified that Headquarters, Air Service Command, should direct the development of training courses and instructional materials, including Technical Orders, informational guides, and work guides for depots, subdepots, and other installations and for off-reservation civilian training programs. The Personnel and Training Division, Headquarters, ASC, was to determine occupations for which instructional material was to be developed, and was to develop outlines of training courses. The Technical Data Section, Maintenance Division, Headquarters, Air Service Command, was to work with the Personnel and Training Division in the development of instructional material.¹⁹

Section J also discussed informational and instructor's guides, stating their purposes and showing the organizational forms they should follow. It outlined the procedures for the procurement and distribution of different types of training material. The use of training films and other visual training aids as an important adjunct in the civilian training program was discussed, and procedures for the requisitioning of films, and for the operation of projectors and the handling of films were taken up in some detail.²⁰

Section K took up the allocation and distribution of class 26 material (engines, airplanes, accessories, etc.), and of class 17-A and 17-B materials to depots and off-reservation schools for use in training. Section L dealt with training buildings and policies in regard to their assignment and use. Section M dealt with training records and reports, and training certificates, showing the forms used and how to use them.²¹

On the first two pages of Section N the War Department civilian training policy, as set forth in the War Department Memorandum of 10 July 1941, was outlined for reference purposes. Also for reference purposes Section N gave information on such topics as the title, grade, position description, and qualifications of the civilian training personnel needed to staff a depot civilian training program--and included complete information on Class 26 material and its procurement, handling, and disposition. There was also information on training literature and its reproduction, a list of 41 factories to which civilian employees had been assigned for training; a check list for civilian training, and a copy of AAF Regulation No. 50-19, 1 Jan 1943, which gave instructions on the preparation, production and procurement of training aids.²²

Over one-half of the January 1943 Plan, a total of 150 pages in Section P, was devoted to training outlines. The outlines were divided into two groups, those used in engineering (maintenance) training and those used in supply training. The engineering training outlines constituted the larger group, 78 of them ranging in an alphabetical index from airframe dis-assembler and assembler specialist to A/C woodworker. The engineering training outlines were also indexed by the following work groups: aero repair, engine repair, equipment repair, metal manufacture and repair, and miscellaneous.²³

Eighteen supply training outlines were listed in an alphabetical index. They were also indexed by depot sections under the following headings: inspection, inventory, property accounting, purchasing and contracting, receiving, shipping, tool crib and liaison and warehousing.²⁴

The training outlines were given in considerable detail. The purpose, duration, and general program to be followed in each course were stated. A general outline of instruction was provided along with references to texts to be used (i.e., manuals, Technical Orders, and trainee guides). The emphasis in the outlines was on specialized training.²⁵

The January 1943 Plan was the first really comprehensive and detailed civilian training program designed for large-scale use, and covering nearly every aspect of training, to be developed by the Air Service Command. For that matter, it was the first civilian training system of such wide scope and significance to be developed in the Army Air Forces. It provided the Depot training officers with an all-inclusive plan of training based on experience and having the authoritative status of an ASC Regulation. The system of civilian training established by the January 1943 Plan was to serve as a model for an Air Force-wide civilian training program.

Development of an Air Force-Wide Civilian Training
Program

About eight months later Headquarters, AAF, made its first official pronouncement of AAF civilian training policy with the issuance on 1 September 1943 of AAF Regulation 40-6, which delineated responsibility for training of civilian personnel in the AAF. The Assistant Chief of Air Staff, Personnel, was designated to coordinate the planning, development, and administration of civilian training while other echelons planned and conducted programs of their own.²⁶ AAF Regulation No. 40-6, 11 December 1943, which superceded the directive of 1 September, set forth the same general policy; one under which the Assistant Chief of Air Staff, Personnel, was to act as the coordinating and advisory agency in the planning, development, and administration of all AAF civilian training programs, except civilian flying training programs. AC/AS, Personnel, was also to plan, install, and conduct any civilian training programs needed in Headquarters, AAF. To promote maximum utilization of training facilities close cooperation was to be maintained between officials training military personnel and those training civilian personnel.²⁷

The Assistant Chief of Air Staff, Personnel, at one time had military and civilian training together as Military Training, but eventually civilian training was separated from military training and put under the Civilian Personnel Division as the Training Branch of that Division.²⁸ As early as April 1943 the Training Branch was listed as a part of the Civilian Training Division, AC/AS, Personnel. At the time the directive of 1 September 1943 was issued Lt. Col. Verne C. Fryklund was Chief of the Training Branch under Col. Gordon E. Clark, Chief of the Civilian Personnel Division.²⁹

At the end of the year Headquarters, AAF initiated a review of the entire AAF civilian training set-up with the intent of bringing about the unification and integration of the various AAF civilian training programs into an over-all AAF civilian training program which would include every sort of training considered necessary for the training of civilian employees of the AAF, with the exception of the Civilian Flying Training Program.

In accordance with a Headquarters directive dated 23 December 1943 a conference of civilian training officers representing 11 different commands met at AAF Headquarters on 11-15 January 1944 for the purpose of surveying existing AAF civilian training programs and, in the light of findings, making recommendations for an over-all AAF civilian training program. The following air forces and commands were represented: AAF Redistribution Center, Training Command, Troop Carrier Command, 1st Air Force, 2d Air Force, 3d Air Force, 4th Air Force, Air Service Command, Materiel Command, Air Transport Command, and Proving Ground Command. A total of 57 officers represented the 11 air forces and commands at this conference. The Training Command and the Air Service Command had the most representatives; 16 from Training Command and 19 from Air Service Command.³⁰

The civilian training problem was considered in the light of the following factors: the transfer of the Air Service Command subdepots (which had been set up at many installations of other commands and air forces to perform supply and maintenance functions) to the various air forces and commands, the tapering off of the military training activities of the Training Command, the interest of the Office of the Secretary of War in the establishment of an over-all civilian training program by the AAF, and the critical manpower situation facing the AAF at that time.

Of most immediate concern was the series of problems created by the transfer of the subdepots. Before the transfer the Air Service Command was conducting approximately 95 percent of the civilian training in the AAF as measured in terms of numbers of employees undergoing training. The ASC civilian training program operated in three echelons, ASC Headquarters, the Control Area Depots, and the subdepots. With the transfer of the lowest of these echelons it was necessary to determine how much of the former flow of training materials through ASC could continue to reach the subdepots and to ascertain and set up alternative procedures where the flow must be discontinued.³¹ Later developments justified this consideration given to the problems created by the transfer of the subdepots.

On 11 January 1944 Mr. William H. Kushnick, Director of Civilian Personnel and Training, Office of the Secretary of War, made an address to the headquarters civilian training conference in which he emphasized the importance attached by the War Department to the training of civilian employees. He pointed out that the various agencies of the War Department could not have expanded as they had, and could not have attained their existing rate of production, unless they had developed means for the training of inexperienced personnel. He also pointed out that the need for civilian training was not ebbing, that it was as necessary to intensify the training effort from this ^{time} to the day of victory as it had been hitherto.

Mr. Kushnick in highly commending the Air Service Command for the work it had done in civilian training stated: "The Air Service Command has done a magnificent job in training." He pointed out that the Air Service Command had issued the first official policy on civilian training, a policy modeled

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after that established by the Secretary of War. It was also the first component of the War Department to formally establish a civilian training program and the first to provide funds for establishing on-reservation schools.³²

Mr. Kushnick went on to say that the recent inspections made by the Office of the Secretary of War indicated that there was still a tremendous need for developing a true over-all training program in the AAF. It had been found that although training in manual skills was of necessity the main feature in all AAF civilian training programs, nevertheless too little had been done to expand the training concept in other needed directions. For instance more needed to be done in orientation training for both industrial and administrative personnel, and in the field of safety training. Supervisor training stood in need of expansion and improvement. The Air Service Command had the best supervisory training program in the AAF, but Mr. Kushnick felt that this program needed to be carried beyond training in instructional techniques, and more emphasis placed on training supervisors for job improvement, work simplification, and human relations.

According to Mr. Kushnick the OSW found that in the AAF outside the Air Service Command there was but scanty comprehension of an over-all training program. In some places typists were being trained, in others they had orientation programs, in some others they had started supervisory training programs; in general, however, such training consisted of the handling of a spot problem in a spotty fashion, and planning was uncertain.³³

Mr. Kushnick was also quite critical of the failure of the AAF to coordinate between its components such matters as the existence and availability of training materials in the various commands, and the

knowledge of successful training methods and techniques. One AAF establishment might start a civilian training program from scratch without knowing it could avoid much needless and time-consuming foundation work by following methods already worked out by another component of the AAF. He also pointed out that at some installations there existed in the sub-depots fine training facilities and staffs which were not used for training in other parts of the installations where training was equally needed; all because the Commanding Officer or the Personnel Officer had not felt the authority or the desire to do so.³⁴

In Mr. Kushnick's opinion the AAF civilian training program was in much need of guidance in program and technique, and of coordination, from the AAF Headquarters level. He felt that there was need for an Air Force policy on civilian training which would set objectives and place responsibilities, and for counterparts of that policy for every subordinate air force and command, and in the establishments under their jurisdiction. There was also a need for the recognition by AAF Headquarters that a training program needed adequate staffing and the facilitation of the necessary authorizations for such staffing.

Mr. Kushnick emphasized the need for "top-side coordination" in program planning, giving as an example the supervisory training program. He felt that guidance must be provided to decide whether or not to extend to other commands the supervisory training courses developed by the ASC, or whether each command should develop its own, or whether it would be better to bring in the Training-Within-Industry Course (developed in the War Manpower Commission) with its courses in Job Improvement Training, Job Management Training, and Job Relations Training.

Coordination at the top was needed to avoid unnecessary duplication in the development of training courses, and to make known to all commanding officers and civilian personnel officers the availability of training course outlines [and other aids] which would help in the inauguration of much needed civilian training courses. There was also need for help and leadership in respect to such problems of training administration as trainee's pay, instructor's pay, and the securing of training personnel.³⁵

In connection with training personnel Mr. Kushnick emphasized the need for the training of training officers and training specialists. The inauguration of sound training programs in many installations had been retarded because no capable personnel could be found to head up the program. Mr. Kushnick placed the responsibility for this project at Army Air Force Headquarters level.

Finally the speaker emphasized that the most important help which could come from AAF Headquarters in Washington would be the continuous influence on all commanders to establish and encourage comprehensive and over-all training programs. This influence would come not only from the issuance of a policy-making directive; it should stem even more from personal contact with commanders to keep them constantly alert to the advantages offered by a planned training program. Mr. Kushnick also believed that the full implementation of a Training Branch* in the Civilian Personnel Division of AC/AS, Personnel, Headquarters, AAF, would come to be understood by all the subordinate headquarters as indicating that the top echelons expected action on civilian training.³⁶

* As we have already stated, the Training Branch of the Civilian Personnel Division AC/AS, Personnel, was in existence as early as April 1943. It was not however, adequately staffed or organized and lacked the necessary authorizations to carry on a really comprehensive AAF civilian training program.

With Mr. Kushnick's analysis of the AAF civilian training program and its needs to guide them, and having the benefit of the knowledge and experience of the many able civilian training officers present, the conference proceeded to the accomplishment of its mission. The Headquarters temporary committee, made up of one authorized representative from each of the 11 air forces and commands participating in the conference, deliberated in committee session, and presented their report and recommendations to the conference as a whole. These were unanimously adopted as the conference report. It was recommended that, subject to the approval of its contents by AG/AS, Personnel, the conference report and attachments should be officially forwarded to the air forces and commands for suggestions and comment.*³⁷

A review of the existing AAF civilian training situation contained in the report indicated that the Air Service Command had established and was maintaining an adequate civilian training program to meet its own needs. The Training Command and the Materiel Command had in operation civilian training programs which were not considered adequate to meet the new training needs of these commands. Other individual air forces and commands had indicated that no organized training programs had been established.³⁸

In the matter of the subdepots it was found that their transfer brought about the cancellation of important training services which they had formerly received from the Air Service Command Area Commands. They no longer had access to the post schools and off-reservation schools belonging to the Area Commands, and no longer received assistance from them in their supervisory

* See Appendix I for the full text of the report and recommendations.

and upgrade training programs. It was necessary to make new provisions so that the subdepots could continue to receive such training aid and facilities.

It was also pointed out that the Air Service Command had control of practically all off-reservation training facilities, and was using approximately 40 off-reservation state cooperating schools, 7 off-reservation contract schools, and certain factory training facilities developed in cooperation with the Training Command. The transfer of the subdepots made it necessary to establish procedures whereby all AAF activities could use these facilities on an equal basis.

It was further noted that the Air Service Command civilian training program [adequate for its own purposes] was not wholly suited to serve as an over-all AAF civilian training program.

The report criticized the program conducted by the Training Command on the ground that there was no means of coordination by which the sub-commands could work together in the planning, exchange, or joint use of the voluminous amount of course materials they produced.

Headquarters, AAF, also received its share of criticism. It, the report indicated, lacked the facilities and the personnel to properly organize and conduct a satisfactory coordinated training program.³⁹

In their survey of civilian training in the AAF the temporary committee found many specific weaknesses and submitted a long list of recommendations as to how these weaknesses might be remedied. Some of the more important of these recommendations are listed as follows:

1. That particular attention should be given to the placement of employees on specific jobs for which they had been trained, thus preventing misassignments which had proved to be frequent in the past.

2. That AAF Headquarters should approve both the 52-hour supervisor training course (developed by ASC) and the 30 hour T-W-I course for use by the air forces and commands, and that it should establish a standardized instructor training program for all installations.

3. That a general orientation course of from two to eight hours duration be given to all new employees in the AAF.

4. That consideration be given to revising AAF Regulation 65-53 with a view toward giving all civilian training programs the highest priority possible for the procurement of Class 26 equipment--and that such action as might be necessary from time to time should be taken to secure adequate and equitable distribution of civilian training equipment.

5. That AAF activities be authorized to utilize the facilities of public schools to assist in civilian training whenever practical and economical.

6. That AAF activities should be authorized to utilize the facilities of private contract schools to assist in civilian training wherever practical and economical.

7. That factory schools should be used to provide upgrade training that could not be economically provided by using facilities existing within the air force or command.

8. That all air forces and commands be authorized to utilize training conducted by other air forces and commands when quotas were available. Such arrangements to be made directly between the air forces and commands involved with clearance through AAF Headquarters.

9. That AG/AS, Personnel, should maintain in its Civilian Personnel Division a civilian training branch with adequate staff and facilities to insure proper accomplishment of the AAF civilian training program.

10. That AAF Regulation 40-6 on civilian training be revised to outline the policies and procedures prescribed by Headquarters, AAF, and to further outline the training functions and responsibilities of the individual air forces and commands, and at all echelons.⁴⁰

This last recommendation for the revision of AAF Regulation 40-6 was followed by a long list of proposed revisions defining in considerable detail the training functions and responsibilities of AAF Headquarters, the headquarters of each air force and command, and of the headquarters of each AAF installation employing civilian personnel.⁴¹ These revisions would be embodied, practically in toto, in the new civilian training regulation which was to be issued by AAF Headquarters in March 1944.

The conference report also recommended for reporting on civilian training a new system which would eliminate excessive details and provide more comprehensive data on training activities. To accomplish this a proposed table was submitted which was recommended for use in AAF Form 134 in place of Column I.

Included in the report were several definitions of training terms submitted for purposes of clarification.*

The problem of manpower allotments was considered in regard to the failure of existing personnel allotments to make provision for maintaining adequate training for new personnel to serve as replacements. It was recommended that Headquarters, AAF, should secure an allotment of an additional 5 percent of AAF personnel for each air force and command, such

* See Appendix I.

allotments to be used exclusively for personnel maintained in full time pre-service training.⁴² Finally the report ended with three general recommendations as follows:

1. That the conference report be approved and copies distributed to the headquarters of the several air forces and commands.

2. That an attached proposed manning table for the Training Branch, Civilian Personnel Division, AC/AS, Personnel, should be authorized in order that the recommended civilian training program might be accomplished.

3. That the attached proposed AAF Regulation covering the AAF civilian training program should be approved and published.⁴³

This "Report and Recommendations" by the "Temporary Committee" was concurred in and signed by the authorized representatives of the eleven air forces and commands participating in the conference. With its accompanying recommendations, the report laid solid foundations for the first comprehensive Air Force-wide civilian training program to receive the official backing of Headquarters, AAF.

Col. J. L. Whitney, Chief, Civilian Personnel Section, Headquarters, ASC, made some interesting comments on this conference and what it accomplished in a letter to Brig. Gen. E. E. Adler, Chief, Personnel and Training Division, Headquarters, ASC. Colonel Whitney was the authorized representative of Air Service to the conference and one of the signers of the report made by the "Temporary Committee" and adopted by the conference.

Colonel Whitney stated that there was general agreement to the report with certain exceptions by the Training Command in regard to their increased responsibilities in contract and factory training. In Colonel Whitney's opinion the committee report constituted a substantial indorsement of the Air

Service Command civilian training program as defined by its regulations [For instance ASC Regulation No. 50-1, 18 January 1943, Plan for Civilian Training] and directives. According to Whitney no changes would be necessary in ASC plans and authorities for civilian training--and the report incorporated ASC viewpoints on the use of pre-service training, upgrade training, and supervisor training.⁴⁴

In the report the Air Service Command accepted no responsibility for the training of the civilian personnel of other air forces and commands. All air forces and commands, however, were to cooperate by exchanging materials and by making available wherever convenient, quotas for other AAF personnel to attend upgrade training courses currently conducted at their installations.

Colonel Whitney noted that the report of the "Temporary Committee" was utilized at the request of Brig. Gen. James M. Bevans, AC/AS, Personnel, Headquarters, AAF, to prepare a proposed revision of AAF Regulation 40-6 on the subject of civilian training. Thus, it is evident that AAF Headquarters initiated the subsequent revision of AAF Regulation 40-6, 11 December 1943.⁴⁵

After the "Report and Recommendations" had been approved by AC/AS, Personnel, and submitted to the various air forces and commands for review and the submission of their comments and suggestions, the new directive establishing a comprehensive civilian training policy and program for the whole AAF was drawn up. It was issued on 6 March 1944 as AAF Regulation 40-6 Civilian Training Program. This regulation, though its topical arrangement was somewhat different from that of the regulation suggested by the conference report and recommendations, was essentially the same in its provisions.

The new regulation, in addition to defining the responsibilities of all the echelons of the AAF in regard to civilian training, defined the mission, scope, and facilities of the civilian training program in detail. In the first paragraph it was provided that the AAF civilian training program was to be developed and directed by AC/AS, Personnel, Headquarters, AAF, in order to carry out the mission of the program. The mission of the civilian training program was : 1) to conserve manpower by increasing the productive capacity of civilian employees, 2) to permit the AAF to employ potentially qualified persons, 3) to reduce wastage of material resulting from the work of untrained or undertrained personnel, 4) to reduce accidents resulting from unsafe work practices and from faulty workmanship.

The scope of the AAF civilian training program was delineated in terms of the types, locations, and methods of training included in the program, and each of these were carefully defined. There were to be three types of training given: pre-service training--which was defined as training given an employee prior to assignment to productive work; up-grade training--defined as training designed to prepare an employee for a higher skill; supervisory training--training in the principles of supervision.

In terms of location two kinds of training were listed, on-reservation training and off-reservation training. The first was instruction given by War Department (AAF) personnel in facilities provided by the War Department (AAF). The second was defined as the training of AAF employees in public schools, private schools, and factory schools.

There were also two types of training methods to be used--group instruction and on-the-job-training. Group instruction was interpreted to

mean instruction given to homogeneous or selected groups not on the job, while on-the-job training was planned training of employees while they were engaged in actual work. For obvious reasons instruction on forming, shaping, and critical assembly operations was not to be permitted in on-the-job training.⁴⁶

The civilian training responsibilities of Headquarters, AAF, were to be exercised by the Civilian Personnel Division, AC/AS, Personnel. These responsibilities included:

1. Planning, organization, policy determination for, and the evaluation and supervision of training programs for all civilian personnel under the control of the Commanding General, AAF.
2. The outlining of objectives and establishment of standards for training, as well as responsibility for the assembly and dissemination of course outlines, and for periodic reports and record maintenance.
3. Maintenance of liaison with outside agencies such as the War Manpower Commission and the U.S. Office of Education.
4. The establishment and operation of a civilian training program in Headquarters, AAF, planned to meet the needs of that organization.

The regulation also outlined in detail the training responsibilities of the individual air force and command headquarters, and of the headquarters of each AAF station employing civilians.⁴⁷

Paragraph 6 of the regulation dealt with the utilization of training facilities, stating that Headquarters, AAF, would act as a control center on the availability of training facilities and furnish pertinent information to the air forces and commands. The Air Service Command was to cooperate by furnishing AAF, Headquarters with current information as to training facilities,

by course type, available in Area Air Service Commands and off-reservation schools, and in factory schools, and special schools. Similarly, the AAF Training Command was to cooperate in providing information regarding training facilities available in the schools of the AAF Technical Training Commands and factory schools. Each command and air force was to provide Headquarters, AAF, with information regarding training facilities, including private schools, by course type. The procedure for clearing information on the availability of training facilities through AAF Headquarters was also explained.⁴⁸

Paragraph 7 outlined the procedure to be used in arranging for contract training, and paragraph 8 provided for close cooperation and coordination between officials responsible for the training of military personnel and those responsible for training civilian personnel in order to achieve maximum utilization of training equipment, classrooms and instructors.⁴⁹

Thus, finally, an official policy and detailed plan for an over-all AAF civilian training program was set up. This regulation, with minor changes effected by AAF Regulation No. 40-5A, issued 9 June 1944, remained the official expression of AAF civilian training policy until 5 May 1947 when it was superseded by a new civilian training regulation which revised the official policy and program in the light of postwar developments.⁵⁰

Headquarters, AAF, took several measures to secure better coordination of civilian training activities in the continental United States after an Air Force-wide program had been set up. The United States was divided into three areas, northern, western, and southern, each with a civilian training field liaison office, one located at Headquarters, ATSC, Wright Field, Dayton, Ohio; one at Headquarters, Fourth Air Force, San Francisco, California;

and one at Headquarters, Training Command, Fort Worth Texas. These offices were staffed by civilian training field liaison officers sent out from Headquarters, AAF, and enabled Headquarters to carry out policies for evaluating civilian training programs while providing more expeditious assistance in field training.⁵¹

In the spring of 1944 the Training Branch of the Civilian Personnel Division, AC/AS, Personnel, Headquarters, AAF, organized a Civilian Training Reference Service. The function of the Reference Service was to determine the availability of training materials and to assist the various commands and air forces in obtaining them.⁵²

In order to plan and organize the training of civilian supervisors in accordance with the civilian training policy set forth in AAF Regulation No. 40-6, 6 March 1944, AAF Headquarters requested the Air Service Command to conduct a Master Institute in July 1944 to train one coordinator of supervisory training for each of the command air force headquarters.

The Master Institute was to include conferences on the supervisor as an instructor, job methods simplification, problems of handling personnel, and job management training. The coordinators trained at this institute would be qualified to conduct institutes to train supervisory trainers within their command or air force, and to assume the responsibility for quality control and supervision of supervisor training programs.⁵³

This Master Institute was held at Patterson Field, Dayton, Ohio, from 10 to 26 July, inclusive. Thirteen persons representing the AAF commands and air forces attended.⁵⁴ This institute was followed by similar institutes given at frequent intervals at various command headquarters.⁵⁵

At the same time Col. Gordon E. Clark, Chief, Civilian Personnel Section, AC/AS, Personnel, Hq, AAF, requested that an AAF regulation should be issued setting up an approved AAF supervisor training program to be conducted in all the commands and air forces as a required form of civilian training.⁵⁶ Such a directive was issued on 2 August 1944 as AAF Regulation No. 40-11, Supervisor Training Programs.⁵⁷ This was followed by AAF Letter 40-24, 9 August 1944, which informed the various organizations and echelons of the AAF that the Air Service Command supervisor training program had been approved for use by all the AAF commands and air forces, and that the use of the Training Within Industry program and facilities would be discontinued.⁵⁸

On 9 September 1944 Mr. William E. Dewey, who had played a leading part in the development of the Air Service Command supervisor training program while he was Training Specialist at Headquarters, ASC, was transferred to the Training Branch, Civilian Personnel Division, AC/AS, at AAF Headquarters. As Training Officer he worked under the immediate supervision of Lt. Col. Frank Miller, Chief of the Training Branch. Mr. Dewey directed all phases of civilian training for AAF Headquarters, and supervised the AAF supervisor training program on a world-wide basis. Mr. Douglas Claussen was in charge of civilian training for field activities.⁵⁹

Development of a Civilian Training Policy
and Program Within AAF Headquarters

Action was taken to reorganize and more closely integrate the civilian training program conducted within Headquarters, AAF. Headquarters Office Instruction No. 30-40, issued 23 September 1944, stated that civilian training in Headquarters, AAF, would be actively encouraged in order to

increase efficiency of operation and to promote job satisfaction on the part of civilian employees. All matters pertaining to civilian training for Headquarters, AAF, were to be referred to the Training Branch of the Civilian Personnel Division, AC/AS, Personnel. No Headquarters office was to carry on civilian training or to prepare instructional material for its employees without the guidance and coordination of the Training Branch.

The directive also set forth the functions and duties to be performed by the Training Branch, Civilian Personnel Division, in carrying out the Headquarters civilian training program. In the performance of these duties and functions the Training Branch was to:

- (1) Conduct upgrade training courses.
- (2) Conduct the prescribed AAF supervisor training courses.
- (3) Conduct AAF prescribed orientation courses.
- (4) Assist Headquarters offices in determining their training needs and planning how to meet them.
- (5) Assist offices in formulating plans and outlines of special training projects.
- (6) Assist in preparing training and review materials originated in other offices for training purposes.

All typists and stenographers who were new to Headquarters, AAF, and all employees within Headquarters who were reclassified as typists or stenographers, should be scheduled for the 4-day orientation course in the Training Branch. This course consisted of both orientation and instruction in military correspondence.

Finally, in order to make sure that the Training Branch would direct and coordinate all civilian training in Headquarters, AAF, it was provided

that all questions pertaining to training courses administered in Headquarters, AAF, would be referred to the Headquarters Section, Training Branch.⁶⁰

The Training Branch conducted an extensive training program in Headquarters, AAF, until the end of the war. Supervisor training had been previously carried on in Headquarters. By 8 November 1943 a total of 225 individuals, unit and sub-unit chiefs, had been given a job methods training course, and by January 1944 most of the job methods training phase of supervisor training for Headquarters had been completed.⁶¹ Soon afterward courses in job relations training were gotten underway. The job management phase of supervisory training was inaugurated in AAF Headquarters in October 1944. In June 1945 supervisor training courses in instructor techniques were being conducted by the Training Branch, which was also conducting master institutes from time to time.⁶²

Clerical training was also an important part of the AAF Headquarters civilian training program, since there was a perennial shortage of qualified typists and stenographers. Attempts on the part of Headquarters, AAF, to make up this shortage by levying on the commands and air forces in the field for quotas of transfers fell short of the goal.⁶³ Consequently AAF Headquarters had to train many of its own clerical personnel. Among the clerical courses conducted for Headquarters personnel were refresher courses in typing, courses in the preparation of military correspondence, basic military correspondence, Gregg shorthand dictation, and Gregg shorthand review.⁶⁴ Headquarters civilian personnel were also sent to attend courses conducted by other agencies such as the War Department course in civilian personnel administration; the civilian payroll administration course conducted

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conducted by the AAF School for Civilian Personnel Administration at Kelly AFB, San Antonio, Texas; and a course in efficiency rating procedures put on by the Civil Service Commission.⁶⁵

Also, of course, the branch ran its own special courses from time to time and its orientation program was a continuous one as was the supervisor training program. An example of the AAF Headquarters orientation program cited in the Diary of the Civilian Personnel Division for 7 August 1944 indicates that the Headquarters Section of the Training Branch processed 145 new clerical employees through its four-day orientation course during the month of July 1944. It should be remembered, however, that the training of Headquarters personnel was only one responsibility of the Training Branch; it also had the responsibility for the planning, organizing, policy-making for, and supervision and coordination of all AAF civilian training programs.

War Department Civilian Training Policy in 1944

In June 1944 the Training Branch worked with the Civilian Personnel and Training Division of the Office of the Secretary of War in revising the War Department's announced civilian training policy as formerly issued under the dates of 10 July and 20 October 1941.⁶⁶ The revised policy was announced in a War Department Memorandum issued 30 June 1944 with the subject heading: War Department Civilian Training Policy.

Secretary of War Henry L. Stimson sent General H. H. Arnold, Commanding General of the Army Air Forces, a letter with a copy of this memorandum, as an inclosure. In his letter Mr. Stimson pointed out that this policy statement brought up to date the War Department Memorandum on civilian training of 10 July 1941. He commended the AAF for having built so well

on the basic War Department policy by setting up training programs under which thousands of workers had been trained, supervision improved, jobs simplified, production increased, and vast quantities of time and money saved.

In Mr. Stinson's opinion the need for training civilians continued to be as great as ever and he urged that Arnold increase his effort to bring the training of AAF civilian personnel to the highest possible level of effectiveness. Stinson also desired that the attached War Department Memorandum on civilian training should be brought forcefully to the attention of every AAF operating official and supervisor.⁶⁷

In reply to the Stinson letter Arnold in a memorandum stated that the AAF had pursued and would continue to pursue an aggressive training policy to increase the effectiveness of civilian employees--such training being extremely necessary since most of the repair and maintenance of aircraft in the continental United States was done by civilians and such work demanded a high quality of workmanship.

General Arnold further pointed out that every command and air force was now emphasizing the importance of high standards of preservice training, upgrade training, and supervisor training. Factory schools were being utilized for civilian training and every effort was being made to advise field training officers of the availability of suitable training literature and training facilities. Furthermore, civilian training liaison officers had been assigned to assist field installations in solving training problems. Operating units were being encouraged to initiate training geared to their needs--such training to be conducted under the supervision of a civilian training officer in order to insure quality control. Also

arrangements were being made to provide for a more equitable distribution of salvaged material [especially class 26 material] in order that AAF activities might give more and better training by using actual equipment.

General Arnold assured Secretary Stimson that every operating official and supervisor in the AAF was being apprised of the War Department training policy memorandum and directed to carry out its provisions.⁶⁸ General Arnold's memorandum was circulated throughout the AAF for information and guidance.⁶⁹

The War Department Memorandum was circulated throughout the AAF in the summer of 1944 for the information and guidance of all concerned. The accompanying AAF Letter pointed out that the AAF civilian training policy contained in AAF Regulation 40-6, 6 March 1944, was in consonance with the War Department policy as outlined in the memorandum.⁷⁰ This statement, of course, meant that the AAF was coordinating its training program with that of the OSW and other components of the War Department.

The War Department Memorandum stated the three objectives of War Department civilian training policy to be as follows:

1. "An integrated, comprehensive War Department program that provides training for the development and maintenance of an effective civilian work force, to include training for executive management, for supervision, for job skills, for health and safety, for upgrading, for orientation, for morale, and for both long range and immediate needs."
2. "The same careful consideration for civilians as is given soldiers in connection with training plans, appropriations and programs."
3. "Sufficient freedom in the application of basic training policy to permit quick and proper adaptation to local and changing conditions."⁷¹

The memorandum also clarified in some detail the responsibilities of the War Department, the Commanding Generals of the three Forces, and training

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staffs at all echelons, in carrying out the civilian training program of the War Department. The responsibility of the War Department was to determine the training needed and to develop a program to meet those needs. It was the responsibility of the Commanding Generals of the Forces and their subordinates at all levels to give aggressive leadership in the civilian training program and to see that the necessary civilian training was provided. Training staff personnel were to work closely with operating officials, and were to perform all the various advisory, supervisory, coordinative, administrative, and instructional functions necessary to the maintenance of a high quality training program.

The memorandum contained provisions for the general organizational set-up for the civilian training program. Acting through the Director of Civilian Personnel and Training, the Office of the Secretary of War was to formulate War Department-wide plans and policies relating to civilian training; to inspect and audit training activities at each echelon as necessary, to coordinate training activities, and to counsel and assist wherever necessary in the development of civilian training activities. The Commanding General of each Force was to see that the plans and policies of the Secretary of War were made effective as applied to the organization and structure of the Force, and was to provide for the authorization or designation of civilian training officers as directors of civilian training in each echelon of the Force and for assistants when needed. The Commanding General was also to insure that the proper administration of civilian training was an integral part of civilian personnel administration. The functional relationship of such training from echelon to echelon was to

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be continuously close.⁷² Finally the general outline for approved training procedure was given--the definition of jobs to be done by position; establishment of standards of performance; designation of training required to develop such performance; selection of individuals to be trained; selection of training sources; determination of training time required for employees to accomplish performance standards; maintenance of individual progress charts; and continuous appraisal of the results of training.⁷³

It is obvious that AAF civilian training policy, as officially stated in the AAF civilian training regulation of 6 March 1946, was in close accord with the revised War Department policy statement of 30 June 1944. This is not surprising as the AAF civilian training programs, especially that of the Air Service Command, were based on policy laid down by the War Department in 1941, and some of the same AAF training staff personnel who had participated in the formulation of the over-all AAF civilian training policy in January 1944 also had a hand in the formulation of the revised War Department training policy later in the year. With the backing of authoritative and definitive directives from both the OSW and Headquarters, AAF, it was to be expected that there would be a greater emphasis on the development of civilian training activities in the various commands [especially outside the Air Service Command] and air forces of the AAF, and in their field installations.

Implementation of the AAF Civilian Training Program

Civilian training programs in the field began to have a new look even before the AAF Headquarters' new directive on civilian training came out on 6 March 1944. Perhaps the →

influence of Air Service Command training officers in determining the nature of the over-all civilian training program (and policy) announced in the March directive is indicated by the fact that just a few days before the civilian training officers conference met at Headquarters, AAF, the Air Service Command Headquarters issued a new command regulation rescinding the civilian training regulation of 18 January 1943 (the "Plan for Civilian Training") and setting up a somewhat revised program for civilian training which proved to be in line with the policy set forth in AAF Regulation 40-6, 6 March 1944.

This directive, ASC Regulation No. 50-1, issued 7 January 1944, stated that its purpose was to establish the training programs for civilian personnel employed by the Air Service Command. It defined the scope of the programs to be command-wide and established the three major types of civilian training--pre-service, upgrade, and supervisory--as did the AAF civilian training regulation of 6 March. Also, like the AAF regulation, it fixed the responsibility for carrying on the civilian training program. The regulation specified that the detailed outlines of command training programs would be published in Personnel and Training Division Circulars issued by Headquarters, ASC.⁷⁴

The rescission of the ASC regulation of 18 January 1943 with its detailed training plan gave a sufficient degree of flexibility to the ASC civilian training program to enable it to adapt itself to any over-all changes made by Headquarters, AAF, as well as to changes in training needs resulting from the end of the period of expanding personnel strength and the development of critical manpower shortages.

On 8 February 1944 Headquarters, Army Air Forces Central Flying Training Command, issued a civilian training memorandum which was almost identical with the ASC regulation of 7 January 1944. It defined the purpose of the memorandum and the scope of the training program in much the same way. It named and defined the same three major types of civilian training which were to be conducted and fixed the responsibility for carrying on the training program in the various echelons of the command. Training procedures were to be carried on as set up by CFTC Headquarters, and progress reports were to be maintained on training received by all civilian personnel. Provision was made for the maintenance of records and the submission of reports on such training.⁷⁵

On 11 April 1944 AAF Training Command issued a civilian training directive in order to implement and supplement AAF Regulation 40-6, 6 March 1944. This directive was considerably more detailed in its provisions than the ones discussed above. It set forth the objectives for civilian training to be the conservation of manpower by increasing efficiency and productivity of individual employees, to meet future requirements by pre-service training, and to reduce operational accidents by furnishing effective safety training.

This directive broadened the scope of training to include four types--orientation training, preservice, upgrade, and supervisory training. Training facilities were listed in considerable detail as were the training responsibilities of Headquarters, AAF Training Command, and those of the individual training commands.⁷⁶

The implementation of the War Department and AAF Headquarters training policy directives, as well as the implementation of those issued by the

various AAF commands and air force headquarters, was a process which took many months. In order to implement these directives, and to establish effective and well organized civilian training programs of a comprehensive nature in those commands and air forces which had not already developed adequate training programs for their civilian employees, much ground work had to be done. Civilian training officers had to be selected and appointed, training organizations and complements built up; staff and instructor personnel had to be hired and, in many cases, trained. Often it was impossible to procure the personnel needed to establish and conduct an adequate civilian training program. Also it was in some cases difficult to convince commanding officers and operating officials of the need for an effective, well organized civilian training program. Thus, although an immense amount of very effective civilian training was done by the AAF during World War II, it was not until the last year of the war that there was established an Air Force-wide civilian training program in being.

The Air Service Command continued to do the majority of the civilian training accomplished in the AAF in 1944. As of 29 February 1944 all the AAF commands and air forces had a total civilian personnel strength of 336,433 and 18,070 of these civilian employees, 5.3 percent of the total civilian strength, were in training. At this time the Air Service Command had 181,023 civilian employees, 13,681 or 7 percent of whom were in training. This is a rather impressive training record as compared to that of the other AAF commands and air forces which, together, had a total of 155,410 civilian employees with only 4,389 or 2.5 percent of them in training.⁷⁷ The AAF Training Command, which was second to the Air Service Command in number of civilian employees, also was second in the amount of civilian training in the AAF.⁷⁸

There was a wide variation from installation to installation, even where these installations were in the same command, in the quality of the training programs and the degree to which they conformed to stated AAF training policy. These variations were due to many factors; some of them were due to personality clashes, others developed from shortages of training personnel and facilities, and some from the failure of persons in authority to appreciate training needs.

Even Warner Robins Air Service Command, where civilian training had been going on for a long time, was still having its troubles in 1944. In February 1944, although its civilian training officer and administrative staff were well qualified as a whole, there was no chief civilian training administrator to head the program; Headquarters, ASC recommended that one be hired. It also needed more training space and more schools for pre-service training to meet current turnover.

The depot's instructional staff had been badly depleted because of the competition of other agencies which paid higher salaries. In order to assure a high quality of training it was recommended by Headquarters, Air Service Command, that a sufficient number of qualified instructors should be hired by the depot.⁷⁹

On the other hand Spokane Air Service Command had a civilian training administrator at the head of its program, and apparently had an adequate training staff and adequate space. It seems to have had more training facilities than it could use.⁸⁰

At many installations the implementation of the Air Force-wide civilian training program was complicated by the transfer of the subdepots

to the various commands and air forces. In May of 1943 the Personnel Sections of the subdepots were consolidated with those of the stations at which the subdepots were located and the responsibility for civilian training was transferred from the Air Service Command to the station commanders. In actual practice, however, the air depots continued to work with and train for the subdepots until the subdepots were finally transferred from the control of ASC in January, 1944.⁶¹

The transfer of the subdepots from the Air Service Command to the Eastern Flying Training Command approximately doubled the assigned civilian personnel strength of the latter command and change which necessitated an increase in the Civilian Personnel Section of that command and also required a great intensification of the civilian training program which, until this time had been relatively unimportant. To meet the situation an intensive on-the-job training program was established along with other training.⁶²

Headquarters, Eastern Flying Training Command, issued a directive on 8 March 1944 providing for a comprehensive program of civilian training which was planned to meet the training needs of AAF (subdepot and other personnel) and ASWAAF civilian employees at all stations under the jurisdiction of the command. It was the intent of this program to achieve the maximum utilization of all personnel in order to cope with the acute manpower shortage.

The Civilian Training and Recruitment Unit in the Civilian Personnel Section, A-1, EFTC Headquarters, was to be responsible for the development and direction of the civilian training program throughout the command.

Each station commander, acting through his civilian personnel officer, was responsible for the proper accomplishment of this program in all activities under his command which employed civilians.

In order to meet this responsibility the following actions were to be undertaken:

1. Establishment of an adequate civilian training staff headed by a full-time civilian training administrator under the direction of a civilian training officer. Former facilities and personnel of the Air Service Command were to be merged with the civilian training facilities and personnel of the command.*
2. Provision was to be made for close cooperation in the use of facilities for training both military and civilian personnel.
3. Provision was to be made for adequate classroom and shop facilities for civilian training, including necessary tools, supplies, and other training materials.
4. Currently employed personnel assigned to productive work were to be selected for and given upgrade and supplementary training.
5. Maintenance of liaison with War Manpower Commission representatives, and with state and local educational institutions having facilities for training.
6. Maintenance of training records, and the preparation and submission of training reports to higher headquarters.

* The ASC civilian training facilities referred to here were those of the subdepots now transferred to DFIC. Actually the DFIC had been in the process of taking over and using subdepot civilian training personnel and facilities since the spring of 1943.

The directive outlined a plan for basic training to be given to new employees. This was divided into two categories: orientation and basic training in mechanic or specialist skills. All new employees were to be given a general orientation course in order to acquaint them with their new environment, to inform them of the nature of the organization of which they were becoming a part, and to impress upon them the importance of its mission. Basic training was to provide the new employee with the technical information he needed in order to perform his job, and was to combine classroom training with shop work.

Provision was made for up-grade training to be given both in the classroom and on-the-job. This was to be organized training designed to increase employees' skills for more responsible work. Procedures for the establishment of such training courses would be periodically issued from Headquarters, EFTC.

The directive also contained provisions for the conduct of supervisor training at all stations of EFTC, the use of factory schools, the procurement of training aids, the handling of training records and reports, the preparation of course outlines, and the preparation of tests to determine the trainee's degree of skill and mastery of each craft or occupation in which he received training.⁸³

This program was subject to change, of course, when new directives (such as AAF Reg. No. 40-11, 2 August 1944, Supervisor Training Programs) were issued by Headquarters, AAF. The Eastern Flying Training Command took over the training personnel and facilities of the subdepots located at its installations and incorporated them in a command-wide program which included the various types of training enumerated above. When the AAF

adopted the ASC 52-hour Supervisor Training Course, EFTC held standard institutes for the purpose of training conference leaders to carry on the training of supervisors as a part of the civilian training program at all EFTC installations. By 1945 EFTC had a well-integrated civilian training program operating on a command-wide basis with the benefit of effective direction and supervision by the EFTC Headquarters Civilian Training and Placement Unit. 84

In November 1944 the Chief of Civilian Personnel and Training, OSW, met with the Training Branch, Civilian Personnel Division, AC/AS, Personnel, Headquarters, AAF, in order to review the reports of OSW Inspectors on the status of civilian training at the various AAF field stations. The findings of the Headquarters liaison officers of the Civilian Personnel Division were compared with those of the OSW inspectors. It was evident that civilian training at most of the Army Air bases had sunk to a very low ebb after the transfer of the subdepots had been completed in January 1944.

Later, when the need for civilian training became apparent to most of the base commanders, they began to manifest an interest in the training program [an interest which was no doubt stimulated by the AAF and War Department training directives], and later reports by OSW inspectors and civilian training liaison officers from Headquarters, AAF, gave evidence of a revival of civilian training in these bases. The reports of the inspectors and liaison officers indicated, however, that some command and air force headquarters were not cognizant of the needs of their field stations in regard to civilian training, and had not put the necessary emphasis on planning and operating such a program at their installations. 85

At this meeting there was also discussed at length a pattern or procedure for the development of on-the-job training and apprenticeship training.⁸⁶ Now that the period of great personnel expansion was over and it was no longer necessary to place emphasis on a crash program of preservice and off-reservation training designed to train new workers as quickly as possible, it became feasible to plan a revival of apprenticeship training in order to develop highly skilled aircraft mechanics to form the nucleus of a permanent and stabilized working force. It was not until 1945, however, that the AAF Headquarters Training Branch requested Headquarters, AFSC, and Headquarters Training Command to develop apprenticeship courses.⁸⁷ AAF Letter 40-88, issued on 7 December 1945, outlined the qualifications which an installation must possess in order to be approved as an apprentice training center and the procedure to be followed in securing the authority to put on such a program.⁸⁸

The development of on-the-job training was of more immediate concern in 1944. An increasing emphasis was put on up-grade training in 1944-45 as a part of the program for the maximum utilization of personnel made necessary by manpower shortages. Most on-the-job training after 1943 was for up-grading, and an increasing amount of preservice training was conducted on the job. This became more practicable as the number of employees requiring initial training declined, and as assembly line production methods [which broke jobs down into simple, easily learned operations that could be learned by a beginner] came into wide use. Preservice training on-the-job was much more economical than that conducted in off-reservation schools, and by January, 1945 most new workers were being trained in this manner. The cycle ran its course--from individual training in the shops in prewar

days, to mass instruction in classrooms in the period of expansion, and finally back again to individual training in the production area.⁸⁹

Although on-the-job training had many advantages such as economy, the promotion of better relations between the training departments and maintenance, and improved the employee's morale, it had one inherent limitation--it could be used only in circumstances where the experienced personnel outnumbered trainees. It could never have been used in the era of mass hiring and mass training.⁹⁰ Also there were certain jobs which on-the-job trainees could not be permitted to perform. In May of 1944 Headquarters, AAF, enumerated a policy in the form of an AAF Memorandum which emphasized the fact that there should be no beginning learners in training or at work on aircraft, or on any part thereof, which involved shaping, forming, and critical assembly operations, and that such operations should be taught on practice material until such time as the learners had attained the necessary standard of performance.⁹¹

The emphasis on upgrade training as a must for maximum utilization of personnel was accompanied by an emphasis on supervisor training. Supervisors trained in the principles of job management, job instruction, and job (human) relations could get more work done with fewer people. Upgrade training would prepare employees to perform jobs involving higher skills, thereby meeting an installation's promotional needs and improving morale. Much upgrade training could be done on an on-the-job basis. Then too, supervisor training and upgrade training dovetailed--the supervisor who had mastered job instruction principles and methods in a supervisor training course could set up an upgrade on-the-job training course in his own department. Also he would be more likely to cooperate with training personnel

who conducted upgrade training on a classroom basis. Strenuous efforts were made to improve employee relations and to promote safety training so as to prevent the loss of manhours through absenteeism, high turnover, job dissatisfaction, and absences. Civilians were increasingly used to replace military personnel wherever possible. ⁹²

Quarterly and semi-annual reports on civilian personnel utilization were required of the various commands and air forces.⁹³ These reports were required because the United States Civil Service and War Manpower Commissions required assurance that full utilization was being made of manpower in all installations for which they were requested to give assistance in the recruitment of personnel. An important phase of the efficient utilization of manpower was the proper training of the civilian employees. ⁹⁴

Quarterly reports of civilian personnel utilization surveys made by various installations indicated varying degrees of development of civilian training programs. A report from Stockton Field, California, submitted 3 October 1944, showed the basic pilot school there to be holding upgrade training courses for civilians, and indicated that the first phase of the AAF 52-hour course was underway. Also a preservice program of orientation training for new employees was being given weekly.⁹⁵

A personnel utilization report from an AAF Technical Training Command detachment at Yale University indicated that upgrade training was being conducted with the objective of replacing enlisted men with civilians in office jobs; civilian employees and instructors were receiving upgrade training daily in the maintenance, engineering, and communications departments; there was a training program conducted in the supply division by the

officer in charge; and all civilian clerks and stenographers had taken a course in military correspondence. No mention was made of a supervisor training program.⁵⁶

A semi-annual report on civilian personnel utilization made by ANF Central Flying Training Command in July 1945 stated that supervisor training was being continued throughout the command and in many cases was being extended to officer personnel. This supervisor training was given credit for reduction in number of employee grievances, improvements in handling grievances and in taking disciplinary action, improvement in handling personnel, higher production, and increased skills in the interviewing of employees and leading departmental conferences.

Under the heading "Training for Maximum Utilization" this report gave the civilian training program credit for the following contributions to the maximum utilization of personnel:

1. Totally untrained personnel hired and put into production through training.
2. Increased production resulting from training personnel in better methods.
3. Fewer grievances caused by poor supervision.
4. Reduction of the number of personnel required to do the same work.
5. Ability to adjust operations to a change of mission.
6. Downward trend of the accident rate.
7. Increase in ideas for victory and a corresponding increase in production.
8. Increase in ability to shift personnel across departmental lines in case of peak loads.

9. Development of understudies which prevented absenteeism from affecting production to any great extent.⁹⁷

A summary of the official status of training in the Air Technical Service Command at the beginning of 1945 was given in ATSC Regulation No. 50-6, 22 January 1945. The Civilian Training organization continued to be responsible for organizing, supervising, and conducting training programs in schools and production areas on the reservation and for arranging for the accomplishment of necessary training in off-reservation facilities of all types. The operating officials were responsible for taking the initiative in providing assistance and coordination in analyzing needs and in making course outlines; in providing assistance in securing instructors; in requesting training where needed; and in making personnel available for training.⁹⁸

The largest program was in the field of operational training which included both preservice and upgrade training. Organized preservice training was to be given to all new employees who were not qualified to enter upon productive duties at the time of employment. All new employees who were to be assigned to mechanical jobs and who lacked the proper mechanical experience were to be given 48 hours of basic instruction, including the use of tools and safety practices, prior to assignment to on-the-job preservice training.

Upgrade training was defined in considerable detail as organized instruction to increase the skills and proficiency of a worker, to prepare him to assume added duties connected with his current job, or to prepare him for promotion to a higher level in his current job series. Retraining, cross-training, and related forms of training were considered to be upgrade

training if for the benefit of the government. It was stressed that it was a fundamental policy of the ATSC civilian training program to make continuous provision for upgrade training for civilian personnel in the command. The operating divisions and the training organization were to make recommendations to the commanding officer through the civilian training committee as to the place of training--that is whether on-the-job, in the classroom, or both in combination. Instructor personnel for operational training could be furnished by the civilian training organization, by the operating division, or by an outside agency such as the state department of education.

Supervisor training was provided for under the category of management and professional training. It was to be given to all civilian supervisors directing the work of others. The 52-hour basic supervisor training course, developed by ATSC, was approved as the standard course for all commands. This was to be the minimum requirement. Continuing courses beyond the basic program were authorized and recommended in order to deal with advanced problems of management and supervision. The training of military supervisory personnel by the civilian training organization, using the standard ATSC 20-hour officer-training program and continuing courses, was authorized and recommended.

Emphasis was also placed on a program for the training of instructors in the latest and approved techniques of instruction. Special attention was to be given to the development of an instructor-training program to train on-the-job instructors.

Each civilian employee was to receive an orientation training course to inform him as to employee rules, rights, obligations, security, safety, and as to the nature of the organization in which he was employed.

The use of civilian training facilities for the joint training of civilian and military personnel was authorized in the interest of the maximum utilization of manpower and space.

Extension of ATSC civilian training facilities to the personnel of other AAF installations was to be made only in accordance with AAF Regulation No. 20-31.

An important feature of the training set-up established by ATSC Regulation 50-6 was the civilian training committee which was to be set up at each ATSC installation. It consisted of a representative of the commanding officer, the civilian personnel officer, the civilian training officer, the civilian training administrator, the civilian placement officer, and one representative from each operating division. In smaller installations one officer might serve in more than one of the positions indicated above. This committee was to act in an advisory capacity to the commanding officer on matters pertinent to the efficiency and effectiveness of the civilian-training program. Among its duties was that of submitting a monthly plan for training to the commanding officer or his representative.

There were provisions dealing with training records and reports, with the issuance of certificates of training to those trainees satisfactorily completing courses, and with the payment of wages and per diem to trainees.

Training facilities were to be found in both on-reservation and off-reservation schools. Specialized training facilities in certain technical or administrative fields were to be centralized at certain ATSC installations

for the training of personnel from any number of other ATSC installations. Such specialized schools were to be established only on the authority of Headquarters, ATSC, and such centralization was to serve the purposes of economy and efficiency.

Off-reservation schools were to be used where civilian training needs could not be provided on the reservation. Such off-reservation facilities were to include the War Production Training Program of the U.S. Office of Education; professional and scientific training offered by the Engineering, Science, and Management War Training Program; contract schools; factory schools; and centralized depot schools. Procedures were established by which to arrange for such training and for securing training equipment for on-reservation and off-reservation training programs.

It was emphasized that complete and properly organized course outlines of instruction must be established and used in all training activities, except in certain types of short-term training where it might be more desirable to use job sheets as work sheets. Standard course outlines for shaping, forming, and critical-assembly activities were published and distributed by Headquarters, ATSC. Provision was made for the proper preparation of course outlines for local use, and IAW was encouraged on the local development and printing of training materials in accordance with IAW Letter 10-22. Whenever the subject matter permitted IAW Technical Orders or War Department Manuals and other authorized publications were to be used as texts in civilian training courses.⁵⁹

The civilian training organization of ATSC had a well organized and effective training program, but it had its problems too. Some of these problems as brought up for consideration at a meeting of training branch

chiefs on 5 December 1944 follow:

1. Difficulty in procuring and keeping qualified military and civilian training personnel. Civilian training officers with a training background were hard to find, and even harder to keep because of the slight promotional opportunities. Over a period of two years the turnover among civilian training administrators, supervisor training specialists, and instructors reached the rate of 75 percent.

2. Printing restrictions which had stopped the development of training manuals. Now only mimeographed outlines and work sheets could be developed.

3. Difficulty in maintaining adequate supervision of training activities in the field. Travel restrictions severely hampered such supervision and the training programs in some areas suffered as a result.

4. Difficulties resulting from the introduction in April 1944 of the individual technical training program for enlisted men. Much of this training was done by the civilian training schools, and the resultant work load led to the almost complete elimination of the training of civilians at times. At other times the sudden withdrawal of the enlisted men from training left an excess of instructor personnel. Efforts to secure estimates of the future training needs of enlisted personnel were not successful, even as late as 1 April 1945, hence intelligent and efficient planning was almost impossible.

5. Difficulties which arose when it became necessary to establish centralized depot schools in AFSC covered areas because most of the area civilian training branches had been reduced to the point at which no such additional work loads could be handled.

6. Limited training facilities. It was difficult to meet the many requests for the training of civilian personnel for the air forces and other commands at area ATSC facilities.¹⁰⁰

Despite the problems which often arose and the obstacles which prevented the full achievement of the objectives of the ATF civilian training program in the Air Technical Service Command, and the other commands and air forces, a great amount of civilian training was accomplished. Reports from various ATSC areas commands definitely justify the expenditures for training and the time involved in carrying on the program.

In the spring of 1945 Oklahoma City ATSC, in reply to a teletype from Headquarters, ATSC, requesting information on specific training achievements justifying the expenditures for civilian training, submitted an impressive list of benefits resulting from its civilian training program.* They were as follows:

1. Decreased number and severity of accidents. Continuous technical courses in industrial safety, accident prevention, shop methods, first aid, etc., together with complete cooperation with the safety engineer and safety instruction in preservice training and orientation, lowered the accident frequency rate from 15.81 percent in 1943 to 3.94 percent in 1944.

2. Increased production. The original cadres of workers sent to man the shops at OCAATSC were supplemented by personnel trained in off-reservation schools and in the Civilian Training Branch of OCAATSC for specific assignment to maintenance, supply, administrative, and miscellaneous

* Attached to the list were 14 exhibits to illustrate the value of civilian training.

activities. Production began to climb immediately and from that date 30 to 50 percent of all employees appointed to positions at Oklahoma City ATSC received all or a part of their training from OCATSC Civilian Training Branch. In part it was training that enabled this installation to rise from an unproductive organization in July 1942 to become one of the most productive installations in the ATSC.

3. Increased skill of trainees. The OCATSC Civilian Training Branch, the off-reservation school under its control, and the factory schools made it possible for ex-housewives and garage mechanics in large numbers to work alongside skilled aircraft mechanics and instrument workers and machinists, and to fully qualify in many of the related skills themselves. Training was basic to this productive achievement.

4. Supervisory training. From 1 January, 1944 supervisor training had been conducted at OCATSC at a total cost of \$79,837.60. It was estimated that as a result of the training received in this course a total of 1,281,623 manhours had been saved for the government. Estimating this at 80 cents an hour the monetary saving was \$1,025,298.40. Subtracting from this the cost of the supervisor training, the profit to the government was \$945,460.80, resulting from slightly more than one year's application of the principles and methods learned in supervisor training.

5. Decreased turnover and absenteeism. Turnover at Oklahoma City ATSC was on a decline due to orientation of the employees, preservice training, and supervisor training. Absenteeism was a seasonal affair but its incidence had been decreased to some extent by a presenteeism program put on by the conference leaders of the Supervisory Training Unit, Civilian Training Branch.

6. Adaptability of civilian training to change of mission. On 13 July 1944 the OCATSC Civilian Training Branch was informed that there was a need for the training of military and civilian personnel in the maintenance of B-29 aircraft. Although it had very little experience with military training the Civilian Training Branch developed the program within a month after notification and on 11 September 1944 the first class started. Within a short time a fully accredited curriculum in all phases of the technical maintenance of the B-29 was in operation.

By 28 March 1945 a total of 2,411 officers and men had graduated from the course in B-29 maintenance training and were being utilized throughout the world wherever B-29's were in operation. Materiel Command inspectors, technical representatives, factory representatives, departmental supervisors and other trainees were still being given training in B-29 maintenance, 341 persons being enrolled at the time of the report. Here a civilian training school had changed to a military and civilian training school in a very short time and had shown itself an effective medium for both types of training.

7. Training for the untrained and inexperienced. At the date of the report 33 1/3 percent of all personnel employed monthly by OCATSC were untrained and inexperienced. This group was assigned to the Civilian Training School for orientation and training. Of the clerical employees 40 percent were without experience and training and the remaining 60 percent were below the standards of normal times. Supply and maintenance employees needed upgrade and on-the-job training in order to be better fitted for their assignments. Many of these were trained long enough to become specialists in certain fields and were used by the operation divisions to meet current production needs.¹⁰¹

In a letter or report in reply to the same type of request for information by ATSC Headquarters, San Antonio ATSC reported similar achievements in justification of expenditures for its civilian training program. Largely as a result of civilian training activities the accident frequency rate for the period January 1943 to January 1945 had been lowered from 15 percent to .68 percent, and the accident severity rate from .8 to .13. Training had reduced the maintenance on fork lift equipment by 50 percent and the accident frequency rate for fork lift operators had declined to 5.55 percent as compared to the national average of 26 percent.

SAATSC reported that due to training many departments were maintaining production at the required levels despite drastic cuts in personnel. Training had produced most noticeable results in increasing the speed of typists and stenographers and in decreasing their errors. Through training management had been able to improve the individual abilities of many workers and to achieve thereby greater utilization of manpower. The supervisory training program had greatly stimulated the number of suggestions submitted for better job methods and for new devices which saved the government money by conserving man hours and materials.

The Civilian Training Branch of SAATSC had organized and conducted a highly successful program for training supervisors and workers in Packaging Control and Corrosion Prevention [which was an important factor in preventing the wastage of such critical and costly equipment as aircraft engines]. The Training Branch had also devised and carried on for both military and civilian personnel a training course in new supply procedures which had decidedly promoted production and the elimination of errors. The supervisory training staff at SAATSC had been very useful to management in

giving special training to supervisors in efficiency rating procedures, in handling grievances, and in the reassignment of workers. 102

Warner Robins AFSC, at Warner Robins, Ga., submitted similar information justifying expenditures for civilian training in that command area. A few examples selected from the WAFSC report indicate that its civilian training program was of great utility, in increasing production, saving manhours, and making supervision and management more effective.

On a modification of the FE-73-C dynamitor production was increased 200 percent through training. An intensive training program begun in September 1964 reduced the overhaul time on R-2800 engines by 50 manhours per unit in five months and increased the output of engines from 295 to 539 per month.

Job Methods Training in the supervisor training course resulted in the submission of 679 suggestions representing an annual estimated saving of 113,627 man days. Continuing conferences with supervisors on absenteeism reduced the absenteeism rate by 2 percent and the separation rate by 30 percent.

In terms of dollars saved it was estimated that the results of training in cutting down on the overhaul time per unit for R-2800 engines saved the Government \$60,362.00 per month--and the 876 suggestions submitted by WAFSC supervisors after taking the Job Methods Training resulted in savings estimated at \$1,127,604.00 a year.

The WAFSC report indicated that these examples of savings affected through training constituted only a portion of the actual benefits received from the operation of the civilian training program at Warner Robins Air Technical Service Command and its subinstallations. 103

In connection with these reports it should be noted that the data which the various area commands had been requested to submit to AFSC Headquarters was desired by the Office of the Secretary of War in order to prove that the investment in civilian training had been profitable.¹⁰⁴

It is obvious, of course, and was so stated in the above-mentioned reports, that factors other than civilian training also operated to bring about the more effective management and execution of the various AAF activities under discussion, and the savings of time and money effected. It is equally obvious, however, that civilian training played a major part in making possible these great contributions to the success of the AAF in carrying out its mission. It should also be pointed out that many of the benefits accruing from the AAF civilian training program were intangible in nature, although real enough, and could not be measured in terms of dollars and hours saved. More important than any such savings were the contributions of training in bringing the war to a quicker close and in saving countless lives--contributions which it was impossible to measure, in definite terms.

In 1945 there was a wider recognition throughout the AAF (in the continental United States) of the need for civilian training and of its utility, and civilian training activities were more widespread through the AAF commands and Air Forces. The civilian training programs were more comprehensive and more better organized, not only in the Air Technical Service Command, the AAF Training Command, and the AAF Headquarters Training Branch, but also in other AAF organizations.

There was a wide range in the size and scope of the civilian training programs at various AAF installations. A large control depot with thousands

of civilian employees might have a training program covering all or nearly all of the eleven areas of civilian training established in August 1945 for War Department civilian employees. * Its training organization might be staffed with a complement of over 100 training personnel (including both administrative and instructor personnel), and conduct dozens of courses with a total enrollment of trainees numbering several hundred at any given time.

On the other hand a relatively small organization like AAF Technical Air Center with its headquarters at Orlando Army Air Base, and employing approximately 2,500 civilians in January, 1945, had a much more limited training program. In 1945-1946 the AATAC civilian training branch, functioning under the general supervision of the Assistant civilian personnel officer, Hq, AATAC, had 7 people in its civilian training complement--a civilian training administrator, an assistant civilian training administrator, a secretary, and four instructors. The training program included an orientation course, the required AAF supervisor training course, clerical training (military correspondence, shorthand, typing, and filing), upgrade training, and some safety training. The administrator, with the aid of his assistant, carried on the orientation training. All supervisor

* These areas of training were as follows: apprenticeship; clerical; inspection and testing; management and supervision; manual, unskilled, and semiskilled; orientation; protective and personal services; safety; skilled trades and crafts; supply operations and procedures; technical, scientific, and professional. See Minutes of Training Committee Meeting held at Office of Training Branch, CPD, OSI, at 10 AM, 8 August 1945, in Folder, Policies (Misc. Eng.), Files of Career Development Division, Directorate of Civilian Personnel, USAF Hq, Washington, D.C.

^ In June 1944 Sacramento ASC had 4 officers and 133 civilians assigned to its training complement. At its peak Kelly Air Force Base (San Antonio ATSC) had a training organization which hired over 400 people to carry on civilian training. See 1st Ind, Hq, SASC, McClellan Field, California, to CG, ASC, Patterson Field, Ohio, 24 June 1944 (Branch Ltr, Hq, ASC, to Hq SASC, subj: Civilian Training Activities Questionnaire, 31 May 1944), KCRC, 353 Civilian Training SASC, April; also see "The Kelly Civilian Training Story," p.4, in Folder, History of Civilian Training, in Files of Career Development Division, Directorate of Civilian Personnel, USAF Hq, Washington, D.C.

training was carried on by the administrator. The upgrade training, mostly done on-the-job by foremen and supervisors who had received job instruction training as a part of supervisor training, was conducted in the operating departments under the supervision of the civilian training administrator. The four instructors conducted clerical training for both military and civilian personnel. Ordinarily the trainees enrolled at any time in all the courses offered would not be over 100 in number, if all the employees listed on the training progress charts were not counted as actually being in training.¹⁰⁵

Although the civilian personnel strength of the AAF had begun to decline by the end of November 1944 and continued this process through 1945,¹⁰⁶ and there was no longer any need for the mass training of new employees, the AAF continued to carry on an extensive civilian training program in 1945. In a two-month period (April and May 1945) 10,579 civilian employees completed supervisory, executive, and administrative training; 35,249 completed courses in technical, manual, and mechanical training; 32,994 completed orientation and indoctrination training; and 32,276 commenced training for the first time.¹⁰⁷ In May 1945 a total of 72,729 civilian employees of the AAF completed a course of training and in June 1945 a total of 61,509--in the same two months 39,654 civilian employees commenced training for the first time.¹⁰⁸

Reorientation of Civilian Training Program in 1945

At the end of January 1945 the civilian personnel strength of the AAF in the continental United States stood at 404,469; by the end of December 1945 it had declined to 233,056.¹⁰⁹ This decline in personnel strength

accelerated after VE-Day and VJ-Day as civilian employees resigned to take jobs with private enterprise and to escape the reduction in force which would inevitably take place. In September 1945 all AAF commands and independent activities were notified by telegram of the new reduction-in-force regulation which required that each employee be given 30 days' advance notice before separation.¹¹⁰ By 4 October 1945 reduction-in-force notices had been distributed to those civilian employees at Headquarters AAF, who were effected by the first cut.¹¹¹

These developments inevitably affected the civilian training program which contracted as civilian personnel strength shrank and the need for many types of training declined. At many installations the civilian training organization was crippled when training personnel left government service to seek job security and better salaries elsewhere. By 25 September 1945 all contracts for the training of clerical personnel for the AAF had been terminated. The majority of the other types of contract training such as factory courses, engineering aide courses at colleges and universities, and mechanical training at public and private schools had also been terminated.¹¹²

There was now a need to reorient the civilian training program to adapt it to the demobilization of the armed forces and the transition to a smaller peacetime military establishment with a greatly reduced strength in military and civilian personnel. It was the opinion of the Civilian Personnel Division, AS/AS-1, that supervisor training courses should continue in Headquarters AAF, with special emphasis on the organizational planning aspects of a supervisor's job. It was felt that a reduction of the Headquarters staff would make it necessary to conduct refresher courses for employees reassigned to stenographic and typing duties. In the field

emphasis should be placed on apprenticeship training and veterans training. There should also be a return to the over-all type of training in aircraft work which would permit the full-time use of certain vocational schools which had not been able to conduct the highly specialized type of training needed during the war period.¹¹³

The following statement by Secretary of War Robert P. Patterson in a War Department Civilian Personnel Regulation issued 14 November 1945 indicates the general policy of the War Department in regard to civilian training at this time: "The civilian personnel programs which were instituted during the war should now be reexamined to determine which have proved to be of enduring value and usefulness. Those which increase broadly the quantity and quality of individual output, improve the caliber of supervision, and maintain a high degree of employee morale, will be retained."¹¹⁴

The War Department Regulation outlined seven basic training procedures which were to be followed in order to be sure that employees were trained to do their jobs right so that the Department's civilian personnel policy in general would be implemented. These were:

1. Identification of, and provision for, the training needs of employees.
2. Proper orientation and induction into his job of every employee.
3. Training each employee to do his job safely.
4. Establishment and maintenance of apprenticeship programs for training in highly skilled crafts, trades, or technical operations.
5. Provision of special attention to the orientation and training, or retraining, of employed veterans.
6. The training of all supervisors and for men in the principles of supervision and management.

7. The training of instructors in the effective use of the techniques and materials of instruction so that on-the-job training would be used to the greatest advantage.¹¹⁵

In AAA Regulation No. 16-19, issued 16 November 1945, the Army Air Forces outlined the aims of its postwar civilian personnel program, one of which was to emphasize the continuing importance of civilian training. The emphasis was to shift to the following primary types of training:

1. Apprentice Training - to develop all-around civilian journeymen to meet AAA needs and to create a potential source from which to select supervisors.
2. Supervisor and Manager Training - short courses for preliminary and upgrade training in the principles of management and supervision.
3. On-the-job Training - to provide short unit training for specialized jobs and for cross-training.
4. Safety and First Aid - to train each person to be safety-minded for his own protection and the safeguarding of his fellow workers.
5. Short Courses - to give training on new or changed policies and procedures, and to give refresher training.
6. Orientation Training - to give each employee the information which would enable him to adjust as quickly as possible for maximum production in his new job situation.¹¹⁶

In its shift of emphasis to these types of training which seemed best adapted to postwar needs this regulation essentially conformed to the training policy announced by the War Department in its regulation of 14 November. The training program of the postwar Air Force was, like the Air Force itself, to suffer from neglect, and to sink to a low level of activity before a revival of interest in civilian training was brought about as a result of a new emphasis on the strengthening of American airpower.

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Chapter III

DEVELOPMENTS IN VARIOUS FIELDS OF CIVILIAN TRAINING, 1941-1945

The discussion, in the previous chapter, of the development of the Air Service Command civilian training program and the subsequent establishment of a comprehensive and effective AAF civilian training program on an Air Force-wide basis necessarily confines itself largely to the over-all picture. The civilian training program in the AAF during the war years was so extensive, however, and included so many different types and phases of training which were important in themselves, that it deserves separate treatment.

The Mechanic Learner Program

One of the most important phases of civilian training to develop in the early years of the war was the mechanic learner program. This program enabled the Air Service Command and other AAF organizations to hire thousands of unskilled and untrained civilian employees and to soon have them trained for productive work. This program made it possible to meet wartime expansion needs.

It has already been noted that some of the depots of the Air Service Command had embarked on mechanic learner programs in 1941.* The mechanic learner program was a system by which trainees were paid wages during the time they were receiving training and before they were engaged in productive work. As previously pointed out the authority for using federal funds to

* See above, pp. 22-28.

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pay wages to trainees derived from the act of July 2, 1940, which authorized the President "to provide for the procurement and training of civilian personnel in connection with the protection of critical and essential items of equipment and material and the use and operation thereof."¹ This legislative authority for the hiring of mechanic learners on a trainee basis was confirmed by the Comptroller General on 23 June 1941; San Antonio and Middletown, however, had been paying their trainees since early in the year.

The question of authority having been settled, a definite program for mechanic learners was set up in the fall of 1941 and the Civilian Personnel Division of the War Department authorized the inclusion of the position of Junior Mechanic Learner, \$600 per annum, in the engineering departments of the air depots.²

From these beginnings a widespread program developed and was in almost uniform operation at the depots by late February 1942. Mechanic learners were hired at \$900 per annum and for a period not to exceed six months trained at any vocational educational facilities available and suitable--private or public civilian institutions, factories, or schools established on military installations.

The mechanic learner program thus established proved to be well suited to the needs of ASC and was effective in meeting the emergency situation existing at the time. There was one continuous problem which had to be met, that of how much to pay the trainees in order to meet the competition of private industry and of other government agencies in the labor market. Various adjustments were made in salary scales, and finally on 31 August 1942 Headquarters AAF authorized a scale of \$900-960-1080-1200 per annum

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with authority granted to appoint or promote to any salary within the range. This wide range of salaries caused some difficulties as the determination of the salary at each depot was left up to the depot commander. This meant that trainees of the various depots received different wages-- a source of considerable dissatisfaction and trouble when trainees from several depots got together at the same school. At the end of 1942 the program was well established although there remained some dissatisfaction with the salary range.

There was also a problem for some time about what to do about giving per diem allowances to trainees who were sent from the hiring depot to training centers some distance away. Inequalities among trainees in receiving per diem caused considerable dissatisfaction and lowering of morale. Attempts to standardize per diem payment procedures finally led to the inclusion in ASC Regulation 40-1, 16 January 1943, of a paragraph which provided that employees in pre-service training (before engaged in productive work) should not be paid per diem while in school, but might be paid for time spent in travel from the official station to school and back. This did not apply to experienced employees who were being sent off to work for specialized training, only to mechanic learners.

In addition to enabling the Air Service Command to compete in the labor market and at the same time to give the new and inexperienced employees the necessary preservice training, the mechanic learner program had the advantage of giving the depots a means of control over the off-reservation schools. As these were financed by National Defense Training funds, the depot control over them was very slight insofar as the written agreements went.

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But when the trainees were put on the depot payroll the depot was in a position to refuse to pay trainees of a school which was not meeting standards or turning out qualified workers. This gave the depots a very effective control over the off-reservation schools.

The scope and importance of the mechanic learner program in the ASC are indicated by the number of trainees enrolled in the program during its five peak months, June through October 1942. These figures ranged from 10,273 to 13,442 during the whole period.³ The mechanic learner program was reduced in scope when the hiring of new employees was reduced and civilian personnel strength fell off but it remained in operation until federal funds were cut off in 1945.⁴

Jurisdictional Conflicts and Other Training Problems

In such a vast, complex, and widely diversified training program as that carried on by the AAF during World War II, both for military and civilian personnel, it was almost inevitable that jurisdictional conflicts should arise in certain areas of training, especially where military and civilian personnel were using the same training facilities and receiving the same type of training, and where more than one AAF agency exercised authority in the same field of training.

The most outstanding case of jurisdictional conflict in the field of civilian training in the AAF arose when Headquarters, AAF, in May 1942 directed that all technical training of individuals conducted by the various commands and air forces of the AAF under contract in schools and factories was to be placed under the general control and supervision

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of the Commanding General of the Technical Training Command not later than 1 June 1942. This included all military and civilian personnel on duty at the contract and factory schools--it did not apply to technical training given by the ASC at its own on-reservation schools. It was further directed that Air Force Commanders in need of individual training requiring the assistance of agencies beyond their jurisdiction were to submit requests for such training to the Chief of the Army Air Forces, attention: Director of Individual Training, who would then issue the necessary instructions to the Technical Training Command to effect the desired training.

As the Technical Training Command, which was primarily concerned with the training of military personnel, was slow to take action in effecting arrangements for the training of civilian personnel requested by the Air Service Command, complications and disputes arose which led to the delegation of some of its authority over the training of civilians by the Technical Training Command to the Air Service Command.⁵

On 25 June 1942 AAF Headquarters clarified the situation to some extent by issuing a letter which informed all concerned that the Commanding General, Air Forces Technical Training Command, Knollwood Field, N.C., was responsible for and had jurisdiction over the training of all military and civilian technical students for the AAF except those technical students being trained in ASC depots, subdepots, and mobile depots; and except as otherwise agreed to by the Technical Training Command or authorized by AAF Headquarters. It was also stated that the Commanding General, AAF Technical Training Command, could subrogate this power of training jurisdiction wherever it was deemed expedient.

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In addition it was stated that no personnel of the AAF would be sent to industrial plants for information or technical training, and no arrangements in connection therewith would be made without the specific authority of Headquarters, AAF, in each case.⁶

This action by Headquarters, AAF, forced Technical Training Command into reluctant action to provide the training requested by AAF, and the dispute was resolved on 27 July 1942 when the Technical Training Command formally subrogated certain of its authority to the Air Service Command. It delegated to the ASC the jurisdiction of training civilian employees in public vocational schools for depots and subdepots and consented that additional arrangements with off-reservation schools might be made by the Air Service Command. Contracts with private schools by ASC were authorized but it was requested that they be coordinated with AF TTC Headquarters.

This gave the Air Service Command complete freedom to handle its own training arrangements with the public vocational schools; it could make training contracts with private vocational schools, though these were to be coordinated with the Technical Training Command; and it might request factory school training from the Director of Individual Training who would issue the necessary instructions to Technical Training Command to see that it was provided.

Although this arrangement seemed to settle the major issues in the jurisdictional dispute Air Service Command never found it satisfactory to have to go through the Technical Training Command, and when the Technical Training Command was combined with the Flying Training Command in July 1943

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to form the AAF Training Command, it was still necessary for Air Service Command to go through Headquarters, Training Command, in the same manner.⁷

Further complications arose, however, particularly in the matter of training in factory schools. In September 1943 ASC requested Headquarters, AAF, that it be given authority to deal directly with factories, making its training arrangements through the Air Service Command liaison representative of the Materiel Command located at plants manufacturing equipment for the Army Air Forces. In October 1943 Col. J. L. Whitney, Chief of the Civilian Personnel Section, Personnel and Training Division, Headquarters, Air Service Command, wrote a letter to Headquarters, AAF, in which he pointed out that a very complicated system was being used for arranging for factory training. He attached as Exhibits A, B, and C to illustrate his point a letter and nine indorsements. The basic letter was from Headquarters, Rome Air Depot Control Area Command to headquarters, ASC, and requested information on aircraft overhaul courses available for civilian employees at Republic Aviation Corporation--Rome had two employees (instructors) it desired to send for this instruction. This letter had been indorsed to Headquarters, AAF; thence to the Commanding General, AAF Technical Training Command; thence to the Commanding General, 1st Dist., AAFITC; thence to Headquarters, New York Civilian School Area, AAFITC; then it retraced its steps, in the process accumulating nine indorsements. This correspondence had passed back and forth between five headquarters, a process which consumed almost six weeks, and Headquarters, ASC, had not yet secured the desired information for Rome Air Depot Control Area Command and the two instructors were still without the desired training.

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In order to obviate this "long and arduous procedure" for arranging the training of Air Service Command civilian employees Colonel Whitney proposed the following changes in the handling of factory and contract school training for civilians:

a. All civilian factory training courses and civilian contract school courses to be directly negotiated for by ASC.

b. ASC to coordinate such training with the Training Command, Fort Worth, Texas, every effort being made to avoid duplication of facilities.

c. ASC to make arrangements for factory training courses through the ASC Liaison Representatives of the Materiel Command located at the plants manufacturing equipment for the AAF.

d. Headquarters, AAF, and Headquarters, Training Command, to be furnished copies of the necessary correspondence routed direct.⁸

The authority to make these changes was not granted, but it was permitted that requests for routine factory classes should be routed directly to Training Command without going through Headquarters, AAF. Requests for new facilities and courses, however, were to continue to be routed through Headquarters, AAF, and to follow the channels already established.⁹

Thus the problem of training in contract and factory schools continued to exist despite Technical Training Command's delegation of authority to Air Service Command in 1942, and the slight change in the procedure for making routine factory training requests authorized by Headquarters, Army Air Forces, in 1943. Needless to say other commands and organizations of the AAF suffered from the same frustrations and complications in securing technical training for their civilian personnel. This situation did not

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permit the most efficient use of off-reservation facilities for civilian training purposes.

Many other problems besides jurisdictional disputes arose in the development and operation of the civilian training program in the Air Service Command and other AAF commands and organizations. The human element was always a factor to be considered. It has already been noted that the failure to secure the authorization of higher classifications and salary schedules for Civilian Training Administrators, Civilian Training Specialists, Instructors, and other training personnel hampered the procurement of qualified personnel and, in some cases, contributed to weaknesses in the civilian training program.

Depot training programs were, at least in the beginning, dependent on the interest that the depot commander took in civilian training and his conviction of the need for training. The Standardization Directive issued by Headquarters, AEC, on 18 September 1941, left the depot civilian training program largely to the judgment of the depot commander. An uninterested and unconvinced commanding officer could cripple the program by apathy; one who gave full cooperation could be an important factor in the development of a vital and effective civilian training program.

Much of the success of a training program also depended on the type of training officers appointed. A well qualified officer with tact and initiative could organize and direct an effective, smoothly running program; unqualified officers and those who lacked the ability to get along with people could soon lead a program into confusion and make it ineffective. The same could be said for Civilian Training Administrators.¹⁰

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One of the problems faced by many programs was that of securing the cooperation of the operating officials, particularly in Maintenance where a major portion of the need for training existed. Many engineering or maintenance officers, and the civilian supervisors working under them, were hard to sell on the need for training--many considered training a form of "boondoggling" which interfered with production and were reluctant to have their personnel take time from production activities to receive training. Others wanted to take the handling of all maintenance training away from the regular civilian training staff and put it under the control of the maintenance organization.

In December 1943 the Maintenance Control Section at Headquarters, ASC, requested that the authority to decide how to accomplish training be transferred to Maintenance despite the fact that the responsibility still rested with the Personnel and Training Division. Maintenance also proposed a wholesale on-the-job training program.¹¹ These and other requests or recommendations made by Maintenance would have taken the control of the training of civilians away from the Civilian Personnel Section and wrecked the program which was the result of long experience and concentrated committee action. However, these recommendations were disapproved by the Commanding General, ASC.¹²

At Spokane Air Service Command the Civilian Training branch, as had been the experience of training branches in several other area commands to a greater or lesser degree, had to cope with the antagonism or at least the lack of sympathy and understanding of the Maintenance Division. The Training Branch felt that Maintenance fought preservice training from the

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beginning because they wanted to do their own training. Maintenance contended that trainees were not properly selected. Also Maintenance complained that the courses given in the off-reservation schools taught nothing that the workers needed to know--however, it refused to furnish the schools with training course outlines which would meet the specific needs of the Division. The Training Branch had a task which would tax the diplomacy and ingenuity of the best of training officers.¹³

Certainly the evidence in this case does not point to cooperation on the part of Maintenance, and the cooperation of operating officials was essential to any effective training program. "Experience has repeatedly demonstrated that success of the training program in any organization is dependent on the extent to which operating officials, from top-management down to first-line supervisors, appreciate the value of training and share in training responsibilities."¹⁴

Another problem which has already been mentioned in the discussion of Sacramento Air Depot's off-reservation training program,* was that of securing full cooperation between the operating divisions which needed workers, the training departments which laid the plans, the state boards of vocational education which had final authority over the local schools, and the local school authorities themselves. In cases where cooperation was lacking due to such human factors as jealousies and misunderstanding, incompetence, and personal animus, a training program could become inefficient and unsatisfactory as happened at the Spokane and Fairfield Depots. Where cooperation was good the program was strikingly successful as at the Ogden and Mobile Depots.¹⁵

* See above, pp. 25-26.

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There were many other problems that the AAF civilian training program had to contend with during the war--manpower cuts, high turnover in training personnel as well as in trainees, restrictions on printing of training materials, difficulties in field supervision, heavy workloads imposed on civilian training schools as a result of the introduction of the individual technical training program of enlisted men established in April 1944, the necessity of establishing special depot schools when staff personnel was limited, and the numerous requests by other air forces and commands for the training of civilian personnel at its facilities problems which had to be met by Air Technical Service Command when time and training personnel were scarce.¹⁶

Perhaps all of these problems with which the AAF civilian training program was faced during and after World War II were not fully resolved. But those whose solution was essential to the success of the program were overcome, and many thousands of civilian employees of the AAF were trained to perform those multitudinous tasks necessary to the accomplishment of the mission of the Air Force in time of war and peace.

Off-Reservation Schools

It has already been noted that the first off-reservation school* was established in 1941 by an agreement between the San Antonio Air Depot and the Texas State Board for Vocational Education.¹⁷ At this time there was

* Technically all training given outside the actual limits of a military reservation may be called off-reservation training and the schools giving it off-reservation schools. In this study, however, the term will henceforth be used to mean training for which arrangements were made through a state board of vocational education and funds for which were supplied out of congressional appropriations made in accordance with the act of 27 June 1940. Such off-reservation schools were either public or private vocational schools, taken over completely or in part for depot training, or were schools set up for such training by a state board.

¹⁷ See above, p. 23.

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no standard form of agreement prescribed by Headquarters, ASC, which would set up specific and uniform responsibilities to be observed throughout the Command by both parties to such agreements. By the end of 1942, however, such a standard form of agreement had been formulated.¹⁷

An example is the cooperative agreement between Spokane Air Depot and the Spokane Board for Vocational Education. First a statement of purpose was made--that it was the sole objective of the cooperating public vocational school to instruct trainees as efficiently as possible for the air depot and subdepots, both in manipulative skills and related technical information.

Under the heading "Director of Program" it was stated that close contact and cooperation were to be maintained between the Air Depot Commanding Officer, or his representative, and the director of the cooperating school in order that effective working relations and policies might be established and maintained. The Air Depot Training Officer was to be contacted at the air depot by the cooperating school officials on matters pertaining to air depot and subdepot training. In general the Air Depot Training Officer was to determine what training was needed and the cooperating school was to do the training.

Under the heading "Direction and Control" the responsibilities of the air depot in carrying out the training program were defined as follows:

1. To determine and define the occupations for which the cooperating school was to give training.
2. To provide course outlines, technical orders, instructional manuals, and visual aids.
3. To determine the numbers of employees to be trained in stated periods of time.

4. To select and assign said trainees to the cooperating schools.
5. To dismiss or withdraw paid trainees from training.*

Under the subheading, "The Board for Vocational Education," it was provided that the local or state board for vocational education should have sole direction, control, and supervision of the school.

Problems arising under the operation of the agreement were to be handled by the Training Officer and the director of the school in point. Problems which failed of decision were first to be referred to the Depot Commanding Officer and the State Director of Training for War Production Workers; then if necessary to the representative of Training and Operations, Air Service Command; and the U.S. Office of Education.

Provisions were made for the inspection of the training program in the cooperating school by air depot officials, and also by officials of the War Department, the ISC, the State Board of Vocational Education, and the United States Office of Education.

Recommendations for improvement were to be solicited and given prompt consideration. Such recommendations were to be made in writing to the Director of the school or to the Air Depot Training Officer.

The agreement specified in detail the training facilities and administrative services to be provided for the cooperative school by the state or local board for vocational education without expense to the air depot. The facilities for instruction included instructional supplies and equipment, instructors, and classrooms. The administrative services included the services of a director, and the provision of such facilities

* This provision gave the depots a very important control over the activities and policies of the off-reservation schools.

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as clerical equipment, office supplies, power, heat and light, janitor services, and supervision.

The air depot was to provide the following services:

1. To loan equipment which the cooperating school could not otherwise secure.
2. To loan equipment and material on which to work such as aircraft engines, carburetors, aircraft instruments, and accessories.
3. To make available for employment by the school, whenever possible, qualified instructors. Selection of the instructors was to be made by the director of the cooperating school after consultation with the Air Depot Training Officer. Instructors in the cooperating school were to be on the board of education payroll and were to be under its general supervision and direction.

Trainees might be of two types: a) those employed by the air depot through Civil Service and sent to the cooperating school for full-time training, b) those persons employed by the air depot on a full-time basis who might come to class after working hours or part-time during working hours.

The cooperating school was to maintain and supply the Training Officer and the board for vocational education with whatever records and reports were officially required.

The records to be kept by the coordinating school included the following:

1. Group progress charts visibly located in each training shop.
2. Individual progress and personnel records.
3. Attendance records.
4. Running stock and supplies inventory.
5. Equipment inventory.

6. Records needed by the State and by the United States Office of Education.

The services of the coordinating school could be terminated in writing by either the air depot commanding officer or by the public school authority in charge of the program. The party desiring such termination was to give notice in writing to the other party, specifically stating the reasons for desiring such termination of the training program, and giving a date of termination allowing at least 30 days notice.

In case this agreement was changed, or additions were made to it, the written approval of the Air Service Command and of the United States Office of Education were to be secured.

This particular cooperative agreement, signed by Mr. J. G. Griffin, Spokane Board of Vocational Education, and by Col. W. R. Sweeley, acting for the Commanding Officer of Spokane Air Depot, was the standard type used by the Air Service Command in arranging for the training of its civilian personnel in off-reservation schools.¹⁸ This standard form of cooperative agreement was also used in 1944, as exemplified by the signing of an agreement between the Fairfield Air Service Command and the Wilberforce University Board for Vocational Education in 1944, which was identical in its language and provisions.¹⁹

A study of the provisions of the standard cooperative agreement would seem to indicate a carefully drawn document which specifically defined the duties and responsibilities of both the air depot and the cooperating school and its officials in setting up and conducting an effective off-reservation training program. It is obvious, however, from reading the terms of the agreement, that there must be close cooperation between air

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depot officials and the public vocational school officials (including the state and local boards, and the state and local directors of vocational education) if a smoothly running and effective program was to be set up.

A case in point was the example of the Sacramento Air Depot off-reservation training program, established 16 February 1942. Sacramento started off with the disadvantage of having an unstable depot training department. Furthermore, the State Department of Education did not consider the depot's off-reservation program as a cooperative activity--it tended to regard the off-reservation training program as its own and operated it accordingly. When the State Director increased the number of off-reservation schools in the Sacramento Depot's control area in March 1942 instead of decreasing the number as depot officials requested, the depot did not exercise its power of control over the State Board of refusing to pay trainees. Also there were quarrels between the State Director and various officers and civilians in the Depot Training Department. Consequently the Sacramento Air Depot's off-reservation training program was not a success.²⁰

On the other hand the Ogden Air Depot, working in cooperation with the Utah State Board of Education, started a highly successful off-reservation school program in June 1941 with its first schools at the cities of Ogden, Logan, and Salt Lake. Ogden made an early start and had more time to develop its program. An important factor was that the Commanding Officer of Ogden Air Depot, Colonel Morris Berman, was convinced of the necessity for and the value of a sound training program. Also the Utah State Board of Education staff, which included some of the best vocational education men in the United States, worked closely and harmoniously with the Depot.

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Finally the Depot Training Officer, Maj. C. C. Minty, was a man of both ability and tact. All of these factors, of which close cooperation was not the least important, contributed to the development by Ogden Air Depot of an off-reservation school system which soon had a wide reputation for excellence.²¹

Another such successful off-reservation school program was that established by the Mobile Air Depot. Prior to the September 1941 Conference of Depot Training Officers Colonel Dixon and Lt. Colonel Parker of MOASC had contacted local and state school authorities with regard to facilities available for training depot personnel. A survey revealed that vocational education in the high schools and privately owned trade schools of the Mobile territory was not geared to the type of training required by an air depot as they served an agricultural rather than an industrial economy. Also it was revealed that there were few skilled or semi-skilled men available, and these few were mainly automotive mechanics. To put it briefly, it was necessary to immediately find or establish training facilities which could turn automobile mechanics and farmers into aircraft mechanics.

With the close cooperation of the Alabama State Department of Vocational Training arrangements were made by September 1941 to establish training programs at the following schools.

1. Waterman Technical School, Mobile, Alabama
2. The Alabama School of Trades, Gadsden, Alabama
3. The Alabama Polytechnical Institute, Auburn, Alabama
4. The University of Alabama, Tuscaloosa, Alabama
5. Tuskegee Institute, Tuskegee, Alabama

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With the cooperation of the Tennessee State Department of Education a well-equipped school was located at Whitehaven, Tennessee, the Shelby County School of Aeronautics, and arrangements were made with this school to take part in the Mobile off-reservation training program. As engineering or maintenance training was the most difficult problem and the schools selected were of a vocational nature, they were used to train employees for engineering functions only. Supply training, not involving technical operations, could be done on the Depot itself.

In November 1941 the first trainees were graduated and by mid-1942 the off-reservation schools were in full operation and furnished the Mobile Air Depot and its sub-depots with a steady stream of qualified workers throughout the year. By May 1942 there were approximately 1,800 engineering trainees in off-reservation schools and only 350 in post schools. Mobile Air Depot considered its off-reservation training program so valuable that it kept it in effect long after many other depots had abandoned off-reservation training for training done in post schools.²²

Middletown Air Depot also had an excellent off-reservation school program. It differed from the system developed at Sacramento, Mobile, and Ogden, in that it developed out of training which had already been in operation for a year and it was set up in facilities not previously used as a school. Hence it was more closely integrated in the depot's training program than the off-reservation schools at the other depots. It really represented an overflow from a large and comprehensive training program with well developed courses of study and a mechanic learner program which Middletown had pioneered in establishing. As training quarters on the installation had become inadequate, Middletown Air Depot, with the co-operation of the Pennsylvania Department of Public Instruction, took over

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the Farm Show Building at nearby Harrisburg on 20 March 1942, and continued the program as an off-reservation school under the name of the Pennsylvania School of Aeronautics. So closely was this school tied to the depot training program that it was, for all practical purposes, a post school located ten miles from the parent installation. At its peak in 1942 this school had an enrollment of 4,060.²³

Middletown also had other off-reservation schools similar to those at Ogden and Mobile. These were three private vocational schools, the Academy of Aeronautics, the Casey Jones School of Aeronautics, and the New England School of Aeronautics, located in New York City, Newark, and Boston, respectively. Arrangements for use of these schools in off-reservation training were made by the respective State Boards for Vocational Training. These off-reservation schools were transferred to the Rome Air Depot in October 1942 to handle its off-reservation training program.

The other depots, with the exception of Fairfield, which has already been mentioned as having a poor training program, made large use of the off-reservation schools during 1942, and generally with good results.²⁴ The training done in the off-reservation schools was almost exclusively for basic maintenance work and was pre-service training, which may be defined as full-time training given to a paid employee prior to his assignment to a job. Most advanced maintenance training was handled at schools on the posts where the special and recently developed equipment was available. Supply training also could generally be given more effectively on the reservation where the actual bins, warehouses, and other equipment and facilities could be used in the training program.²⁵

During the year 1942 off-reservation schools provided workers for both the subdepots and the depots. As the number of subdepots increased

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with the establishment of so many bases by the Training Command and other commands and organizations of the AAF, the need for training workers for subdepots became increasingly apparent. On 9 December 1942, Headquarters, Air Service Command, directed that off-reservation schools should be used primarily for training personnel for subdepots, indicating that approximately 80 percent of the graduates should be assigned to those installations. It cannot be ascertained whether this goal was ever met.²⁶

In 1943 a list of schools available for the preservice training of maintenance workers was compiled, the various areas of the Air Service Command reporting a total of 40 schools available for the pre-service training of maintenance workers as of 1 August 1943. Of these 24 were listed as "Off-Reservation State Schools," two were operated by staffs made up of a combination of state and depot training personnel, and nine were listed as depot schools. Five were not classified. The Pennsylvania State School of Aeronautics, Harrisburg, Pa. [Middletown's own off-reservation school], had the largest staff (335) and the largest capacity for trainees, 2,000 in one shift. The next largest was the post school at San Bernardino Air Service Command, with a staff of 200 and a capacity of 2,000 in one shift.²⁷

On 13 June 1944 the Civilian Personnel Division, Office of the Assistant Chief of Staff, Personnel, Headquarters, Army Air Forces, issued AFPCP Directive: Field No. 133, Subject: Public Vocational School Facilities for Aviation Service Training. This was addressed to all field activities of the AAF, not just to AAG field activities. Attached was a list of aviation service training facilities in public schools and colleges supported

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by the Federal Vocational funds and available to AAF installations. Included on the list were approximately 1,000 separate courses comprising 38 course titles available for training in aircraft manufacture and maintenance services in more than 400 public vocational schools and colleges of 44 states and the District of Columbia.

The 38 course titles listed were as follows:

- | | |
|------------------------------------|---|
| 1. Aircraft Sheet Metal | 20. Aircraft Parachute |
| 2. Aircraft Assembly | 21. Aircraft Propeller |
| 3. Aircraft Riveting | 22. Aircraft Drafting |
| 4. Aircraft Woodwork | 23. Aircraft Plexiglas |
| 5. Aircraft Engines | 24. Aircraft Loftman |
| 6. Aircraft Machine Shop | 25. Aircraft Tools |
| 7. Aircraft Welding (electric) | 26. Aircraft Heat Treating |
| 8. Aircraft Welding (gas) | 27. Aircraft Mechanical Drawing |
| 9. Aircraft Patternmaking | 28. Aircraft Electroplating |
| 10. Aircraft Inspection | 29. Aircraft, Other |
| 11. Aircraft Blueprint Reading | 30. Aircraft Production & Maintenance Clerk |
| 12. Aircraft Electrician | 31. Aircraft Flight Line Maintenance |
| 13. Aircraft Fabrics & Leatherwork | 32. Stress Analysis |
| 14. Aircraft Mechanics | 33. Aircraft Nomenclature |
| 15. Aircraft Radio | 34. Applied Mathematics |
| 16. Aircraft Instrument | 35. Aircraft Supply |
| 17. Aircraft Paint & Dope | 36. Engineering Aide |
| 18. Aircraft Hydraulics | 37. Fuel and Lubricant Inspection |
| 19. Aircraft Carburetion | 38. Ground Safety Training Course |

The purpose of this directive and the attached list was to enable all AAF stations employing civilian personnel to familiarize themselves with the public school training facilities available to meet their off-reservation training needs.²⁸

Off-reservation training had many advantages to offer and, in the period of mass hiring it was indispensable in a program designed to turn many thousands of inexperienced and untrained civilians into useful and productive employees of the AAF. This form of training, however, had its problems.

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One problem was that of meeting multiple payrolls--each AAF installation with an off-reservation program had to meet payrolls for its people in the off-reservation schools as well as its own payroll. This frequently resulted in trainees not being paid on time--sometimes the checks were as much as six weeks late. This made for bad morale on the part of the trainees and created confusion in the payroll section of the station concerned.

The second problem, that of securing close coordination between the depot, the off-reservation school, and the State Board for Vocational Education, has already been discussed. The importance of securing such coordination in the operation of a successful off-reservation training program can hardly be over-emphasized.

A third problem was that of securing for the off-reservation schools equipment that they were unable to obtain for themselves. This was a responsibility that the depots found it very difficult to meet.²⁹ There were three types of equipment used in training for the depots:

1. Class 25--desks, chairs, filing cases, stationery, and office machinery needed in supply and headquarters training.
2. Class 17a and 17b--materiel needed chiefly for maintenance training. 17a consisted of heavy machine tools such as lathes, milling machines, drill presses, band saws, etc. Class 17b consisted of hand tools such as wrenches, screwdrivers, files, gauges, reamers, and micrometers.
3. Class 26 equipment--also used for maintenance training--was defined as including "articles of all classes of property which have been set aside and specifically designated by the Commanding General, Air Service Command, . . . as school equipment to be used for ground instructional

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purposes only and which are not to be used for flight purposes while carried in this class." This classification included aircraft, airframes, aircraft engines and accessories, which were obviously very important for the training of aircraft mechanics.

Classes 17a, 17b, and 26 material were not easy to obtain and the training program was hampered by this state of affairs. In March 1942 the San Antonio Air Depot Training Officer stated that the post maintenance school was less than 50 percent efficient because of lack of equipment. It follows, then, that many of the off-reservation schools were even worse off.

There were several reasons for this lack of training material. One was that there was a scarcity of both hand and machine tools all over the country due to the general expansion of industrial activity in the war emergency. Another was that in early 1942 no well defined procedure had been worked out for securing these articles for civilian training purposes. Requisitioning such materials from Headquarters, ASC, proved unsatisfactory because of the months of delay in receiving said material. Local purchase by training departments with funds obtained from ASC Headquarters was not always successful in securing materials from a depleted market.

Class 26 equipment was hard to get because the Technical Training Command had priority on that type of property. Even when this priority was broken and Class 26 equipment was secured for depot training there was still the problem of securing authority to issue such equipment to the off-reservation schools--an authority reserved to Headquarters ASC.

Although specific methods for securing such equipment for training purposes were worked out by the end of 1942, Class 26 property remained scarce and hard to get.³⁰ In the summer of 1944 Headquarters, Air Service Command informed Headquarters, Army Air Forces, that 33 off-reservation schools training paid AAF civilian personnel were deeply concerned about the policy covering equipment loaned by the AAF as determined by the ASC interpretation of War Department Procurement Regulation No. 7 which meant that public schools could no longer have obsolete and unusable equipment originally distributed to them by the AAF.³¹ When rewritten the War Department Regulation still put severe limitations on the distribution of Class 26 equipment.³²

In November 1944 the Civilian Personnel Division, AC/AS, Personnel, Headquarters, AAF, proposed to the Individual Training Division, AC/AS, Training, that a group of approximately 100 approved vocational schools should be authorized to receive class 26 equipment to assist in conducting approved courses of training for civilian employees of the AAF.³³ In the same month a list of "Schools Authorized to Receive Army Air Forces Class 26 Equipment" was issued. These schools were used for the training of AAF civilian personnel and it was stated that the AAF was responsible for the adequate supply of aircraft training equipment to the schools in order to train qualified personnel to overhaul and maintain aircraft in the Continental United States and in certain overseas establishments. It was indicated that additions and deletions would be provided in keeping with the fluctuating nature of training needs.

The list named 61 schools in 35 states.* It included trade schools, vocational schools, vocational departments of high schools, colleges, and

* See Appendix 2.

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universities, aircraft schools, and junior colleges.³⁴ It would seem that this action was adequate to meet the needs of the off-reservation training program as hiring had fallen off sharply since the manpower freeze and the tendency was to discontinue the rise of off-reservation schools and to do an increasing amount of the civilian training in the post schools and on-the-job.

The problems arising in the use of off-reservation schools were not insuperable, and they were more than offset by certain clear advantages which off-reservation training offered. In the first place most off-reservation schools were already staffed with experienced vocational school instructors when they began to participate in the training of AAF civilian personnel. Also the state boards of vocational education, with more experience and offering higher salaries than the depots, were able to get better instructors and more of them.

A second advantage was that the off-reservation schools, in many cases, did a good deal of recruiting of workers for the AAF in order to keep their classes full. Scattered as they were over a wide area, they were in a better position to recruit than a single centralized school would have been. For instance Warner Robins Air Depot near Macon, Georgia, had schools in Florida and Alabama as well as in Georgia and was able to draw recruits from these states. Therefore recruitment proved a very important advantage of the off-reservation school program.³⁵

Another advantage of the off-reservation training program, and a very obvious one, was that it permitted the use on a large scale of training facilities (buildings, equipment, training and administrative organizations, etc.) already in existence. This, alone, was a factor of incalculable value to the AAF in terms of time and money saved.

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The off-reservation training program provided the Air Service Command with good workers and with more of them than could have been provided in any other way in 1942.³⁶ During the latter part of 1942 there was a marked trend towards closing off-reservation schools due to a tendency to do more and more of the preservice training at schools on the posts. This tendency continued in 1943 and 1944. By the last quarter of 1943 there was little preservice training away from the post, and courses which had initially covered 12 weeks were limited to six. In the last year of the war the number of man hours spent in preservice training declined steadily.

This decline in preservice training and in the use of off-reservation schools was also in large measure due to the manpower "freeze" of late 1943 which automatically ended the need of mass training for rapid expansion. The post schools could now handle most of the greatly reduced volume of preservice training and there came to be an increasing emphasis on on-the-job training as being more practical, economical, and efficient under the existing circumstances. The vocational defense training program, under which the off-reservation schools were organized, continued to operate until the federal funds were cut off in 1945.³⁷

Contract Schools

Another type of school which carried on off-post civilian training for the AAF was the contract school. This was a private vocational school with which an AAF agency would make a contract to have students trained in return for a specified tuition. Contract training was paid for out of AAF funds. The students were trained on a quota basis and were returned to the installations after graduation.³⁸

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Contract schools differed from off-reservation schools in that they were not financed by National Vocational Defense Training funds; they trained on contract, not as the result of an agreement; they were not as a rule supervised by any state or federal vocational training agency; and they did not train employees for any one installation or depot--they trained for any or all installations or depots according to the terms of the contract.

In the case of the Air Service Command the preliminary arrangements were made by the ASC Headquarters; an AAF agency drew up the contract; and the training given was for several or all depots.³⁹ Other commands and Air Force organizations also made use of the contract schools.

The contract schools were not used in large numbers, but they served a useful purpose in that they made available a wide variety of training in addition to that required for the various mechanical occupations. This gave a greater degree of flexibility to the AAF civilian training program. These schools were selected on the basis of their qualifications and for their proximity to recruiting areas.⁴⁰

The Chicago School of Aircraft Instruments at Chicago, Illinois, may be regarded as a good example of a contract school. On 12 October 1942 this school submitted, on request, a proposal for training to Headquarters, Air Service Command. The school was to be assured a minimum of 15 students per class (later raised to 18). The rate of tuition was to be $38\frac{1}{2}$ cents per hour, the same rate charged to the Technical Training Command for the training of enlisted men.

On 15 October 1942 ASC requested authority from Headquarters, AAF, to contract with the Chicago School for the training of women civilian

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instrument mechanics, sending the trainees at the rate of 15 a week for a 15-week course until 210 were trained. This had been informally cleared with Technical Training Command, and Headquarters, AAF, granted the authority on 19 October. On 28 October the Contract Section of the Materiel Center was requested to negotiate the contract. ASC, by later agreement, furnished Class 26 instruments and other necessary training materials and instructional matter.⁴¹

The contract schools provided special training which was difficult to find elsewhere. For instance in March 1943 the Air Service Command requested the training of 70 civilians in a course on wooden propellers and asked the Director of Individual Training to make arrangements for such a course. The Spartan School of Aeronautics, Tulsa, Oklahoma, was willing to provide this training on a contract basis.⁴²

In the fall of 1943 the Anderson Organization at Nashville, Tennessee, and the Chicago School of Aircraft Instruments at Chicago had approximately 1,000 persons in pre-service training. The trainees were recruited directly by these organizations as Civil Service had not been able to furnish enough recruits for the depots.

It seems that contract schools often filled gaps left in the training program by the closing down of off-reservation schools. San Bernardino, in the latter part of 1943, asked that a contract be let to the Anderson Organization for the recruitment and instruction of 3,000 trainees. Other depots were also asking for additional trainees since this appeared to be the only source of trainees left.* At this time many of the civilian

* This state of affairs was caused by the manpower freeze of 1943 plus the high rate of turnover in civilian personnel.

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employees being sent to factory schools were practically on a preservice level due to the relative scarcity of experienced personnel at the depots.⁴³

Although Mobile Air Service Command had an excellent off-reservation training program it utilized the Anderson Organization to do a good deal of training on a contract basis. In the fall of 1943 a class of 60 mechanics' helpers assigned to MOASC through the 67th AAF Technical Training Detachment, Vanderbilt University, Nashville, Tennessee, reported to the Anderson Organization for a course of instruction in aircraft sheet metal mechanics. These were a few of the hundreds of civilian employees this school trained in aircraft sheet metal work for MOASC.⁴⁴

In the spring of 1944 the Anderson Organization was still turning out large numbers of trainees for MOASC and Headquarters, ASC, recommended that the contract with this school should be continued.⁴⁵

The significant part played in the civilian training program by contract schools was recognized by Headquarters, AAF, which included in AAF Regulation 40-6, 6 March 1944, a section (Par. 7) devoted to the procedure for arranging for contract training. It was provided that requests for all such training must be cleared through Headquarters, AAF, which would refer approved requests for such training to the appropriate command for the purpose of making contractual arrangements.⁴⁶

In 1945 contract schools were used because federal funds were no longer available to operate an off-reservation training program through state vocational training. For this reason the Civilian Personnel Division, Headquarters, AAF, granted approval for the establishment of a contract to train Air Transport Command civilian personnel in maintenance courses at the Academy of Aeronautics at La Guardia Field, New York.⁴⁷ In June 1945

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Air Transport Command was also granted the authority to negotiate a contract with the Shelby County School of Aeronautics, Memphis, Tennessee, for the training of 868 civilian employees in various first, second, and third echelon maintenance courses.⁴⁸ A survey made by the Training Branch of the Civilian Personnel Division, Headquarters, AAF, indicated a continuing need for contract training in maintenance work available at this school despite the general tendency to close down contract and off-reservation schools.⁴⁹

Colleges and universities also contracted to train civilian employees for the AAF. In the spring of 1945, for instance, Headquarters, AAF, approved negotiations for a contract between Air Technical Service Command and Rutgers University to train 50 ATSC employees for 26 weeks as engineering aides to be assigned to the ATSC Watson Laboratories at Red Bank, N.J.⁵⁰ Other colleges and universities which carried on contract training of engineering aides for the AAF were Alabama State Teachers College, Troy, Alabama; the University of Texas; the University of Minnesota; and West Virginia Wesleyan.⁵¹

Contract schools also did clerical training for the AAF in addition to that done in post schools. In June 1944 Materiel Command negotiated a contract with the American Institute of Business, Des Moines, Iowa, for the training of 500 clerk typists, this need having arisen from the cancellation of a contract with Grinnell College.⁵²

The Air Service Command tried to alleviate its acute shortage of clerical personnel by negotiating contracts with various schools to train typists and stenographers. Headquarters, ASC, had contracts in 1944 with Tiffin University, Tiffin, Ohio; Bliss College, Columbus, Ohio; the Office

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Training School, Columbus, Ohio; and the Cincinnati YMCA, Cincinnati, Ohio, to train typists and stenographers. The contracts with these schools provided that they were to furnish Headquarters, ASC, with specified numbers of trained typists and stenographers over specified periods of time. Recruitment was to be conducted by the Civil Service Commission. Trainees were hired at the rate of \$1,260 per annum plus overtime. After completion of their course qualified trainees were put on productive work and promoted to the next grade at \$1,440 plus overtime. The stenographers' course lasted from 10 to 12 weeks, and the typists' course for four weeks. The number of trainees contracted for were based on vacancies created by normal turnover. Although the contracts provided for certain numbers of trainees for certain periods the quotas were seldom filled.⁵³

In May of 1945 Headquarters, AAF, granted Headquarters, ATSC (formerly ASC), approval for the renegotiation of six existing contracts for the training of typists and stenographers for that command. The extension of these contracts was to provide for the training of 1,840 civilian typists and stenographers between the period of 1 July and 31 December 1945.⁵⁴ These, of course, are just a few examples taken from a rather widespread program of clerical training done by contract schools.

By 25 September 1945, after V-J Day, the contract school situation had radically changed. All contracts for the training of clerical personnel for the AAF had been terminated. The majority of the other types of contract training, such as factory training courses (to be considered under another topic), engineering aide courses at colleges and universities, and mechanical training at private and public schools had also been terminated.⁵⁵ Now

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that the war was over and the plans had already been made for a massive reduction in force, training needs which had been urgent ceased to exist, and a wholesale reduction of the civilian training program was to be expected.

The program for training civilian employees in contract schools showed a few weaknesses. Several of the depots had difficulty in meeting their quotas of trainees; discrepancies in pay between the trainees from different depots caused morale trouble at first; there was not at first a uniform plan for rating and paying graduates of the training program. These weaknesses were remedied, however, and the AAF continued to make profitable use of contract schools until the end of the war.⁵⁶ They provided a wide variety of training not available otherwise; they proved useful in supplementing the programs of the post schools; when the off-reservation schools began to close down contract schools were useful to meet emergency training needs; some of the contract schools were of assistance in the AAF recruitment program. One of the most significant features of contract training was that it could be utilized as a means to secure for AAF civilian personnel training on the higher technical and scientific levels. For this reason, and because of the advantages of using it in a period when mass training was no longer a consideration, contract training became a very important and useful part of the Air Force training program in the postwar period.

Factory Schools

Another type of training, which fulfilled special needs was done in the factory schools. In most respects they were very different from the

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off-reservation and contract schools. They were set up and operated by manufacturing plants primarily for the training of their own employees. On occasion civilian employees of the AAF were sent to these schools for training.⁵⁷ Military personnel were also sent to these schools in order to receive training to familiarize them with the maintenance and use of new types of equipment which the factories were producing for the AAF. And, as will be pointed out in the following pages, factories sometimes set up special schools to meet the training needs of the AAF.

Actually factory schools had been used by the air arm since 1919 to train specialists, and when the war emergency arose the Air Service Command and the Technical Training Command fell back on this device to train urgently needed specialists. At first the classes were small, but by March 1942 the program had become so large that its supervision was turned over to Technical Training Command to avoid duplication of effort and general confusion.⁵⁸

Headquarters, AAF, officially authorized factory training on 10 March 1942 by its issuance of AAF Regulation 50-4, Training, of that date. This regulation, and AAF Regulation 50-4, Training, of 26 September 1942, which superseded it, established a policy of permitting local commanders, whenever it was necessary in order to familiarize personnel with new types of airplanes, engines, and equipment, to detail to factory schools the minimum number of personnel necessary to establish a course of instruction on their return to their home stations. The instruction at the factory school was to be completed at least one month prior to the delivery of the new equipment to the activity concerned.

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Requests for arrangements with the aircraft industry, for courses in maintenance (factory) training, which were to be offered by the factories without profit, were to be submitted to Headquarters, AAF, which would make the arrangements, or authorize the manner in which they were to be made. Orders for personnel to attend such courses were to be issued by, or issued as authorized by, the Commanding General, Army Air Forces, and requests for such orders were to be submitted to Headquarters, AAF.⁵⁹ A letter from Headquarters, AAF, to the Commanding Officers of all stations and activities of the AAF in the continental United States, dated 25 June 1942, gave the Technical Training Command jurisdiction over factory training although it specified that no AAF personnel were to receive such training without authorization by Headquarters, AAF.⁶⁰ This setup, of course, led to the jurisdictional disputes and other difficulties already mentioned, which ASC and other AAF organizations experienced in securing factory training for their personnel.

Acting on the basis of the AAF directives discussed above the Air Service Command formulated a policy for sending civilians to factory schools. Civilian employees were to be sent to factory schools only when inadequate facilities and a lack of instructors at the depots made instruction at the depots impossible; when the number of personnel to be trained was so small that it was uneconomical to set up area schools; or when, because of the newness or secrecy of the equipment, only factory personnel were qualified to offer instruction. In line with definitely stated AAF policy such training was to be completed prior to the arrival of new equipment at the

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depots, or the establishment of new processes or methods, or when emergency conditions arose. Employees who had received such training were to be used extensively as instructors on their return to their home stations.⁶¹

An example of the use of factory training, in accordance with this policy, occurred when several new carburetors, including the Chandler-Evans hydrometering and direct-metering carburetors and the new injection-type Bendix-Stromberg carburetor, were introduced. Workers were sent from the Depots to the factories for instruction in the maintenance of this equipment prior to its receipt at their installations.⁶²

Another example was a factory training course for hydraulic mechanics conducted by the Houde Engineering Division of the Houdaille-Hershey Corporation at Buffalo, N.Y. From 24 August to 5 September 1942 the Houde Engineering Division conducted a school to train 12 hydraulic mechanics in the operation of servicing Houdaille Shimmy Dampers (equipment on the nose of tricycle landing-gear aircraft). These twelve men included mechanics from AEC depots at Middletown, Fairfield, San Antonio, Oklahoma City, Ogden, Spokane, Wellston (Warner Robins), Mobile, and Sacramento. The course covered the basic principles of tricycle landing gear, the general construction of the damper, field and base service operations, and the use of special and standard tools. In the laboratory work each man was required to disassemble, inspect, and reassemble each of the three basic types of dampers.⁶³

Another class reported in 1942 consisted of 22 civilian employees sent from 11 different depots to attend a three-day course in A-8 sextants

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conducted by Baushe & Lomb Company, Rochester, N.Y. Depots represented by two students each were: Fairfield, Ogden, Sacramento, Warner Robins, Middletown, Oklahoma City, San Antonio, Mobile, Rome, Spokane, and San Bernardino.⁶⁴

Factory schools were used to train both military and civilian personnel of the AAF and of the other armed services. In fact the Technical Training Command and other AAF organizations sent large numbers of military personnel to these schools and civilians were often in the minority in the factory school classes. This created its own problems in the administration of factory training, especially in cases where the training of military personnel had first priority and facilities were limited.

An example of a mixed class was an electronics class held at the Minneapolis-Honeywell Company at Minneapolis, Minnesota, in late 1942. This particular class consisted of six AAF officers, two Navy officers, four seamen (Navy), one warrant officer, 26 enlisted men, and nine civilian employees (five males and four females). This school could handle female employees but requested that those sent to future classes should have higher qualifications. It was also recommended that more care should be exercised in general in selecting properly qualified personnel for this school.⁶⁵

A random check through factory training correspondence and reports in the Departmental Record Branch at Alexandria, Virginia, and the Kansas City Records Center at Kansas City, Missouri, indicates that factory training for AAF civilian employees continued on a wide scale through 1943, 1944, and until the fall of 1945 when most off-post training was discontinued by the AAF because of the end of hostilities.

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One of the more significant examples of highly specialized types of training for which the assistance of factory schools was urgently needed was in the training of aircraft inspectors. In the summer of 1944 AAF Materiel Command made a request to Headquarters, AAF, for the training of a total of 165 civilian instructors on such equipment as the Norden bomb-sight, C-1 automatic pilot, the JP engine, and several aircraft instruments. Since it was the policy of AC/AS, Training, Hq, AAF, that no civilians would be trained in AAF technical schools, the urgent need for this training would necessitate the reopening of certain factory schools, as well as the utilization of some Air Service Command training facilities on a special project basis, inasmuch as the Air Service Command had the only other valuable training facilities in the AAF.⁶⁶

Another training emergency which came up in 1944 was that of securing quotas for the training of civilians in the maintenance of B-29's. The Training Branch of Civilian Personnel Division, AC/AS-1, Personnel, Hq, AAF, had been getting quotas for the training of civilians in factory schools with little difficulty except in the field of B-29 maintenance. B-29 training for civilians had become a critical project for the Second Air Force, which did the major maintenance work on the aircraft.⁶⁷ The Second Air Force had requested a quota of 13 civilian employees a month to be trained at the Oklahoma City AFGC which was carrying on a B-29 training program. However, no quotas were available for civilians at Oklahoma City because all the quotas for civilian training had to be utilized by military personnel.⁶⁸ Therefore arrangements were made with AC/AS, Training, for a conference to be held at the Boeing Seattle Plant to arrange the necessary

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course. AC/AS, Training; AC/AS, Personnel; IAF Training Command, and the Second Air Force were all to be represented at this conference.⁶⁹

In the winter of 1945 there was still factory training going on in the AAF, especially in the Air Technical Service Command. Included in the program were the following: 1) Courses in aircraft optical instruments, and the installation and shooting of the A-2 automatic pilot, Sperry Gyroscope Company, Inc., Great Neck, New York; 2) civilian weight and balance control, Curtiss-Wright Corp., Buffalo, New York; 3) civilian training on Curtiss electric propeller Model C644 S-A; 4) Aircraft instruments training, Eclipse-Pioneer, Division of Bendix Corp., Teterboro, New Jersey; K-14A gunsight training, AC Sparkplug Division, General Motors Corp., Flint, Michigan.⁷⁰ As already pointed out, the factory training program was cut back drastically in the fall of 1945.

The factory school was used primarily for maintenance training, although it was found that in certain limited areas of supply work, such as that done by employees of the specialized depots for carburetors, factory instruction was useful for complete familiarization with parts.⁷¹ A factory training class was scheduled in much the same manner as a class at a contract school. A class to train a given number was scheduled for a certain date and the stations concerned were informed of their quotas. These quotas were not mandatory, however, and an installation might send fewer trainees than the number specified or none at all. Classes were scheduled only when needed. If no class was scheduled at a time when an installation had need for training of some of its workers, it might request that a special class be set up. Hence the system was flexible and was

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learned to meet special needs.⁷² Some idea of the wide range of specialties in which such training could be secured for civilian personnel of the AAF may be gained from the fact that the Air Command listed in January 1943 a total of approximately 58 courses given at 41 different factories to which ASC civilian personnel had been assigned for training.⁷³

The list of courses included training in such highly specialized jobs as propeller governor test and repair, maintenance of Model A-3 auto pilots, operation of Doall machines, maintenance of General Electric turrets, overhaul and repair of self-sealing tanks, operation and overhaul of wind-drift mechanisms, overhaul of automatic flight control equipment, and parachute repair.⁷⁴

It was inevitable that a program which expanded so rapidly as the factory school program did in 1942, and which was so widely used for the training of military and civilian specialists, should experience considerable confusion before planning and organization caught up with operations.

In the aircraft mechanic program, for instance, thousands of men were ordered to factory schools on very short notice, arriving there before those responsible for the training had been notified and before any facilities were prepared to take care of the influx of trainee personnel. Discontent and confusion obviously resulted.

There were no definite courses of instruction set up at first, and the individual factories had to proceed on a trial and error basis. It was soon found out that the AAF idea that men could be trained right on the regular production lines was unworkable. The factories vigorously resisted this interruption of their production processes and finally resorted to

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classroom lectures and demonstrations on mock-ups and actual aircraft. Special facilities had to be taken over in already crowded industrial areas to provide the classrooms. Instructors were hired and trained to supplement the insufficient manpower the factories could release for training purposes.⁷⁵

The procedure established in 1942 for setting up factory schools was rather cumbersome and led to a good deal of confusion and misunderstanding which delayed the operation of the program in some cases. The command or air force desiring factory training for some of its employees was supposed to send a request for such training to Headquarters, Army Air Forces, which then authorized the Technical Training Command, acting thru the Procurement Districts, to provide the desired training and facilities. The Districts made arrangements for the factories involved to negotiate contracts with the Corps of Engineers for housing and related facilities; and with the Quartermaster Corps for messing, transportation, and related facilities. The contract for the instruction itself was negotiated between the factory concerned and the Technical Training Command. Involved in the negotiations, then, were the factory representatives, Technical Training Command liaison officers, Procurement District contracting officers, and representatives of the Corps of Engineers and the Quartermaster Corps.⁷⁶

This complex procedure and the numerous negotiations involved often led to frustration and misunderstanding. In August 1942 Mr. C. H. Miller, Vice President of the Republic Aviation Corporation, wrote the Commanding General of the First District, AFTTC, that his company was unable to make further expenditures in the development of its factory school program

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because Republic could not secure the desired specifications nor the authorization of sufficient funds despite months of negotiations. The Republic Aviation Corporation had been striving for a decision since 1 May 1942 and could make no more capital expenditures (in addition to the \$50,000 it had already spent on its training program) for fear they would not be approved by the government as being required.⁷⁷

In October 1942 Mr. Frank Watson, Chief of Contract Administration, Consolidated Aircraft Corporation, San Diego, California, wrote to the Commanding General, Army Air Forces, that his company would be forced to close its school for AAF mechanics within 60 days. Mr. Watson said that this step was being taken because it was impossible to secure the necessary facilities and reimbursement for costs due to confusion and lack of agreement on the division of responsibilities in the long drawn-out contract negotiations which involved the necessity of negotiating three different contracts to cover the operation of the school; one with the U.S. Engineers for housing, one with the Quartermaster Corps for feeding the trainees, and yet another with the Technical Training Command for instruction.⁷⁸

With time for planning--and doubtless profiting from experience--Technical Training Command gradually straightened out the situation.⁷⁹ Then, too, it is probable that those industries participating in the factory school program became more adept at the tedious process of "following channels" as time went on and they had more experience in working with the AAF.

The factory school program was successful and it resulted in great man-hour savings in specific jobs because it was the quickest way to

familiarize personnel with new equipment and new techniques and procedures. The latest types of equipment were available at factory schools before they were available elsewhere--indeed it was almost impossible for civilian training schools elsewhere to secure certain high priority equipment without months of delay. Expert instruction on the maintenance and operation of new equipment was most readily available at the factory schools. The success of the factory school program is attested by the fact that factory schools were used extensively throughout the war, and they continued to be used for civilian training in the postwar period.

Post Schools

A great deal of the AAF civilian training program, particularly in the period of expansion, consisted of off-post, or off-reservation training, done by public vocational schools, contract schools, colleges and universities, and factory schools. From the beginning, however, much of the civilian training program was carried on in schools located on the post, and as time went on there was, as we have seen, an increasing tendency to close down off-reservation schools, and to do more and more preservice training on the post.

In 1941 and 1942 the bulk of the preservice training, especially in maintenance, was done at off-reservation and contract schools. Late in 1942 there developed a marked trend towards closing out the off-reservation and contract schools and a concurrent expansion of the post schools. By the last quarter of 1943 comparatively few off-reservation and contract schools were left in operation and preservice training in most area commands of the Air Service Command was concentrated in the post schools. ⁸⁰

Many training functions, of course, were not well adapted to be handled in schools located off the post, or could not be performed by them at all. Hence post schools were set up and run by the depot training departments. Advanced maintenance training could best be done at the depot because it required advanced types of equipment or depot-fabricated equipment which was unlikely to be available to schools off of the post. Supply training was also more effectively done on the post where the trainees could be trained in the actual warehouses to become familiar with real stock and stock procedures. Instructor training and training carried on by mechanics trained at factory schools could best be given on the post. Also the depot school was the most logical place for orientation, and for part-time training such as supervisor training. Necessarily on-the-job training was done on the post.⁸¹ Clerical training and many other types of special training were also carried on in post schools.

Hence it was the responsibility of the post schools to give those types of training which could best be given on the post and also to augment the number of trainees supplied by off-reservation and contract schools.

Maintenance training was found in the post schools of almost all the AEC depots. Supply training was a second major function of the post schools, becoming a function of the training departments in most depot by 1942. By the end of 1942 AEC Regulation No. 50-5, 28 December 1942, officially made supply training a function of the post schools.⁸²

A third major division of training, headquarters training, had shown little development in the AEC post schools by 1942. The March 1942 Plan outlined three courses of headquarters training under the heading,

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Personnel, Finance, and Military Correspondence. In October 1941 Middletown Air Depot had initiated a headquarters training school to train personnel and fiscal clerks for its new subdepots. In mid-1944 Fairfield and San Bernardino Air Depots set up courses in typing and shorthand.

With the expansion of headquarters training part of it, such as routine typing and stenographic instruction, was assigned to off-reservation schools. Certain types of headquarters training, however, had to be conducted in depot schools because it was only in the depots that persons with sufficient knowledge of depot procedures and methods could be found to serve as instructors. This included training in civilian payroll procedures with its complexities in regard to leave regulations, tax, and retirement deductions, bond deductions, and overtime pay; processing employees and handling Civil Service and Civilian Personnel forms and records; army filing; military correspondence; etc. In the depots [and the other AAF installations] there were available supervisors and experienced personnel who could be used for instructors. Hence the logical place for headquarters training was in the post schools.⁸³

Foreman-supervisor training was also slow to develop into a general program and was only in the early stages of development in 1942. As early as November 1941 Ogden AEC inaugurated a supervisor training program, and in 1941-1942 other depots set up programs on their own, but the supervisor training program was not fully developed until 1943. Although outside help was used in several cases, supervisor training was a function of the depot training departments and because it was conducted on a part-time basis had to be given in the post schools.⁸⁴ It was set up on an Air Force-wide basis in 1944-1945.

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Some difficulties were encountered in establishing post schools. One of these, already touched upon, was the difficulty in finding instructors. The depots could not compete with the off-reservation and factory schools in salaries offered to instructors. Therefore, in order to get instructors they found it necessary in many cases to train their own, and developed rather elaborate courses in instructor training as part of the post school function. By January 1943 instructor training in most depots was based on a well organized plan.⁸⁵

Orientation classes for new employees were also established in 1942 by the post schools of some of the depots. Typical of these courses was the eight-hour course at San Bernardino Air Depot which had for its purpose acquainting the civilian employees with War Department, AAF, and LSC Regulations and Circulars, with Civil Service rulings, and with San Bernardino Air Depot policies and operations. This course was given to 13,710 persons between 28 September 1942 and 12 October 1943.⁸⁶ Orientation, of course, became a proscribed form of training for all AAF installations employing civilian personnel with the issuance of AAF Regulation No. 40-18 on 21 July 1945.⁸⁷

There was a trend towards expansion of the post schools in the latter part of 1942. Although post schools were a necessity for certain types of civilian training and were better than schools located off the post for other types, some question existed as to the extent to which they could profitably replace the latter--a question not yet fully resolved. Among the obvious advantages of post schools the following are listed:

1. Use of schools cut down on the expense of travel allowances and per diem. The concentration of training in a post school was more economical than equipping several training centers.

2. They did not have the troublesome task of maintaining multiple payrolls.

3. Unlike the off-reservation school the post school did not have the sometimes irksome problem of coordination between depot, state board of education officials, and school.

4. They saved time by eliminating or reducing travel time and by shortening the period of transition between training and productive work.

For the above reasons expansion of the post schools and curtailment of the off-reservation schools would seem advisable. Yet on the otherhand the post schools also had their disadvantages:

1. A mistake of judgment in one large school had more serious consequences than a similar mistake in one of several small schools.

2. One large school gave more opportunity for empire building with its resultant extravagance and waste.

3. The concentration of thousands of trainees in one post school intensified housing problems.

4. Post schools ran into recruitment difficulties as people were reluctant to go any great distance from home for training.⁸⁸

A comparison of the respective values of the off-reservation and the post school is impossible to make as complete statistics showing the total number of workers graduating from each class of school are unavailable, and

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would be of little use in proving which type was most effective if they were available. nor is it possible to determine which type was more expensive. It is true that part of the expenses of the off-reservation schools were met by funds provided by the Emergency Training Bill and controlled by the State Board of Education, while all or almost all of the financing of the post schools was done by the depots [or other AAF installations].⁸⁹ This obviously meant that off-reservation training was likely to require less expenditure of funds appropriated directly to the Air Force.

Although it is not possible to make a general statement that one did a better job of training than the other because of the differences in conditions existing from depot to depot,⁹⁰ and installation to installation, it is the opinion of this writer that the depot school was easier to administer, allowed better control of training activities by the depot, and closer contact between the training organization and the using organization. On the other hand the off-reservation schools performed a function of vital importance in the early years of World War II by making it possible to train many thousands of inexperienced and unskilled civilian employees to become productive workers at a time when the AAF had a critical need for trained workers and lacked the "know how" and facilities to perform this gigantic task on its own.

The post schools, as has been pointed out, took over more and more of the training functions of the off-reservation schools and contract schools as they were closed down. The activities of the post schools themselves were eventually somewhat curtailed in 1945 as the manpower shortage, the

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decreased rate of hiring, and the decline in civilian personnel strength had their effect. Another factor which diminished the activities of the post school was the growing tendency in 1944-1945 to do preservice and other types of training on-the-job in the operating departments rather than in the post schools. The post schools, however, were still performing important training functions when the war ended.

Subdepot Schools

The subdepot schools were an important part of the Air Service Command civilian training program and, after the transfer of the subdepots to the commands and air forces on whose installations they were located, the subdepots' schools played an important role in the civilian training organizations of those commands and air forces. In many cases the subdepot schools formed the nuclei around which the new command and air force civilian training programs were built up.

Prior to the great expansion of the Air Force the manning of the few subdepots presented no great training problem; it was sufficient for the parent depot to send a small cadre of trained men to the new subinstallation and these experienced men trained other personnel, hired locally, on the job. In 1941, however, it was announced that over 100 new subdepots were to be activated within a year and it was directed that the parent depots were to be responsible for the training of all the civilian personnel under their jurisdiction. The directive was complied with, and the depots supplied thousands of trained maintenance and supply workers to the new subdepots. These workers, in most part, had been trained by the depots in off-reservation and post schools.

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Once the new stations were established it was decided that it would be advantageous to set up schools on the subdepots themselves under the direction of the control depots. This decision made it necessary for the various depot training departments to formulate definite training policies for the subdepots and to draw up training plans.⁹¹

The various depots seem to have acted independently in setting up their own plans for subdepot training. The Liddletown Air Depot issued its plan in November 1942, directing its subdepots to employ engineering trainees locally and to send them to the Pennsylvania State School of Aeronautics, which was to conduct the basic training for such employees in courses specifically designed to meet subdepot training needs. On-the-job and upgrade training were the responsibility of the subdepot training department. Engineering (maintenance) employees might be sent to the parent depot for short courses. Preservice supply and headquarters training were the responsibility of the subdepot, with the exception of a very few special courses which trainees from these two divisions might take at the depot.

In February 1942 San Antonio Air Depot directed each of its subdepots to send its most competent maintenance employee to the depot for a 15-day in-service training and school administration course. Each of these employees was to then return to his subdepot and establish a school there, organizing classes, selecting and training an instructor staff, and proceeding with in-service training.⁹²

An example of a subdepot training program in action was that established by Warner Robins Air Depot (WR'D) in its subdepot on Cochran Field (Flying Training School, basic) at Macon, Georgia. The subdepot training program

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there was headed by a civilian training coordinator hired by the subdepot commander in the spring of 1943. The coordinator set up and supervised an on-the-job upgrade training program for maintenance and supply workers. After attending a standard conference for the training of supervisor training conference leaders, held at WRAD in June 1943, he conducted the Air Service Command supervisor training course at the subdepot, training all the supervisory personnel in the maintenance and supply divisions of the subdepot. Training aids and instruction materials were obtained at the parent depot. Personnel employed by the maintenance division of the subdepot were given their preservice training at the Macon Aircraft School, one of WRAD's off-reservation schools.⁹³

The January 1943 "Plan for Civilian Training," published as AEC Regulation 50-1, made the commanding officer of the control depots responsible for the preservice training of civilian employees for the subdepots and specified that this training should be planned to meet the specific needs of the subdepots. Upgrade training was to be the responsibility of the subdepot commander in accordance with the policies of the depot. At least one competent instructor was to be employed at each depot. The emphasis in the subdepots was to be on upgrade training supplementary to the training already received at control depot or off-reservation schools.⁹⁴

Training at the subdepots continued into 1943. In May of that year, however, the personnel sections of the subdepots were consolidated with those of the stations at which the subdepots were located and the responsibility for civilian training was transferred from the Air Service Command to the station commanders. In actual practice, however, the air depots continued

to cooperate with the subdepots in training until the subdepots were transferred from the control of the Air Service Command in January 1944.⁹⁵

As pointed out in the preceding chapter,* civilian training sank to a low ebb at most of those bases where the subdepots were transferred from the control of the Air Service Command. It was not long, however, before the training situation began to improve. As the various commands and air forces absorbed the subdepots and began to use the subdepot training personnel and facilities which they had taken over, and as station commanders and various command and air force headquarters came to realize the need for civilian training, the Air Force-wide civilian training program began to materialize. In large measure the subdepots furnished the commands and air forces which took them over the facilities and personnel to implement the AAF civilian training program prescribed in AAF Regulation No. 40-6, issued by Headquarters, AAF, on 6 March 1944. Hence it may be said that subdepot schools made an important contribution to the development of the Air Force-wide civilian training program.

Special Depot Schools

The special depot schools which came into use in 1943 were established by the Air Service Command at area commands for the purpose of giving personnel of any or all area commands short courses of upgrade training in the latest procedures and equipment. These schools were authorized only to provide types of training which could not be economically provided in each area command. They were similar to the factory schools in basic

* See above, p. 72

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purpose, authorized by the same regulation, and operated under the same Air Service Command policy.⁹⁶

The B-29 school,* which was put in operation at the Oklahoma City ATSC in 1944, is an example of an effective special depot school. Personnel trained there serviced B-29's in every part of the world.

Another example is the armature rewinding school set up at Mobile. Instead of losing time by sending armatures back to the factory to be rewound, the Mobile area command sent representatives to the factory to learn armature rewinding. On their return they set up a course of training and taught rewinding to others. This training course resulted in such a great increase in production that Headquarters, Air Service Command directed Mobile to establish a special school in armature rewinding and assume the responsibility for training representatives of all the area commands so that they might go back to their stations and train their fellow workers.⁹⁷

Among other such special schools were Fairfield's in installation and removal of fuel cells; San Antonio's in metal radiography; and Mobile's in repair of turbo supercharger bucket wheels. Also special schools for corrosion control, and packaging and crating were established.⁹⁸ Fairfield also had a Norden bombsight school in 1944 for training in the third and fourth echelon maintenance of the Norden bombsight.⁹⁹ In addition Fairfield was selected by ATSC Headquarters in 1944 as the location for an area school to carry on training in the first four echelons of the maintenance and repair of typewriters and office appliances to meet the training requirement of all the area commands.¹⁰⁰

* See above, p.84

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Trainees were sent to these schools on the basis of quotas assigned by the Personnel and Training Division, Headquarters, but the areas sending trainees had the privilege of requesting quotas off a given number.¹⁰¹ As previously pointed out, IAF Regulation 40-6, 6 March 1944, provided that the training facilities of these special depot schools established by the Air Service Command could be used by the other AAF commands and air forces when they were available. Whenever possible instructors were to be sent to these schools so that they could give needed training locally when they returned to their home stations.

By January 1945 increasing numbers of special depot schools were being established, partly because of a contraction of training activities at the area commands, and because of reports from theaters of operation indicating the need for certain types of training.¹⁰²

Training Course Developments

The many and varied courses developed for the training of AAF civilian personnel during the war years covered a vast field of training which can be divided into 11 areas. A meeting held on 8 August 1945 in the office of the Training Branch of the Civilian Personnel Division of the Office of the Secretary of War established the following areas of training:¹⁰³

- | | |
|---------------------------------------|--|
| 1. Apprenticeship | 6. Orientation |
| 2. Clerical | 7. Protective and Personal Services |
| 3. Inspection and Testing | 8. Safety |
| 4. Management and Supervision | 9. Skilled Trades and Crafts |
| 5. Manual, Unskilled and Semi-skilled | 10. Supply Operations and Procedures |
| | 11. Technical, Scientific, and Professional. |

Apprenticeship Training

Apprenticeship training, of course, was the main reliance for the training of Air Force civilian personnel in aircraft mechanic occupations until the wartime emergency arose. This form of training was dropped in 1942 as unsuitable for use in an emergency situation which demanded the rapid training of great numbers of inexperienced personnel, and was not reestablished as an important part of the AAF civilian training program until the war was over.

Maintenance and Supply Training Courses

Although training courses were developed in all the other areas during the war years the most significant training course developments in the AAF civilian training program occurred in the areas of the skilled trades and crafts, supply operations and procedures, and management and supervision.

In the discussion of the growth of the Air Service Command's civilian training program and of the development of civilian training on an Air Force-wide basis in the first two chapters, and in the accounts of the mechanic learner program and of the various training schools used on and off the post, training courses* and other developments in the areas of the skilled trades and crafts, and of supply operations and procedures are covered insofar as the limitations of time and space permit. The great complex of courses developed by the training departments and operating divisions (maintenance and supply) of the depots and other AAF installations, and by the various off-the-post schools, were used to train many thousands of workers in the performance of their jobs in maintenance and supply

* For outlines of training courses in maintenance and supply work see Air Service Command, Plan for Civilian Training (AOC Reg. No. 50-1, 18 January 1943), pp. P-1 through P-150.

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operations. It was in these areas that the majority of AAF civilian employees received their training, whether it was preservice or upgrade training; or whether it was training done in the classroom or on the job, or as a combination of both.

Supervisor Training Courses

Of almost equal importance was the training received by AAF foremen and supervisory personnel in the area of management and supervision. If there was one key course in the curriculum of the AAF civilian training program it was the supervisor training course developed in the Air Service Command and adopted by the AAF in 1944 as its official supervisor training course.

Supervisor training originated in the Air Service Command in 1941 almost as soon as its force of civilian employees began to expand. Experienced supervisors were not available and the only way to get good supervisors was to train them.¹⁰⁴ In Mobile and Warner Robins Air Service Commands, for instance, where the workers were drawn from non-industrial areas, the situation in regard to supervisors was critical. A large majority of the workers at these area commands had been small farmers and had no experience in planning and directing the activities of others, in organizing group work, in instructing, or even in working in groups. Naturally people with such a background made poor supervisors, but they constituted the main source from which supervisors could be drawn. Since it was imperative to have good supervisors in order to increase production, effect economies, and reduce labor turnover, it was necessary to train the existing foremen and supervisors in the principles and methods of good supervision. Obviously merely firing unsatisfactory foremen and supervisors could not solve the problem.¹⁰⁵

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The need for training foremen and supervisors was recognized at an early date. It was discussed at the Conference of Training Officers of September 1941 and again at that of March 1942. Fairfield and San Antonio Air Depots had initiated their own supervisor training courses in mid-1941 and Ogden followed suit later in the year; in 1942 both Middletown and Mobile established courses.¹⁰⁶ However, there was no standardized supervisor training program set up for use at all depots. Ogden had its own supervisor training program which was developed by its Civilian Training Administrator, Mr. William E. Dewey, who had been Assistant State Director of Industrial and Vocational Education for Utah before he went into civilian training work for the ASC. Other Air Service Command depots had supervisor training based on the Training Within Industry program.¹⁰⁷

The Training Within Industry (TWI) program was developed by the War Manpower Commission as a supervisor training program for industry while the ASC was evolving its program. It consisted of three 10-hour courses called Job Methods Training, Job Relations Training, and Job Instructor Training. In November 1943 the TWI program was incorporated into the ASC supervisor training program which included an additional 22 hours in basic management techniques. The other AAF commands and air forces from 1942 to 1944 used either the ASC course or the TWI course. Where the TWI course was used the AAF using organizations drew on the staff and facilities of nearby TWI district offices.¹⁰⁸

The January 1943 Plan for Civilian Training, issued as ASC Reg. 50-1, 18 January 1943, did not establish a standardized supervisor training program; instead it stated that the depots were responsible for the development of

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procedures for training foremen and supervisors, and emphasized the importance of developing such training.¹⁰⁹ Soon after this, however, a conference on supervisor training was held at Headquarters, Air Service Command, and Mr. Dewey and Mr. Earl Brooks worked out an official Air Service Command supervisor training program based on the program Mr. Dewey had set up at Ogden.¹¹⁰ On 25 March 1943, Headquarters, A&C, issued Memorandum 50-1, Plan for Basic Training of Supervisors, which outlined a 52-hour supervisor training course in an effort to establish a standardized supervisor training program at all depots.¹¹¹ The next month, April 1943, an institute was held at St. Louis to train supervisor training instructors to conduct this first official A&C supervisor training program. On their return to their home stations new supervisor training courses were set up at most of the area commands or old ones were revised in accordance with the directive.¹¹²

A new A&C directive on supervisor training, ASC Regulation 50-10, Training of Civilian Supervisors, issued 23 November 1943, superseded Memorandum l.o. 50-1 of 25 March 1943, and outlined a basic 52-hour program of supervisor training. It was stated that the purpose of this regulation was to establish a training program for civilian supervisors in order to improve their effectiveness and better enable them to meet their responsibilities. This training was to be given to all civilian employees directing the work of others. Supervisors at higher levels were to be trained first, with major emphasis placed on the training of the numerous supervisors and foremen of the lower and middle ranks.

The development and direction of this program were to be the responsibility of the Civilian Training Branch, Personnel and Training Division, Headquarters,

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Air Service Command. It was to be the responsibility of the commanders in the area Air Service Commands to see that the program was carried out at the depots and other installations under their command. Commanders of installations were to see that the conference rooms and facilities necessary for civilian training were provided. Military personnel were declared eligible to take the course if approval of the Commanding Officer concerned was secured.

The basic training program was to be 52 hours in length and was designed to instruct in:

- (1) The responsibilities of supervisors.
- (2) Job instruction techniques.
- (3) Basic management principles.
- (4) Job method improvement.
- (5) Job relations and handling of employees.

The following courses of the Training Within Industry service of the War Manpower Commission were to be used in this basic program:¹¹³

- (1) Job Instructor Training - 10 hours
- (2) Job Methods Training - 10 hours
- (3) Job Relations Training - 10 hours

In March 1944 Mr. Dewey became head of civilian training for the Air Service Command. Mr. Lewis Lerda was charged with supervisor training under his direction and the course was reorganized--new conference outlines, work sheets, and other training materials prepared. The course as set up was used with slight revision throughout the war.¹¹⁴

The revised materials were highly commended by Mr. William M. Kushnick, Director of Civilian Personnel and Training, Civilian Personnel Division,

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Office of the Secretary of War, as an excellent integration of the fundamentals of supervision. He requested copies of the revised materials so that he could analyze the program and stimulate other echelons with the example set by the AG.¹¹⁵

The basic Air Service Command supervisor training course as taught in 1944-1945 consisted of 26 two-hour conferences held two or three times a week. The course was divided into four parts with printed conference outlines for each of the 26 conferences. The titles of the conferences and the four major topics with which they dealt are given as follows:¹¹⁶

Instructing Techniques

- No. 1 Getting the Work Done
- No. 2 Orienting New Employees
- No. 3 Job Instruction Steps
- No. 4 Getting Ready to Instruct
- No. 5 Job Instruction Methods
- No. 6 Practicing Job Instruction
- No. 7 Reviewing Instruction Steps
- No. 8 Conducting Meetings

Job Methods Improvement Techniques

- No. 9 Job Methods Techniques
- No. 10 Analyzing Present Methods
- No. 11 Developing New Methods
- No. 12 Applying New Methods
- No. 13 Reviewing Method Analysis

Job Relations Techniques

- No. 14 Developing Initiative and Confidence
- No. 15 Using the Reprimand
- No. 16 Job Relations Methods
- No. 17 Getting the Facts
- No. 18 Sizing Up the Problem
- No. 19 Acting and Checking
- No. 20 Meeting Other Relationships

Job Management Techniques

- No. 21 Outlining a Management Plan
- No. 22 Organizing and Planning
- No. 23 Directing and Supervising
- No. 24 Managing Time
- No. 25 Developing An Understudy
- No. 26 Building Morale

The first three parts of this course, Instructing Techniques, Job Methods Improvement Techniques, and Job Relations Techniques, were based on the TWI series developed by the Training Within Industry Branch of the War Manpower Commission for use in private industry prior to Pearl Harbor. The TWI course names were so thoroughly established prior to the development of the AEC supervisor training course that their old short titles stuck, and were popularly applied to the AEC courses. Hence Instructing Techniques commonly went by the name JIT; the Job Methods Improvement Technique section of supervisor training was called JMT; and Job Relations Techniques,¹¹⁷ JRT.

The first series of eight conferences in Instructing Techniques dealt with the responsibilities of a supervisor, the orientation of new employees, and methods of instruction. It taught the supervisor how to break a job down into its operations, and then how to instruct the learner in the performance of these operations in a logical step-by-step sequence with demonstrations. It taught the supervisor how to determine what instruction was needed and how to schedule the instruction. This part of supervisor training fitted into the orientation program of civilian training and gave instructor training of a type especially suited to on-the-job training.

Job Methods Techniques took up the methods of doing a job. It taught the supervisor how to analyze a job in all the details of its performance so that he could increase production and cut waste of materials by the elimination of the loss of time and motion and by a combination of various details. This adoption of the time and motion study technique to practical job improvement resulted in a great increase in the number of suggestions turned in for improvements under the USAF suggestion program, and brought about more efficient methods of production in office, shop, and warehouse.

Job Relations Techniques, taking up the human relations angle of handling personnel, was especially valuable to inexperienced supervisors. It taught them how to develop initiative and confidence in their subordinates; how to use the reprimand wisely and without stirring up antagonism or rebellion; how to handle grievances; how to gain the trust and confidence of the workers; and how to be a leader rather than just a boss. These techniques were particularly needed in 1943-1945 when the USAF had to contend with manpower shortages and a high rate of turnover.

Job Management techniques was a phase of supervisor training in which the AEC did pioneer work. It taught supervisors the value of a knowledge of management and acquainted them with the four basic principles of management: unity of command, span of control, homogeneous assignment, and delegation of authority--and their application. It taught them the functions of management; how to organize effectively; the use of organization charts to determine clear lines of authority; how to make the best use of time by developing and using a daily schedule or time budget; and how to develop an understudy who could relieve the supervisor of some of his work and take over in case of emergency.

The supervisor training course was taught by handling the conferences as controlled discussion groups which took up not only the content of the course but its application to the individual problems of the supervisor trainees. Short and informal lectures were used to stimulate discussions. Printed material was given to the conferees to illustrate points in the course. Large charts were used in the illustration of major items to be emphasized. Very effective use was made of demonstrations put on by the conferees themselves, and frequent use was made of training aids such as film strips and records. Each conference was thoroughly outlined and planned with all the materials and methods of instructing the trainees being carefully selected and correlated.¹¹⁸

In addition to the 26 conferences in the basic 52-hour course advanced courses in supervisor training called continuing conferences were developed. They covered such fields of supervision as the manpower problem, production control, personnel procedures, qualifications of a supervisor, industrial

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psychology, safety, first aid, office management, women in industry, and industrial hygiene. These were developed by individual area commands [and other AAF installations] to meet specific training needs.¹¹⁹

There were several reasons for the increasing emphasis on supervisor training from 1943 to the end of the war. The freezing of the number of civilian personnel in 1943, and subsequent cuts in civilian personnel strength, eliminated the necessity for mass training. Preservice training decreased greatly as it was now given only to those hired as replacements, and more and more of this was given on the job. There was an increasing emphasis on upgrade, on-the-job training which would raise each worker to his peak of efficiency. As on-the-job training depended largely on the training of supervisors and foremen in the techniques of instruction, supervisor training received an impetus.¹²⁰ Also the emphasis on the maximum utilization of personnel in 1944-1945 called for well trained supervisory personnel who knew how to obtain maximum production from the workers under their direction, and who could keep them on the job.

Supervisor training was emphasized by headquarters, HSC, as one of the most direct ways of improving efficiency in operation and of conserving manpower. By February 1944 standardization of course content had largely been accomplished, and new and well-illustrated materials were ready to be sent out to the area commands. Also a series of regional standard institutes was scheduled to train supervisor training instructors (conference leaders) in the handling of the revised course.¹²¹ The supervisor training program was carried on throughout the Air Service Command. The magnitude of

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the ASC supervisor training program is indicated by the fact that in the 16 months period, September 1943 through December 1944, a total of 25,922 persons completed the 52-hour ASC supervisor training course.¹²²

Supervisor training was felt to be necessary for the training of civilian personnel in the other components of the AAF for much the same reasons that it was considered a vital part of the ASC civilian training program, although it was not carried on in a comprehensive, well organized basis outside the ASC prior to the reorganization of the civilian training program on an Air Force-wide basis in 1944-1945.¹²³ In their "Report and Recommendations" the "Temporary Committee" of civilian training officers appointed to survey the AAF civilian training programs in January 1944 pointed out that two recommended supervisor training programs were being used in the AAF, the 52-hour ASC course and the 30-hour TWI course. They recommended that AAF headquarters should approve both courses and that the commands and air forces should confine their training to the course selected without alteration.¹²⁴ AAF Regulation No. 40-6, entitled AAF Civilian Training Program and issued 6 March 1944, to authorize an Air Force-wide civilian training program, provided for supervisor training as a part of that program.¹²⁵

In August of 1944, the Training Within Industry budget was cut and funds for printing training material were eliminated. This eliminated the TWI course as a medium for AAF supervisor training and the ASC supervisor training course became the basis of the officially approved AAF supervisor training program.¹²⁶

At the request of Headquarters, AAF, the Air Service Command had already held a Master Institute at Fatterson Field, Ohio, in July 1944 attended by

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13 persons from various commands and air forces. These persons were indoctrinated in the content of the ASC supervisor training program so that they could train supervisor trainers for their respective air forces and commands. As a result standard institutes were held at various command and air force headquarters to train supervisor trainers, (conference leaders).¹²⁷

On 2 August 1944 Headquarters AAF, issued AAF Regulation No. 40-11, Supervisor Training Programs, which provided that an approved supervisor training program should be set up in all AAF installations employing civilian personnel. It was to consist of two parts: basic instruction and continuing conferences. The major phases of supervision were to be presented in four courses: Problems of handling personnel, supervisors as instructors, job methods improvement, and management training. All AAF civilians responsible for the work of five or more civilians were to complete a minimum of 30 hours of civilian training. Instructional materials for the four phases, and films and charts, were to be requested directly from the Civilian Personnel Division, Assistant Chief of Air Staff, Personnel, Headquarters, AAF, Washington, D.C.¹²⁸

A few days later, 6 August 1944, Headquarters, AAF, issued AAF Letter 40-24 to the commanding generals of all air forces and all independent and subordinate AAF commands, and to the commanding officers of all AAF installations. This directive established the 52-hour ASC supervisor training course as the approved basic supervisor training course for the AAF and eliminated the TWI courses from the AAF training program.¹²⁹ The ASC supervisor training program now became the standard program for all the other components of the AAF, and a series of master and standard institutes

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were held at various air force and command headquarters installations throughout the continental United States to train civilian training personnel for the quality control of supervisor training and to conduct supervisor training courses.

In order to develop a clear understanding of the supervisor training course being given to civilians--and to provide essential information in the field of management and supervision, the Air Technical Service Command offered a course for officer supervisory personnel in the summer of 1944. It was a condensation of the 52-hour basic course into an intensive 20-hour course divided into 10 conferences lasting two hours each.* This course was favorably accepted at Headquarters, ATSC, and it was provided that all officers functioning in supervisor capacities were to be assigned to this course.¹³⁰ In installations where this course was not offered officers acting in supervisory capacities, particularly in supply and maintenance, often sat in on sessions of the regular 52-hour course offered to civilians.¹³¹

As early as March 1944 the Third Air Force sent information to Headquarters, AAF, indicating that a complete supervisor training program had been set up for its 39 installations. Its enrollment comprised about 1,000 supervisors among its approximately 10,000 civilian employees.¹³²

The official supervisor training program became widely established in the AAF Training Command by the end of 1944. In the Eastern Flying Training Command the program was initiated by the attendance of the Supervisor Training Administrator, EFTC, at a Master Institute held at Mobile ATSC. By September 1944 EFTC had held four standard institutes, and conference

* This was probably the 20-hour "Management and Supervision" course developed in late 1944 by ATSC, working with the AAF Headquarters Civilian Training Branch. See p. 165.

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leaders for all EFTC stations had been trained.* By 21 November 1940 supervisors had completed the supervisor training course, 670 were attending and 1,723 remained to be trained. Stress was placed on continuing conferences and follow-up work as well as on the basic supervisor training.¹³³ Eastern Technical Training Command reported in November 1944 that supervisor training programs had been established at all major stations of the command and that all personnel selected to conduct supervisor training at the station level had satisfactorily completed training at a standard institute.¹³⁴ Central Flying Training Command reported in December 1944 that it had held four training institutes which had qualified 44 persons to conduct supervisor training at stations of the command. Following these institutes the supervisor training program had been put into effect at all stations of the CFTC. Continuing conferences on management had been given at a few stations and continuing conferences on efficiency ratings had been completed at almost all stations. Headquarters, CFTC, had also developed an 18-hour course in personnel leadership and an 8-hour course in management principles in personnel leadership. These courses were to be made available to all officers of the command who had supervision over personnel, either military or civilian.¹³⁵

By mid-1945 most AAF installations employing civilian personnel were able to establish supervisor training as a part of their civilian training programs. As noted above the Air Technical Service Command, the AAF Training Command, and the Third Air Force had their supervisor training programs well under way by the end of 1944. These three components of the

* Actually Mrs. Mamie Sylvester, EFTC Civilian Training Administrator, had conducted four major institutes, and seven institutes for small groups, in which personnel representing 47 installations received training as supervisor training conference leaders. Interview by author with Mrs. Mamie Maples (Sylvester), Director, Management Training Unit, AU, MAPE, Ala., 18 June 1956.

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AAF, between them, employed by far the majority of the AAF's civilians in December 1944; 313,889 civilians out of a total of 409,850.¹³⁶ Although the complete data is not available it is reasonable to suppose that by the end of 1945 most AAF installations which employed civilian personnel had supervisor training programs under way since such training was required by regulation. Those installations where supervisor training programs were nonexistent or lackadaisical were likely, in most cases, to be those where the commanding officers (or the officers in charge of the operating departments) were not convinced of the value of civilian training in general.

The extent of the AAF supervisor training program is shown by the fact that 40,000 civilian employees had been given supervisor training by the end of 1944 with benefits which were apparent in all echelons.¹³⁷ For all AAF installations the number of man hours of supervisor training in the period July 1944 to September 1945 showed a rise from approximately 116,000 man hours in July 1944 to about 160,000 man hours in January 1945, then a decline to 99,000 in August 1945, and a rise again to 115,000 in September of 1945. For the whole period the cumulative number of man hours accomplished in supervisor training rose from 90,000 in July 1944 to approximately 1,875,000 in September 1945. The following components of the AAF were indicated as having reported man hours accomplished in supervisor training in 1945: Headquarters, AAF; the Air Technical Service Command; the Continental Air Forces (which included the 1st, 2d, 3d, and 4th Air Forces, and I Troop Carrier Command); the AAF Center; the Tactical Center (changed to AAF Center); the Proving Ground Command (changed to AAF Center); the Personnel Distribution Command; the Air Transport Command; and the Training

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Command. The ATSC led, reporting a cumulative total of 1,080,000 manhours of supervisor training accomplished in the period July 1944-September 1945; Training Command came next with 390,000 manhours; and the Continental Air Forces was third with 250,000 manhours reported.¹³⁸

Like other training programs supervisor training had its problems. One of the greatest difficulties was in procuring supervisor instructors or conference leaders. Initially the ASC hired people who had 10 to 20 years experience in industry but no teaching experience. It was found that most of these could not put the course over so they were replaced by people with less experience in industry but with practical teaching experience.¹³⁹ Also, of course, training institutes were used on a wide scale to develop conference leaders. People with widely varied backgrounds--vocational teachers, high school instructors, college professors, salesmen, aircraft mechanics, housewives--became conference leaders. Some were excellent, others were good, too many were mediocre or poor instructors and conference leaders. It was the ability of the conference leader to put the course over, or the lack thereof, that played the major part in determining the success or failure of a supervisor training program.¹⁴⁰

Another problem was that of scheduling supervisory personnel to attend the supervisor training conferences. They were busy men and their superiors, unless thoroughly convinced of the value of training, were reluctant to let them have time off to attend conferences. For example a representative of ATSC Headquarters visited Oklahoma City ATSC in the spring of 1945 and found that the Maintenance Division was providing less than 50 percent of the supervisors requested by the Supervisor Training Unit, and that this

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division stipulated that those supervisors assigned to supervisor training could be recalled on short notice if necessary. This attitude was taken despite a record of 51,670 manhours per month saved as a result of supervisor training at OCMSC.¹⁴¹ Even where there was full cooperation from operating officials in assigning supervisors to training conferences there were always occasions when supervisors were forced to miss conferences as a result of various emergency situations, and it was extremely difficult to arrange for these to be made up.

Sometimes "hardshell" supervisors were hard to convince of the value of the course and gave little cooperation in the conferences. They would claim that the course had nothing to teach them, that the principles and techniques of supervision taught were just a needless repetition of the obvious. Or there might be the complaint by some supervisors that the conferences were adapted to the training of shop foremen rather than to that of administrative and supply supervisors. This last complaint was met to some extent by revisions of the course and by scheduling the different types of supervisors in different classes.¹⁴²

Despite these criticisms and the difficulties encountered in securing good conference leaders, and in scheduling supervisor training conferences, the AF supervisor training program was well worth the time, money, and work invested in it. Supervisors and foremen learned the principles and techniques of supervision and how to put them into effect. They learned how to instruct their personnel; how to organize and manage their departments; how to handle the workers under their supervision and how to get the most out of them by building up their morale; they learned how to improve job

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methods in order to save time and materials and increase production.

Many of the benefits of supervisor training were too intangible to measure in terms of man hours and dollars saved; others were more concrete and could be assessed in definite terms. For instance Oklahoma City ITC credited supervisor training with bringing about improvements which, in a period of a little over a year since 1 January 1944, had saved a total of 1,281,623 man hours with a profit of \$945,460.80 to the Government, after figuring the total cost of the CCATSC supervisor training program. Continuing conferences carried on by the CCATSC Supervisor Training Unit were given a good part of the credit for a decrease in absenteeism and in the rate of turnover at CCATSC.¹⁴³ San Antonio ITC credited supervisor training with a great stimulation of suggestions submitted for improvement which had effected great savings in manhours and materials. It had also been valuable to management in training supervisors in special areas such as efficiency ratings, handling grievances, and the assignment of workers.¹⁴⁴ Similar testimonies of the value of supervisor training were to be found in reports submitted by other command areas and installations.*

Whenever a supervisor training program was conducted by well-qualified conference leaders who enjoyed the backing of the installation commander, and of the operating officials, not only in putting on the program but also in implementing the principles and techniques taught, it was generally a success. Under such circumstances, where there was an effective follow-up program conducted by the supervisor training unit, the supervisory personnel

* It is rather significant that private industry used AIF supervisor training materials in their own training programs. For instance the Mack Bfg Co (buses, trucks, fire apparatus) contracted Bg, ITC, in March 1945 about obtaining such material to use in setting up an extensive supervisor training program in the 10 plants of its Allentown Division. See ltr., Mr. W. B. Arnold, Personnel Manager, Mack Bfg. Corp., Allentown, Pa., to Lt. Col. E. M. Berg, Ch, ITC, 353 Supervisor Training, March 1945.

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were able to derive maximum benefits from the training. This, in turn, brought the installation concerned maximum results in increased effectiveness of management and efficiency of operation and was a major factor in the maximum utilization of civilian personnel.

Personnel Management

It was to be expected that the supervisor training program, with its emphasis on the principles of management and administration as applied by line supervisors, should stimulate interest in the development of more advanced training in personnel management for administrative and supervisory personnel, both military and civilian, in the higher echelons. It became increasingly apparent that an organization as large and complex as the AAF would profit greatly if its key administrative and supervisory personnel were to make conscious and effective application of sound and proven principles of management in the handling of their administrative and supervisory duties.

The Training Branch of the Civilian Personnel Division, Headquarters, AAF, working with the ATSC in late 1944, developed a 20-hour training course entitled "Management and Supervision." It planned to prescribe the course for officers and administrative personnel of the AAF when it was worked out well enough to be acceptable to the Division.¹⁴⁵ The first of these courses began in February 1945 and they were carried on for four months, but the war ended before the result of this course could be fully evaluated.¹⁴⁶

Another management training course was developed by the AAF Training Command in 1944. This course, AAF Personnel Management, was worked out in a three-week conference held at Headquarters, AAF Training Command, Fort

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Worth, Texas. Among those playing an important part in developing the course were Maj. Robert J. Schwartz, Project Officer; Lt. Col. Russell G. Broedus, Director of the Manning and Control and Personnel Management Section, BFTC Headquarters; Mrs. Lennie H. Sylvester (now Mrs. Kaples), Civilian Training Administrator, BFTC Headquarters; and Mr. William L. Miller, Civilian Training Administrator, Smyrna Army Air Field, Smyrna, Tennessee.

After the course materials were developed a training institute was held at Denver, Colorado, in the summer of 1945 to train officers to give the 21-hour course in AAF Personnel Management--10 officers from each of 5 different subordinate commands of the AAFTRC--the 3 flying training commands and 2 technical training commands. Since V-J Day came immediately after the institute ended, the carrying out of this training program was suspended in all the commands involved except one, the Eastern Flying Training Command, which actually conducted the course at its installations.¹⁴⁷

A personnel management course for senior officers entitled Applied Personnel Management, was also given at AAFSTAC, Orlando, Florida, early in 1945. It was given for officers only, but civilian personnel officers attending recommended that differentiation between military and civilian personnel was not essential or desirable since the general management principles were equally applicable to both.¹⁴⁸ In planning for the future use of the Applied Personnel Management Course consideration was given to the probability that the postwar personnel strength of the Air Force would be 300,000 with which to build and support an organization of 70 groups.

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To accomplish this would require maximum economy in the utilization of manpower. The Applied Personnel Management Course was designed to help accomplish this.¹⁴⁹

The A/F Personnel Management Course as developed by the AAF Training Command, was a condensation of the basic Supervisor Training Course and the Applied Personnel Management Course for senior officers given at AAFTAG (AAFSAT). It emphasized management and the supervision of personnel.

The course was designed to give operating officials a thorough knowledge of the principles and procedures of personnel management and skill in their application to everyday management problems. It was a 20-hour course divided into 10 conferences lasting approximately 2 hours each. The major topics dealt with were the principles of management, the functions of management, steps in applied personnel management, the foundations of personnel management relations, and the application of the principles of management. Course materials consisted of printed instructions and course outlines for the conference leaders, sets of charts, conference summaries and work sheets for the conferees, demonstration devices and films.¹⁵⁰

This course was part of the AAF Personnel Management Program activated by AAF Regulation 37-1, 16 October 1945, which outlined the responsibility of all officials in command of military personnel or supervising of civilian personnel to:

- (1) "Incorporate personnel management principles and practices in all plans and operations."
- (2) "Indoctrinate and stimulate their operating personnel in personnel management principles for the effective utilization of manpower."¹⁵¹

The war ended before the AAF Personnel Management Program was fully implemented but this program, and some of the other management courses developed in the AAF in 1944-1945, marked the beginning of an emphasis on management training which would play an important part in the postwar civilian training program.

Miscellaneous Courses and Special Schools

Although the great majority of civilian training done by the AAF during the war years was in the areas of orientation, clerical training, skilled trades and crafts, supply operations and procedures, and management and supervision, much important instruction was done in the other six areas of training and in special courses or schools organized to give training to limited groups of personnel in special fields. In many cases civilian trainees were assigned to courses or schools organized primarily for the training of military personnel and, in some cases, they were sent to schools conducted by government agencies other than the AAF.

Training in the area of inspection and testing began as early as 1941 when Middletown Air Depot was offering a flight test and operations course. This was training for flight test inspectors and trouble shooters.¹⁵² Inspection training was also done in off-post schools such as the Shelby County School of Aeronautics which did inspector training for the Materiel Command in 1944.¹⁵³

An example of important training done in the area of semi-skilled labor was the 'Af-wide program for operators of gasoline systems developed by the AAF in cooperation with the Army Service Forces and initiated in the summer of 1944.¹⁵⁴

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Training in the area of protective and personal services included training for guarding and policing activities, and for fire-fighting and fire protective work. In 1941 Middletown Air Depot was training civilian personnel in the fundamentals of guard duty, and in the proper care and method of handling firearms.¹⁵⁵ What was probably the first fire-fighting training to be given at any depot was given to the entire fire-fighting force at Mobile Air Service Command as upgrade training beginning in February 1943. This course was conducted in cooperation with the Alabama State Department of Education.¹⁵⁶

In early 1945 an AAF crash fire-fighting and rescue training course was set up at Buckley Field, Colorado. This course covered elementary as well as structural and aircraft fire fighting. It was an 8-week course with 35 class hours a week, and was offered for both military and civilian personnel of the AAF.¹⁵⁷

Training for civilian personnel in the area of safety was given informally as a part of basic shop training and orientation from the beginning, but as more and more untrained and inexperienced civilians were employed by the AAF it was necessary to place more emphasis on safety training. AAF Regulation 40-6, 6 March 1944, stressed that a part of the mission of the AAF Civilian Training Program was to reduce accidents resulting from unsafe work practices and to reduce operational accidents to aircraft resulting from faulty workmanship.

Safety was stressed in the Civilian Personnel Officers Training Course as largely a matter for training action. Safety information was to be given in general orientation; safety was to be considered as a factor in

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proper job placement; and safety courses were to be included in the civilian training program.¹⁵⁸

It was in the area of technical, scientific, and professional training that there was the widest range of training courses and schools. Much of the training in this area was done by agencies outside the AAF; some of it was done in special courses or schools organized by the Air Force.

The training of officers and of civilian technicians and specialists in civilian personnel administration and its various phases was of particular significance to the civilian training program, not only because it gave many civilians much needed training in civilian personnel matters, but also because it gave civilian personnel officers greatly needed information on civilian training and the vital part it played in the effective administration and utilization of civilian employees.

In 1941 the War Department was conducting basic classes which furnished instruction in the laws, regulations, policies, and procedures pertaining to civilian personnel in the War Department.¹⁵⁹ In the fall of 1944 the AAF Training Command initiated at Santa Ana, California, a course for the purpose of training AAF officers to handle civilian personnel problems better. The course took up such topics as: The reemployment and placement of veterans; recruiting, testing, and investigation of employees; ungraded efficiency ratings; training; procedures; employee relations; job evaluation and wage determination; statistics; control, organization, and administration of a civilian personnel office; and the genesis of industrial relations. After one class, administered jointly by Headquarters, Training Command, and by AAF Headquarters, this activity was transferred to the San Antonio

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Aviation Cadet Center. Two classes containing a total of 132 students graduated before the end of the year. These included officers from the various commands and air forces.¹⁶⁰

Evidently this training course ceased to operate after a few months because the Civilian Personnel division, AC/AS, Personnel, Headquarters AAF, was planning in July 1945 to establish a civilian personnel officers' school to continue the course formerly given under the auspices of the Training Command. Duke University was recommended as the location of the school. These plans were canceled by the end of the war.¹⁶¹

In December 1945 a War Department School of Civilian Personnel Administration was set up under the auspices of the OSW. The major AAF commands were instructed to send selectees, either military or civilian, to the first class and a quota of 13 was given to the AAF. This quota was suballocated to the following commands: Continental Air Forces, Personnel Distribution Command, Training Command, Air Transport Command, AAF Center, Air Technical Service Command, and Headquarters AAF. A second War Department Civilian Personnel School was scheduled for early 1946. In this connection a canvass of the major AAF commands made late in 1945 indicated a need for the training of approximately 200 AAF civilian personnel officers and approximately 750 civilians and military personnel in specialized activities such as placement, salary and wage administration, and processing.¹⁶²

Special classes were conducted dealing with various phases of personnel administration. For instance civilian personnel from AAF headquarters attended a training course in new efficiency rating procedures given by the Civil

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Service Commission in February 1944.¹⁶³ Efficiency rating procedures were also made the subject of continuing conferences in supervisor training programs.

In June-July 1945 the Classification and Wage Administration Branch of the Civilian Personnel Division, AC/AS, Personnel, Headquarters, AAF, held a training course for classification analysts at Omaha, Nebraska. It was attended by approximately 30 representatives from the headquarters of the various commands and air forces. They, in turn, were to hold similar courses for classification analysts at the field installations of their respective commands and air forces.¹⁶⁴

In the summer and fall of 1944 civilian payroll administration courses for civilian employees were conducted by the Army Finance School, Ft. Benjamin Harrison, Indiana. A quota of 32 was allotted to the AAF for the first class and in turn suballotted to the various commands and air forces; the quota of 32 was repeated for the second class; and 16 for the third class.¹⁶⁵ The assignment of civilian trainees from the AAF for this school continued in 1945.¹⁶⁶

The Army Finance School also trained civilian personnel of the AAF (personnel from the AAF Budget and Fiscal Office) in its accounting and auditing course. This course was held for the purpose of acquainting civilian employees of the War Department with problems of contract termination and to instruct them in procedures in termination accounting and auditing.¹⁶⁷ Similar training courses were carried on by the Air Technical Service Command for its personnel.¹⁶⁸ The Air Technical Service Command also held a series of contracting officers conferences at ATSC Headquarters in

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January and February of 1945. Each conference consisted of a six-day course for local purchase personnel and a nine-day course for all other contracting personnel. The conferences were for both military and civilian personnel.¹⁶⁹

The training of scientific personnel did not play as large a part in the World War II AAF civilian training program as it has in the postwar period which has seen such a tremendous development in the scientific and technical aspects of military aviation. Although the AAF and other components of the War Department did considerable training along scientific and technical lines during the war, it was not until 1945 that the Federal Council of Personnel Administration established an Advisory Committee* on the training of scientific personnel in the government service. This committee was composed of representatives from the War Department, the Navy Department, and other government agencies. The AAF was to advise with the Civilian Personnel Division of OSW as to its desires in the training of scientific personnel.¹⁷⁰

The Air Technical Service Command was responsible for the procurement, supply, and maintenance of aircraft and related accessories and equipment, and necessarily carried on extensive activities in testing, engineering, and technical research. Therefore, it had the greatest need for the scientific and technical training of civilians. For example the ATSC operated a rather extensive program for the training of engineering aides at various colleges

* Late in 1944 Gen. H. H. Arnold appointed a Scientific Advisory Group of distinguished civilian scientists for the purpose of assembling ideas for new weapons. See W.F. Craven and J.L. Cate, The AAF in World War II, (1955) VI, 334.

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and universities. One of the schools carrying on this program (which came under the auspices of the Engineering Science Management War Training Plan) was the University of Texas operating in cooperation with the Civilian Personnel Section of San Antonio.¹⁷¹ Women were given this type of training in a number of colleges throughout the Middle West. In the program for training engineering aides for work in aircraft radio the policy was to select trainees with a background in science and mathematics and to give them a fundamental course of instruction in basic radio engineering--paying them a salary while they were learning. Upon successful completion of the college course the engineering aides would assist military and civilian engineers in the design, development and procurement of radio and radar equipment for the AAF.¹⁷²

It should be noted that much of the ATSC college training program was taken over in the fall of 1944 when Signal Corps personnel at AAF installations were transferred to AAF rolls.* The training of the civilian personnel formerly on Signal Corps rolls was now a responsibility of the civilian training branches at the various AAF installations concerned, and the continuation of the Signal Corps training program which involved the training of technicians in colleges and universities became an AAF responsibility.¹⁷³

A significant move in the direction of more emphasis on technical and scientific training was made late in 1945 when AAF Headquarters ordered the

* This transfer, when completed in the spring of 1945, involved some 9,000 military and civilian personnel and a number of installations. It gave the AAF the responsibility for the development, purchase, and storage of all communications and radar equipment used in aircraft--a responsibility formerly belonging to the Signal Corps. See AAF in WW II, VI, 374.

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Air Service Command to set up the AAF Engineering School. This school was to operate under the policy supervision of AAF Headquarters and was to train officers in general and specialized subjects appropriate to the functions of developing, procuring, supplying, and maintaining the equipment of a modern air force, and to provide higher administrative and scientific training of personnel to put into effect a broad research and technological development program.

Facilities at Wright Field were to be used until such time as new facilities were justifiable. Faculty and facilities to take care of a class of approximately 200 students were to be provided by September 1946.

In addition to the basic and specialized courses given to resident students the AAF Engineering School was to make provision for advanced training at colleges, universities, and other scientific and research institutions. There was also to be provision for an extension service.

With the approval of AAF Headquarters in each case, qualified civilians, who were U.S. citizens, could be authorized to receive training at the AAF Engineering School.¹⁷⁴ This made it possible for civilian employees in the higher scientific and technical positions to receive the training necessary to keep up in scientific knowledge and technology with the swift advances which were playing an increasingly important part in the development of airpower. It presaged the development of an increasing emphasis on scientific and technical training in the postwar period--for both military and civilian personnel.

Veteran's Training

In the summer of 1944 the Training Branch of the Civilian Personnel Division, MC/AS, Personnel, Headquarters, AAF, conferred with the Training Branch of OSW in regard to plans for the rehabilitation training of returned veterans who would work in the War Department. At this time such plans were tentative, as there were a number of government agencies involved in rehabilitation training, and the War Department had to determine the extent of its participation in such training.¹⁷⁵ The whole question of training returning veterans became a matter of increasing concern to the civilian training organizations of the various components of the AAF as the end of the war approached and veterans began to return to their old jobs with the AAF. In many cases these veterans needed retraining for their old jobs, or had to be trained for new ones. Disabled veterans needed rehabilitation training. With demobilization the training of veterans was to occupy an important place in the AAF civilian training program.

War Department Civilian Personnel Regulation 55, Revised, 19 April 1945, developed by the War Department in conjunction with the AAF and the ASF, clearly established the fact that it was an over-all Department responsibility [and hence an AAF responsibility, too] to place ex-War Department civilian employees who were returning from military service. The regulation also set up detailed procedures for accomplishing this re-employment.¹⁷⁶

The basic policy of the War Department, as stated in Orders B, 1945, was that the War Department should make full use of all of its training

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facilities to insure that those veterans returning to War Department positions should receive whatever special training was needed to effect their successful adjustment to civilian employment. In addition it was War Department policy to employ and train as many additional veterans as was practicable.¹⁷⁷ The AAF, as a component of the War Department, was obligated to follow this policy in its civilian training program.

Departmental Circular No. 522, issued 1 May 1945, by the Civil Service Commission, pointed out that returning veterans were an important source of manpower and that disabled veterans properly trained and placed could fully meet the normal requirements of many Federal jobs. Under the provisions of Public Law No. 16, 78 Congress, authorizing a rehabilitation training program for disabled veterans, the Veterans's Administration could make agreements with Federal agencies to train certain disabled veterans for employment.

According to the Departmental Circular there were two ways in which veterans eligible for rehabilitation under Public Law No. 16 could be placed in training in Federal agencies: 1) as civil service employees in trainee status, or, 2) as Veterans Administration beneficiaries receiving no salary. The Civil Service Commission believed that the first way best served the interests of the veteran concerned and of the Government service.

Another War Department Circular (No. 62, 1 June 1945) stated that formal agreements might be arranged between the Veterans Administration and the headquarters of the forces for the training of veterans as civilian employees in a trainee status; however, no action was to be taken to negotiate agreements for training veterans as Veterans Administration

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beneficiaries until the issuance of further instructions. It was also stated that the use of trainee positions as a means for the immediate employment of veterans needing a limited amount of additional or refresher training to qualify for a War Department position was in complete accord with War Department policy concerning the reemployment of veterans.¹⁷⁸

In order to implement the training policy as set forth by the War Department, representatives of the civil personnel divisions of OSW, of Headquarters, IAF, and of ASF, developed plans for a nationwide training program, beginning with an indoctrination meeting of representatives of the major commands at Washington in June 1945. This meeting was to be followed by regional meetings to train teams in the necessary procedures-- these teams would in turn disseminate this information to all War Department installations in their respective regions.¹⁷⁹

Meanwhile the War Department was working out with the Veterans Administration a plan for the training of disabled veterans at certain select War Department field installations. As early as 24 February 1945 a representative of the Training Branch, Civilian Personnel Division, AAF Headquarters, had met with War Department and Veterans Administration representatives to discuss a plan whereby War Department installations could participate in a training program for disabled veterans set up under the provisions of Public Law 16, 78 Congress.¹⁸⁰ Planning and negotiations continued through the summer of 1945 for this training, which was to be in the mechanical trades and related activities. The War Department coordinated these plans with the forces and services concerned.¹⁸¹

By September 1945 the War Department and the Veterans Administration reached an agreement on the training of disabled veterans at War Department

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installations. This agreement had been written in the War Department, then coordinated with the AAF and the ASF, before being submitted to the Veterans Administration, which made only minor changes. It was expected to result in AAF installations soon receiving a number of veterans for training in various types of aircraft work.¹⁸²

A plan for training veterans under the provisions of Public Law No. 346, 78 Congress, was also formulated and signed by the Secretary of War and submitted to the Veterans Administration for concurrence,¹⁸³ final concurrence being achieved by the spring of 1946. On 24 April 1946 the War Department issued WD Civilian Personnel Circular No. 50, Veteran Training Program, which reproduced Cooperative Agreement Number I (under Public Law 16, 78 Congress) and Cooperative Agreement Number II (under Public Law 346, 78 Congress) between the VA and the War Department for the training of veterans at War Department installations.

The Circular reaffirmed the War Department policy in regard to the training of veterans, outlined the procedures to be followed by the forces in coordinating their veterans training programs with the VA, and set the requirements to be met by those installations recommended to do veterans training.

Cooperative Agreement Number 1, framed on the basis of the provisions of Public Law 16, 78 Congress, set up two plans, A and B, under which the War Department should accept into its civilian training program vocationally handicapped disabled veterans for vocational rehabilitation training designed to make each veteran satisfactorily employable in the job or occupation chosen in collaboration with the VA. Cooperative

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Agreement Number II, framed on the basis of the provisions of Public Law 346, 78 Congress, provided for the acceptance into War Department civilian training programs of veterans eligible for training or retraining while receiving subsistence allowances from the VA. Only veterans in paid War Department jobs were to be trained under this agreement.¹⁸⁴

Finally on 22 July 1946, AAF Headquarters issued AAF Letter 40-10, Training of Veterans in AAF Installations, which gave instructions for the implementation in AAF installations of veterans training programs in conformity with the basic regulations for veterans training set forth by the War Department in Civilian Personnel Circular No. 50, 24 April 1946. This directive also provided that complete records of all such training should be maintained and monthly reports submitted as required by the agreements between the War Department and the Veterans Administration.¹⁸⁵ Thus, approximately two years after the initial participation in War Department veterans training planning activities, the AAF officially launched veterans training as a part of its civilian training program.

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Chapter IV

CIVILIAN TRAINING IN THE POSTWAR AIR FORCE

1945 - 1951

The contraction of AAF civilian training activities which had set in before the end of the war was accelerated when hostilities ended in September of 1945. The need for certain types of training now ceased to exist. Also the steady decline of the civilian personnel strength of the AAF through resignations and reduction in force decimated the civilian training complements of many installations, and those training people who remained on the job found themselves with fewer and fewer people to train.

The total number of civilian employees in the AF in the continental United States fell from 404,489 on 31 January 1945 to 233,056 on 31 December 1945.¹ By 31 December 1946 the number of Air Force civilian employees in the continental United States had dropped to 125,233, of whom 86,107 were employed by the Air Materiel Command² [The successor of the Air Technical Service Command]. This represented a decline of approximately 46 percent in civilian personnel strength in a period of 12 months. By 31 December 1947 AAF civilian personnel strength had decreased still further to 111,730.³ This massive reduction was at least partly due to the fact that a reduction of more than a quarter of a million civilians in classified Federal employment by the end of the fiscal year beginning 1 July 1946 was mandatory under the provisions of the 1946 Pay Act which became law in May of 1946.⁴

This great decrease in the civilian personnel strength of the AAF took place despite the fact that the Air Force, in submitting its proposed budget for the fiscal year of 1947, requested funds for 400,000 civilian employees. According to testimony given by General Spaatz before the subcommittee of the Appropriations Committee of the House of Representatives on 20 May 1946, this was the irreducible minimum the AAF needed to fulfill its mission which largely depended on the success of a plan to utilize civilian personnel for all duties which did not require the assignment of military personnel. The AAF planners had not anticipated such a great reduction of civilian personnel strength by the Bureau of the Budget due to fund limitations for the fiscal year 1947. The 20 percent total reduction of AAF strength, said General Spaatz, had been based on the premise of having civilian personnel strength available for the performance of a great number of Air Force duties.⁵

The whole Air Force program was, of course, cut back to the bone as a result of the tremendous cuts Congress made in its appropriation of funds for the AAF for the fiscal years 1946 and 1947.⁶ Now that the war was over Congress had become economy-minded and the Bureau of the Budget had prescribed reductions of personnel for the War Department and the Department of the Navy.

This was in line with the thinking of Senator Harry Byrd of Virginia, chairman of the Joint Committee on the Reduction of Nonessential Federal Expenditures, who recommended rapid reductions in personnel at home and abroad in the interest of efficient and economical government [which is not necessarily synonymous with effective and adequate national defense]. Byrd's committee concluded that the demobilization of wartime civilian personnel was not proceeding at a rate comparable with military demobilization.

The committee recommended in the spring of 1946 that Congress should enact legislation placing on an over-all ceiling on civilian personnel employed by the executive branch of the Federal Government. This ceiling was to be graduated downward between 1 July 1946 and 30 June 1947, finally reducing the total of Federal civilian employees to a figure approximately 175 percent of the total number of civilians employed by the Federal Government as of 31 December 1939.⁷ As previously mentioned, a considerable reduction was accomplished by the Pay Act which became law in May of 1946.

Congressional Inquiry into Civilian Training

The postwar emphasis on economy and retrenchment in the executive branch of the Federal Government resulted in a congressional investigation headed up by Senator Byrd of the training and utilization of civilian personnel in the AAF in 1946.⁸ On 24 October 1946 Mr. A.H. Onthank, the Director of Civilian Personnel and Training, Office of the Secretary of War, notified the Commanding General of the AAF that a committee of Congress was seeking information for an evaluation of training facilities in all government agencies.

In order to furnish the investigating committee with the data desired Mr. Onthank requested that the Commanding General should furnish the OSW with comprehensive information on the AAF civilian training program for the fiscal year 1947. This information was to cover off-the-job and on-the-job training. The desired data on off-the-job training was to include the following:

- a. Location, component, number of field installations, or names of colleges or other schools where training was being given.

b. Brief descriptions of each course, need or purpose for which it was given, and evaluation.

c. Number of groups to be trained, length of course in hours, number of hours per week.

d. Total number of trainees and number of instructors.

e. The total estimated cost of training including salaries of trainees and instructors, tuition costs, travel and per diem, costs of supplies, and of aids and equipment purchased during the fiscal year.

A general statement on the on-the-job types of training was requested, giving the approximate number of trainees by types or kinds of training program or course, the need or purpose, and the results accomplished.⁹

The required information was collected from the various AAF installations* as quickly as possible in order to meet the request of the Office of the Secretary of War that it should receive this information by 1 November or as soon as possible thereafter.¹⁰ After all the reports had been turned in to AAF Headquarters the information in them was combined to form one consolidated report on each of the areas of training. In addition a recapitulation of the eleven training area reports was compiled. On 18 November these reports and the recapitulation, constituting an over-all report on civilian training in the AAF for the fiscal year 1947, were submitted to the Office of the Secretary of War for transmission to the congressional investigating committee.¹¹

* For instance Headquarters, Air Defense Command, directed its installations to send the requested information on civilian training directly to Headquarters, AAF, in order to expedite matters. See Ltr, Hq, ADC, Mitchel Field, N.Y. to G.O. Fort Crook, Neb., Subj: Congressional Inquiry on Civilian Training, 4 Nov 46, KCRC, 353-Training, AG Records.

As Mr. Onthank had remarked in his memorandum of 24 October, the gathering of this information on civilian training constituted an excellent opportunity to appraise what was being done by the AAF in this field and to determine what could be justified in the way of future training activities. The report on civilian training in the Army Air Forces, as submitted on 18 November in accordance with the request of the OSW, covered off-the-job training in considerable detail and gave only very general information concerning on-the-job training.¹² As this report covered the fiscal year 1947 (1 July 1946-30 June 1947) and the information it contained was compiled in late October and early November of 1946, it is evident that the statistics for at least seven months of the period covered were based on estimates--and in many cases they were rather rough estimates made by civilian training administrators and their assistants working to meet an arbitrary deadline on a few hours notice.

Making due allowance for the guesswork involved in compiling this report, it may be considered as giving a comprehensive picture of the AAF civilian training program and its accomplishments in the fiscal year 1947; it also indicated postwar trends in training. According to the recapitulation the AAF civilian training program no longer included preservice or preinduction training, or training in the basic skills; all training now was to increase the efficiency of the employees after they had qualified and been employed. All the benefits accruing from the civilian training program, it stated, could never be fully appreciated, and the war could not have been won without the program. The recapitulation recommended the continuation of training for more efficient peacetime operation in order to take care of turnover, refresher training

for veterans, cross training of individuals so they could assume additional duties because of reduction in force, supervisor and management training, skills training including apprenticeship, scientific and research training,¹³ and safety training.

The recapitulation showed a total of 124,961 persons receiving training in fiscal 1947. The fact that 34,689 of these received safety training indicates the widespread nature of the AAF safety program. The next highest number of trainees, 29,079, were in management and supervisor training--indicating the growing emphasis on this type of training. Third came orientation with 15,316 trainees. Many of these, doubtless, were former employees of the AAF now returning from military service, or disabled veterans with priority of selection. Fourth on the list was clerical training with 13,602 trainees; and fifth protective training (for guards, firemen, police, etc.).

For the first time since it was discarded early in World War II apprentice training resumed a place in the AAF civilian training program. Five installations reported apprentice training with a total of 518 trainees. As pointed out earlier in this study plans had been made in 1944-1945 for a resumption of apprenticeship training as suitable for peacetime conditions; now these plans were being carried out.

Supervisor and management training was evidently the most widespread form of civilian training as training courses in this area were reported by 62 installations, the greatest number reporting courses in any one area of civilian training. This, of course, was in line with the policy laid down in AAF regulation 40-19, AAF Postwar Civilian Personnel Program, issued

16 November 1945, which stated that in the postwar period civilian training would continue to be important, but that the emphasis would shift to six primary types of training--one of which was supervisor and management training.*

Clerical training courses were reported by 44 installations, the second largest number of installations reporting a course in any one area of training. Clerical training continued important because of a perennial shortage of trained clerical personnel which seems characteristic of this era of ever-increasing paperwork.

Orientation came third with 40 installations reporting courses in that area of training, and the skilled trades fourth with 36 installations reporting courses. Safety training courses were reported by 28 installations, courses in supply training by 23 installations. Fifteen installations reported courses in technical and scientific training, 12 reported protective training courses, 5 installations reported training courses in inspection and testing, and only 2 reported training in manual and unskilled occupations.

The most expensive training, estimated in terms of total cost (including the salaries paid to the trainees for the time they were in training rather than on the job) was that done in the area of management and supervision. The total cost of this type of training was \$754,447. Most of this cost, \$593,494 was in the trainees' salaries. Next in total cost came clerical training which cost \$432,604; next came training in

* The other five primary types of training to be emphasized in the postwar civilian training program were: 1) apprentice training, 2) on-the-job training, 3) safety and first aid, 4) short courses (on new policies and procedures, etc.), and 5) orientation.

the area of the skilled trades with a total cost of \$318,616; safety training was reported as having a total cost of \$269,573; and fifth in total cost was technical and scientific training which was estimated at \$300,545. In all the areas of training but one, technical and scientific training, the greatest cost to the government was in the salaries of the trainees. The total cost of all off-the-job training reported for fiscal 1947 was \$2,631,670; subtract the trainee salary costs, however, and the cost of all this training was only \$666,614.^{* 14}

If we accept the evaluations given by the report the benefits resulting to the AAF from the civilian training program in the fiscal year 1947 repaid the costs many times over. According to the evaluation of training in the area of management and supervision, reports from top level officials offered convincing proofs that millions of dollars were saved annually by improved management practices and better employee relations resulting from the training of supervisors. Reports also indicated many millions of dollars saved through the work improvement suggestions sent in by supervisors after they had taken the work simplification part of this training. One installation reported it had saved over \$1,000,000 in this phase alone.

It was reported that millions of dollars in fire losses and much loss of life had been avoided through training in protective services, and millions of dollars saved by the elimination of lost-time accidents as a result of safety training. Safety training had also undoubtedly saved many lives and prevented much damage to equipment.

* For further details of the Recapitulation, Civilian Training in Army Air Forces for Fiscal Year 1947, see Appendix 3.

The evaluation of training, done in other areas also indicated definite benefits accruing to the AAF. A significant example, especially in view of the growing importance of science and technology to air-power, was the evaluation of technical, scientific, and professional training done during the fiscal year. According to the evaluation this training provided the AAF with a staff of highly qualified personnel at the technical, scientific, and professional levels. Much of this work was so highly specialized that qualified personnel could not be obtained from the outside, and personnel who were qualified needed frequent training in order to keep abreast of developments and changes.¹⁵

Despite the fact that the reports turned in indicated that civilian training had played an important part in the accomplishment of the objectives of the AAF and performed important functions in the peacetime Air Force, the training program did not fare well. The investigation led to severe reductions in force and further cutbacks in the AAF civilian training program. A year later the Civilian Personnel and Training Division of the Office of the Secretary of War put out a mandatory directive on organization which cut out the civilian training organization in the Air Force as such and put it under Employee Utilization, a combination of Employee Relations and Training.¹⁶

The Status of Civilian Training, 1946-1949

Although the report on AAF civilian training for the fiscal year 1947, as submitted for transmittal to the congressional investigating committee in November 1946, indicated activity in all eleven of the officially prescribed areas of training, the fact was that civilian training

activities were on the decline in 1946. Many installations either had an inadequate training program or none at all because of reduction in force and redesignations--in others civilian training activities were curtailed or stopped because of the end of hostilities.

In March 1946 Washington National Airport Army Air Base reported that it had had no civilian training administrator since early in January and had accomplished very little training.¹⁷ Another Air Transport Command installation at Great Falls, Montana, reported in the fall of 1946 that due to decrease in civilian personnel authorization it had become necessary to discontinue all forms of training with the exception of on-the-job training.¹⁸ Morrison Field, West Palm Beach, Florida, also reported in November that no civilian training was being conducted there as the training staff had been deleted because the withdrawal of authorizations left no staff or facilities for carrying on a civilian training program.¹⁹

At Kelly Air Force Base, Texas (Headquarters, San Antonio Air Materiel Area) there was a drastic change in the civilian training program after 1945. At the peak of the Kelly Field (or San Antonio Air Depot) training program during World War II there were over 400 people on the civilian training staff. When the war ended and thousands of civilians were being separated and none hired, many of the management people believed that there was no further need of training. The few training people left were kept frantically busy trying to meet new training needs created by the reduction-in-force procedures in 1946 and 1947. At one time in this period the Civilian Training Branch had only about a dozen instructors left--in fact the branch became so small that it was absorbed into the Employee Utilization Branch. It was not until 1948 that Training again attained branch status at Kelly Field.²⁰

The massive reductions-in-force which characterized the period 1946-1947 brought new training problems instead of abolishing the need for training as many officials thought it would. At Kelly Field, to take one example, reduction-in-force meant that there was considerable shifting around of those employees who remained to handle the jobs of those who had left. In many cases these employees were shifted to jobs for which they had no training. In other cases what had formerly been two or three jobs were combined and given to a single employee. These reassignments of people and jobs created a new need for training.

To meet these needs a radically changed training policy was put into effect at Kelly Field--the changes being induced by the fact that the training staff was so reduced in number (from 400 during the war years to 30 or less in the period under consideration), and by the return to the prewar concept of the first line supervisor as a member of management rather than merely a lead man. A new emphasis was placed on his responsibility to train his men. A program was worked out by which the supervisor would do the actual training on the job at the work station. The training specialist (as he was now called) was available to advise and assist the supervisor with all his training problems.

Where on-the-job training was not feasible the members of the training staff did the training themselves. This was normally group training--the groups being made up of persons from all over the installation--and dealt with such topics as orientation, management training, military correspondence, ect. A small group of conference leaders devoted themselves to management training. At first the idea of making supervisors responsible for the training of their employees was not well received in all circles, but

top management was sold on the program, and in 1948 it went into effect.²¹

Other commands and installations met similar training problems. Headquarters, Atlantic Division, Air Transport Command, noted in March 1946 that the recurring turnover of personnel at its bases due to the replacement of military personnel by civilians, and military personnel reverting to civilian status on jobs originally established as military, made training necessary if even average efficiency was to be obtained from this personnel. Also this headquarters found that reduction-in-force meant the assignment to the remaining personnel of additional jobs and more responsibilities which meant that more training was necessary. To permit the assignment of increased responsibility to personnel, to provide for immediate needs and offset contemplated losses of personnel, and to improve morale and establish a basis for promotion, an extensive upgrade training program was suggested.

Headquarters, ATLD, ATC, wished to give all the service possible to its installations in the matter of civilian training and offered the services of the Headquarters Civilian Training Director to assist in the organization of base training programs, and to conduct supervisor training programs for key civilian supervisors and for officer personnel supervising civilian employees.²² The offer of Hq, ATLD, to send its Civilian Training Director out to bases to organize base civilian training programs and to carry on supervisor training programs, indicates that very probably many of the bases either had never organized adequate civilian training programs, or that their programs and training complements had been disrupted by the reduction-in-force.

According to Headquarters, ATLD, ATC, the following forms of training were available.

- a. Supervisor training for key civilians and officer personnel supervising civilian employees.
- b. Safety training designed to lessen the accident rate--an especially important form of training for indigeneous personnel overseas.
- c. Courses in aircraft maintenance, supply, crash firefighting, etc. to fit the individual needs of bases which could be organized in a more effective manner.
- d. A course in the preparation of military correspondence.
- e. A self-help upgrade typing course to improve speed and accuracy²³ which could be organized to be done on the job.

It is evident that the civilian training available in ATC was rather limited in scope and that the programs were weak or non-existent at the base level. It did not even cover the six primary types of civilian training specified by AAF Regulation No. 40-19, 16 Nov 1945, as basic for the postwar civilian training program since there was no mention of apprenticeship training.

An outstanding phase of postwar civilian training which will be treated in more detail in the following pages was that of providing the proper training for veterans. Mr. F.C. Waller, Director of Civilian Personnel and Training for the War Department, in discussing postwar training problems pointed out that over 303,000 men and women employed by the War Department had left the civil service to enter the armed forces. In 1946 great numbers of these were returning for reemployment and in many cases would need training. He also pointed out that there was a great

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postwar loss of key management personnel which called for intensive
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efforts to select and train replacements.

In December 1946 a memo from Brigadier General Bartlett Beaman, Chief, Civilian Personnel Section, AC/AS-1, Hq, AAF, to the Commanding General, TAC, Langley Field, Va., outlined a general policy for civilian training in 1947. General Bartlett noted that "proper economies" had been effected and would continue to be effected through the elimination of various types of training. Among these were all forms of contract training for civilian personnel which involved any charge for instruction--
*
except as specifically approved by Hq, AAF. This did not apply to training under contracts already approved.

All preassignment training of new employees was to be stopped except in those categories where qualified individuals could not be found. This did not include refresher training or the retraining of veterans. Also all operations of centralized civilian training schools except as specifically authorized by Hq, AAF, were to be terminated. This did not apply to training conferences, conferences of short duration held in a central location, or to essential on-the-job training held at base level.

The Commanding Generals of the major AAF commands were to continue to maintain programs for the training of personnel in order to effect further economy of operation. These programs were to carry out the provisions of pertinent War Department and AAF directives.

Each major AAF command was to maintain a minimum field-going staff to

* In March 1946, AC/AS-3 informed Civilian Personnel Division, AC/AS-1, that the estimated funds for the training of civilian employees for the fiscal year 1947 by contract with outside agencies had been cut by 10 percent. See Daily Diary for 18 March 1946, Civ Pers Div, Hq, AAF, File No. 121.02.

give technical and professional leadership to and to control civilian training functions in subordinate echelons. These staffs were to be assigned wide responsibilities in the planning and development of job training programs; evaluating training activities at subordinate echelons and making recommendations; furnishing technical and professional counsel and skill to aid subordinate echelons; and taking the necessary measures to insure the maintenance of the quality of instruction given to civilians in the command.

Field installations were to continue civilian training programs as necessary. Special emphasis was to be placed on those in-service and job training programs which contributed directly to more efficient operation in areas such as executive management, scientific research, and professional work, supervision, job skills (including apprenticeship), the retraining of reemployed veterans, and safety.

All personnel responsible for the supervision of civilian personnel were to receive training in each area of supervision in which peak effectiveness was not being demonstrated. Until a new War Department Supervisory Development Program (then being prepared) was ready, the AAF supervisor training program was to continue.²⁵

The actual training being done in the AAF two months later (in February 1947) hardly reached the comprehensive state envisaged in Brigadier General Bartlett's memo. At this time the training of civilians was largely confined to on-the-job training which had the following objectives: to improve each individual's performance; to improve his safety practices; and to increase his skills to such a point that he might take on extra duties as required. The major training accomplished was

skills training, including the training of apprentices; management and supervisory training; training of scientific and research personnel; the training and retraining of veterans who returned to positions in the Air Force. This training was accomplished only where it was needed for the efficient performance of work assignments. A small amount of training was done for key personnel in factories where the latest equipment was being manufactured, persons thus trained giving this technical information to other aircraft maintenance workers.

The training of approximately 300 scientists and research engineers was being accomplished at Wright Field--this training being done in the field of the graduate studies and largely accomplished in evening classes. Scientific training courses were to be inaugurated soon at New York University and Brooklyn Polytechnic Institute to train approximately 50 graduate engineers in advanced electronics, physics, and communication research.

There was no basic or preservice training being carried on in the AAF to prepare persons for initial assignment. This type of training, which had been conducted on a very large scale during the war, did not
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continue after V-J Day.

On 5 May 1947 Headquarters, AAF, issued a new civilian training directive, AAF Regulation No. 40-6, AAF Civilian Training Program (superceding AAF Reg. No. 40-6, 6 Mar. 1944, and 40-6A, 9 June 1944) which established an official postwar civilian training policy for the Air Force. It stated that it was the policy of the Commanding General, AAF, that each installation should plan and execute a civilian training program based upon its needs as determined by a continual analysis of the work of the

installation and the performance of its civilian employees. No courses designed to qualify personnel for initial assignment were to be conducted. Implementation of this policy was to include provision for adequate staff, equipment, space, and funds. The training was to be planned, conducted, and evaluated in the light of the following objectives:

- a. To obtain more efficient job performance.
- b. To conserve manpower and funds by increasing individual productive capacity.
- c. To reduce work errors resulting in wasted materials and lost time.
- d. To reduce accidents by improving work habits and practices.
- e. To create sources of qualified employees to meet promotional needs of the installation.
- f. To develop well-rounded skilled journeymen in trades and crafts.
- g. To provide scientific and professional personnel and to keep them abreast of research and developments in their respective fields.
- h. To improve supervisory and management practices.

The regulation also prescribed the responsibilities of Headquarters, AAF, in regard to the carrying out of the civilian training program. The Assistant Chief of Air Staff-1, acting through the Civilian Personnel Division, was to plan, organize, prescribe policies for, evaluate, and supervise the training programs for all civilian employees in the AAF. Other Headquarters responsibilities included the outlining of objectives and establishment of standards for civilian training; the assembly, coordination, and dissemination of course outlines; the prescription of periodic reports and maintenance of necessary records; the maintenance of

liaison with other War Department components and other Federal agencies; the provision of staff assistance to operating officials in the determination of training needs and in planning, organizing, conducting, and evaluating civilian training in AAF Headquarters; and the conducting in AAF Headquarters of necessary training of such a nature that it could be more advantageously conducted by the training staff than by the operating officials.

The regulation also outlined in considerable detail the responsibilities of the major air commands and of the individual AAF installations in regard to civilian training; described the proper procedure to use in obtaining information on training facilities available; and provided for close cooperation and coordination between officials responsible for the training of civilian personnel in order to make the maximum use of equipment, classrooms, and instructors.

A comparison of this policy-making civilian training regulation of 5 May 1947 with the civilian training regulation of 6 March 1944, which it superseded, indicated the significant changes in civilian training policy which took place in the postwar period. Whereas the 1944 directive declared that it was a part of the mission of the AAF Civilian Training Program to permit employment by the AAF of potentially qualified persons, and provided for preservice training to accomplish this mission, the 1947 directive specifically provided that no training courses designed to qualify personnel for initial assignment (i.e. preservice training) should be given. The 1947 directive also emphasized such objectives as developing well-rounded and skilled journeymen in the trades and crafts

(Apprentice training) whereas the 1944 directive, containing no reference to this type of training, framed a policy which led to the rapid training of new and inexperienced personnel to become proficient in very narrow and highly specialized segments of the skilled trades and crafts. Also the 1947 directive placed emphasis on scientific and professional training as an objective of the AAF Civilian Training Program, whereas the 1944 training regulation made no specific mention of this type of training.

The policies set forth in both regulations were concerned with civilian training as a means of conserving manpower and increasing the productive capacity of the individual employee; both were also concerned with training to reduce the waste of materiel and to cut down accident rates. The civilian training policy set by the 1947 directive, however, placed a great deal more emphasis on the improvement of supervisory and management practices and on the creation of a source of qualified employees to meet the promotional needs of installations.

The establishment of a training policy and its complete implementation are two different things; further shrinkage in civilian personnel strength in 1947 progressively weakened the civilian training programs at many installations. It has already been seen how the Kelly Field civilian training program dwindled to such small proportions in 1947. The civilian training picture in 1947 was a spotty one--some installations reporting a rather comprehensive training program, and others reporting little or no training.

Chanute Field, Ill., reported civilian training as being conducted in four of the eleven areas of training in the month of August 1947--orientation, protective and personal services, supply operations, and

technical, scientific and professional training. Of the 47 persons entering training during the period 30 were veterans, and 26 of the 48 persons completing training courses were veterans. A total of 13 different²⁸ courses were reported. Most of the training was done on the job.

Scott Field, Ill., another Air Training Command installation, reported civilian training courses conducted in six areas of training in October 1947: clerical, inspection and testing, management and supervision, protective and personal services, skilled trades and crafts, and supply operations and procedures. This installation reported 100 entering training during the month, of whom 11 were veterans, and 24 completing. There were 397 persons, including 51 veterans, in training at the end of²⁹ the month. The great majority of the training was done on-the-job.

A consolidated AFEC civilian training report for the month of September 1947, submitted to AAF Headquarters in the fall of 1947, indicated that the Air Training Command, as a whole, carried on training in eight areas: clerical; inspection and testing; management and supervision; manual, unskilled, and semi-skilled; protective and personal services; skilled trades and crafts; supply operations and procedures; and technical, scientific and professional. The majority of the training was done on-the-job, especially in the area of skilled trades and crafts training. No orientation or apprenticeship training was reported for this period. The report indicated that most of the clerical training and technical, scientific, and professional training was done off-the-job; and that most³⁰ of the training in supply operations and procedures was done on-the-job. This report indicated that the civilian training program was being carried on in a fairly effective manner in some ATRC installations.

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On the other hand many installations had little or nothing in the way of civilian training. In November 1947 the civilian training program at Williams Field, Chandler, Arizona, was reported to be in an unacceptable condition. There were 752 civilians employed at this installation and it had one civilian training man. According to the report no active civilian training had been conducted at Williams Field for more than a year, and it was impossible at that time to evaluate the new civilian training program which had been operating just two months. It was recommended by higher headquarters that corrective action should be taken at Williams Field. This should consist of: 1) at least 4 hours of classroom work each day to make up the backlog of existing training needs, and 2) the procurement of an adequate classroom to make classes more pleasant and to lead to better instruction methods.³¹

Another example of the difficulty experienced by AAF installations in maintaining civilian training programs in the postwar period is the training situation at Fort Francis E. Warren, Wyoming, as reported in December 1947. When an examination and review of the civilian personnel program at this AIRC installation was made no rating could be given to the civilian training program in view of the following facts:

a. Until three weeks before the review and examination the station was without a qualified civilian training administrator. For a period of three months previous to this time the station had expended all efforts in an attempt to procure a certified AAF supervisor trainer as a training administrator.

b. As the station had been without a qualified civilian training administrator its exact training needs were unknown.

It was recommended that this station should plan and execute the Civilian Training Program as determined by a continual analysis of its work and employee performances, and that training, predicated on the needs of the station, should be carried out by the most appropriate and expeditious methods with the civilian training administrator discharging his responsibilities as provided in AAF Reg. No. 40-6, 5 May 1947.³² The implementation of these suggestions obviously depended on the ability of the installation to procure and keep on the job adequate and qualified training personnel. This was becoming increasingly difficult to accomplish.

The Air Force became an independent service by the enactment of the National Security Act of 1947, which became law on 26 July 1947. The Army Air Forces now became the United States Air Force which was placed on an equal basis with the Army and Navy. Three military departments were set up, the Department of the Army, the Department of the Navy, and the Department of the Air Force, each with a civilian secretary. They were placed under the unified direction and coordination of the Secretary of the Department of Defense.³³

The attainment of independent status by the Air Force brought no immediate changes of any importance in civilian training policy. It was not until 2 May 1949 that the new Air Force establishment issued a directive establishing a civilian training program policy for the Department of the Air Force.³⁴ There were some changes in the Headquarters staff organization of the USAF which concerned the Headquarters civilian training branch. In October 1947 this branch became a part of the Directorate of Personnel which came under the Assistant Deputy Chief of Staff, Personnel

and Administration.³⁵ A reorganization in effect at the end of 1948 created a Directorate of Civilian Personnel (as well as a Directorate of Military Personnel). The Civilian Training Branch now became the Civilian Training Division of the Directorate of Civilian Personnel, which came under the Deputy Chief of Staff, Personnel.³⁶

In 1948 there was a small increase in the civilian personnel strength of the Air Force; the number of civilian employees of the Air Force in the continental United States rose from 113,730 at the end of December 1947 to 130,946 at the end of December 1948. Including 26,853 civilian employees overseas, the worldwide civilian personnel strength of the USAF on 31 December 1948 was 157,799.³⁷

Although civilian training in the USAF was still at a low ebb in 1948 there were some significant training developments during the year. One was the establishment of the USAF School of Civilian Personnel Administration and a USAF field extension office [for civilian training] at Kelly Air Force Base, San Antonio, Texas.³⁸ Another was a growing emphasis on the importance of developing civilian training programs for the training of foreign nationals employed at overseas installations of the USAF, especially in FEAF.³⁹

Also 1948 was the first year for which civilian training statistics for the various commands of the USAF appeared in the USAF Statistical Digest.⁴⁰ These statistics give a good idea of the relative amount of training and of the types of training done by the commands which reported civilian training in 1948. In 1948 a total of 4,085,959 man hours of training was done by the nine USAF commands reporting civilian training.⁴¹ This was an average of about 340,496 man hours of training a month as

compared with an average of 2,000,000 man hours of training a month⁴² accomplished in fiscal year 1945. These figures indicate the decline of civilian training activities in the postwar period and the reduced status of the Air Force civilian training program in 1948.

A majority of the civilian training reported in 1948, 70.4 percent was on-the-job training. The greatest amount of training, 1,191,707 man hours, was accomplished in the area of the skilled trades and crafts. Apprentice training came next with 836,939 man hours of training accomplished in 1948 was done in these two areas, and most of this was on-the-job training; 88.1 percent of the training was done on-the-job in the skilled trades and crafts, and 86.8 percent of the apprentice training was done on-the-job. On the other hand, most of the orientation training and of the training in the area of supervision and management, 90.5 percent and 88.6 percent⁴³ respectively, were done off-the-job.

In 1948 there were a total of 147,648 course completions in the USAF civilian training program. As a number of individuals completed more than one course this figure does not show the number of persons completing training during the year. There were no course completions reported in apprentice training as this type of training had not been resumed until along in 1946, and it took from two to four years to complete an apprenticeship and be graduated as a journeyman.^{* 44} The greatest number of course completions, 33,794, was naturally in orientation as each new employee of the Air Force⁴⁵ was supposed to attend an orientation course. The next greatest number of course completions, 33,181, was in the area of supervisor and management training, which constituted 22.5 of the total number of course completions

* See below, pp. 239-40.

for the year. The number of course completions in the important area of technical, scientific, and professional training was relatively small, coming to only 5,301.⁴⁶ These courses, however, tended to be longer than courses in the other areas (except in apprentice training) as many of them were academic courses, or involved the mastery of complex processes or procedures.

As might be expected, the Air Materiel Command (successor to the ASC and the ATSC) led all the other commands in the amount of training reported. The AMC reported a total of 2,502,893 trainee hours of civilian training accomplished in 1948, which was approximately a million more trainee hours than was accomplished by all the other commands combined. AMC was the only command reporting apprentice training--a total of 836,939 trainee hours being accomplished in this area with 6,466 persons in apprentice training at the end of 1948. According to the civilian employee training report, January through December 1948, the AMC led in the number of trainee hours accomplished in clerical training, ground safety training, training in inspection and testing, orientation, training in the skilled trades and crafts, supervisor and management training, supply training, and the training of semi-skilled and unskilled workers. In the area of the skilled trades and crafts Air Materiel Command accomplished more than twice as many trainee hours as all the other commands combined; and in each of the other areas of training mentioned above AMC reported more trainee hours accomplished than all the other commands combined.⁴⁷

AMC was fourth in the amount of training reported in the area of protective and personal services; ADC, SAC, and ATRC, respectively, exceeded AMC in the amount of training accomplished in this area. SAC

led in the total of trainee hours accomplished in the area of technical, scientific, and professional training with 103,805 trainee hours reported as compared with 96,803 hours reported by ATRC and 74,186 by AMC. AMC led in the number of trainee hours accomplished and in the number completing training during the year; 181,404 were reported by AMC as the number completing training during the year out of a total of 235,947 reported by all the commands. SAC came second and ATRC third in number of trainee hours reported accomplished, 437,133 hours and 381,392 hours respectively; and in the number reported as completing training during the period, 12,555 and 11,858 respectively.

Each command reported veterans as completing training and as being in training at the end of the year. AMC reported 37,198 veterans as having completed training at the end of the year. MATS came second in veterans' training, reporting 5,061 to have completed training in the year, and ATRC reported 4,065 to have completed training. The total number reported in the veterans' category as having completed training during the year was ⁴⁸54,709.

The civilian employee training report for January through December 1948 covered only civilian training done in the continental United States. * All nine of the continental commands reported training; these were the Strategic Air Command, the Tactical Air Command and the Air Defense Command (together forming the Continental Air Command), the Air University, the Air Training Command, Air Materiel Command, Air Proving Ground Command, the Military Air Transport Service (successor to the Air Transport Command), ⁴⁹ and the Headquarters Command.

* See below, Chapter V, for civilian training accomplished by the USAF in its overseas components.

In the spring of 1949 the Department of the Air Force issued a directive establishing its official civilian training program policy. This directive--Air Force Letter No. 40-23, Civilian Training Program Policy, 2 May 1949--stated that the policy of the USAF civilian training program was to provide a framework within which civilian employees would be developed and trained to perform their existing duties efficiently and to meet the future requirements of the Air Force; and to see that civilian training programs were established on a basis of need and given attention and supervision comparable to that given to the training of military personnel.

The AF Letter outlined the eight major objectives of training as follows:

- a. To orient new employees.
- b. To give employees the training necessary to bring their performance level up to required standards of production, quality and safety.
- c. To train qualified employees for higher skills and to assume greater responsibility.
- d. To meet Air Force needs for journeymen and skilled craftsmen by conducting apprentice and advanced training.
- e. To improve the effectiveness of supervision at all levels through training in the principles and techniques of good management.
- f. To provide for training in technical, scientific, and professional fields to meet specific Air Force needs.
- g. to establish a system of cooperative exchange training between Air Force installations and private enterprise.
- h. To train understudies for key positions in order to provide cadre personnel as required.

This directive assigned the Chief of Staff, USAF, the general responsibility for training civilian employees and for the issuance of the directives necessary to carry out this policy. The Deputy Chief of Staff, Personnel, acting through the Director of Civilian Personnel, was to have the functional responsibility for civilian training. This included staff supervision, staff assistance and followup, the determination of Air Force needs, the authorization of broad plans and programs, the establishment of training standards, etc.

Major air commands were given the responsibility for aggressive leadership in the civilian training program, and were to make available adequate staff, facilities, equipment, and time to meet the training needs of their commands. Also each installation was to have the responsibility for training civilian employees to meet local needs--this was to include planning, organizing, conducting, and evaluating the civilian training program.

This directive emphasized that the supervisors would normally train and instruct employees with the training staffs providing the necessary assistance. The emphasis was to be on training done on-the-job at the work location. Classroom and other training was to be done only where clearly warranted and instructors were to be employed specifically to meet those training needs which could not be met by supervisors training employees on-the-job.

It will be noted that this official policy statement on civilian training emphasized the trend away from classroom training. Air Materiel Command, which had the most extensive civilian training program in the postwar period, followed this policy. Its policy was not to use classroom training except in those situations where the training to be given

lent itself to classroom instruction. When AMC reported classroom training it included graduate, undergraduate (college), and factory training which in May of 1949 made up approximately 30 percent of the classroom training⁵¹ accomplished by AMC.

Although the examination and evaluation of civilian personnel activities made at Wright-Patterson Air Force Base in 1949 indicated that the AMC civilian training program was comprehensive in scope and was an active one,⁵² this was not true of all commands and installations.

A survey of 29 installations made during the period 1 January-30 June 1949 showed civilian training to be sadly neglected at many of the installations. Six different Air Force commands were involved in this survey--9 of the installations belonged to SAC, 1 to Headquarters Command, 4 to ATRC, 5 to ConAC, 9 to AMC, and 1 to APGC. Perhaps the fact that one half of the installations surveyed had civilian personnel officers who did not provide adequate leadership and direction to their staffs⁵³ had a good deal to do with the low status of the civilian training program. With the exception of the Air Materiel Command installations, where separate training programs were required by command regulation, only two installations had training staffs which were organizationally separate from the placement and employee relations functions. This was considered the most economical form of organization.

It was found by the survey teams that most of the civilian personnel staffs were giving little attention to estimating the real training needs of the installations or to the provision of assistance to the supervisors in meeting their on-the-job training needs. The training skills of the personnel staffs were essentially classroom skills

hence they did not provide necessary guidance and assistance to supervisors acting as instructors7.

The survey teams found training activities to be poorly integrated with other civilian personnel activities such as classification, placement, and employee relations. It was felt that the training people should work more closely with other components of the civilian personnel staffs and use information derived from them to diagnose and meet training needs.

It was found that 16 of the 29 installations had not conducted systematic surveys to determine their real training needs. In 15 installations supervisors were not being provided with assistance in solving training needs. Adequate training records were not being kept at 11 of the 29 installations surveyed, nor were their training reports reflecting the true condition of their training programs.

The survey teams found that 17 of the installations inspected had inadequate training programs. One inadequacy was the lack of followup visits and other procedures to evaluate the results of training. Most of the civilian personnel officers were overlooking their responsibility to provide on-the-spot assistance to supervisors in the development of their employees to adequate levels of productivity.

In 13 installations the orientation training was inadequate, and there were 13 installations where the management and supervisory training programs were inadequate. Twelve installations were not conducting adequate efficiency rating programs, and seven had deficiencies in their safety training activities. Apprenticeship programs were found to be adequate in the few installations where this activity was being carried

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on.

It was the conclusion of those who analyzed the survey reports that the civilian training program should be redirected into its proper role by centering the responsibility for the training activity on the shoulders of the supervisor with the civilian personnel office acting as coordinator and consultant. This was, in effect, the announced policy of the Civilian Personnel Division, Headquarters USAF.⁵⁵

This policy worked very well indeed at an installation like Kelly Air Force Base. By means of a good supervisor-management training program Kelly supervisors were thoroughly grounded in job breakdown methods and on-the-job instruction techniques. Then training specialists were assigned to work with the supervisors in drawing up course outlines and actually getting technical training started. There was constant follow-up work, special training courses, coaching, and other forms of assistance given by the training people to keep the supervisors on the job of training and to make their training activities effective. There were also classroom courses conducted to supplement the on-the-job technical training and to provide those necessary types of training that could not be done on the job.⁵⁶

In the opinion of this writer a training program which places the major responsibility for training on the shoulders of the supervisors is doomed to failure unless it is carefully supervised by an adequate staff of well-qualified and experienced training specialists. The supervisors must be thoroughly indoctrinated in regard to the importance of training and the need for it, and well trained in the techniques of instruction. There must be close cooperation between training specialists, supervisors, and operating officials; and the program must be effectively supported by the civilian personnel officer and the higher echelons of command.

The numerous training deficiencies shown by the examination and evaluation of civilian training activities in the first six months of 1949 indicate that the ideal conditions for carrying out such a training program were not to be found at many installations at this time. In fact the total amount of civilian training done in 1949, as expressed in terms of course completions, was less than that done in 1948. For 1948 there were 147,648 course completions reported, in 1949 there were 133,815 course completions reported--a decline of 13,833 in course completions. There was, however, a small increase in the number of trainee hours reported in 1949. The percentages of on-the-job and off-the-job training done in both years remained substantially the same.⁵⁷ The small increase in trainee hours reported may be accounted for by the slight increase in the civilian personnel strength of the USAF which rose from 130,946 civilian employees in the continental U.S. on 31 December 1948⁵⁸ to 138,636 on 30 June 1949.

This gain in strength was soon to be lost, however, in the general cutback the USAF suffered in the economy-minded administration of Louis A. Johnson as Secretary of Defense. By 31 March 1950 the civilian personnel strength of the Air Force in the continental U.S. had dropped⁵⁹ to 126,570. This Air Force slump was not destined to last long, however; on 25 June 1950 war broke out in Korea and it became necessary to expand the Air Force immediately in order to meet an emergency situation.⁶⁰

Improvement in the Status of Civilian Training,
1950 - 1951

In the first six months of 1950 the USAF civilian training program felt the effects of the cutback resulting from Secretary of Defense

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Johnson's policy of "paring the fat" from the National Military Establishment.⁶¹ The total number of trainee hours accomplished in this period was 425,239 less than had been accomplished in the preceding six months.⁶² The number of trainee hours accomplished rose considerably in the last six months of 1950, but the total number of trainee hours reported by the Training Division, Directorate of Civilian Personnel, DCS/P, Hq, USAF, was less in 1950 than it had been in 1949.⁶³

On the other hand the total number of course completions in 1950 considerably exceeded that reported for 1949, and in 1951 the number of course completions reported was more than triple the 1950 figure. The total number of trainee hours (hours spent by trainees in organized training classes or courses on or off of the job) reported for the calendar year 1951 nearly tripled the number reported for 1950 and more than doubled the number of trainee hours reported for 1949. This increase in training activities is shown by the following statistical table:

Civilian Training Statistics, 1949-1951⁶⁴

<u>Total No. of Course Completions</u>	<u>Total No. of Trainee Hours</u>
Calendar Year 1949 - 133,815	4,191,071
" " 1950 - 149,829	3,353,166
" " 1951 - 462,377	9,186,991

The number of course completions reported is a better indication of the actual accomplishments of a training program than the number of trainee hours accomplished. A great many hours may be spent in training by individuals who never satisfactorily complete the course or who drop out before completion. Also there is the possibility that activity reported in good faith as on-the-job training may have been in some cases routine work of little or no training significance.

Each course completion reported indicated an actual training course staisfactorily completed by a trainee and, presumably, meant that the USAF would profit from the increased job skills, the improved administrative and management techniques, the additional scientific and technical knowledge, and other benefits derived from the courses completed.

The expansion of the Air Force resulting from the outbreak of war in Korea increased the need for skilled workers of many different types and made an enlarged civilian training program necessary. ⁶⁵ The need for an enlarged civilian training program is indicated by the fact that the civilian personnel strength of the USAF in the continental United States, which was only 131,675 ^{*} (154,453 worldwide) in June 1950, had risen to 160,806 (186,357 worldwide) by December 1950, and by June 1951 had increased ⁶⁶ to 232,388 (260,728 worldwide). By December 1951 the civilian strength of the USAF in the continental United States had increased to 249,202 ⁶⁷ (281,052 worldwide). As these statistics indicate the civilian strength of the Air Force was almost doubled in the period June 1950-December 1951.

In the second half of 1950 there was an increase of 26 percent over the previous six months in the number of man hours of training accomplished-- there was also an increase of approximately 33 percent in the number of ⁶⁸ course completions. The increases in man hours of training and in course completions were even greater for 1951 as compared to 1950--the number of man hours of training nearly tripled and there wer more than three times as many course completions. ⁷ Over half of the man hours of

* Apparently the reduction in force in effect in March 1950 had cut too deep and an increase in civilian strength had become necessary before the outbreak of war in Korea.

⁷ See Table on page 213.

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training reported were accomplished on-the-job in the period January 1949-June 1951, averaging about 59.6 percent; in the period July-December 1951 however, more than half the training, 52 percent, was done off-the-job. This indicates an increase of emphasis on classroom training in the last part of 1951, particularly in such areas as supervision and management, orientation (of the numerous new employees), and in technical, scientific, and professional training in which there was a great increase in the number of course completions in the last half of 1951 and the first six months of 1952.⁶⁹

Chapter AF T10, Training Civilian Employees, of Air Force Manual 40-1, issued 19 June 1950, contained a complete statement of USAF civilian training policy and its objectives.⁷⁰ The policy and objectives outlined were essentially the same as those established by Air Force Letter No. 40-23, Civilian Training Program Policy, 2 May 1949. Chapter AF T10 was also similar to the AF Letter in its assignment to Headquarters USAF, to the major air commands, and to the individual installations, of their respective responsibilities in carrying on the civilian training program of the Air Force.⁷¹

Chapter AF T10 also stated that each Air Force installation was to carry on a civilian training program commensurate with its needs, and to set up for civilian training an operating plan which emphasized the use of on-the-job training wherever possible, and specified that normally supervisors would train and instruct employees. Classroom training was to be used wherever necessary to supplement on-the-job training, and the civilian personnel office at each installation was to provide staff assistance and advice to supervisors and operating officials in training matters.⁷²

Chapter AF T10 also dealt with the various phases of civilian training such as the determination of training needs, the training to be done in the 11 officially designated areas of training, program follow-up and evaluation, special facilities available for the training of civilian employees, reporting training, etc.⁷³ This was the most complete and detailed set of civilian training instructions issued by the Air Force since the issuance of the "Plan for Civilian Training" by the Air Service Command in January 1943. When the Korean War emergency arose the USAF at least had a well conceived and carefully drawn-up plan on which to base the building of an expanded civilian training program.

In addition to these official instructions on the operation of a civilian training program a handbook, "Civilian Training in the Department of the Air Force," was published in June 1950. This handbook, which had a foreword written by Mr. John A. Watts, Director of Civilian Personnel, summarized the civilian training program and the part it played in helping the Air Force to accomplish its mission. It gave a general description of the Air Force-wide civilian training program and its organization; took up the need for civilian training in the Air Force; discussed the work done in the various areas of training and the special facilities for civilian training such as the Air Force School for Civilian Personnel Administration, the use of funds for training in outside facilities, and the special provisions for training veterans under the terms of the cooperative agreements between the Air Force and the Veterans Administration. Also statistics for civilian training the period from April 1949 through March 1950 were⁷⁴ given.

Thus for its expansion the USAF had a well-planned and formulated program for civilian training even though that program was far from being fully implemented. However, the problem of meeting the civilian training needs arising from the Korean emergency was not so serious as it had been at the beginning of World War II as the Air Force already contained a relatively large force of trained and skilled workers. Also the development of a production line technique in aircraft repair and maintenance permitted the utilization of many unskilled and semi-skilled workers.

In order to meet an increased demand for instructional materials the Directorate of Civilian Personnel developed a number of course outlines including: 1) an instructor's guide for the group orientation of civilian employees, 2) a course outline for training supervisors in the new Air Force performance rating plan, 3) and an instructor's guide for training correspondence clerks. In the fall of 1950 the directorate, at the request of the major commands, gave a course for civilian personnel officers at the Air Force School for Civilian Personnel Administration. * This course was requested because the increase in civilian personnel strength had created a need for more trained civilian personnel officers.

There also arose a greater need for training Air Force employees through contracts with private organizations and institutions of higher learning, including university graduate schools. The necessity for training many unskilled employees caused the Air Force to depart from its normal policy and to secure increased appropriations for expanded factory-familiarization training. It also became necessary to set up a

* For a discussion of this Air Force school see p. 220

program for the instruction of several types of engineering aides, draftsmen, typists, and stenographers in order for them to meet Air Force standards. This led to a continued expansion of contract training, and from 1 January to 30 June 1951 Headquarters USAF approved the expenditure of \$220,131 for the training of 1,019 employees on a contract basis.⁷⁵

As the civilian strength of the USAF continued to expand in the first six months of 1951 the Training Division of the Directorate of Civilian Personnel continued to face the problem of assisting the field installations in their efforts to meet their rapidly increasing training needs. Many of the new employees needed training in basic skills not available from the labor market, others needed training in skills peculiar to the Air Force or to the local installations. New and expanding installations needed assistance and guidance in establishing training programs.

As civilian strength grew and skill shortages became more acute, more emphasis was placed on giving employees skills training, on training supervisory personnel in the better utilization of their employees, and in making available the technical, scientific, and professional training needed by civilian employees in order to effectively accomplish their responsibilities.⁷⁶

Two training specialists had been appointed in the fall of 1950 as representatives of the Training Division to keep it currently informed on field training activities and to assist commands and installations to establish and maintain effective training programs. In the first six months of 1951 these representatives made official visits to AMC, ATRC, and MATS Headquarters; to Bolling, Andrews, and Carswell Air Force Bases; and to the Southern Air Procurement District Headquarters.⁷⁷

In addition to developing the training materials previously mentioned, the Training Division of the Directorate of Civilian Personnel worked with the Office of the Assistant for Ground Safety in determining needs for, and in making plans for the preparation of instructional materials on safety for Air Force-wide use. This material was to be developed jointly by the two offices.

The division also cooperated with the Training Aids Detachment at Scott AFB in the review and preparation of Air Force Manual 50-8, "Conference Leadership," which was published in January 1951. It reviewed a revision of AFTRC Manual 50-0-25, and in cooperation with the Directorate of Military Training, made arrangements for a reprint of the Air Force Primary and Production Management Course materials.

In dealing with specific areas of training activities the Training Division treated such problems as the nation-wide shortage of typists and stenographers which had become acute in the Ohio and Washington D.C. areas by the spring of 1951. A program for the contract training in typing and stenography of persons hired on a trainee basis was approved for Wright-Patterson AFB, Dayton, Ohio, and such a program was considered for the Washington area. Due to legal considerations and Congressional criticism, however, no further contracts for the pre-assignment training of typists and stenographers were approved.

In April 1951 two one-week institutes for the training of correspondence instructors were held at Headquarters USAF, a total of 47 persons successfully completing the institutes.* These institutes were planned and conducted

* A third institute for correspondence instructors was planned for October 1951.

to meet a need indicated by major air commands for persons qualified to conduct military correspondence courses.

Three different sessions of a Manpower Management Engineering Course were held at George Washington University in Washington, D.C. in the summer and fall of 1951. The Training Division allotted quotas to the major air commands for civilians to attend. The primary objective of this course was to train qualified personnel assigned to the manpower management field, but individuals engaged in personnel management were permitted to attend.⁷⁸

In February 1951 AMC notified Headquarters USAF that the space used by the USAF School of Civilian Personnel Administration was needed for troops. After a number of colleges and universities were contacted the University of Denver was selected as a desirable location for the school. On 1 June 1951 the school director and staff, and the field representatives of the Training Division were moved to the University of Denver. The USAF School was quite active in this period, a total of 342 persons receiving training in eight courses between 1 January and 30 June 1951. Facilities of this school were also used in giving safety training courses.

In this period the Training Division also made a survey to determine the needs of the various commands for future training in civilian personnel administration. This information was used in planning for fiscal year 1952.

At the end of the first six months of 1951 it was estimated that the increase in civilian training activities which accompanied the expansion of the Air Force had resulted in a 140 percent increase in course completions and a 131 percent increase in total man hours of training over the preceding 6 month period.⁷⁹

The second six months of 1951 was characterized by the development of some major problems in regard to the training and development of civilian employees in the field installations of the USAF. These resulted largely from the continued expansion of Air Force activities and the increased difficulty of recruiting fully qualified employees from available labor sources.

The shortage of aircraft repair and maintenance personnel, and of clerical personnel, created a need for a large amount of basic training in these areas. The hiring of large numbers of new employees necessitated more training in skills peculiar to the Air Force and a greater emphasis on orientation. The great increase in civilian personnel strength created a great many more supervisory positions and enhanced the need for training in the areas of supervision and management. There was an increased need for highly technical or specialized training which could be most effectively handled on a contract basis at factories and in institutions of higher learning. The growth in the civilian strength of the USAF and the establishment of new bases increased the need for civilian personnel officer training and for training in the specialized phases of civilian personnel administration. The existence of this training situation at the field installations resulted in an increasing need of the installations for staff assistance from the Training Division at USAF Headquarters.

As a result of an administrative study of the Air Force civilian training program made in the summer of 1951 recommendations were submitted to the Director of Civilian Personnel for certain changes which would contribute to the effective attainment of civilian training objectives.

As a first step in carrying out the recommendations contained in the study the Training Division was supplanted in the Directorate of Civilian Personnel, DC/S-P, by a Career Planning and Training Division on 1 October 1951. In addition to being responsible for civilian training, this new division had the functional responsibility for identifying career areas and establishing guides for the promotion of career employees. This reorganization was based on a broad concept which included not only the training of civilian employees for specific jobs and functions, but the development of a corps of highly skilled Air Force career employees and a full utilization of their skills and knowledge. Provision for training and development was not to be confined to professional and scientific personnel but was to cover all civilian occupational areas.

The new division was set up with a simplified form of internal organization which eliminated the three branches into which the former Training Division was divided. A field extension office of the new division, consisting of three training specialists and a clerk, was established at Harrisburg, Pennsylvania. This office had delegated to it some of the functions of the Career Planning and Training Division, particularly for the preparation of specific program and policy issuances on career planning and training, and for providing staff assistance to commands and installations. The extension office had the advantages of proximity to Washington and of being located at an air materiel area which gave excellent opportunity for observation, exploration, and application of training innovations and proposed program and policy issuances.

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The Career Planning and Training Division placed an increased emphasis on the training and development of civilian employees to meet skill shortages,

to provide a reservoir of trained employees for emergency expansion, and to promote maximum and effective employee utilization. This was in line with the President's Manpower Mobilization Policy and the programs advocated by the Civil Service Commission and the Bureau of the Budget.

The new division prepared a letter on civilian training addressed to the Commanding Generals of all Air Force commands. This letter, issued under the signature of the Deputy Chief of Staff, Personnel, directed attention to serious inadequacies in the civilian training program revealed by recent evaluations and to the need for appropriate emphasis and staff at the command and installation levels.

Replies to this letter indicated that certain commands were intensifying their efforts to meet training needs. Information submitted by these commands indicated that the following steps had been taken to establish effective civilian training programs at command and installation levels:

a. Seven commands either employed a full-time training administrator at command headquarters or were planning to do so. Three commands had taken action to provide additional full-time training specialists at installation level.

b. Two commands had issued detailed civilian training directives and had provided bases with guides for use in organizing and carrying out their training programs. One command had sent out a letter to all its installations urging an aggressive program of cross-training, on-the-job training, and supervisory training. Two commands had initiated a system of planned periodic surveys to determine training needs and to facilitate the planning of civilian training.

c. Eight commands reported taking measures to assure more positive staff supervision of and assistance to their installations in regard to

the establishment and operation of civilian training programs. Two commands had held civilian training conferences at which all their training administrators had met to develop and agree upon civilian training plans and policies. Another command had stressed the importance of civilian training at a conference of all civilian personnel officers.⁸¹

When it is taken into consideration that there were 17 major Air Force commands (5 of them overseas) in the USAF as of the fiscal year 1952,⁸² it is evident that only about 41 percent or less than half of the commands had sufficiently emphasized civilian training to establish or to plan the establishment at command headquarters of adequate training staffs with civilian training administrators to head up their civilian training programs. This, however, represented considerable progress, as earlier in the year only one command had had a civilian training man on its headquarters staff. This was Air Materiel Command which had continued to have a well organized civilian training program throughout this period.⁸³ Certainly more command headquarters were placing increased emphasis on civilian training and were taking action to increase training staffs, determine training needs, and to provide guidance and assistance to their installations in regard to civilian training.

In order to facilitate planning for fiscal year 1952 the Career Planning and Training Division initiated an Air Force-wide survey of training requirements, requesting the major air commands to submit estimates of their training requirements by priority for that period. These estimates gave highest priority to training needs in the areas of supervision and management, orientation, and clerical training. Policy and program planning were directed to meeting these needs.

During this period the Division changed the policy issuances in regard to orientation, making it mandatory for each Air Force installation to provide a planned orientation program for its employees. Changes were also made in the policies and procedures governing the expenditure of funds used for the contract training of civilians in order to expedite the procedures and cut down paper work. These changes were incorporated in the basic policy issuance on civilian training, Chapter AF T10 of Air Force Manual 40-1.

A representative of the division, three training administrators from Air Materiel Areas, and a training specialist from Headquarters, AMC, made a study of depot schools in the fall of 1951. This study was for the purpose of determining the best methods of meeting the training needs of AMC civilian employees in the light of existing conditions, the expansion program, and long-range planning.

Contract training received special attention from the Career Planning and Training Division in addition to the above-mentioned changes in policies and procedures. The commands were requested to determine their long-range training needs and to submit estimates of training which would need to be accomplished under contract during fiscal year 1953.

During the period 1 July thru 31 December 1951 the division also approved the expenditure of \$ 529,085 for the training of 1,575 employees under contract. This included three types of training--factory training, graduate training, and training to meet skill shortages. This represented a 54 percent increase in number of persons trained under contract and an increase of 140 percent in total expenditures over the preceding six-month period.

This increase in the number of persons receiving contract training resulted from the development of new types of aircraft and component parts and also from the necessity to qualify the large numbers of quality control inspectors needed in the expanding procurement program. The increase in average cost per person was the result of the greater complexity of the machines and equipment used in giving the training and also reflected the general inflationary trend of the period.⁸⁴

The last six months of 1951 also saw an increase in the training activities of the Air Force School for Civilian Personnel Administration, now located at the University of Denver in Denver, Colorado. The courses there were directed toward insuring more effective civilian personnel management, and better compliance with established Air Force policies, program guides, and regulatory requirements.

A survey taken to determine the needs of the major commands for training in civilian personnel administration in the fiscal year 1952 indicated a need for training approximately 1,200 people in fiscal year 1952. It was estimated that approximately 60 percent of these could be trained.

In order to meet this increase in requirements for training at the Air Force School the Career Planning and Training Division provided that technical specialists from the Directorate of Civilian Personnel should be made available to prepare, review, and evaluate school instructional materials--and that staff members of the various divisions of the directorate should serve as instructors in their specialties. Also command and installation personnel were to be utilized as guest instructors. Staff members of the Career Planning and Training Division were to serve

as advisors in regard to training methods and techniques and in final review and approval of courses of instruction.

Between 1 July and 31 December 1951 a total of 265 persons received training in six courses at the Air Force School, each course being three weeks in duration.

As a result of the sudden expansion of Air Force civilian training activities there arose at the various installations an urgent need for adequate basic training materials for use in planning and conducting instruction--particularly in the areas of orientation and supervisory training and for use in conducting job skills training. The Career Planning and Training Division, working with three major commands, and with outside agencies, began to collect and evaluate training materials with the purpose of setting up a clearing house for the Air Force-wide dissemination of training materials needed to carry on the USAF civilian training program.

The division did training work in certain specific program areas. It worked with the A.B. Dick Company in making available to the Air Force a training program developed by the company. This program was for the training of both mimeograph operators and the typists who prepared material for reproduction. The division also promoted the training of instructors to carry on management training, particularly for base level supervisors, in order to meet the increased need for, and emphasis on, management training. It monitored the selection of approximately 100 civilians to attend the six-week Manpower Management Engineering Course at George Washington University. Incidentally the division also utilized sound administrative

* At this time the three-week training course conducted at the Air Force School for Civilian Personnel Administration was the only course in the Air Force which qualified management trainers.

and personnel management techniques to secure the utmost utilization of its own staff members.

In order to keep in touch with field problems and developments, and to secure better coordination of its field visits with those of other divisions of the Directorate of Civilian Personnel, the Career Planning and Training Division made plans for an organized system of field visits by the staff to be started after 1 January 1952. It was planned that two members of the division would accompany Field Survey Teams on their visits during the spring of 1952.⁸⁵

Thus in 1951 the Training Division of the Directorate of Civilian Personnel, and its successor, the Career Planning and Training Division, revised Air Force civilian training policies and procedures, and revitalized training activities from the top echelons down to the base level, in order to meet the great increase in civilian training needs caused by the emergency expansion of the USAF.

The expansion of civilian training continued in the last six months of 1951 with 256,427 course completions reported as compared to 205,950 in the preceding six months period, an increase of approximately 24 percent. There was also an increase in the total of trainee hours, 4,738,279 being reported for the last six months of 1951 as compared with 4,440,712 trainee hours reported for the first six months.^{*} This represented an increase of 8 percent, considerable less percentage-wise than the increase in course completions.⁸⁶

Over the three year period, 1949-1950, the greatest numerical increase in course completions was in the area of orientation training--the result

* This increase in number of trainee hours reported continued into the first six months of 1952, a total of 5,429,227 hours being reported for this period.

of the induction of such a large number of new civilian employees to meet the needs of an expanding Air Force. There were 23,847 course completions in orientation in 1949, in 1950 there were 43,291 completions, and 156,208 in 1951. Percentage-wise the greatest increase in number of course completions in the period 1949-1951 was in the area of apprentice training; the total rose from 8 in 1949 to 241 in 1951.⁸⁷

The number of completions in protective and personal services training increased over five times, from 12,244 to 69,695 in the period. Completions in supply training, inspection training, safety and health training, and in skilled trades training increased approximately three-fold. Clerical training showed a great increase with 19,564 completions reported for 1951 as compared with 9,263 for 1949; and there was a somewhat greater increase in course completions reported in the training of unskilled and semi-skilled personnel, from 8,892 completions in 1949 to 23,369 in 1951. Course completions in the area of supervisor and management training showed a small gain in 1950, only 1,324 over the 1949 figure of 23,732, and then jumped to 45,453 in 1951 as it became evident that many more supervisors had to be trained in order to secure maximum utilization of the great number of new employees being hired by the Air Force. The only area of training in which there was a decrease in course completions during the period was in technical, scientific, and professional training--⁸⁸ 12,469 completions in 1949, 10,094 in 1950, and only 6,011 in 1951.

It should be noted, however, that the number of course completions in this vitally important area of training rose to 16,155 in 1952, the greatest number of course completions hitherto reported in this field.⁸⁹

Thus, by the end of 1951 there had been a great increase in the Air Force civilian training program. This had come about as a result of the Korean emergency and the attendant expansion of the USAF. Although the status of civilian training in the USAF had improved tremendously in 1951 as compared to its condition when it was in the doldrums in 1946-1949 (and in early 1950), the civilian training program still needed to be extended and strengthened.

An evaluation of civilian training activities in USAF Headquarters completed in 1951 resulted in action being taken to strengthen this function in order to provide more effective program guides and assistance to commands and installation in the planning and conduct of civilian training. Also surveys completed at about the same time showed that out of the 42 installations throughout the Air Force which had been surveyed, 27 did not have programs which adequately met civilian training needs. Moreover, civilian training programs in some of the other bases needed strengthening if management was to utilize the full potential of civilian
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work performance.

As this condition was accompanied by a severe labor shortage, and an anticipated civilian buildup required by Air Force expansion, USAF Headquarters considered that a serious program deficiency existed. It was felt that the increasing importance of the civilian training function required that each command headquarters should exercise effective staff supervision over installation programs, provide positive guidance and assistance to its installations in the conduct of needed training, and insure the effectiveness of the command-wide training activity. Headquarters USAF stated that the urgency of the training activity made it

imperative that each command headquarters should provide the necessary training staff within the civilian personnel organization at the command⁹¹ and installation levels to meet demonstrable training requirements.

Civilian training in the USAF was expanding to meet growing Air Force needs, and the nature of the civilian training program was being changed to meet the changing requirement of a modern Air Force, but much still remained to be done to provide a program adequate to meet all the training needs of the USAF.

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Chapter V

SOME OUTSTANDING POSTWAR TRAINING DEVELOPMENTS

Several changes were made in Air Force civilian training policies and procedures after World War II, considerably revising the civilian training picture. The use of preservice or preassignment training, on or off the reservation, to give basic training to masses of inexperienced and unskilled personnel was discontinued, and the so-called tied schools (off-reservation schools) were no longer utilized. Training on a contract basis in factory schools, private vocational schools, laboratories, private and public educational institutions was continued only on a limited basis and in each instance had to be specifically approved by headquarters.*

After the war it was also the policy of the Air Force to cut down on the operation of centralized civilian training schools and to maintain in the various commands and installations small civilian training staffs.† These operated largely in an advisory capacity, giving professional and technical leadership in training. Training was planned to develop the highest possible degree of employee proficiency necessary for maximum economy of peacetime operations. Special emphasis was given in-service and job-training programs which contributed directly to more efficient operation in such fields as executive management, scientific research and professional work, supervision, job skills (including apprentice

* In the period 1949-1951 the policy of limiting contract training was modified, and the amount of training done on a contract basis was greatly expanded.

† Some commands and installations lacked these civilian training staffs.

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training), the training and retraining of employed veterans, and safety.¹

Wherever it was feasible civilian training was done on-the-job by the supervisors. This was supplemented as necessary by group or classroom training. When the Korean emergency brought about a sudden expansion of the Air Force, which resulted in an expanded civilian training program, it became necessary to initiate certain types of preservice training, to increase the amount of classroom training, and to enlarge the scope of contract training.

The major training developments which characterized the postwar period took place in apprentice training; veterans training; technical, scientific, and professional training; and in the area of supervisory and management training. The expansion of contract training in the last part of the period, the emphasis on career development, and the establishment of civilian training programs overseas were also outstanding postwar training milestones.

Apprentice Training

At a meeting of the Director of Civilian Personnel and Training, OSW, with officials of the Training Branch, Civilian Personnel Division, AG/AS-1, Headquarters, AAF, held in November 1944, the revival of apprentice training was discussed. Planners felt that this type of training should be renewed in order to develop highly skilled aircraft mechanics to form the nucleus of a permanent and stabilized working force. Not until 1945, however, was action taken to initiate the development of apprentice training courses by the ATSC and the ATRC.*

* See above, pp. 73.

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On 10 September 1945 the War Department issued Civilian Personnel Regulation No. 111 setting forth the War Department plan for apprenticeship. This CPR stated that the policy of the War Department in establishing the apprenticeship program was to assure an adequate source of skilled employees to meet both the immediate and the long range plans of the Department, thus maintaining at all times an effective civilian working force. Responsibility for the apprenticeship programs was placed with the commanding generals of the three forces, and it was to be the function of air force headquarters to provide for the establishment and effective administration of apprentice training in accordance with the needs of the respective forces.² Thus apprentice training, which had been discontinued during the war, was reinstituted by the War Department.

The AAF followed the War Department policy and its general plan in regard to apprentice training. By October 1945 the Air Technical Service Command had established a curriculum development unit and was ready to assist the Training Branch at AAF Headquarters in preparing apprentice training courses.³ On 7 December 1945 AAF Headquarters issued AAF Letter 40-88, which outlined the qualifications an installation must possess in order to qualify as an approved apprentice training center and described the procedure involved in securing the authority to conduct apprentice training.⁴

Sacramento ATSC was the first AAF installation approved to conduct apprentice training. Early in 1946 Sacramento secured approval to train apprentices in the following trades:

Aircraft Service Mechanic
Aircraft Machinist
Aircraft Sheet Metal, Glass, and Plastic Worker
Aircraft Engine Mechanic
Aircraft Accessories Mechanic⁵

Although other commands indicated interest in apprentice training, this form of training, with its emphasis on the development of expert aircraft mechanics with an all-around knowledge of their crafts, fell primarily in the province of the Air Materiel Command (formerly ATSC). On 19 July 1946 AMC Headquarters issued AMC Regulation No. 50-1, Apprentice Training Program, which prescribed the policies, procedures, and methods pertaining to the establishment and operation of apprentice training programs in that command. It stated that the AMC policy was to establish a planned program of apprentice training in accordance with the provisions of War Department CPR No. 111 and AAF Letter No. 40-88. The program was to be for use by all AMC installations requiring the employment of apprentices to create a potential source of well-rounded skilled workers from which supervisory selections might be made.⁶

An "Apprenticeship Program" was defined as a plan providing for the training of individuals for trades and crafts which required serving an apprenticeship to attain journeyman status. An "Apprentice" was defined as a person who entered employment with an AMC installation under an agreement to learn a skilled trade or craft involving not less than 4,000 hours of work experience and related instruction in accordance with standards of apprenticeship set forth in this regulation and so prescribed by the Commanding General of the AAF. A "Trade" or "Craft" was defined as any occupation considered apprenticeable under the conditions of the standards prescribed by WD CPR No. 111.

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This regulation prescribed the apprenticeship program responsibilities of AMC Headquarters, and of the various AMC activities employing civilian personnel. It defined in detail the standards of apprenticeship which had to be met by apprentice training centers in regard to facilities, training personnel, terms of apprenticeship, employment of apprentices, instruction of apprentices, scheduled work experience of apprentices, instructional materials to be used, and methods of evaluating apprentice training.

The directive also contained instructions for the certification of graduate apprentices, and provided that each approved apprentice training center should have an apprentice committee appointed by the commanding officer to act as an advisory committee to the apprentice training administrator. The committee was to be composed equally of voting journeymen and administration officials appointed from the operating divisions and areas in which the majority of apprentices were employed. A committee membership of from five to nine persons was recommended. Instructions were also given for the maintenance of apprentice training records and for the submission of monthly reports on this form of training.⁷

On 11 September 1946 AAF Letter 40-88A came out as a supplement to AAF Letter 40-88, 7 December 1945. This supplementary letter gave new instructions for reporting on apprentice training which entailed the use of a new form entitled Apprentice Training Report AFPCP 31 (9 Sept 46).⁸

By November 1946 five AAF installations were giving apprentice training in the United States. During fiscal year 1947 518 trainees were enrolled in the apprenticeship program. The average length of the apprentice training course was 163 hours per year of off-the-job training. On-the-job

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training included the full time of the trainee during his apprenticeship less the time spent in off-the-job training. The duration of the apprenticeship itself varied from two to four years, depending on the difficulty of the craft or trade being learned.⁹

In 1948 the Air Materiel Command* reported a total of 836,939 man hours of training in the area of apprentice training, more than was accomplished in any other AAF training area except in that of skilled trades; 86.8 percent of this training was accomplished on-the-job.¹⁰ No course completions were reported,¹¹ probably because no trainee had as yet been in the program long enough to complete his apprenticeship term.¹²

As of February 1949 there were eight apprentice training centers in the Air Materiel Command. These were MAAMA with 49 apprentices, MOAMA with 95, SAAMA with 218, OOAMA with 45, and W-PAFB which reported 39 apprentices in training. Warner Robins, Sacramento, and Oklahoma City also sent in reports on apprentice training at this time but had been requested to review their reports and to resubmit them to AMC Headquarters.¹³

By April of 1949 the number of apprentices assigned to receive training in the various approved apprenticeable trades or crafts in the Air Materiel Command had reached a total of 951 men. A ratio of one apprentice to ten journeymen in each apprenticeable trade or craft was established by higher authority to prevent the grouping of all apprentices in one year. It was the desire of Headquarters, AMC, to increase the ratio to one apprentice to five journeymen in those trades where a shortage of skilled all around mechanics existed.¹⁴ A request to this effect was granted in the summer of 1949, permitting a one to five ratio in the following

* AMC was the only command reporting apprentice training for 1948.

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trades: A/C Electrician, A/C Radio and Radar (Electronics) Technician, A/C Instrument Mechanic, and A/C Engine Mechanic.¹⁵

The Air Materiel Command apprentice training program in 1949 provided training in the various trades and crafts, utilizing a combination of the self-study and on-the-job methods. Each course was of four years duration and for the self-study phase of the training numerous technical text books were used as instructional aids.¹⁶ This program was considered of great importance to the Air Force as it would insure the availability of a constant and effective working force in the apprenticeable trades and was considered essential to provide the trade and craft skills necessary to meet the future needs of the Air Force.¹⁷

One of the outstanding apprentice training programs was conducted at Kelly Air Force Base, Air Materiel Command, San Antonio, Texas. Here the training was performed on and off of the job by some 23 Maintenance personnel who had been designated as on-the-job instructors. These instructors devoted approximately 50 percent of their time to training apprentices and military personnel. Guidance and assistance was furnished by the Training Branch at Kelly AFB, which provided an apprentice training administrator and a clerk-typist. The Training Branch also gave instructor training at regular intervals.

In November 1949 there were 246 apprentices enrolled in 10 trades at Kelly AFB. Rigid standards had been set and apprentices failing to meet the requirements were weeded out by the apprentice training committee. Most of the apprentices were enrolled in after work hour classes under the auspices of the Texas Vocational Program and the San Antonio Vocational and

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Technical School. The Kelly apprentice training program was well received by operating supervisors who said that apprentices being trained in their units turned out a satisfactory amount of productive work.¹⁸

One of the major problems which arose in carrying on the apprentice training program in the latter part of 1949 was the loss of apprentices due to reduction-in-force. At Ogden AMA personnel losses resulting from reduction-in-force, and the shifting of personnel as a result of the bi-zonal plan,* caused difficulties in apprentice training.

It was the natural tendency to RIF (separate because of reduction-in-force) apprentices rather than the skilled mechanics. Hence the RIF at Ogden resulted in the loss of all aircraft service mechanic and sheet metal apprentices, and threatened the loss of all aircraft instrument and aircraft electrician apprentices. This, of course, meant that the time and money spent training the apprentices was wasted. It was felt that some changes in manpower allotment policies were necessary in order to maintain a strong, economical, and well conducted apprentice training program.¹⁹

Despite such problems as these apprentice training continued to flourish, representing an important part of the USAF postwar civilian training program. For the whole year 1949 a total of 1,347,080 trainee hours was accomplished in the area of apprentice training, more than was accomplished in any other area of training that year.²⁰ By 30 June 1950 several new trades had been added to the list of apprenticeship occupations, the ratio of apprentices

* This plan reorganized supply procedures on a geographical basis, using the line of the Mississippi River to divide the country into two zones. In each zone each individual depot was responsible for certain classes of supplies, with prime depots having global supply responsibilities in certain classes. Each prime depot had its opposite in the other zone. This reorganization, of course, effected maintenance procedures as well.

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had been increased in four trades, and a number of revisions made in instructional materials.²¹ There were only two course completions in apprentice training in 1949; for the calendar year 1950 a total of 42 course completions in this area were reported; and for 1951 a total of 214 course completions.²² As of 31 May 1951 a total of 829 persons were enrolled in this program.²³

Veterans' Training

As in the case of apprentice training, representatives of the Air Force, working with officials of the War Department, had begun planning for the training of veterans in 1944. Formulation of a definite Air Force program for the training of veterans was delayed, however, until the War Department had completed its agreements with the Veterans Administration (Cooperative Agreements I and II) on the plans and procedures to follow in the training of veterans at War Department installations.*

Finally an official Air Force policy and program for the training of veterans was established with the issuance on 22 July 1946 of AAF Letter 40-10, Training of Veterans in AAF Installations. This directive gave instructions for the implementation in AAF installations of veterans' training programs in conformity with the basic regulations set forth in War Department Civilian Personnel Circular No. 50, 24 April 1946. This Directive provided that the major AAF commands should screen all requests from installations desiring to train veterans under the provisions of WDPC No. 50. Such installations were to be certified as meeting the requirements set up in paragraph 8 of the circular which provided that stations recommended

* See above, pp. 176-80.

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to do such training must have adequate training organizations, programs, and facilities to do a thorough and complete job of training for veterans enrolled in training.

For the training of veterans under Cooperative Agreement No. I, Plan B, applicable only to the training of disabled veterans not on the installation payroll, trainees were to be accepted for training only where vacancies existed in courses organized and conducted for regular employees. Complete records were to be maintained on all training given under the terms of the cooperative agreements.²⁴

Under Civil Service regulations veterans had special employment rights in the Government service. Non-disabled veterans had a five-point preference over non-veterans in qualifying by examination for Civil Service jobs, and disabled veterans had a ten-point preference. The veteran was also placed on the list of eligibles ahead of non-veterans with the same grade. With the exception of applicants in certain scientific and professional jobs, the disabled veteran got priority of selection over all others, and in early 1946 examinations were open only to veterans except when the number of veterans' applications was insufficient to meet the needs. Also, of course, returned veterans who had previously been employees of the AAF had broad re-employment rights.²⁵

In 1946 the Civil Service listed 3,000 jobs which could be filled by by physically handicapped. A Coordinating Committee for the Physically Handicapped was established in order to cut red tape and to promote more direct contact between the regional offices of the federal placement and rehabilitation agencies.²⁶

Operating under these regulations and directives the Air Force civilian training program soon included thousands of veterans as trainees. At the

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end of 1948 the Air Materiel Command reported 6,466 persons in apprentice training--5,607 of these were veterans; 17,215 veterans were reported as having completed orientation training courses in 1948. Out of a total number of 163,642 reported in training in the various courses offered in the 11 areas of training covered by the "Civilian Employee Training Report" for the calendar year 1948, 56,886* or nearly 1/3 were veterans.²⁷

On 5 November 1948 the newly created Department of the Air Force issued Air Force Letter No. 40-10, Training of Veterans at Air Force Installations. This directive transmitted as attachments Cooperative Agreement Nos. I and II between the War Department and the VA.²⁸ The agreements, of course, provided the basis for the participation in Air Force civilian training programs of veterans eligible for subsistence allowances while in training.

A report, WD AGO Form 670, "Civilian Training Course Description," was required for each course in which an installation planned to train veterans eligible for subsistence allowances. Records were to be kept of the number of veterans completing training and reports submitted as prescribed in AF Ltr. 40-28.

This directive also provided that major commands were to screen all requests from subordinate installations for veterans training and to forward approved requests to the Chief of Staff, USAF, Attn: Director of Civilian Personnel, DCS/P, for final approval. On approval the USAF installations concerned were to contact the appropriate Veterans Administration regional office, request inspection of facilities, and if they were found adequate, were to complete details for accomplishing the training.²⁸

* This does not mean that there were actually 56,886 veterans in training as, in many cases, an individual would be enrolled in two or more different courses, and in courses in different areas.

²⁸ See above, pp.

The policy and procedures established by this directive for training veterans at USAF installations were virtually the same as those established by AAF Letter 40-10,* 22 July 1946, for installations of the Army Air Forces. The main difference was that the 1948 directive established the policy and procedures for veterans' training in an independent Air Force.

Over-all statistics for veterans in civilian training after 1948 are not available as the reports on civilian training given in the USAF Statistical Digest after 1948 do not differentiate between veterans and other trainees. However, some statistics on veterans training in individual installations are available. In 1949, for instance, Warner Robins Air Materiel Area was conducting training for 68 veterans in seven different apprenticeable trades,²⁹ and Oklahoma City AMA was carrying on training for 159 veterans in 12 different apprenticeable trades.³⁰

A letter from the Chief of the Civilian Policy Section, Civilian Personnel Division, Headquarters, AMC, to the Central Office of the Veterans Administration, stated that Headquarters, Air Materiel Command, was providing apprentice training for 108 veterans under Cooperative Agreement No. I and 740 veterans under Cooperative Agreement No. II, a total of 848 veterans receiving apprentice training.³¹ Headquarters, AMC, had developed instructional material such as progress charts, study guides, equipment and reference material lists, tests and keys for classroom use to be used in conjunction with on-the-job apprentice training. Also instructor personnel and shop facilities of the

* See above, p. 179-80.

³¹ It should be noted that apprentice training, which involved learning a trade, was the type of training which Public Laws 16 and 346, and the Cooperative Agreements intended to make available for veterans. Orientation, safety training, supervisor training, and other forms of civilian training which were conducted for all employees as needed, were only incidental to performing a job--hence were not veterans training in the meaning of Public Laws 16 and 346, even though veterans were trained in such courses, along with other civilian employees.

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command had been made available to insure an efficient and effective training program for these veterans.³¹

In 1950 the USAF was providing training for veterans at a number of its installations by cooperative agreement with the Veterans Administration. Veterans who were eligible for subsistence allowances under Federal law could enroll in certain approved courses provided by the Air Force for its civilian employees. Some of these courses were: communications cable splicer, traffic clerk, heating operator engineer, aircraft propeller mechanics, rubber products manufacturer and repairer, and the apprenticeable trades. In the 12 months ending 31 March 1950 a total of 150 veterans satisfactorily completed such courses. In training in the apprenticeable trades veterans training under Public Laws 16 and 346, 78th Congress, made up 85 percent of all the apprentices in the Air Force.³²

In 1951 there were no new developments of any great significance in the training of veterans in the Air Force. The expansion of the civilian personnel strength of the Air Force in 1951 had a tendency, of course, to increase the number of veterans employed by the Air Force and enrolled in civilian training courses. As already pointed out, the year 1951 saw a great increase in the number of course completions in apprentice training, a majority of them in all probability being accomplished by veterans who, by virtue of the knowledge and skills thus acquired, would in the future become key men in the maintenance activities of the Air Force.

Since the end of World War II veterans have constituted a large and importance segment of the civilian personnel strength of the USAF. Their

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participation in the Air Force civilian training program, both in the VA approved and the regular courses of training, has been a major factor in creating from their ranks a corps of highly skilled mechanics, technicians, supervisory and managerial personnel, and career employees in general, which plays a vital part in the accomplishment of the mission of the Air force.

Technical, Scientific, and Professional Training

During World War II there was considerable activity in the area of technical, scientific, and professional training. Most of this training activity, however, involved technical and professional training rather than scientific training; especially the training of civilian technicians and specialists in civilian personnel administration and its various phases. There was some training of a scientific nature such as the program carried on by the Air Technical Service Command for the training of engineering aides at various colleges and universities. This program came under the auspices of the Engineering Science Management War Training Program. In late 1945 ATSC set up the AAF Engineering School, the training facilities of which were open to qualified civilians.*

The best over-all picture of what the AAF did in the area of technical, scientific and professional training in the period immediately following World War II is to be found in the report on civilian training in the AAF for fiscal year 1947, which was submitted to the Office of the Secretary of War in November 1946 in answer to a Congressional inquiry. In this period, 1 July 1946-30 June 1947, technical, scientific, and professional training was being given at eight AAF installations and in seven colleges and industrial establishments.

* See above, pp. 170-75.

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This training was given in such fields as engineering, accounting statistics, and personnel administration peculiar to the work and procedures of the AAF. It was estimated in the report that 21 groups, or a total of 1,219 trainees, were trained in this period at a total cost of \$300,545.00.³³

It was in the postwar period that scientific training began to really come into its own, along with an increasing emphasis on technical and professional training. The accelerated pace of scientific and technological developments in military aviation and related fields during and after World War II put a premium on scientific knowledge and technical skills which had its influence on training concepts and objectives.

AAF Regulation No. 40-6, AAF Civilian Training Program, dated 5 May 1947, stated that one of the objectives of the AAF civilian training program was to provide scientific and professional personnel for the Air Force and to keep them abreast of research and developments in their respective fields. Training with this objective in mind was already in process at Wright Field where 300 scientists and research engineers were being given training in the field of graduate studies in February 1947 and plans had been made for the training of about 50 graduate engineers in courses in advanced electronics, physics, and communication research at New York University and Brooklyn Polytechnic Institute.³⁴

In accordance with AAF Regulation No. 40-6, a program of in-service training below college graduate level was started by Wright-Patterson Air Force Base in February 1948 when four courses were offered on an experimental basis. In September 1948 there were 15 courses offered, and in February 1949 the curriculum had grown to 20 courses.

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This program was conducted by the Civilian Training Branch, Wright-Patterson Civilian Personnel Section, Hq., AMC, in cooperation with Wilmington College, Wilmington, Ohio. Among the college undergraduate level courses offered were courses in the fields of aeronautical, electrical, mechanical, and photographic engineering; physics; mathematics; and personnel and business administration. This program was in keeping with the new civilian training program policy issued by the Department of the Air Force in AF Letter No. 40-23, dated 2 May 1949.³⁵

In the period 11 February 1948 through 3 June 1949 a total of 1,015 employees were enrolled as students in the Wilmington College program and there were 811 completions. Six of these courses were offered during work hours, four were offered after work hours, all the others were offered half on the employee's time and half on government time. Of the participants in these courses 8 percent were military personnel and 51 percent were veterans.

The philosophy behind this undertaking was comparable to that behind the college training programs of the United States Department of Agriculture and the Naval Research Laboratory. It was based on the belief that work and study could be combined to the advantage of both--work giving meaning and motivation to study, and study supplying understanding and competence to the work situation. The program also operated on the conviction that opportunities for in-service training on the college level would have a vital relation to morale and performance of duty.³⁶

An evaluation of the courses offered under the Wright-Patterson Undergraduate Training Program based on personal interviews with students

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and their instructors indicated that they were very effective in improving occupational skills, increasing production output, developing individual initiative, improving morale, and improving quality of work. The courses covered a wide range of subjects and the trainees represented an equally wide range of technical, scientific, and professional occupations. Position titles of students pursuing the courses included: engineers (aeronautical, electrical, mechanical, and radio), engineering aides, radio and aircraft service mechanics, administrative assistants, office managers, supervisors, purchasing agents, attorneys, testing technicians, and statisticians.³⁷

In addition Headquarters, AMC, in cooperation with Ohio State University was also taking steps in 1949 to establish a graduate training center at Wright-Patterson AFB. Extensive inquiries were made of the methods used by the Naval Research Laboratories in establishing and conducting its program to provide graduate and undergraduate training for its civilian personnel.³⁸

It was also suggested in July 1949 that a research accrediting program should be set up at Wright-Patterson AFB similar to the one used by the Navy. Graduate students from various colleges could be appointed to positions in AMC laboratories and could have their research and work in the laboratory count toward their degrees. Upon completing their research and securing their degrees they would have reasonable assurance of promotion and permanent assignment. It was pointed out that such a program would implement the Ohio State University graduate training program which had gone into effect by then.³⁹

This program provided professors and graduate training facilities on a contract basis. The training was carried on by Ohio State faculty members

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who came over to conduct courses at the graduate training center at Wright-Patterson AFB, known as the Civilian Graduate Center of the Air Force Institute of Technology. The Civilian Graduate Center provided training in sciences and management essential to the progress of the research activities of the Air Materiel Command; provided for the professional growth of engineering and scientific personnel; and furnished the facilities for consultation, and research participation. As a part of the Air Materiel Command it had the advantage of close association with current research and development activities* and also with industrial programs and activities.

The Graduate Center enabled qualified employees of the Air Materiel Command to pursue graduate work without having to go to a college campus. Personnel selected by laboratory chiefs or engineering shop superintendents, and who were graduates of an accepted college or university and could meet Ohio State's entrance requirements, were eligible. Instructors and facilities were available to offer courses such as aeronautical engineering, chemical engineering, chemistry, civil engineering, electrical engineering, industrial engineering, mathematics, mechanical engineering, mechanics, physics, and astronomy.⁴⁰

This training was in line with the policy advocated by the Ridenour Report submitted to General Vandenberg by a Special Committee of the Scientific Advisory Board to the Chief of the Air Force on 21 September 1949. The importance to the Air Force of scientific and technical training was pointed up by the report's statement that "... the Air Force is not a static force, and cannot afford to be. It must introduce into its fighting units, as rapidly as possible, the most advanced weapons, that current technology can develop. Only by doing so can it retain its

* This was before the establishment of the Research and Development command.

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state of readiness and effectiveness."⁴¹ The report emphasized the importance of civilian technical and scientific personnel in research and development work, and the necessity of developing methods of civilian personnel administration which would attract and hold them in Air Force employment.

As an example the report cited the graduate courses offered at Wright-Patterson AFB by Ohio State and the increasingly liberal policies in regard to the attendance of professional and scientific meetings by civilian personnel. It emphasized additional emphasis on opportunities for professional improvement through training, and by other methods, as important in attracting the highly trained technical and scientific personnel needed by the Air Force, and in reducing the high turnover rate of civilian employees in these categories.⁴²

The report recommended that major steps be taken to implement Air Force Regulation No. 80-4, dated 1 March 1949.⁴³ This regulation laid down basic policies for the recruitment and training of high-grade research personnel, and for the administration of their assignments so as to assure for them a scientific career. It also advocated a policy of promoting individual professional competence by encouraging participation in scientific gatherings, by a fellowship program, and by postgraduate training.

This regulation also urged a liberalization of contract arrangements for the hiring of consultants and a more liberal policy in the letting of contracts and subcontracts for scientific research. This was to be for the purpose of accelerating the scientific effort available to the Air Force.⁴⁴

In the fiscal year 1950 the letting of training contracts was considerably liberalized. Contracts were entered into with several institutions

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of higher learning adjacent to Wright-Patterson AFB and to the Cambridge Research Laboratories to further the development through part-time training of highly specialized scientific and engineering personnel. Also arrangements were made for specialized courses at other institutions.⁴⁵

The shortage of engineers and the lack of adequately trained personnel in other technical and scientific fields was intensified in the last six months of 1950. The only positive means to build up personnel strength in engineering and other scientific and technological fields was by recruiting employees from the graduating classes of the various colleges.⁴⁶ This proved difficult as the USAF met stiff competition from private industry which offered salaries and chances of advancement to college graduates that could not be matched by Air Force (AFC) recruiters.

An intensification of the college recruiting program, however, with the use of on-the-spot hiring in place of the usual slow Civil Service procedures, produced reasonably good results in late 1950 and early 1951. One of the best "drawing cards" for "selling" these positions with the Air Force to college graduates was the Civilian Graduate Center.⁴⁷

The civilian graduate training program had the following purposes:

1. To provide key scientific, technical, and professional personnel of the Air Force with an opportunity to pursue training, on a part-time basis, in their fields of specialization.
2. To keep them abreast of current advances in their fields.
3. To enhance the morale of such personnel by making it possible for them to continue their studies without leaving their jobs and endangering their earning power.
4. To provide replacements for officers leaving the Air Force.⁴⁸

Graduate training to increase the skills of engineers engaged in development and research in communication was provided by the Watson Laboratories at Red Bank, L.J., and advanced courses were offered by educational institutions within commuting distance of Red Bank. These were for the training of a limited number of key engineers and included such courses as electronics and electronic ballistics, ultra high frequency techniques, communication network theory, vector analysis, complex functions, and transients in linear systems. This type of training was usually conducted by an institution of higher learning working with the Air Force on a contract basis.⁴⁹

The necessity for civilian training on such a high level was vital in a modern Air Force which had to conduct research and development in many fields if it was to avoid obsolescence and disaster. This research included such fields as aircraft design, guided missiles, aircraft and missile propulsion, electronics, meteorology, aviation medicine, armament, atomic energy, geophysics, and human resources.⁵⁰

Thus to meet the challenges posed by military aviation developments in an age of supersonic speeds, guided missiles, and nuclear weapons the USAF provided training for its scientific, technical, and professional personnel. This training was, in great part, accomplished at the installation level with Air Force personnel and facilities, using both on-the-job and classroom training as was done, for instance, in the college undergraduate training program at Wright-Patterson AFB. When necessary, outside sources were used, generally through contracts for training arranged with colleges, universities, and other training and educational facilities.⁵¹

Professional and technical training for civilian employees in the field of civilian personnel administration was conducted at AAF installations and at the War Department School of Personnel Administration from 1946 to 1948.⁵² As stated in the preceding chapter the USAF School of Civilian Personnel Administration was established at Kelly Air Force Base in 1948. This school, which was later moved to Denver, was the chief center for the training of specialists and technicians in the various fields of personnel administration. Its activities have already been discussed at some length in the preceding chapter.

Finally it should be remembered that while the work done in the area of technical, scientific and professional training did not show up as well in the statistical reports as some other forms of training, especially in the period 1948-1951 when there was an actual decline in the number of course completions, this type of training is qualitative rather than quantitative in its nature and value. Also it should be mentioned that after the period of diminishing course completions, the year 1952 saw the greatest number of course completions ever reported in technical, scientific, and professional training.*

Supervisory and Management Training

The AAF supervisor training program continued to operate after World War II, although it suffered, like other phases of civilian training, from the reduction-in-force and the cutback in training activities which came with the return of the AAF to a peacetime status. The need for supervisor training continued because there was still a backlog of untrained supervisors; also the reduction-in-force and resignations meant that new supervisors

* See above, p. 229. There were 16,155 course completions in technical, scientific, and professional training in 1952 as compared to 6,011 in 1951.

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must be trained to take the place of those who left the employment of the AAF. Also the postwar emphasis on the maximum utilization of employees and the tendency to shift the bulk of the responsibility for training onto the shoulders of the supervisors meant that training in the fields of management and supervision became increasingly important.

A master institute in supervisory training was conducted at Bolling Field, Washington, D.C., from 30 January through 8 February 1946, under the auspices of the Training Branch of the Civilian Personnel Division, Headquarters, AAF. This institute was attended by 53 representatives of major AAF commands who were thus qualified to conduct standard supervisory training institutes in their commands.⁵³ The Training Branch, Headquarters AAF, also sent a representative to the AAF Center, Orlando Army Air Base, Orlando, Florida, to assist the civilian training staff there in conducting a standard supervisory institute for the purpose of training conference leaders to conduct the AAF supervisor training course.⁵⁴ In the late summer of 1946 representatives of the Civilian Personnel Division, Headquarters, AAF, assisted Headquarters, Tactical Air Command, in conducting an institute on AAF supervisor training and personnel management.⁵⁵

Although AAF Regulation 40-11, dated 2 August 1944, which had made the AAF 52-hour basic supervisor training course mandatory, was rescinded by September 1947,⁵⁶ supervisor training continued in the Air Force. It was stated in AAF Regulation 40-6, dated 5 May 1947, that one of the objectives of civilian training in the Air Force was "To improve supervisory and management practices by developing an understanding of sound management principles and procedures."⁵⁷

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As late as December 1947 a standard supervisory institute was held at Tinker Field, Oklahoma. The purpose of the institute was to qualify instructors and conference leaders in the Air Force supervisor training program. Persons who had not attended a standard institute were eligible to attend.⁵⁸

In 1948 the basic 52 hour supervisor training course was officially discontinued in favor of the primary and basic management courses which had been developed by Mr. William E. Dewey in 1947.⁵⁹ Mr. Dewey left the Training Branch, Civilian Personnel Division, in 1946 to serve as Management Consultant in the Utilization Branch, Manpower and Personnel Management Division, AC/AS-1. Since the Utilization Branch was concerned with securing the maximum utilization of both military and civilian personnel in carrying out the mission of the Air Force his revised management course became the official Air Force course for both military and civilian supervisors.⁶⁰

The revised course was actually a combination of the previously developed AAF Personnel Management Course with Production Management, developed on two levels, primary and basic. The Primary Management Course was a 40-hour course given to noncommissioned officers and comparable civilians (first-line supervisors). The Basic Management Course was for officers and comparable civilians (intermediate supervisors) and consisted of two parts: I-Personnel Management, 20 hours; II-Production Management, 18 hours.⁶¹

Mr. Dewey set up a central school at Keesler Field to train conference leaders, military and civilians, to give the Primary and Basic Management courses. Shortly it was transferred to Craig Field, Selma, Alabama, where the Air University, USAF, established the Management Instructors Course which trained military and civilian personnel to give the management courses

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in various USAF Commands. This course lasted for two years, closing down in 1950.⁶²

An advanced supervisory trainers' course was scheduled by Headquarters, USAF, to be conducted at the Air Force School for Civilian Personnel Administration at Kelly Air Force Base, San Antonio, Texas, beginning 28 November 1949 and ending 16 December 1949. The primary purpose of this course was to show experienced supervisor trainers how the revised AF Primary and Basic Management Courses were to be integrated into the Air Force "Introduction to Management Course." A school for inexperienced supervisory trainers was scheduled for March 1950.⁶³

By 1951 the Air Force School for Civilian Personnel Administration offered the only course in the Air Force which qualified management trainers. As a result both military and civilian management instructors were enrolled in training at this school. In 1951 a total of 76 instructors were trained here to carry on the management training of supervisors.⁶⁴

The USAF Introductory Management Course mentioned above was one of the three management courses developed by the civilian training organization at USAF Headquarters in this period. The three courses, as constituted in 1949, closely paralleled the Primary and Basic Management Courses developed by Mr. Dewey in the Utilization Branch, Manpower and Personnel Management Division. The USAF Introductory Management Course was essentially the same in course content as the Primary Management Course; the USAF Production Management Course covered the same material as Basic Management, Part I; and the USAF Personnel Management Course, as set up by the civilian training organization at USAF Headquarters, gave instruction in the same principles

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and functions of management as Basic Management, Part II. These three courses were for the training of civilian supervisory personnel--the Primary and Basic Management Courses were for the training of both military and civilian supervisory personnel.⁶⁵ This, of course, indicates a considerable overlapping of training activities in the area of management and supervision.

In addition to the management courses on the primary and basic levels there was also developed an advanced management course for officers in the upper levels of command and management. This course was given at Craig Field simultaneously with the Management Instructors Course, but was discontinued when the Air University lost Craig Field in 1950.⁶⁶ A small quota of Air Force officers was assigned to take an advanced management course offered by Harvard University in February 1949, and in the summer of 1949 plans were formulated with the University of Pittsburgh for the inauguration there of a nine-month course in Air Force advanced management. These courses were for officers only.⁶⁷

The Management Improvement Program, instituted by the Air Force in compliance with an executive order issued by the President on 29 July 1949,⁶⁸ resulted in an increased emphasis on management training (both personnel and production management) when it got underway in 1950-1951.⁶⁹ Also, of course, the rapid expansion of the Air Force after the outbreak of the conflict in Korea in June of 1950 created an increased need for this type of training. The number of course completions in the area of supervision and management training increased from 24,056 in 1950 to 45,453 in 1951, and the number of trainees hours accomplished from 315,498 to 587,052.⁷⁰

The Directorate of Manpower and Organization, which had the responsibility for the general operation of the Management Improvement Program, soon

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discovered that there was a shortage of management-trained personnel in the Air Force. This was true in the upper echelons as well as on the lower levels of command and supervision. Initially it was decided that 400 experienced civilians and field grade officers would be trained, quotas being assigned to all commands. The Air Staff selected George Washington University in Washington, D.C., to conduct an advanced management course for this personnel, and collaborated with the university in preparing the course. On 4 June 1951, the enrollment for the first six-week training course in manpower management totalled 93 officers and civilians.⁷¹ This course was entitled Manpower Management Engineering and was for senior officers and key civilians, being designed to promote more effective management practices among persons assigned responsibility for manpower and personnel management. In the last half of 1951 the Career Planning and Training Division of the Directorate of Civilian Personnel monitored the selection of about 100 civilians to attend this course.⁷²

As already indicated, there was also a great extension of management training in the lower echelons of managerial and supervisory personnel, both military and civilian. Thus supervisor training, which had been established in the Air Force civilian training program during World War II primarily for the purpose of training the great numbers of unexperienced foremen and first-line supervisors employed by the AAF as a result of the war emergency, developed into management training which was given to managerial and supervisory personnel, military and civilian, in all echelons.

Contract Training

By the end of 1945 the Air Force terminated most of its contract training activities,* and contract training for civilian employees was kept

* See above, p. 90.

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to a minimum in the lean years which the Air Force suffered in the period between the end of World War II and the outbreak of hostilities with the Communists in Korea. Air Force Letter No. 40-21, 5 August 1948, in a statement in regard to the expenditure of appropriated funds for civilian training, said that inservice training on Air Force installations was to continue (as it had since the end of World War II) to be the principal training medium.

It was stated, however, that when it was not practicable to provide certain training within the Air Force, the use of outside facilities was permissible. In order to maintain proper control of the expenditure of funds it was required that the approval of the Director of Civilian Personnel, DCS/P, Headquarters, USAF, be obtained prior to entering into any agreement involving the payment of USAF funds for the training of civilian personnel. Such approval was also required prior to the renewal of tuition contracts or agreements.

Full supporting data was required when submitting requests for the approval or renewal of such contracts, and the individuals selected for training under these contracts had to have permanent status or give reasonable assurance of two years duty after completion of such training, and they must be currently assigned to duties appropriate to the training requested. Section 16 of the Military Appropriation Act of 1949 was given as the basic authority for utilizing facilities which involved the expenditure of funds for the payment of tuition to manufacturers, civilian contract schools, and institutions of higher learning for the training of selected personnel.⁷³

Expenditures made for contract training were generally for factory familiarization training on Air Force type equipment, or for the training of scientific and engineering personnel at institutions of higher learning, usually--though not always--on a graduate level.⁷⁴ Chapter A-110 in Air Force Manual 40-1 provided for the use of outside facilities when training at Air Force facilities was not practicable.⁷⁵

Contract training fell into three major categories:

a. Graduate Training. This program was used to train eligible civilian employees in advanced scientific and technical subjects in fields directly pertaining to the mission of the Air Force. This was part-time training, usually on the graduate level, given to those employees currently assigned to types of work where the training received could be expected to improve production through application of scientific and technical knowledge. This program also provided for short courses of instruction where additional information was required or would be helpful to the employee in his duty assignment; for example specialized courses in occupational dermatoses, homicide investigation, and radio isotopes.

b. Factory Training. The purpose of this training was to provide instructor personnel in order that instruction on new Air Force equipment might be conducted at Air Force installations, and to provide a nucleus of maintenance and operational personnel for installations in order that equipment might be operated as soon as delivered. Examples were training at the General Electric Company on the J-47 jet engine, and training at Pratt & Whitney on the R4 360 A/C engine.

c. Undergraduate and Special Training. This program was for the purpose of training civilian personnel in those occupations for which qualified personnel were not available through local labor markets, and in those occupations for which training could not be provided at the installations. Examples were training for typists and stenographers, for radio and radar mechanics, and lathe operators, and for craftsmen and engineering aids.

In instances where an installation could not obtain adequate contract training locally, or where an installation's total needs for specific occupations was small, arrangements were made by USAF Headquarters to consolidate the needs and arrange for the training.⁷⁶

As increasing emphasis came to be placed on scientific and technical training in the postwar Air Force the negotiation of training arrangements on a contract basis with various colleges and universities became increasingly necessary. Also the introduction of new types of aircraft and equipment made it necessary to increase contractual training arrangements with factory schools. The general expansion of civilian training after June of 1950 was in large measure characterized by a greater use of outside training facilities through contract arrangements.⁷⁷

An Air Force-wide survey was conducted at this time to determine contract training requirements for the last quarter of fiscal year 1951 and for fiscal year 1952. The various commands reported a need for the training of a total of 7,466 employees under contract for the fiscal year 1952. Budget estimates based on an analysis of these needs were prepared, submitted for approval, and successfully defended before the Budget Advisory Committee.⁷⁸

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The Career Planning and Training Division, in order to meet more effectively the increasing need for contract training in the postwar Air Force, devised means for expediting the approval of requests under Section 610 of Public Law 179, 82d Congress, which made it mandatory for all expenditures of funds for the contract training of civilian employees to be specifically approved by the Secretary of the Air Force. In cooperation with the Standards Division, Career Planning and Training also undertook a study aimed at improving the effectiveness of budgeting for contract training; and as a first step toward better budgeting, requested the commands to determine their long-range training needs and to submit estimates of their contract training needs for fiscal year 1953.⁷⁹

Now that post schools had been reduced to a minimum, and tied-schools were a thing of the past, it was inevitable that the increasing needs for various types of specialized and highly technical training would lead to a greater use of outside training facilities with the result that contract training came to play an increasingly important part in the Air Force civilian training program. This trend was accentuated by the increasing flow of new planes and equipment to the Air Force. Also contract training came to be of major importance in the civilian training program because it was the means which enabled the Air Force to use the training facilities of the colleges and universities, and of other educational institutions, in order to secure for certain categories of its civilian employees the technical, scientific, and professional training which are so vital to the maintenance of airpower in the modern world.

Career Development

In 1949 the Air Force established a "junior management program." The purpose of this program was to secure competent replacements for vacancies in top-grade civilian positions in the Air Force and to resolve, thereby, one of the most important civilian personnel problems. It involved the selection of exceptionally outstanding young civilians for employment as junior management assistants and junior professional assistants. These selectees were obtained through civil service processes and trained as specialists on a career basis.⁸⁰

This program for training junior management and professional assistants was officially known as the Air Force Civilian Career Development Program. It was one of the ways by which the Air Force endeavored to effect the maximum utilization of personnel when it was cut back to 48 groups and had to reduce its civilian personnel strength from 168,958 on 1 July 1949 to 150,743 on 31 December 1949.⁸¹

There was also the problem of taking action to offset the rapid turnover of military personnel in the Air Force which made it difficult to maintain a stable organization and a steady, consistent program. The USAF Maintenance Division believed that the stabilizing influence of the career type civilian employee was needed and that this could best be attained through career civilian advisors and assistants in key military positions throughout the Air Force structure, and particularly within the Wing Base structure.

It was the feeling of the Maintenance Division that in the event of an air-atomic war the importance of the "career civilian" would be very great; hence career civilians who would supervise and direct important

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functions under mobilization conditions should be developed. It was suggested that an Air Force directive should be issued establishing a policy for assigning civilian technical advisors at supervisory levels in the Materiel and Services Groups in the Zone of the Interior. The Air Materiel Command, which was the greatest employer of civilian personnel in the Air Force, agreed that this was a good idea but felt that implementing action from USAF Headquarters was indicated.⁸²

In an Air Force Letter, dated 17 April 1950, subject "Program for Development of Career Administrators," Headquarters USAF forwarded to all commands a guide for the administration of a career development program. This guide set forth the basic policies, responsibilities, and techniques governing the development of potential civilian executives in the Air Force and was to be followed in conducting the career development program.⁸³

In April 1951 Mr. John A. Watts, Director of Civilian Personnel, stated that the Air Force Civilian Career Development Program had made great progress since its inception in 1949. Through the facilities of this program more than 1,000 employees had received guidance, formal training, and developmental assignments to prepare them for more responsible duties within the Air Force. Experience with the program indicated its value to the Department of the Air Force and its future possibilities for the development of capable employees for high level responsibilities. Mr. Watts stated that it was, therefore, Air Force policy to continue to emphasize the principles of career development, and to apply those principles whenever possible.⁸⁴

In line with the policy stated by Mr. Watts, and as a result of an administrative study of the civilian training program made in the summer of

1951, the Training Division of the Directorate of Civilian Personnel was replaced on 1 October 1951 by a Career Planning and Training Division. This reorganization was based on a broader concept of training; one which included not only the training of civilian employees for specific jobs and functions, but also the development of a corps of highly skilled Air Force career employees. In addition to its routine civilian training responsibility the new division had the functional responsibility for identifying career areas and establishing guides for the promotion of career employees. The provision for career training and development was to cover all occupational areas, not being confined to professional and scientific personnel.*

Thus career development became, by a process of administrative reorganization, an integral and functional part of the civilian training program. In the modern Air Force, plagued with a high turnover of military personnel, and with its high requirements for skilled mechanical workers, and for technical, scientific, professional, and administrative personnel, the development of a permanent corps of skilled and highly trained civilian careerists in these various fields is of the utmost importance.

Civilian Training Overseas

The training of civilian personnel employed by the Air Force at installations outside of the continental United States is, in general, very scantily documented although a few stray documents and reports, and random accounts in command and air force histories indicate that such training was carried on at a few overseas installations during and immediately after World War II. There were relatively small complements of civilian

* See above, p. 222.

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employees at most overseas installations during the war, and emergency conditions, the difficulties experienced by AAF Headquarters in the initiation and supervision of civilian training in distant installations, and various other factors kept civilian training overseas at a low level during the war.

After the war civilian training and civilian personnel strength throughout the Air Force was severely cut back. Eventually, however, the development of the policy of the "containment" of Communism by President Truman's administration, accompanied by a great growth of our military commitments overseas, resulted in a worldwide system of Air Force installations with complements of civilian personnel. In December 1948 there were 26,853 Air Force civilian personnel employed overseas and by December 1951 this number had increased to 31,850;* by the latter date approximately one ninth of the civilian personnel strength of the Air Forces was employed outside the continental United States.⁸⁵ With this growth of civilian personnel strength in overseas bases it was inevitable that the need for civilian training should become more apparent and result in the development of civilian training programs overseas.

In 1948 the Pacific Air Command was carrying on a civilian training program which included on-the-job training in Telephone Repair, Fuel Service Unit Maintenance and Repair, Automatic Pilot and Teletype Repair, and Stock Record Posting Procedures. A special course in efficiency rating training attended by approximately 102 employees was conducted at Wheeler Air Force Base, Hawaii. Personnel management training was also inaugurated in PAC in 1948.

* In addition there were thousands of indigenous personnel employed by the Air Force overseas as distinguished from the AAF (American) employees listed in AF Stat. Dig. civilian personnel strength tables.

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Other Pacific Air Command civilian training activities in 1948 included the formation of a committee to work with the Hawaiian Territorial Department of Public Instruction in establishing a training program designed to provide a continuous local source of skilled labor to meet the needs of the Pacific Air Command; a survey to determine the number of employees interested in continuing their education and the types of courses desired; planning for the establishment of an apprentice training course in Airborne Radio and Radar; and the completion of course outlines in the following subjects: Ungraded Efficiency Rating, Aircraft Technical Orders, Fuel Servicing Equipment and Segregators, Military Correspondence, Aircraft Crash and Rescue Firefighting, and Employee Orientation. A formal program in firefighting training was initiated at Bellows AFB, Hawaii.

Altogether there was a total of 5,919 course completions in civilian training in the Pacific Air Command in 1948. Courses in 25 subjects were conducted in the first quarter of the year; 23 in the second quarter; 21 in the third; and 33 in the fourth.⁸⁶

The most extensive of the overseas civilian training programs was probably the one developed by the Far East Air Forces. FEAF had 11,784 civilian employees in December 1951, the largest civilian personnel complement of all the overseas commands, constituting over one-third of the total USAF overseas civilian personnel strength of 31,850.⁸⁷

The development of the FEAF civilian training program was in large measure stimulated by the increasing realization of the great need for the training of Japanese personnel employed by the Air Force. From 1945 to 1947 Japanese employees of the Occupation Forces were a conscription type labor group and little consideration was given to the problem of

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obtaining full production from this labor source. When management realized that a system for the more effective use of this work force had to be devised, a training program was initiated. There were many problems to be solved. Some of the major problems were: the language barrier, customs peculiar to the people, lack of technological capability, and a lack of mutual understanding and trust between the Japanese and Americans. There were also many minor problems to be surmounted--work habits, lack of safety consciousness, mechanical ignorance, poor maintenance and repair procedures, etc.⁸⁸

Extensive training for Japanese personnel in the Supply area of the Japan Air Materiel Area was started in mid-1948. Courses given included posting, warehousing, and inventory. It was soon realized, however, that some problems could not be solved solely through training in job knowledge and practice, and that instruction for Japanese supervisory personnel on the principles, techniques and procedures of management was just as important as for DAFC personnel (American civilian personnel), in order to bring about full utilization of this work force.

Hence a management course was initiated for Japanese personnel in Supply. The Air Service Command management course for civilian personnel was hastily translated by persons who had no knowledge of the management training program and gave little consideration to the differences between Japanese and American personnel in habits, ways of thinking, manner of expression, and general background. As a result deficiencies were noted in the course material after some classes had been conducted by Japanese instructors from the Supply Group. It was also apparent that the instructors lacked a knowledge of teaching techniques [a difficulty which had been noted in the carrying on of supervisory and management courses in the continental United States].⁸⁹

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Therefore the job of revising the course was given to the Civilian Training function. In August 1949 the Training Branch of the Central Civilian Personnel Office, Far East Air Materiel Command (formerly the Japanese Air Materiel Area) made a survey of the requirements for instructor personnel at FEANCOM Air Base, FEAF Base, and Showa Sub-Base. Mr. Dixon Miyauchi, a DAFC employee, headed this project under the supervision of Mr. H. G. Robinson, Director of Civilian Training, FEANCOM. Also a review of course material, headed by Mr. Takezawa, was started in an effort to make it more suitable for use by Japanese personnel. The Air Service Command, the USAF Primary and Basic Management, and the AAF Personnel Management courses were used in preparing a second and revised edition of the course. The new course proved far superior to the old one and in March 1950 the 20 two-hour conference outlines which became the standard edition for Japan-wide use were completed.⁹⁰

Later a third edition of this management course for Japanese personnel was prepared under the supervision of FEAF Headquarters. This course was lengthened from 20 to 22 conferences and devoted more time to certain subjects without introducing new material. It was first used in February 1952.

The first institute for instructors was held at FEANCOM Air Base, 3-25 October 1949, before the second edition of the management course material was completed. Approximately 20 supervisors from the Far East Air Materiel Command, Mr. Shimura from FEAF Base, and Mr. Sasaki and another person from Showa Sub-Base attended this institute.

Classes in management were conducted at FEAF Base and at FEANCOM Air Base by graduates of this first institute. The need for instructors at other Air Force installations in Japan soon became evident, however, and a second institute was held by Headquarters, FEAF, 10 April-5 May 1950. This was

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the first instructor institute to be conducted under the auspices of FEAF.

Held at Waseda University in Tokyo under the auspices of Headquarters FEAF this was the first Japan-wide instructor institute. It was for the purpose of training full-time instructors for the Central Civilian Personnel Offices at the Far East Materiel Command and Fifth Air Force. The directors were Mr. Levine (Headquarters, FEAF), Mr. Robinson (FEAMCOM), and Mr. Hutchinson (Fifth Air Force), all from the Civilian Training functions. Japanese personnel acted as chief instructors and assistants. Twenty students from Air Force installations, four from Japanese government agencies, and four from Japanese universities were enrolled in the course. Lectures were given in English, conferences were in Japanese. Despite the resultant language difficulties 20 trainees (19 Air Force Japanese personnel and 1 from the Japanese agencies) were graduated and became the first full-time management instructors. They returned to their installations, started selling the training program to American and Japanese supervisors, and set up classes. The efforts of these pioneers were recognized by management and became the basis for the full program which developed later.⁹¹

A third institute* was completed on 17 November 1950, graduating 34 persons from Air Force installations in Japan, 20 Okinawans from Air Force and Army units in the Ryuku Islands, and 13 persons from Japanese private industry. Headed by Mr. Shimamura, Japanese employees of the USAF who had graduated from the first FEAF institute acted as instructors.

* The second institute conducted by FEAF.

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A fourth instructor institute* was held 4-29 June 1951 at the Armed Forces Education Center in Tokyo. It was attended by 23 Air Force Japanese employees, 15 Okinawans from Army and Air Force installations, and 18 persons from the Army's Japan Logistical Command.

Meanwhile Japanese private industry and the Japanese government became interested in the management training program. Members of the Japan Personnel Research Association attended a 2-day introductory course in management held by Mr. Shimamura immediately after the June 1951 institute. Later similar meetings were held in cities throughout Japan. Filled with enthusiasm concerning management training, leaders in private industry wished to initiate a similar program; the Japanese Ministry of International Trade and Industry negotiated with Headquarters FM/F and secured permission to send potential instructors to the second FLAF institute in November 1950 and to reprint the course material for their own use. This resulted in the initiation by the Japanese government of a management training program for private industry. By July 1952 there were 256 instructors in this program and they had trained approximately 26,000 supervisors in about 900 different organizations.⁹² This constituted a sincere tribute to the effectiveness of the FLAF Management Training Program.

Headquarters, Japan Logistical Command, an Army organization which employed about three times as many Japanese as the Air Force, also became interested in management training. It borrowed Mr. Shimamura, one of the Air Force's best instructors, to conduct a school for top-level Japanese supervisors. Later the Army initiated a management training program headed by Mr. Shimamura who was transferred with Air Force consent. After the third

* The third institute conducted by FLAF.

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FEAF instructor institute all such institutes were conducted by the Army under the supervision of Saimamura. The Air Force, and later, the Navy, were allotted spaces at these institutes, making this phase of civilian training an interservice affair.

In 1949, as a part of setting up a more extensive training program for Japanese personnel a Translation and Reproduction Unit of the Training Division, Central Civilian Personnel Office, Japan Air Materiel Area, FANCOM Base, was organized. Its function was to translate training materials into the Japanese language and to reproduce them for use in the training of Japanese personnel.* This Unit made possible an extensive and well organized training program. It continuously provided materials and services for all Air Force activities in Japan, Okinawa, and Korea.⁹³

The outbreak of the Korean conflict necessitated the utilization of Japanese employees in order to release airmen--to achieve this a more extensive training program became requisite. English, typing, orientation, and trade skills were taught to raise the efficiency of the Japanese employees. As the management instructors were the only Japanese employees who had received any training in instructor techniques, they formed the backbone of the training program in the various skills areas, serving as instructors until more specialized instructors could be trained.⁹⁴

The FEAF also conducted training for its American civilian employees (DAFC employees). In most cases the first groups of American employees had some specialty for which they had been hired, but a review of this work force led to a decision that steps should be taken to improve its capabilities.

* The Unit purchased Japanese typewriters and mimeograph machines, and made its own stencils and reproduced its own materials.

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Some bases instituted training programs in 1946 but there was no coordinated FEAF-wide program until a Training Division was organized in the Directorate of Civilian Personnel, Headquarters, FEAF, in 1948.

The following training was offered to DAFC employees: orientation, management training, administrative courses (clerical courses for clerks, typists, and stenographers), skills training (both within the theater and in the Zone of the Interior), personnel administration (by assignment to courses offered at Denver University), and special indoctrination courses (such as short courses on the responsibilities of an Air Force employee in a foreign land, on traffic laws, legal procedures affecting American citizens, etc.).

It was estimated that 40 percent of the cadre of DAFC personnel originally assigned to the Far East Air Forces worked five or more years in their assignments or in one at a higher level, and that many of these received one or more courses offered under the training program.⁹⁵ Of the two phases of the FEAF civilian training program, the Japanese phase and the DAFC phase, the first is the more outstanding because of the many difficulties and problems involved and the originality displayed in meeting them successfully. The training of Japanese civilian employees to be more effective workers for the USAF was also significant in that it pointed the way to a more effective utilization of manpower in a global Air Force.

Civilian training activities were also conducted in other Air Force commands and installations overseas. The Air Transport Command also showed an awareness of overseas civilian training needs in 1946 when it sent a civilian training administrator to assist in solving civilian training problems at an Air Force installation in the Azores Islands.⁹⁶ In 1947-1948

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French nationals were being trained at Orly Field to replace enlisted personnel.⁹⁷

A program for the training of German nationals for office positions at U.S. Army Air Force installations in the Wiesbaden area began prior to the end of 1945. As it was the policy of the War Department to deploy as many military personnel as possible to the continental United States for possible discharge, there was a definite need for the training of local personnel for the performance of tasks involving no security risks, such as the typing and processing of correspondence on unclassified subjects. The redeployment program also made it necessary to give on-the-job training to many German nationals in the Wiesbaden area for responsible positions in motor vehicle maintenance. There was also an orientation program for newly hired German nationals in operation in late 1945 and early 1946.⁹⁸

By the end of December 1945 USAFE already had a total of 21,850 German nationals as employees.⁹⁹ It soon became evident that an organized training program must be set up for the effective utilization of these employees, especially now that military personnel deployed to the Continental United States were being replaced with German civilian personnel. By the end of 1946 the improvement of supervisory personnel had been established as the first goal to be attained in the training of German nationals.¹⁰⁰

In March 1947 a two-weeks conference of training specialists from the various subordinate commands of USAFE was held at Headquarters, USAFE. At this conference the USAFE was held at Headquarters, USAFE. At this conference the USAFE civilian training program was outlined, together with plans for the standardization of such training throughout the command.

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Training techniques and practices were taken up, and emphasis was placed on the training of supervisors through the conference method.¹⁰¹

As there were not sufficient qualified German civilian personnel technicians to implement the program for the maximum utilization of all available employees, installations subordinate to Headquarters, USAFE, were encouraged to survey their requirements and to select personnel to receive the OJT (on-the-job training) and the off-job training offered by Headquarters, EUCOM.* Also an institute in civilian training techniques was conducted at USAFE Headquarters. A result of this institute was the initiation of supervisory training for German personnel in the three fields of Job Instruction Training, Job Methods Improvement, and Job Relations.¹⁰²

A decision made in the last quarter of 1947 to utilize German nationals for guard duty made it necessary to set up a training course for civilian guards. They needed considerable training in the English language, pass-checking procedures, the use and handling of weapons, etc.

This and other training tasks prompted the calling of a training conference at Headquarters, USAFE, which was held 18-20 November 1947. Forty-two representatives of USAFE subordinate commands attended, 14 of them being German nationals. The training of civilian guards and industrial police was the main topic of discussion at this conference, with emphasis being placed on USAFE Letter No. 40-9, 22 October 1947, Training Outline for Civilian Guards and Industrial Police.¹⁰³

As a result of the continued redeployment of its military personnel USAFE set up two other training projects for its German employees in 1947.

* Headquarters, European Command (EUCOM) was the name given to the U.S. Army Headquarters then located at Frankfurt/Main, Germany.

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One was for the training of fire fighters and the other for training automobile drivers. The drivers, for instance, had to be taught enough English to read the important signs in U.S. military installations, and were given 14 days of instruction to familiarize them with the principal types of American vehicles.¹⁰⁴

In 1948 the USAFM civilian training program was considerably affected by the course of international relations--in particular the Russian blockade of Berlin and its frustration by the Berlin airlift. In April of 1948, after the beginning of the crisis in Berlin, a conference was held at Headquarters, USAFM, on the techniques to be employed in the prevention of subversive acts. It was attended by about 50 persons; personnel from the Office of Military Government for Land Hesse and Headquarters, MOCG, as well as representatives from the various echelons of USAFM.¹⁰⁵

Later events incidental to the phase-out of the Berlin airlift retarded the development of the USAFM management (supervisory) training program,¹⁰⁶ and it was not until April of 1949 that another supervisory management institute was held. German training technicians from all USAFM installations participated.¹⁰⁷ By the end of 1949 management training (the USAFM Supervisory Management Course) was being presented to both American and German personnel. Requests were received for better outlines and training aids for this course and plans were made to establish a central library of all course outlines, which were to be available in the first six months of 1950. Central and branch film libraries were also made directly available for use by the training sections of USAFM installations.¹⁰⁸

Other USAFM training developments in 1949 included plans for a more extensive civilian training program. The Civilian Training Division of

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the Directorate of Civilian Personnel, Headquarters, USAFE, planned for "closer direction of a comprehensive civilian training program." This was to be accomplished by staff visits, a greater development of supervisor training, the development of a new training division,* and a broader use of on-the-job training facilities.¹⁰⁹

There were two other significant civilian training developments in USAFE in 1949. One was the operation of a Classification Training School at Erding Air Base in October 1949 for the purpose of indoctrinating German position classifiers from USF installations in American concepts of evaluation and classification.¹¹⁰ This venture into the field of civilian personnel administration training was the natural result of the growth in the number of German nationals employed by USAFE and of the increase in the scope of their job activities.⁴

The second development was the initiation of a policy of using the facilities of the EUCOM Engineer School at Murnau, Bavaria, for the training of German civilians employed by USAFE. A total of 277 German nationals from USAFE installations attended courses at this Engineer School in 1949, 176 in the year 1950, and 187 attended in 1951. Seventeen different courses were offered in the period under survey, including such subjects as Ignition and Carburetion, Refrigeration Mechanic, Crane Operator, and Ordnance Motor Maintenance Mechanic. During this period, however, available sources indicate that by far the greater part of the

* A separate training division at Headquarters, USAFE, was established 11 July 1949.

⁴ For instance German nationals were authorized for employment in aircraft maintenance positions in the last quarter of 1948. See USAFE Training Survey, 1945-1951, p. 6.

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training given to the German employees of USAFE was pre-job or on-the-job training, or was done by the conference method.¹¹¹

In the first half of 1950 new course materials in English for the USAFE Supervisory Management (USAF Primary Management) Course were completed. An instructors institute for U.S. representatives (DAF civilian training personnel) of USAFE installations was held at Garmisch from 8-12 May 1950. One German training technician attended this institute. The German version of this course was implemented with a management training institute for all German training technicians conducted 16-25 August 1950. In the first six months of 1950 considerable progress was also made in the organization of training materials; course materials for 105 different civilian training courses were assembled in one central reference bureau in the Training Division.¹¹²

In 1950 the Training Division also made plans for the preparation and publication of a USAFE Civilian Training policy; for a review of the special training requirements for USAFE industrial police; and for an intensification of safety training for German employees. The Training Division also assisted the Utilization Division in planning and preparing for a USAFE Employee Utilization Conference to be held at Bad Kissengen, Germany, in August 1950.¹¹³

In 1951 the Training Division,* Headquarters, USAFE, continued to expand the scope of its training activities. In the first half of 1951 it developed a training course for the implementation of the new Air Force Employee Rating Program; prepared and transmitted to subordinate commands

* At this time Mr. Burdette Barth was the Chief of the Training Division, Directorate of Civilian Personnel, Headquarters, USAFE. He served in this capacity from 26 September 1949 to 1 July 1953. See USAFE Training Survey, 1945-1951, Inclosure No. 1, p. 1.

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a letter covering the USAFE Civilian Orientation Program; developed materials for an installation clerical testing program; sent out management training materials to installations in the field; and selected employees to attend courses at the Air Force School of Civilian Administration.¹¹⁴

Plans were also made in early 1951 for the preparation of course outlines covering the major areas of civilian training involved in the USAFE mission, and for their dissemination to subordinate commands as an aid in meeting their training needs.¹¹⁵ Skills training, which had begun in 1947* as a result of supervisory training, was given on a large scale in 1951. Statistical reports indicate that 6,975 employees received 62,778 trainee hours during the first quarter of 1951, and 7,641 employees were in training during the third quarter of 1951 with a total of 81,073 trainee hours.¹¹⁶

In addition to the training courses carried on at USAFE installations, there was also considerable off-base training accomplished. In 1950-1951 thirteen off-base safety training courses for USAFE civilian employees were arranged for at German factories and governmental agencies. In the period 1949-1951 a total of 21 USAFE employees attended the Air Force School for Civilian Administration at Denver, Colorado.¹¹⁷

In summing up the civilian training activities of USAFE, it is evident that they centered around management and skills training. Management institutes were conducted for DAF and German training technicians in order to train them to carry on management and supervisor training for the supervisory personnel of USAFE, both DAFC and German. This, in turn, promoted the development of on-the-job training at USAFE installations

* Prior to 1947 the major training accomplished was in the field of clerical training.

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and made possible the accomplishment of training in a wider variety of skills. EUCOM facilities were also used in giving skills training to USAFE civilian personnel. USAFE also used other outside (off-base) facilities for the training of its civilian personnel. These included German factories, governmental facilities, and the Air Force School for Civilian Personnel Administration at Denver, Colorado. These off-base facilities were used to give specialist and professional training as well as skills training to USAFE civilian personnel. By 1951 USAFE had a well-organized civilian training program and had provided such training facilities as film libraries, collections of course outlines, etc. Like FEAF the United States Air Forces in Europe placed a good deal of emphasis on the training of indigeneous personnel.

Civilian training programs were set up in other overseas commands. The Philippines Command (Air Force) and Thirteenth Air Force, for instance, issued a regulation on 5 February 1951 providing for the establishment and maintenance of a civilian training program to improve the efficiency, skill, and knowledge of the command's civilian employees.* Two important objectives of this program were to reduce recruitment from the Zone of Interior and to provide replacements for vacancies created by repatriation.¹¹⁸

The available evidence would indicate, however, that as of the end of 1951 FEAF and USAFE had the largest, and the best organized and most effective, overseas civilian training programs. In general, however,

* This superseded Philippines Command (Air Force) and Thirteenth Air Force Regulation 40-5, 5 May 1950.

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civilian training had not received as much attention at overseas installations as it had in the Zone of Interior, and much remained to be done. It was becoming increasingly important that the Air Force civilian training program should be established on a truly world-wide basis as the Air Force faced the new problems of personnel procurement and utilization involved in building up its far-flung lines of bases on a global scale.

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Chapter VI

SUMMARY

The real history of civilian training in the Air Force began in the winter of 1940 when the effects of the war emergency expansion program came to be felt. Prior to the outbreak of World War II, there had been no training problem insofar as civilian employees were concerned. As late as the summer of 1940 the Air Corps was not concerned over the supply of trained civilian personnel. In the winter of 1940-1941 the Air Corps came to the realization that it had a major civilian training problem.

It was recognized that it was no longer possible for the Civil Service Commission to furnish fully qualified personnel and that the services themselves would have to see that the necessary training was provided. In July 1941 the War Department issued a memorandum setting forth a specific policy on civilian training for all components of the Army. On 20 October a supplementary War Department Memorandum provided for the organization of civilian training in the War Department and its components, and authorized training positions. A Director of Civilian Personnel and Training was set up to head the War Department's civilian training program.

Meanwhile the Army Air Corps had started its own civilian training program in order to meet the problems created by the employment of large numbers of untrained civilian personnel to carry out the great expansion program authorized by Congress. A Chief of Training and Placement was set up in the Civilian Personnel Division, OCAG; a Training Unit was set up in the Training and Placement Section; and in the summer of 1941 three training specialists were added. This Training Unit pertained to department employees of the air arm, not to those in the field.

The Air Corps civilian training program received a great impetus from a conference of Maintenance Command training officers held at Wright Field on 3-6 September 1941. The recommendations made at this meeting by the training officers of the depots laid the foundations for the development of the Air Force civilian training program, and were implemented by the issuance on 18 September 1941 of a Maintenance Command directive, subject, Standardization of Civilian Training at Air Corps Depots.

One of the first and fundamental steps taken in the development of a civilian training program by the Air Corps was the compiling of job analyses of specific types of occupations or jobs, by the various depots. These job analyses, or step-by-step job breakdowns, were the basic necessity in reducing occupational techniques and processes to the instructional levels required for the training of unskilled workers. The Ogden Air Depot pioneered in this work which laid the foundation for a vast development of training materials and methods.

The Air Service Command, which replaced the Maintenance Command in October 1941, had the greatest expansion of civilian personnel strength of any component of the Air Corps. As the Air Service Command hired more and more civilians to carry on the vital tasks of aircraft supply and maintenance in its expanding system of depots and subdepots its training needs grew by leaps and bounds. In order to meet these needs the training officials of the ASC worked with state and federal vocational training officials to facilitate the training of ASC depot and subdepot personnel in public and private trade schools under the supervision of State Boards of Vocational Education.

The existing apprenticeship and NYA programs for civilian training were found to be totally inadequate to meet the needs of the war emergency and were soon discontinued. The ASC developed its own training schools and turned to state and federal sources for aid in training their employees.

A major factor was the assistance received under the National Defense Training Program, under which funds appropriated by Congress were used for the vocational education of defense workers. This program was administered by an agency designated as VEND, Vocational Education for National Defense.

In mid-1941 the ASC depots began to use the funds and services available to them through this program. Working with the state directors of vocational training, the depot commanders could secure the establishment of new schools for depot and subdepot use; existing public schools might be converted for depot use; privately owned schools could be converted to depot use by contract arrangement; new courses introduced into schools already in depot use. Funds especially appropriated by Congress for general defense training purposes were used to finance such training arrangements, thereby saving Air Force funds for other purposes.

These off-reservation or tied schools, financed out of National Defense Training funds, and administered by local directors appointed by local or state boards of vocational education, trained many thousands of workers for the Air Corps in the critical period of rapid expansion when trained workers were not available on the labor market.

In addition to enacting legislation making funds available for vocational training, Congress also helped the Air Corps civilian training program by the passage of an act of July 2, 1940, which authorized the hiring of persons lacking the necessary job qualifications and permitted

them to be trained after they were hired. This gave the Air Corps a firm legal basis for the hiring of untrained persons and putting them on the payroll while they were in training for productive work. If the Air Corps had not been able to pay substantial salaries to trainees it could not have competed with private concerns and other government agencies in a contracting labor market.

The four original depots, Middletown, San Antonio, Sacramento, and Fairfield, took the lead in developing independent training programs in 1941, each experimenting with a different phase of training. In-service training was featured at Middletown; a large tied-school program was set up by San Antonio Air Depot, working in cooperation with the State of Texas Vocational School Department. Sacramento developed a widespread program which encompassed the integration of vocational and other schools within a radius of 100 miles. Fairfield Air Depot confined its civilian training to some fifteen courses in basic maintenance work conducted on the reservation. These depots were also responsible for the training of cadres of civilian employees to staff five new depots which were to be activated in 1942.

The training programs developed by these depots represented the first step in solving the tremendous training problem which confronted the Air Corps. This problem is illustrated by the fact that the civilian personnel strength of the Air Corps in the continental United States, which was 62,418 in December 1941, rose to 274,980 in December 1942, an increase of over 400 percent in twelve months. In the Air Service Command, the largest employer of civilians, personnel strength increased from 31,292 to 207,603 in the 12 months of 1942, an increase of over 650 percent.

The total civilian personnel strength of the AAF reached its wartime peak of 422, 157 in October 1944. At its peak civilian strength in October 1943 the ASC had 316,956 civilian employees. Most of these employees had to be trained before they could handle their full share of productive work.

When the rate of expansion of civilian personnel strength slowed down there was still the problem of training replacements. By 1943 the supply of skilled labor was almost completely exhausted and women and handicapped personnel had to be hired and trained to replace drafted personnel and losses from turnover. Later a cutting of personnel complements made the training problem one of raising each worker to his or her peak efficiency.

The Air Service Command, with its great preponderance of civilian employees, had the greatest civilian training problem of all the commands and, in meeting this problem, developed a comprehensive and well organized civilian training program which served as a model for the Air Force-wide civilian training program which eventually developed. As pointed out, the Maintenance Command, predecessor of the ASC, took the first steps toward the development of a comprehensive civilian training program.

Soon after the Air Service Command replaced Maintenance Command it was seen that an over-all training plan for the Command must be formulated and issued as ASC Headquarters policy in view of the expansion of the Command's civilian strength. Therefore Headquarters, ASC, issued a "Plan for Air Depot and Sub-Depot Training" in March 1942. This plan was designed to give greater uniformity of both administrative and operational training practices. This plan was not issued as a directive although it was backed by the authority given to it by the inclusion of some pertinent directives of an earlier date.

On 18 January 1943 Headquarters, ASC, published the first really complete and comprehensive plan for civilian training, issuing it as ACS Regulation 50-1, Plan for Civilian Training. This was the policy directive of the Command and was to be followed by the operating echelons in carrying on the ASC civilian training program. Put out as a large-size publication, well printed and profusely illustrated, the Plan covered 288 pages and took in every phase of civilian training--the training organization and personnel, organization charts, the major categories of training (pre-service training, inservice training, instructor training, and management training), trainees, training programs, depots and subdepots, upgrade training, cooperative schools, instructional materials, informational and instructors' guides, training aids, and outlines of courses.

About eight months later AAF Headquarters made its first official pronouncement of AAF civilian training policy with the issuance of AAF Regulation 40-6, 1 September 1943, which delineated responsibility for the training of civilian personnel in the AAF. The Assistant Chief of Air Staff, Personnel, was designated to coordinate the planning, development, and administration of civilian training. This regulation was superseded by AAF Regulation No. 40-6, 11 December 1943, which set forth the same general policy and also provided that AC/AS-Personnel was to plan, install, and conduct any civilian training programs needed at AAF Headquarters.

Civilian training was finally separated from military training in the AAF Headquarters organization and a Training Branch was set up in the Civilian Personnel Division, AC/AS-Personnel. This change was in effect in 1943.

At the end of 1943 AAF Headquarters inaugurated a review of the entire AAF civilian training set-up with the intent of integrating the various AAF civilian training programs into one Air Force-wide civilian training program. This, of course, did not include the Civilian Flying Training Program. To accomplish this civilian training officers representing 11 different commands and air forces met at AAF Headquarters on 11-15 January 1944 to survey existing AAF civilian training programs and to make recommendations for an over-all AAF civilian training program.

This Headquarters conference of training officers submitted a report summing up the status of civilian training in the Air Force. According to this report the ASC had an adequate civilian training program in operation. The Materiel Command and the Training Command had programs but they were not adequate to meet their new training needs. The other commands and the air forces had no organized civilian training programs. Various other AAF civilian training deficiencies were pointed out.

Also the conference submitted a long list of recommendations to AAF Headquarters. It recommended that Headquarters should approve the ASC and TWI supervisor training courses for Air Force-wide use; that there should be a general orientation program for all new employees; that a civilian training division with adequate staff and facilities should be maintained at AAF Headquarters; and the initiation of several other measures to improve civilian training. The most important recommendation was one calling for a revision of AAF Regulation 40-6 on civilian training in order to outline in detail the policy and procedures to be followed in establishing and maintaining an Air Force-wide civilian training program. A proposed regulation containing the recommended revisions was included.

On 6 March 1944 Headquarters, AAF, issued a revision of AAF Regulation 40-6. This revision was essentially the proposed regulation submitted by the training officers conference. It formulated the first Air Force-wide civilian training program and defined its mission, scope, and activities in detail. The AAF civilian training program was to be developed and directed by AC/AS, Personnel, Headquarters, AAF. Its mission was : 1) to conserve manpower by increasing the productivity of civilian employees, 2) to permit the AAF to employ potentially qualified persons, 3) to reduce wastage of materiel, 4) to reduce accidents.

There were to be three major types of training: preservice training, defined as training given to an employee prior to assignment to productive work; upgrade training, defined as training to prepare an employee for a higher skill; and supervisory training, which was training in the principles of supervision. In terms of location there were to be on-reservation and off-reservation training. The first was instruction given by War Department (AAF) personnel in facilities provided by the AAF; the second was defined as the training of AAF employees in public schools, private schools, and factory schools. Two methods of training were to be used, group training and on-the-job training.

The civilian training responsibilities of AAF Headquarters were outlined in the regulation in considerable detail, as were those of the individual air force and command headquarters and of each AAF station employing civilian personnel. The regulation also dealt with such matters as coordination of the use of civilian training facilities, procedures for arranging contract training, and cooperation between military training officials and civilian training officials in order to achieve maximum use of training facilities.

Thus, finally, an official AAF training policy was established and the framework for an Air Force-wide civilian training program was provided. This regulation, with minor changes, remained the official expression of civilian training policy until 5 May 1947 when a new civilian training regulation revised the policy and program in the light of postwar developments.

Now the [civilian] Training Branch at AAF Headquarters established three civilian training liaison offices in the field to provide more expeditious assistance in training to various AAF organizations in the field. A civilian training reference service was set up by the Training Branch of the Civilian Personnel Division, AC/AS, Personnel, and measures were taken by AAF Headquarters to get a supervisor training program underway by holding a master institute at Patterson Field, Dayton, Ohio, in July 1944 to train supervisor training conference leaders for the various commands and air forces.

On 2 August 1944 AAF Headquarters issued AAF Regulation No. 40-11, Supervisor Training Programs, setting up an approved supervisor training program which was required to be conducted in all the commands and air forces. This was followed by AAF Letter 40-23, 9 August 1944, which stated that the Air Service Command 52-hour supervisor training course had been approved for use by all the AAF commands and air forces, and that the use of the Training Within Industry supervisor training program and facilities would be discontinued.

The civilian training program conducted within AAF Headquarters was also reorganized and more closely integrated under the supervision of the Training Branch of the Civilian Personnel Division, AC/AS, Personnel.

The Training Branch conducted an extensive training program in AAF Headquarters until the end of the war. It included supervisor training, clerical training, orientation, and special courses in various phases of civilian personnel administration. In addition, of course, the Training Branch had the responsibility for the general supervision and direction of the Air Force-wide civilian training program.

Training officials of the Air Service Command played a dominant role in the development of the over-all AAF civilian training policy and program and took the lead in putting them into effect. The AAF Training Command and its subordinate commands were also active in carrying on the civilian training program, being second only to ASC in their civilian training activities.

In November 1944 training officials from the Office of the Secretary of War met with the Training Branch, Civilian Personnel Division, AC/AS, Personnel, to review the status of civilian training at the various AAF field stations. It was found that civilian training had sunk to a low ebb at many installations in January 1944 after the transfer of the subdepots from ASC to the using stations had been completed. Later there was a revival of civilian training at these bases. At this time, however, reports indicated that some commands and air force headquarters were still not cognizant of the needs of their field stations in regard to civilian training and were not giving it the necessary emphasis.

At this meeting there was also discussed the advisability of emphasizing on-the-job training and of reviving apprenticeship training now that the period of great expansion was over and the preservice training of new workers was no longer a pressing problem. Apprenticeship training, however, did not become a factor in the civilian training program until the war was over.

On the other hand there was an increasing emphasis on the development and use of an extensive on-the-job training program in 1944-1945. As the number of employees requiring initial training declined, and as assembly line production methods now broke jobs down into easily assimilated units, on-the-job training became practical. Furthermore, it was much more economical than off-reservation training. The emphasis on on-the-job training was especially important as a part of the program for the maximum utilization of personnel which the AAF had embarked upon as a result of the critical manpower shortage.

Also emphasized as an important factor in securing maximum utilization of personnel was the supervisor training program. Supervisors trained in the principles of job management, job methods, job instruction, and job relations could get more work done with fewer people. Also they could serve as on-the-job training instructors.

Quarterly and semi-annual personnel utilization reports indicated that where effective civilian training programs were in operation they had made substantial contributions to the maximum utilization of civilian personnel, and this was especially true of supervisor training. Safety training, too, made its contributions by cutting down on man hours lost as a result of accidents.

Reports from Air Technical Service Command (successor to the ASC) installations indicated savings to the Air Force of millions of dollars and millions of man hours resulting from the civilian training program. Many of the benefits actually accruing from the civilian training program were intangible and could not be measured in terms of dollars and hours saved. The most important contribution made by the AAF civilian training

program was its contribution to the success of the Air Force mission which helped bring the war to a quicker close and save countless lives.

The decline of the civilian strength of the AAF, which began by the end of November 1944, had its effect on the civilian training program which began to contract at a rapid rate after the reduction-in-force process launched in the fall of 1945 decimated the ranks of civilian employees. In many installations the civilian training organizations were crippled when training personnel left the government service to seek job security and better salaries elsewhere. By 25 September 1945 all contracts for the training of AAF clerical personnel had been terminated, as had the majority of the other types of contract training.

Now there was a need to reorient the civilian training program to meet a transition to peacetime conditions--the Civilian Personnel Division, AC/AS-1, felt that supervisor training and refresher courses for typists and stenographers should be continued in AAF Headquarters, and in the field the emphasis should be put on apprenticeship and veterans training. Orientation, apprentice training, the training or retraining of employed veterans, supervisor training, and instructor training were stressed by the War Department in a Civilian Personnel Regulation issued 14 November 1945.

AAF Regulation No. 40-19, issued 16 November 1945, outlined the aims of the AAF in its postwar civilian training program. The emphasis was to shift to the following primary types of training: apprentice training, on-the-job training, supervisor and manager training, safety and first aid training, short courses on special subjects, and orientation for new employees. These aims were essentially the same as those outlined in the

War Department Civilian Personnel Regulation of 14 November. In the shift to a peacetime status the AAF civilian training program, like the Air Force itself, was to suffer from neglect and sink to a low level of activity before the rebuilding of American airpower after June 1950 led to a revival of interest in civilian training.

During the war years the AAF civilian training program was very comprehensive, covering a multitude of different courses in many fields of training and involving several subprograms. The most important training developments of the war years were as follows:

1. The Mechanic Learner Program. Under this program many thousands of unskilled and untrained civilian employees were hired by the AAF as junior mechanic learners and trained for productive work. Under this program, which started in 1941 and was in uniform operation in the depots by February 1942, mechanic learners were hired at salaries ranging from \$900 to \$1200 per annum and trained for a period not to exceed six months at any vocational educational facilities available and suitable--private or public civilian schools, factories or post schools. The mechanic learner program was successful in meeting the great need for trained maintenance and supply personnel in the period of emergency expansion. The program was reduced in scope when the hiring of new employees was reduced and civilian personnel strength fell off; however, it remained in operation until federal funds were cut off in 1945.
2. Jurisdictional Conflicts and Other Training Problems. It was inevitable that such a complex and widely diversified operation as the AAF civilian training program should develop jurisdictional conflicts, and that various other problems would arise. The most serious jurisdictional

conflict arose in the control and supervision of contract training in schools and factories. Arrangements for such training for AAF civilian personnel had to be made through AAF Headquarters and the Technical Training Command. This led to delays and complications which proved most frustrating, especially to the ASC which felt it should be able to deal directly with outside schools and factories in arranging training for its civilian employees. Although this difficulty was considerably relieved when TTC delegated to ASC jurisdiction over the training of civilian employees for depots and subdepots in public vocational schools, the procedure for making arrangements for the training of civilians in private contract and factory schools remained complicated and involved going through many channels.

There were also other problems which arose in the civilian training program. One was the difficulty in securing adequate training personnel-- a situation which arose largely from the fact that the AAF didn't pay salaries to training personnel equal to those paid by private industry. Another problem was that of securing qualified training officers.

In many cases a major problem was involved in the failure of commanding officers and operating officials to cooperate with training officials. Also cooperation between AAF training officials and the off-reservation training school officials was sometimes very poor. Manpower cuts, high turnover, restrictions on the printing of training materials, heavy workloads, inadequate training staffs and facilities, and many other problems had to be coped with in carrying on the AAF civilian training program. All these problems were not fully resolved, but those whose solution was essential were overcome, and the civilian training needs of the Air Force were met.

3. Off-Reservation Schools. This term was used to refer to private and public schools conducting civilian training for the AAF under arrangements made through a state board of vocational education, and using funds appropriated in accordance with the act of June 27, 1940. The first school of this type was established in 1941 by an agreement between San Antonio Air Depot and the Texas State Board for Vocational Education. By 1942 a standard form of agreement had been formulated for use in making such training arrangements.

The majority of the training done by the off-reservation schools was preservice training of maintenance workers (preservice training for supply personnel was generally given on the post). By 1 August 1943 there were 31 such schools available for the preservice training of maintenance workers, and nine depot schools doing preservice training. In 1944 a list of 400 public vocational schools and colleges with aviation service training facilities available to the AAF, and supported by Federal Vocational Education funds, was published by the Civilian Personnel Division, AC/AS, Personnel.

Although there were some serious problems involved in the use of off-reservation schools, particularly in regard to cooperation between school officials and the Air Force training officials, the off-reservation training program offered many advantages and provided the AAF with good workers in great numbers--more of them than could have been provided in any other way in the period of emergency expansion.

After the great expansion of personnel ended, off-reservation training was reduced and by the last quarter of 1943 there was little preservice training done away from the post. The vocational defense training program,

however, continued to operate until the federal funds were cut off in 1945.

4. Contract Schools. These were private vocational schools which trained civilian employees for AAF agencies on a contract basis in return for a specified tuition. Contract training was paid for out of AAF funds. Contract schools were not used in large numbers, but served a useful purpose as they gave flexibility to the AAF civilian training program by making available a wide variety of training not obtainable elsewhere.

In 1944 and 1945 contract schools were used to fill training gaps caused by the closing of off-reservation schools, and particularly after federal funds were no longer available for an off-reservation training program. Colleges, universities, vocational schools, and business schools, did contract training for the AAF. Specialized training (such as aircraft instrument training and clerical training) was done by contract schools. By 25 September 1945 most contracts for training had been terminated by the AAF.

5. Factory Schools. Factory schools also fulfilled special AAF training needs. They were set up and operated by manufacturing plants primarily for the training of their own employees. From time to time civilian and military personnel of the AAF were sent to these schools for training, generally to familiarize them with new types of equipment the factories were producing for the AAF. Also, factories sometimes set up special schools to meet AAF training needs.

It was official AAF policy to permit local commanders--whenever it was necessary in order to familiarize personnel with new types of airplanes,

engines, and equipment--to detail to factory schools personnel who would establish a course of instruction on their return to their home stations. Requests for such training were submitted to Headquarters, AAF, and on approval, arrangements were made by the Technical Training Command.

Factory schools were primarily used for maintenance training. This type of training was very useful to the AAF as it was the quickest and most economical way to familiarize employees with new equipment, techniques, and procedures. Factory schools were used extensively throughout the war and continued to be used in the postwar period.

6. Post Schools. Much of the AAF civilian training program was carried on in schools on the post, and as the end of the war approached there was an increasing tendency to close down off-reservation schools and to do more and more preservice training on the post. By the last quarter of 1943 comparatively few off-reservation and contract schools were left in operation and preservice training was, in general, concentrated in the post schools.

Advanced maintenance and supply training could be carried on most effectively on the post, as could instructor training and training given by mechanics trained at factory schools. Part-time training (such as supervisor training), on-the-job training, and orientation could hardly be done anywhere but on the post. Also a great deal of clerical training and other types of special training were given in the post schools.

By 1945 the activities of the post schools came to be somewhat curtailed as the manpower shortage, the decreased rate of hiring, and finally, reduction-in-force, had their effect. Another factor in diminishing the activities of post schools in 1944-1945 was the growing tendency to do preservice and other types of training on the job in the operating departments.

7. Subdepot Schools. With the great expansion of the air depots scores of subdepots were established. At first their employees were trained by the parent depots, but it eventually became necessary to set up schools in the subdepots themselves. ASC Regulation 50-1, 18 January 1943, made the commanding officers of control depots responsible for the preservice training of subdepot employees--upgrade training was a subdepot training responsibility. The subdepots also carried on supervisor training.

When the subdepots were transferred from ASC to the commands and air forces on whose installations they were located civilian training at first sank to a low ebb but soon the subdepot schools became the nuclei around which the various commands and air forces built their own civilian training programs.

8. Special Depot Schools. The special depot schools, which came into use in 1943, were established by the Air Service Command at area commands for the purpose of giving personnel of any or all area commands short courses of upgrade training in the latest procedures and equipment. They were authorized to provide only those types of training which could not be economically given in each area command.

Examples were the B-29 School at Oklahoma ATSC (1944), the Armature Rewinding School at Mobile ATSC, San Antonio's Metal Radiography School, and Fairfields' Norden Bombsight School. By January 1945 increasing numbers of such schools were being established, partly because of a contraction of local training activities and because of reports from theatres of operation indicating certain training needs.

9. Training Courses. The many and varied courses developed for the training of Air Force civilian personnel during World War II covered a vast field. This field was divided into eleven areas of training as follows: 1. Apprenticeship; 2. Clerical; 3. Inspection and Testing; 4. Management and Supervision; 5. Manual, Unskilled, and Semiskilled; 6. Orientation; 7. Protective and Personal Services; 8. Safety; 9. Skilled Trades and Crafts; 10. Supply Operations and Procedures; Technical, Scientific, and Professional. The most significant course developments were in the skilled trades and crafts, supply operations and procedures, and in management and supervision.

Many thousands of civilian employees who performed work vital to the accomplishment of the mission of the Air Force became productive workers as a result of maintenance and supply training given under the AAF civilian training program. It was in these areas (skilled trades and crafts, supply operations and procedures) that the majority of AAF civilian employees received their training.*

Also of major importance in the AAF civilian training program was supervisor training. It was probably the key course in the civilian training curriculum; certainly it was used to train the key men in the AAF civilian work force.

Supervisor training originated in the ASC in 1941 as it became evident that there was a critical need for trained supervisors. There was a tendency for each depot to develop its own course. Some depots used, or adapted to their use, the Training Within Industry course for supervisor training developed by the War Manpower Commission.

* Orientation was eventually required for all employees, but is not to be defined as training for an occupation.

Ogden Air Depot had its own supervisor training program which was developed by its Civilian Training Administrator, Mr. William E. Dewey. In the spring of 1943 Mr. Dewey and Mr. Earl Brooks worked out an official Air Service Command supervisor training program based on the Ogden program. ASC Regulation 50-10, dated 23 November 1943, directed that this training should be given to all ASC civilian employees directing the work of others. The basic supervisor training course as set up under this program was 52 hours in length.

In 1944 the ASC basic supervisor training course was revised. As taught in 1944-45 it consisted of 26 two-hour conferences held two or three times a week. The course was divided into four parts with printed conference outlines for each of the 26 conferences. The four major topics they dealt with were: 1) Instructing Techniques, 2) Job Methods Improvement Techniques, 3) Job Relations Techniques, 4) Job Management Techniques.

In addition to the 26 conferences in the basic 52-hour course there were developed advanced courses for supervisors called continuing conferences. These dealt with such topics as the manpower problem, production control, personnel procedures, etc.

In January 1944 it was recommended by the "Temporary Committee" that AAF Headquarters should approve both the ASC and the TWI courses for use throughout the AAF. AAF Regulation 40-6, issued 6 March 1944, provided for supervisor training as a part of the Air Force-wide civilian training program. Later in the year AAF Headquarters ordered the cessation of TWI training in the AAF and the ASC supervisor training program became the basis of the officially approved AAF supervisor training program, consisting of two parts, basic instruction and continuing conferences.

In March 1944 the Third Air Force announced it had set up a complete supervisor training program for its 39 installations. By the end of 1944 such a program was widely established in the AAF Training Command, and in the Air Technical Service Command. By mid-1945 most Air Force installations employing sufficient civilian personnel had supervisor training underway.

Supervisor training had its problems. One great problem was that of procuring satisfactory conference leaders to conduct the courses. Another was the difficulty in scheduling busy foremen and other supervisory personnel to attend the courses. Then some supervisory personnel were uncooperative in the conferences. Despite these problems the consensus of opinion was that supervisor training was well worth the time and money it cost. Out of supervisor training there grew a management training program which incorporated the basic principles of supervisor training and also included instruction in the more advanced concepts of management for administrative and supervisory personnel in the higher echelons. Tremendous benefits accrued to the AAF in terms of better supervision, greater production, savings of money and man-hours, and better employee relations.

In late 1944 the Training Branch of the Civilian Personnel Division, AC/AS, Personnel, working with ATSC, developed a 20-hour "Management and Supervision" course. About the same time the AAF Training Command developed the AAF Personnel Management Course, and in the summer of 1945 a training institute was held at Levner, Colorado, to train officers to give this course. Before it could be given, however, the war ended and the program was suspended except in ZFPC which actually conducted the program at its installations.

The AAF Personnel Management Course was a condensation of the basic supervisor training course and of the applied personnel management course for senior officers given at AAFTAC, Orlando, Florida. It was designed to give operating officials a thorough knowledge of the principles and procedures of personnel management and skill in their application to everyday management problems. It consisted of 10 two-hour conferences. Although the war ended before the AAF Personnel Management Program was fully implemented, this program marked the beginning of an emphasis on management training which characterized the postwar civilian training program.

The great majority of AAF civilian training during the war years was done in the areas of orientation, clerical training, the skilled trades and crafts, supply operations and procedures, and management and supervision. However, important training was done in the other areas, and in special courses or schools organized to train limited groups of civilians. The most important special training was done in the area of technical, scientific, and professional training. This included special training in the various phases of civilian personnel administration, and the training of engineering aides at colleges and universities.

As early as the summer of 1944 plans for the rehabilitation training of returned veterans were under discussion by AAF and OSW civilian training officials, but little could be done about it until the War Department concluded training agreements with the Veterans Administration. Hence it was not until 22 July 1946 that AAF Headquarters issued AAF Letter 40-10, Training of veterans in AAF installations, which gave instructions for the implementation in AAF installations of veterans training programs in

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conformity with the agreements between the War Department and the Veterans Administration (Cooperative Agreements No. I and No. II) as set forth in WD Civilian Personnel Regulation No. 50, 24 April 1946.

As noted above, the contraction of civilian training facilities began before the war ended. The massive reductions-in-force in the period 1945-1947 cut the civilian strength of the Air Force from 404,489 on 31 January 1945 to 111,730 on 31 December 1947. This reduction-in-force was accompanied by a congressional investigation of AAF civilian training activities and drastic cuts in appropriations.

The report on civilian training in the AAF for fiscal year 1947, which was submitted by AAF Headquarters to the Office of the Secretary of War for the information of the Congressional investigating committee, gave a comprehensive picture of civilian training in the period 30 June 1946-31 July 1947. It indicated that a total of 124,961 civilian employees of the AAF received training in the various areas in fiscal 1947. Safety training, management and supervisor training, orientation, clerical training, and protective training (for guards, firemen, and police), in that order, led in numbers of trainees. Five installations reported apprentice training, which now resumed a place in the civilian training program after being discarded in 1942. Supervisor and management training was the most widespread form of training, 62 installations having training in this area.

Indicating postwar trends in civilian training, the report stated that the AAF civilian training program no longer included preservice or pre-induction training, or training in the basic skills; all training now was to increase the efficiency of employees who had already qualified for their jobs.

According to evaluations given in this report benefits accruing to the Air Force from civilian training repaid the costs many times over. It was estimated that management and supervisor training alone had resulted in savings of millions of dollars to the AAF through improved job methods and management practices, and better employee relations. Also millions in fire losses and much loss of life had been saved through protective training, and safety training saved the Air Force millions of dollars by eliminating a large proportion of lost-time accidents. The training program was credited with great contributions to the winning of the war.

The report recommended the continuation of civilian training for the more effective peacetime operation of the AAF, stating that it would take care of turnover, provide refresher training for veterans, provide for the cross training of individuals to assume additional duties when necessary because of reduction-in-force; it would provide supervisor and management training, necessary skills training (including orientation), scientific and research training, and safety training.

The report did not, however, seem to make a great impression on Congress. Severe reductions-in-force and further cutbacks in the AAF civilian training program followed; for a while the AAF civilian training organization as such was put under Employee Utilization.

In December 1946 a memo from the Chief, Civilian Personnel Division, AG/AS Personnel, had outlined a general policy for civilian training in 1947. Economies were to be effected through the elimination of various types of training. All forms of contract training which involved any charge for instruction were to be eliminated, except as specifically approved by Headquarters, AAF. All preassignment training of new employees was to be

stopped except in limited categories. All operations of centralized civilian training schools were to be terminated except as specifically authorized by AAF Headquarters.

The major commands would continue to carry on civilian training programs in order to effect further economy of operation, maintaining minimum field-going staffs to give technical and professional leadership in training to lower echelons, and to control civilian training functions.

Field installations were to continue civilian training as necessary, with special emphasis on in-service and job training programs in such areas as executive management, scientific research and professional work, supervision, job skills (including apprentice training), the retraining of veterans, and safety. The AAF supervisor training program was to be continued.

The official postwar civilian training policy for the Air Force was established by AAF Regulation No. 40-6, AAF Civilian Training Program, dated 5 May 1947. This regulation stated that no courses designed to qualify individuals for initial assignment were to be conducted. It set forth eight objectives to be attained by civilian training; efficient job performance, and the conservation of manpower and funds through increasing individual productive capacity were the first two of these objectives.

A comparison of this regulation with AAF Reg. No. 40-6, dated 6 March 1944, indicates some significant changes in civilian training policy in the postwar period. The 1944 regulation stated that it was a part of the mission of the AAF civilian training program to permit the employment by the AAF of potentially qualified persons, and provided for preservice

training to accomplish this--the 1947 regulation forbade preservice training. The 1947 regulation also emphasized such objectives as the development of skilled journeymen through apprentice training, and the training of scientific and professional personnel--the 1944 regulation did not mention these specific objectives.

After the Air Force became an independent service as a result of the enactment of the National Security Act of 1947 on 26 July 1947 there was no immediate change in training policy. Not until 2 May 1949 was a directive (Air Force Letter No. 40-23) issued establishing a civilian training policy for the Department of the Air Force. This letter outlined eight major objectives of training, in general similar to those set forth in the 1947 training regulation. It emphasized that the supervisors would normally train and instruct employees with training staffs providing assistance. Emphasis was to be on on-the-job training done at the work location, and classroom and other training were to be used to meet only those needs which could not be attained by on-the-job training.

The creation of an independent Air Force also brought some changes in the Headquarters civilian training organization. In October 1947 the Training Branch became a part of the Directorate of Personnel under the Assistant Deputy Chief of Staff, Personnel and Administration. By the end of 1948 a separate Directorate of Civilian Personnel was created and the Training Branch became the Civilian Training Division of this Directorate.

Civilian training was still at a low ebb in 1948 but there were some significant developments during the year. One was the establishment of the USAF School of Civilian Personnel Administration and a USAF field

extension civilian training office at Kelly AFB, San Antonio, Texas. Another was the beginning of the development of civilian training programs at overseas installations, particularly for foreign nationals employed by the USAF.

In 1948 there was a total of 147,648 course completions in the USAF civilian training program--a total of 4,085,959 man hours of civilian training being reported by nine commands. The greatest amount of training in terms of man hours was accomplished in the area of the skilled trades and crafts (including apprentice training).

The Air Materiel Command (successor to the ASC and ATSC) reported the greatest amount of civilian training, approximately a million more trainee hours than was accomplished by all the other commands combined. AMC was the only command reporting apprentice training and led in the number of trainee hours accomplished in clerical training, ground safety training, inspection and testing, orientation, skilled trades and crafts training, supervisor and management training, and the training of unskilled and semi-skilled workers. ADC, SAC, and ATSC exceeded AMC in the amount of training accomplished in the area of protective and personal services. SAC led in the amount of trainee hours accomplished in the area of scientific, technical, and professional training, with ATSC second and AMC third.

The above statistics indicate that training was taking place in 1948 but they do not, perhaps, indicate the low estate to which training fell in the period 1947-1949. A survey of 29 installations of six different commands made in the period 1 January 1949-30 June 1949 showed that civilian training was sadly neglected at many of the installations. One half of the

installations had civilian personnel officers who gave inadequate leadership and direction, 18 of them had not surveyed their training needs, 13 had inadequate orientation programs. It was found that 17 of the 29 installations inspected had inadequate training programs.

As expressed in terms of course completions a smaller amount of civilian training was done in 1949 than in 1948--there was, however, a small increase in the number of trainee hours reported. In the first six months of 1950 the USAF civilian training program felt the effects of the cut-back resulting from Secretary of Defense Louis Johnson's policy of "paring the fat."

The sudden expansion of the USAF resulting from the Korean crisis which developed in mid-1950 was accompanied by a great expansion of civilian training activities. The total number of course completions in civilian training rose from 149,829 in 1950 to 462,377 in 1951, and the total number of trainee hours accomplished from 3,353,166 to 9,186,991. There was an increase in classroom training, particularly in such areas as supervision and management, orientation, and in technical, scientific and professional training. There was also a very significant increase in the number of course completions in the vital area of technical, scientific, and professional training in the last half of 1951 and the first half of 1952.

In June 1950 a complete statement of USAF civilian training policy and objectives was issued as Chapter AF T10 of Air Force Manual 40-1. They were essentially the same as those established by Air Force Letter No. 40-23, Civilian Training Policy Program, 2 May 1949. Chapter AF T10 constituted the most complete and detailed set of civilian training instructions to come out since the issuance of the "Plan for Civilian Training" by the ASC in 1943.

Thus there was a well formulated program for civilian training ready for implementation when the Korean emergency came. Also the Air Force already had a relatively large force of trained and skilled workers, and had developed a production line technique in aircraft maintenance and repair which permitted the utilization of many unskilled and semi-skilled workers. The problem of meeting training needs was not as serious as it had been in the World War II emergency.

The Directorate of Civilian Personnel developed a number of course outlines in 1950 to meet an increased demand for instructional materials. It also gave a course for civilian personnel officers at the Air Force School for Civilian Personnel Administration in the fall of 1950 to meet the demand for more trained civilian personnel administrators resulting from the sudden expansion of the civilian personnel strength of the USAF.

In 1950-1951 there was also an expansion of contract training to meet increased needs for skills training, the training of engineering aides, and of draftsmen, typists, stenographers, etc. Headquarters USAF liberalized its policy in regard to the approval of expenditures for contract training.

With the continued expansion of the civilian personnel strength of the USAF in the first half of 1951 the Training Division of the Directorate of Civilian Personnel increased its assistance to field installations in meeting their growing training needs. Two training specialists representing the Division made official visits to various command headquarters and installations to assist in establishing and maintaining effective training programs.

Now more emphasis was placed on skills training for new employees, on training supervisors in the better utilization of their personnel, and on

making technical, scientific, and professional training available to those employees who needed it in order to effectively accomplish their responsibilities.

The Division also worked in the development of safety training materials, helped in the preparation of various training manuals, and made arrangements for a reprint of management training materials.

Correspondence instructor training institutes were held at USAF Headquarters, and the Training Division allotted quotas to various commands for civilians to attend sessions of an advanced management course held at George Washington University in the summer and fall of 1951. Other activities of the Division included the making of a survey to determine the needs of the various commands for training in civilian personnel administration for fiscal year 1952; and an attempt to help solve the problem created by a shortage of typists and stenographers.

On 1 October 1951 the Training Division was supplanted in the Directorate of Civilian Personnel by the Career Planning and Training Division. This new division had the functional responsibility for identifying career areas and establishing guides for the promotion of career employees, as well as the overall training responsibility. This reorganization was based on the concept of developing a permanent corps of trained and highly skilled career employees for the Air Force. A field extension office of the new Division was established at Harrisburg, Pennsylvania.

The Career Planning and Training Division placed an increased emphasis on the training and development of civilian employees to meet skills shortages, to provide a reservoir of trained employees for emergency expansion, and to promote maximum and effective utilization.

Information received from the various commands in the last half of 1951 by the Career Planning and Training Division indicated that considerable progress was being made in rebuilding an effective Air Force-wide civilian training program. Now seven commands either employed a full-time training administrator at command headquarters or were planning to do so. Three commands had taken action to provide training specialists at installation level. Two commands had issued comprehensive training directives and program guides, and two commands were making training surveys. Eight commands reported that they were taking measures to provide more positive staff assistance to their installations in setting up and operating civilian training programs; three reported command-wide conferences on civilian training.

When it is considered that a short time previously only one command had a civilian training man on its headquarters staff, these developments represent considerable progress. In order to maintain and increase this buildup of civilian training activities the Division made an Air Force-wide survey of training requirements, provided for a mandatory orientation program at all USAF installations employing civilians, made a study of the depot schools, and gave special attention to the expansion of contract training to meet expanding needs.

There was also a great increase in the activities of the Air Force School for Civilian Personnel Administration which was now located at Denver University. This was the result of an increased need for trained personnel to handle the various phases of the growing task of civilian personnel administration. The Division made a survey of such training needs and took steps to increase the training facilities of the school.

The Division also began to collect and evaluate training materials for Air Force-wide dissemination, promoted the training of management instructors, planned for an organized system of field visits, and took numerous other measures to promote the USAF civilian training program.

Over the three year period 1949-1951 training statistics indicated great increases in practically every area of training. This had come about mainly as a result of the Korean emergency and the attendant expansion of the Air Force. By the end of 1951, however, there were still many USAF installations without adequate civilian training programs, or with none at all. In view of the existence of a severe labor shortage, and in anticipation of a further buildup in USAF civilian personnel strength, USAF Headquarters felt that a serious program deficiency still existed and stated that it was imperative for each command headquarters to provide the necessary training staff at command and installation levels to meet the urgent need for more civilian training. Much still remained to be done to provide adequately for the training needs of the USAF.

An analysis of the postwar civilian training program of the Air Force shows that its major developments took place in apprentice training; veterans training; technical, scientific and professional training; and in supervisor and management training. The increasing use of contract training in the latter part of the postwar period, the emphasis on career development, and the establishment of civilian training programs overseas were also important developments.

Apprentice training had been discontinued in the Air Force in 1942, but was reestablished in 1946 in accordance with instructions

continued in AAF Letter 40-88, dated 7 December 1945. Sacramento ATSC was the first Air Force organization approved to conduct postwar apprentice training.

The purpose of the apprentice training program was to build up a corps of expert aircraft mechanics with an all-around knowledge of their craft, thereby providing a backlog of trained personnel to meet future needs for skilled mechanics and supervisors. An apprenticeship lasted from two to four years depending on the difficulty of the trade being learned. The apprentices learned on-the-job and also received group or classroom instruction. They were under close supervision and had to meet stiff requirements in order to graduate as journeymen.

The Air Materiel Command had a virtual monopoly on apprentice training since it hired the great majority of the aircraft mechanics and needed trained men with all-around mechanical skills in its maintenance shops. In November 1946 five AAF installations in the US were giving apprentice training; by February 1949 there were eight apprentice training centers in the AMC. There were 518 trainees in the apprentice training program in the fiscal year 1947; as of 31 May 1951 there were 821 persons enrolled in the program, a majority of them being veterans. The number of course completions in apprentice training increased from 2 in 1949 to 214 in 1951.

Veterans training in the Air Force was planned as early as 1944, but a definite Air Force program was not initiated until 1946, after the War Department and the Veterans Administration had formulated two cooperative agreements or plans for the training of veterans which would implement federal legislation on the subject.

The Air Force devoted special attention to the training of veterans, who also enjoyed certain preferences in being hired, and required reports on the training of veterans at all installations employing civilian personnel. Thousands of veterans were enrolled in the regular civilian training courses, and many were trained in occupational and trades courses set up at various installations under cooperative agreements with the Veterans Administration. Veterans trained under the provisions of Public Laws 16 and 346, 78th Congress, made up 85 percent of all the apprentices in the Air Force.

Technical, scientific, and professional training was of vital importance in the postwar Air Force as a result of the accelerated pace of scientific and technological developments in military aviation and related fields. It became one of the primary objectives of the Air Force civilian training program to provide technical, scientific and professional personnel with the training necessary to keep them abreast of research and developments in their respective fields.

In 1947 the AMC was giving training in the graduate studies to 300 scientists and research personnel at Wright Field. In 1948 a program of in-service training below college graduate level was started at Wright-Patterson AFB and continued on an expanding scale. This program was conducted by the Civilian Training Branch, Civilian Personnel Section, Headquarters, AMC, in cooperation with Wilmington College. Courses were offered in a wide range of scientific and technical courses; also in personnel and business administration.

In 1949 AMC also took steps to set up a graduate training center at Wright-Patterson AFB. This resulted in the establishment of the Civilian

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Graduate Center of the Air Force Institute of Technology, which utilized professors and other facilities of Ohio State University on a contract basis. This Graduate Center was used for the purpose of training professionals and highly skilled technicians such as electronic scientists and electronics engineers.

Contracts were made by AMC with other colleges and universities to further the development through part-time training of highly specialized scientific and engineering personnel. Training on this high level was [and is] vital to the maintenance of an up-to-date Air Force which depends on research and development to avoid obsolescence and disaster. Necessarily most training of this type must be provided by contract arrangement with the colleges and universities which have the faculty and facilities to give it.

Professional and technical training in the different phases of civilian personnel administration was conducted at various USAF installations and at the Air Force School of Civilian Personnel Administration. After mid-1950 there was a great demand for this type of training.

After the war was over the basic 52-hour AAF supervisor training course continued to be taught to meet the need for trained supervisors who could get the maximum production with the reduced personnel force available. Concurrently with it the new AAF Personnel Management Program was carried on for both military and civilian personnel.

In 1948 the basic 52-hour supervisor training course was dropped in favor of the primary and basic management courses which had been developed by Mr. William E. Dewey in 1947. This was a combination of the AAF Personnel Management Course with Production Management. The Primary

Management Course was for non-coms and equivalent civilian supervisors, Basic Management for officers and civilian supervisors of equivalent grade.

The civilian training organization at USAF Headquarters also developed management courses closely paralleling the Basic and Primary Management Courses. These Courses were for civilian supervisors, and resulted in some overlapping of management training activities.

Advanced management courses were also developed for high ranking administrative officers and their civilian counterparts. Several institutions of higher learning gave courses of this type for Air Force personnel. By 1951 advanced management training for the USAF was being provided by George Washington University, Washington, D.C.

Contract training was held within strict limits in the four years immediately after the end of World War II. Graduate training, factory training, and undergraduate and special training were all done on a contract basis. The necessity for making contracts with colleges, universities, and other institutions for technical, scientific, and professional training accounted for an small increase in contract training, but the sudden expansion of the USAF after mid-1950 and the greatly increased training needs which arose, made it necessary to rely heavily on contract training and to liberalize policies in regard to the expenditure of funds. Now contract training was used to give skills training to newly hired maintenance personnel and to familiarize employees with new materiel at factory schools, to train clerical personnel at private institutions, and to give various other types of training, as well as for increased activity in the training of scientific and technical personnel.

The idea of developing a corps of trained civilian career employees as a permanent and stable working force developed after World War II when effective accomplishment of the Air Force mission was made difficult by a tremendous turnover in military and civilian personnel, and by personnel shortages. In 1948 the Air Force established a "junior management plan" to select and train highly capable young civilian employees as replacements for top civilian positions. They were to be trained as specialists on a career basis. This was a part of the over-all Air Force program for the maximum utilization of personnel.

In the spring of 1950 an Air Force Letter, subject "Program for Development of Career Administrators" was issued to all commands with a guide for the administration of the Air Force Civilian Career Development Program, and by 1951 a total of over 1,000 were participating in this program. In October 1951 the Training Division of the Directorate of Civilian Personnel, Headquarters, USAF, was reorganized as the Career Planning and Training Division in order to further the development, in all occupational areas, of a corps of highly skilled career employees.

There was little real emphasis on civilian training at overseas installations of the USAF before 1948. At this time the Pacific Air Command had some on-the-job training and the beginnings of a management training program, and was developing some training course outlines. Some training was also being done at other locations overseas.

The most extensive overseas civilian training program was initiated in the Far East Air Forces in Japan when a supply training program was started for Japanese employees of Japan Air Materiel Area in 1948. It was soon realized that Japanese supervisors as well as DAFC personnel needed training in the principles, techniques, and procedures of management.

Out of this need grew for Japanese employees of FEAF (and of Army and Navy installations in Japan) a management training program which became very extensive and was so successful that it was adopted by Japanese private industry.

A training program was developed which included training in English, typing, the trade skills, and orientation, as well as the management training program. Facilities were provided for the translation of training materials and their dissemination in Japan, Okinawa, and Korea. FEAF also developed an extensive training program for its DAFC (American) employees, using its own and Zone of the Interior facilities.

United States Air Forces in Europe also developed an extensive civilian training program. Prior to the end of 1945 a program was instituted for giving clerical training to German nationals employed at Air Force installations in the Wiesbaden area. The redeployment of military personnel to the continental United States made it necessary to train German nationals for replacements in jobs not involving security. In late 1945 and early 1946 an orientation program for newly hired German nationals was put into effect.

By the end of 1946 the improvement of supervisory personnel had been established as the first goal to be attained in the training of German nationals employed by USAFE, which now utilized the services of over 21,000 indigeneous personnel at its installations in Germany. By 1947 plans were being made for a standardized civilian training program throughout the command and civilian training conferences and institutes were held. Out of an institute held at USAFE Headquarters in 1947 grew the development of a standardized civilian training program throughout

USAFE. This program placed its chief emphasis on supervisor and management training, and on skills training.

The development of the USAFE civilian training program in 1948 was delayed by the international crisis arising from the blockade of Berlin by the Russians, but by the end of 1949 the USAFE Supervisory Management Course was being presented to both German and American civilian employees by USAFE. Skills training was carried on at various installations, both on-the-job and in the classroom. Off-base facilities were also used for skills training, and for the training of specialists and professionals. Off-base facilities used included German factories, the EUCOM Engineer School, and Zone of the Interior facilities such as the Air Force School of Civilian Administration at Denver, Colorado.

By the end of 1951 USAFE had a well-organized civilian training program which, in large measure, met the training needs of its DAF and German civilian employees. This program included supervisor and management training, various types of skills training, orientation, and specialized and professional training.

Other overseas commands also carried on civilian training activities. For instance, the Philippines (Air Force) Command and Thirteenth Air Force issued a regulation on 5 February 1951 providing for the establishment and maintenance of an over-all civilian training program. As of the end of 1951 FEAF and USAFE had the most comprehensive and best organized civilian training programs overseas. In general, however, civilian training at overseas installations had not reached as high a level of development as in the Zone of the Interior. Yet, at this time of global expansion, the training of civilian personnel employed in

overseas establishments of the Air Force was of increasing importance in promoting the implementation of the Air Force mission.

The most significant development in Air Force civilian training in the postwar period was the growth of scientific and technical training, particularly the programs for giving college graduate level and undergraduate level training to scientists and technical personnel. It is hard to overemphasize the importance of this type of training in the contribution it makes to the ever-continuing work of research and development necessary to keep the Air Force abreast of the latest developments in weapons and equipment.

Contract training, too, has achieved great significance in the period since World War II. As no need for the emergency type of mass training used in World War II has existed since then, and such a need is not likely to arise again, contract training is a cheaper, more efficient, and more flexible means of meeting certain training needs than the operation of an elaborate and expensive system of Air Force schools. Also contract training is the chief medium through which the Air Force can utilize the scientific and technical training facilities of the colleges and universities.

Long range Air Force requirements for the training of aircraft mechanics were adequately met by the apprentice training program while immediate needs were taken care of by contract arrangements with factory schools and other outside facilities.

Today the effective use of civilian training and of the career development program have great possibilities as means to aid in the

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successful accomplishment of the Project HOMEFRONT.* Also the effective operation of civilian training programs in USAF installations overseas should make great contributions to the success of Project NATIVE SON.†

* This is a current USAF project for the substitution of civilian positions for military positions in the Zone of Interior.

† This is a USAF project to replace certain overseas military personnel (and DAF civilians) with indigenous civilian personnel.

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FOOTNOTES

Chapter I

1. USAF Historical Study 58, Civilian Personnel Administration in the AAF, 1939-1945, p. 51; Training of Civilian Personnel in the Air Corps, 28 Nov 41, in USAF HD, File No. 167.86-8.*
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99. 1st Ind (basic ltr, Hq A/F to Hq, ASC, subj: Norden Bombsight Maintenance Course), Hq ASC to CG, Third Air Force, National Guard Armory, Tampa, Fla, 28 Jul 44, KCRG, Civ Tng Misc.
100. Ltr, Brig Gen Lucas V. Beatt, Ch, Pers & Base Sves Div, Hq, ATSC, to CG, Fairfield ATSC, Patterson Field, Fairfield, Ohio, 30 Sep 44, subj: Training Program for the Maintenance of Office Equipment, KCRG, 353 Civilian Training, Misc, Aug-Oct 44.
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102. Ibid.
103. Minutes, Training Committee Meeting, Office Training Branch, CPD, OSW, 8 August 1945, Folder, Policies (Misc Tng), in files of Career Dev Div, Dir of Civ Pers, Hq USAF.
104. USAFHS-58, p. 58.
105. Walker, Pro and Tng of ASC Civ Pers, Pt III, pp. 181-82.
106. Ibid., p. 182.
107. Ibid.; Interview by author with Mr. William E. Dewey, AFOMO, Hq USAF, 25 Oct 54.
108. USAFHS-58, p. 58.
109. ASC, Plan for Civ Tng, pp. I-1, and I-2.
110. Dewey interview.
111. Walker, Pro and Tng of ASC Civ Pers, Pt III, p. 183.
112. Dewey interview; Walker, Pro and Tng of ASC Civ Pers, Pt III, p. 183.
113. ASC Reg 50-10, Training of Civilian Supervisors, 23 Nov 43, Hq, ASC, Folder, Policies (Misc Tng) in files of Career Dev Div, Dir of Civ Pers, Hq USAF.

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- 114. Dewey interview.
- 115. Memo, Mr. William H. Kushnick, Dir of Civ Pers and Tng, CPD, OSW, Washington, D.C., to CG, AEC, Subj: Supervisory Training Program, 9 Mar 44.
- 116. Supervisor instruction materials in Maples Files, Management Tng Unit, AU, MAFB.
- 117. Walker, Pro and Tng of ASC Civ Pers, Pt III, p. 185.
- 118. Information on contents and methods of the supervisor training course is from the instructional material used in the course, and from personal experience. See also Walker, Pro and Tng of ASC Civ Pers, Pt III, pp. 185-87.
- 119. Ltr, Maj Francis L. Hearn, Ch, Civ Pers Sec, Pers & Tng Div, Sacramento ASC, to CG ASC, subj: Development of Continuing Conference Outlines-- Supervisor Training, 10 May 44, KCRG, 353 Supervisory Tng--March.
- 120. USAFHS-58, p. 58.
- 121. Ltr, Hq, ASC to CG, WRASC, Robins Field, Warner Robins, Ga, subj: Regional Institutes for Supervisor Training Conference Leaders, 23 Feb 44. Those conference leaders who had attended the institute at Headquarters on 31 January were not required to attend a regional institute.
- 122. Walker, Pro and Tng of ASC Civ Pers, Pt III Figure 19, ff. p. 194.
- 123. W. H. Kushnick, Dir of Civ Pers & Tng OSW, "Civilian Training in the War Department," Speech Delivered at Conference of AAF Civilian Training Officers, 11 Jan 1944, p. 5, Mimeographed copy in Folder, hist of Civ Tng, in files of Career Dev Div, Dir of Civ Pers, Hq USAF.
- 124. Office of AC/AS, Personnel, Hq AAF, 11-15 Jan 44, Report and Recommendations by the Temporary Committee Appointed to Survey Army Air Forces Civilian Training Programs, p. 5. Mimeographed copy in Folder, hist of Civ Tng, in files of Career Dev Div, Dir of Civ Pers, Hq USAF. See also Appendix I.
- 125. AAF Reg 40-6, AAF Civilian Training Program, Hq, AAF, 6 Mar 44, in Regs Folder, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
- 126. USAFHS-58, p. 58.
- 127. Ibid., pp. 50-51.
- 128. AAF Reg 40-11, Supervisor Training Programs (Subject Classification 105), 2 Aug 44, Hq AAF, in Regs Folder, Career Dev Div, Dir of Civ Pers, USAF Hq, Washington, D.C.

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130. Memo, brig Gen L.V. Beau, Ch, Pers and Base Ser Div, Hq, ATSC, to all Area Air Service Commands, subj: Supervisor Training for Officer Personnel, 6 Sep 44, KCRC, Supervisor Tng, Aug-Oct 44.
131. Statement based on experience of author who served as supervisor trainer and civilian training administrator in the A'F civilian training program 1943-1946.
132. Daily Diary for 24 Mar 44, Civ Pers Div, Hq, AAF.
133. Memo, Capt Raymond L. Barron, Asst Adj Gen, Hq AAF EETC, Maxwell Field, Ala, to CG, AAFETC, Fort Worth, Texas, subj: Civilian Supervisor Training, 21 Nov 44, KCRC Tng, Aug-Nov 44.
134. Memo, Lt Col Paul D. Ewan, Actg Asst Adj Gen, Hq A'F ETIC, St Louis 8, Mo, to CG, AAF TC Command, subj: Progress Report, Supervisor Training Program, 30 Nov 44.
135. Memo, Capt. L. W. Bucy, Actg Asst Adj Gen, Hq, AAF CFIC, Randolph Field, Texas, to CG, AAFTC, subj: Progress Report on Supervisor Training Program, 21 Dec 44.
136. AAF Stat Dig, World War II, Table 19, p. 32.
137. USAFHS-58, p. 59.
138. Graphs Showing Supervisor Training Trends, in Folder, Hist of Civ Tng, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
139. Walker, Pro and Tng of ASC Civ Pers, Pt III, pp. 188-89.
140. All comments on supervisor training problems and on the value of supervisor training not attributed to other sources are based on the author's experience as a conference leader in the AAF supervisor training program, 1943-1946.
141. Ltr, Col Ralph Memo, Ch, Pers & Base Services Div, Hq, ATSC, to CG, OCATSC, Tinker Field, Oklahoma City, Okla, subj: Accomplishment of Supervisor Training, Apr 45, KCRC, 353 Supervisor Tng, Mar 45.
142. Walker, Pro and Tng of ASC Civ Pers, Pt III, p. 189.

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143. Ltr, Lt Col Arthur M. Stanton, Ch, Pers & Base Sves Div, OCATSC, Tinker Field, Oklahoma City, Okla, to Dir, ATSC, Hq, subj: Justification for Civilian Training, Clearance No. /AF-Ap-Sp-115, 28 Mar 45, KCRC, 353 Civ Tng, Okla, Mar 1945.
144. Ltr, Col Russell L. Oppenheim, Ch, Pers & Base Services Div, Hq, San Antonio, ATSC, Kelly Field, Texas, to Director, Hq, ATSC, subj: TSFCP6A-3-514 (in answer to teletype of that designation), 28 Mar 45, KCRC, Civ Tng, Mar-May 45.
145. Daily Diary for 21 Dec 1944, Civ Pers Div, Hq AAF.
146. USAFES-58, p. 59.
147. Applied Personnel Management Indoctrination Course, EFTC, Maxwell Field, Montgomery, Ala, 21 Nov 45 (Mimeographed Booklet), Maples File, Management Tng Unit, MAFB, Ala; Interview by author with Mrs. Mamie Maples, Director, Management Training Unit, MAFB, Ala.
148. Ltr, AC/AS, CC&R, to CG, AAFTRC, Orlando, Fla, subj: Applied Personnel Management Course for Senior Officers, nd, DRB 353-45 20-31 March.
149. Memo for C/AS from Brig Gen William M. Hall, Deputy AC/AS-1, Hq, AAF, Washington, D.C., subj: Applied Personnel Management Course, 14 Nov 45, DRB, Training ltr dtd 14 Nov 45 re: Applied Personnel Management Course.
150. U.S. Army Air Forces, AAF Personnel Management Introductions and Instructions (Introductory Text for /AF Personnel Management Course), pp. 2-4, in Maples Files.
151. Ibid., p. 2.
152. Walker, Hist of Pro and Tng of Civ Pers (AsC), Sup Docs, I, 34.
153. Daily Diary for 5 April 1944, Civ Pers Div, Hq, AAF.
154. Ibid., 28 Aug 44.
155. History of the Middletown Air Depot, from Activation to 1 Feb 43, in 205.04-1, p. 36.
156. History of Mobile Air Service Command, Second Installment, Feb 43 to Jul 44, p. 60, in 205.05-2.
157. Memo, Lt Col John F. Concannon, Asst AG, AAFTRC to CG, AAF, subj: AAF Crash Firefighting and Rescue Training--Special Course, 16 Jun 45, DRB, Training 353 45, Jun 16 1945, Part III.

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158. Memo, Col Gordon E. Clark, Chief, Civ Pers Div, IC/AS, Pers, Hq, IAF, to CG, AAFTRC, subj: Civilian Personnel Officers Training School—Course Study, nd, KCRC, 352.11 GPO Crse. Course Study 1945.
159. Office of the Sec of War, Civ Pers Div, Program for Fifth Training Class, DRB, 353.9A—Training of Administrative Clerks, 1940-1941.
160. Hist Army Air Forces Training Command, 7 Jul 43 to 31 Dec 44, Vol IX, in 222-1; Daily Diary for 21 Sep 1944, Civ Pers Div, Hq, AAF.
161. Daily Diary for 25 Jul 45, Civ Pers Div, Hq, AAF; USAFHS-58, p. 60.
162. Ibid., 29 Dec 45, 18 Feb 46.
163. Ibid., 7 Feb 44.
164. Ibid., 22 Jun 45.
165. Ibid., 4 Jul, 20 Jul, 24 Jul, and 22 Sep 44.
166. Ibid., 7 Jun, 18 Jul 45.
167. Ibid., 24 Aug 44.
168. Ibid., 25 Sep 45.
169. Pers and Base Ser Div, Civ Eng Ltr, Wright Field, Dayton, Ohio, Contracting Officers' Training Conference #4, 24 Jan 45-2 Feb 45, pp. 1-7, KCRC, Civilian Training Mobile, Jan-Feb 45.
170. Daily Diary for 4 Oct 45, Civ Pers Div, Hq, AAF.
171. Ltr, Col Ralph memo, Ch, Pers & Base Ser Div, Hq, ATSC, Wright Field, Dayton, Ohio, to CG, San Antonio, ATSC, Kelly Field, San Antonio, Texas, subj: Training of Engineering Aides, 10 Mar 45, KCRC, Civ Eng, San Antonio, Mar-May 45.
172. Ltr, Lt Col H.W. Berg, Ch, Civ Pers Sec, Pers & Base Ser Div, Hq, ATSC, to Prospective Employees, subj: Engineering Aides, KCRC, 353 Civ Eng.
173. Daily Diary for 29 Nov 1944, Civ Pers Div, AG/As, Personnel, Hq, AAF.
174. Ltr, Col H.G. Culton, AG, AAF, Hq, to CG, ATSC, subj: Establishment of AAF Engineering School, 2 Nov 45, DRB, 353 Training ltr dtd 16 Nov 45, re: Establishment of AAF Engineering School.
175. Daily Diary for 16 Aug 44, Civ Pers Div, Hq, AAF.

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176. Daily Diary for 4 Jun 45, Civ Pers Div, Hq, AAF; WD Civilian Personnel Circular No. 62, Training of Returning Veterans, 1 Jun 45, p. 1, in Regs Folder, Career Dev, Div, Dir of Civ Pers, Hq USAF.
177. WD Civilian Personnel Circular No. 62, Training of Returning Veterans, 1 Jun 45, p. 1.
178. Ibid., pp. 1-2. This WD Circular contained a reprint of Departmental Circular No. 522.
179. Daily Diary for 4 Jun 45, Civ Pers Div, Hq, AAF.
180. Ibid., 24 Feb 45.
181. Ibid., 6 Jun 45.
182. Ibid., 19 Sep 45.
183. Ibid., 8 Feb 46.
184. WD Civilian Personnel Circular No. 50, Veteran Training Programs, 24 Apr 46, in Regs Folder, Career Dev Div, Dir of Civ Pers, Hq USAF.
185. AAF Ltr 40-10, AAF/Hq, Washington, subj: Training of Veterans in AAF Installations (Subject Classification No. 105), 22 July 1946, for distribution, in Regs Folder, Career Dev Div, Dir of Civ Pers, Hq USAF.

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FOOTNOTES

Chapter IV

1. Army Air Forces Statistical Digest, 1945, Supplement No. 1, Table 19, p. 6, in 134.11-6. At the same time the number of AAF Military personnel in the continental U.S. dropped from 1,165,349 to 503,234.
2. AAF Stat Dig, 1946, Table 40, p. 56.
3. Ibid., 1947, Table 51, p. 72.
4. Congressional Record, Vol 94, Part 5, 79 Cong, 2 Sess, Statement by Senator Byrd on Civilian Personnel Ceiling, 27 May 46, p. 5798.
5. Military Establishment Appropriation Bill for 1947, Hearings before the Subcommittee of the Committee on Appropriations, House of Representatives, 79th Congress, 2d Session, on the Military Establishment Appropriations Bill for 1947, U.S. Government Printing Office, 1946, pp. 428-29, in AU Library, MAFB, Ala.
6. USAF Historical Study 84, Legislative History of the AAF and USAF, 1941-1951, p. 105.
7. Congressional Record, Vol 92, Part 4, 79 Cong, 2 Sess, Senate Document No. 177 /printed in the Record/, pp. 4209-11. The all-time peak in Federal employment came in August 1945 when there were 3,649,769 Federal workers inside and outside the United States. As of 31 January 1945 this total decreased to 2,893,670, a reduction of 756,099. This reduction included 298,003 civilian employees of the War Department stationed outside the U.S. and 313,367 inside the U.S.
8. Interview by author with Mr. John A. Earmanttraut, Chief, Career Dev Div, Dir of Civ Pers, Hq USAF, 29 Oct 1954.
9. Memo for CG AAF from Mr. A. H. Onthank, Dir of Civ Pers and Tng, Civ Pers Div, OSW, subj: Congressional Inquiry on Civilian Training, 24 October 1954, in Folder, Hist of Civ Tng, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
10. Ibid., and 1st Ind thereto, Brig Gen Bartlett Beaman, Ch, Civ Pers Div, AC/AS-1, AAF Hq to OSW, Attn: Dir of Civ Pers & Tng, 29 Oct 46.
11. Ltr, Brig Gen Bartlett Beaman, Ch, Civ Pers Div, AC/AS-1, to OSW, attn: Dir of Civ Pers & Tng, subj: Congressional Inquiry on Civilian Training, 18 Nov 46, in Folder, Hist of Civ Tng, files of Career Dev Div, Dir of Civ Pers, Hq USAF.

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12. Ibid., and 12 incls. Hereinafter cited as Rpts on AAF Civ Ing for FY 1947, GDD Files.
13. Recapitulation, Civilian Training in Army Air Forces for Fiscal Year 1947, inclosure, Ltr, Brig Gen Bartlett Beaman, Ch, Civ Pers, Div, AC/AS-1, to OSW, attn: Dir of Civ Pers & Ing, subj: Congressional Inquiry on Civilian Training, 18 Nov 46, in Folder, Hist of Civ Ing, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
14. Ibid.; AAF Regulation No. 40-19, AAF Postwar Civilian Personnel Program, Hq, AF, Washington, D.C., Regs Folder, in files of Career Dev Div, Dir of Civ Pers, Hq USAF.
15. Rpts on Civ Ing for FY 1947, GDD Files.
16. Ehrmantraut interview.
17. Ltr, Hq, Washington National Airport Army Air Base, 503d AAF Base Unit, ATC, to CG, North Atlantic Wing, ATL Div, ATC, Westover Field, Mass, attn: Civ Pers Off, subj: Monthly Status of Civilian Training, 4 Mar 46, KCRC, 353 Ing.
18. Ltr, Hq 1455th AAF Base Unit, Alaskan Div, AIC, Army Air Base, Great Falls, Mont, to CG Hq, ATL Div, AIC, Fort Totten, L.I., N.Y., subj: Discontinuation of Training, 8 Oct 46, KCRC, Central Files, 353 Ing, 1 Sep 46 thru 30 Nov 46.
19. 1st ind (ltr, Hq, ATL Div, AIC, to CG, 1103d AAF Base Unit, AILD-AIC, Morrison Field, West Palm Beach, Fla., subj: Congressional Inquiry on Civilian Training, 22 Nov 46), Hq, 1103d AAF Base Unit, Atlantic Div, AIC, Morrison Field, West Palm Beach, Fla, to CG, Hq, ATC, KCRC, Central Files, 353 Ing, 1 Sep 46 thru 30 Nov 46.
20. The Kelly Civilian Training Story, Headquarters, San Antonio Air Materiel Area, Kelly Air Force Base, Texas, September 1954. A Pamphlet in Folder, Hist of Civ Ing, files of Career Dev Div, Hq USAF. Hereinafter cited as The Kelly Story.
21. Ibid.
22. Memo for Commanding Generals, All Base Commands, Central Atlantic Wing, South Atlantic Wing, 1383d AF BU, HAW/AIC, from Hq AILD, AIC, subj: Civilian Personnel Training Services Available, 6 Mar 1946, KCRC, 353 Ing.
23. Ibid.

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25. Memo for CG, TAC, Langley Field, Va, from Brig Gen Bartlett Beaman, Ch, Civ Pers Div, AC/AS-1, attn: CPO, subj: Approved Job Training Activities for Civilian Employees, 23 Dec 46, in Folder, Policies (Misc Tng), files of Career Dev Div, Dir of Civ Pers, Hq USAF.
26. Memo for Col Geo W. Purdy, Tng Div, IC/AS-3, from Lt Col W.B. Coffey, Actg Ch, Civ Pers Div, AC/AS-1, subj: Civ Tng, 18 Feb 47, in Folder, Policies (Misc Tng), files of Career Dev Div, Dir of Civ Pers, Hq USAF.
27. AAF Reg 40-6, AAF Civ Tng Program, IIF Hq, 5 May 1947, AG Auth Lib, AU, MAFB, Ala.
28. Hq, Chanute Field, Ill, to CG, AIRC, Barksdale Field, La, attn: A-1, Civ Pers Sec, Stat Rpt for Civ Tng, WD AGO Form 671, for period of August 1947, KCRC, 230 Civilian Employees, 16 Oct 47 thru 31 Oct 47.
29. Memo for CG AIRC, Barksdale Field, La, from Hq, Scott Field, Ill, attn: A-1, Civ Pers Sec, subj: Statistical Report of Civilian Training, 5 Nov 47 (with attached report on WDAGO Form 671), KCRC, 230 Civilian Employees, 1 Nov-28 Nov 47.
30. Stat Rpt of Civ Tng, LD AGO Form 671, Hq AIRC, Barksdale Field, La, to C/S USAF, attn: Civ Pers Div, AC/AS-1, Rpt for Month of Oct, no date, KCRC, 230 Civilian Employees, 2 Oct-15 Oct 47.
31. Memo for CG, Williams Field, Chandler, Arizona from Office of the CG, Hq, Flying Div, AIRC, Randolph Field, Texas, subj: Report of Civilian Personnel Administration, 19 Nov 1947, KCRC, 230 Civilian Employees, 1 Nov-26 Nov 47.
32. Ltr, Brig Gen C.W. Lawrence, C/S, Hq, Tech Div, AIRC, Scott Field, Ill, to CO, Fort Francis E. Warren, Wyoming, subj: Review and Examination of Civilian Personnel Program at Fort Francis E. Warren, 30 Dec 47, KCRC, 230 Civilian Employees Permanent, 1 Dec thru 31 Dec 1947.
33. USAFHS-84, pp. 56-57.
34. Air Force Ltr No. 40-23, Civilian Training Program Policy, Department of the Air Force, 2 May 49, AG Auth Lib, AU, MAFB, Ala.
35. USAF Stat Dig, 1947, Organization Chart, p. II.
36. USAF Stat Dig, 1948, Vol I, Organization Chart, p. III; Ehrmantraut interview.

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37. USAF Stat Dig, 1947, Table 51, p. 72; USAF Stat Dig 1948, Vol 1, Table 72, p. 88. This is the first time the Statistical Digest gave strength figures on civilian employees overseas.
38. Memo for Commanders, AIL Div, Pacific Div, Continental Div, CG, Newfoundland Base Command, and CG's of 530th, 520th, 517th AI Wings and 520th AF Bureau, from Hq MAIS, Washington 25, D.C., subj: Survey of Training Needs (Reports Control Symbol AF-CF-SP4), 19 July 1948, KCRG, 353 Tng, 1 July 48 thru 31 July 48.
39. FEAF Civ Tng Program, 1945-1951, p. 1. This is a short account of the development of a civilian training program in the Far Eastern Air Forces written by Mr. H. G. Robinson, Director of Civilian Training, FEAF.
40. USAF Stat Dig, 1948, Vol 1, Tables 125, 126, and 127, pp. 158-68.
41. Ibid., Table 125, p. 158.
42. Notes compiled from graphs showing training trends, Folder, Hist of Civ Tng, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
43. USAF Stat Dig, 1948, Vol 1, Table 125, p. 158.
44. Ibid., Table 126, p. 158.
45. USAF Stat Dig, 1948, Vol 1, Table 126, p. 158; AF Reg 40-18, AAF Orientation Training Program for New Employees, Hq, AAF, 21 Jul 45, in Regs Folder, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
46. USAF Stat Dig, 1948, Vol 1, Table 126, p. 158.
47. USAF Stat Dig, 1948, Vol 1, Table 127, pp. 159-68.
48. Ibid.
49. Ibid., USAF Organization Chart, p. III.
50. Air Force Ltr 40-23, Civ Tng Program Policy, 2 May 1949, Department of the Air Force, in AG Auth Lib, AU, MAFB, Ala.
51. 1st Ind (basic ltr, Hq, USAF, subj: Examination and Evaluation of Civilian Personnel Activities at Wright-Patterson AFB, Dayton, Ohio, 7 November 1949), Hq, AMO, Wright Patterson AFB, Dayton, Ohio, 7 Nov 1949, to Deputy Chief of Staff, Personnel, Hq USAF, DRB, General [A folder of correspondence dealing with civilian personnel, 1946-1949].
52. Ibid.

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53. Analysis of the Air Force Civilian Personnel Program Based upon a Review of Twenty-nine Survey Reports Made During Period 1 January to 30 June, 1949, p. 1, DRB Inspection Reports /Folder--this particular report contains 18 pages/.
54. Ibid., pp. 12-14.
55. Ibid., p. 15.
56. The Kelly Story.
57. USAF Stat Dig, 1948, Vol 1, Tables 125, 126 and 127, pp. 158-68; USAF Stat Dig, Jan 1949-Jun 1950, Table 80, p. 130.
58. USAF Stat Dig, 1948, Vol 1, Table 72, pp. 88-89; USAF Stat Dig, Jan 1949-Jun 1950, Table 58, p. 88.
59. USAFHS-84, p. 106; USAF Stat Dig, Jan 1949-Jun 1950, Table 58, p. 88.
60. USAFHS-84, pp. 77, 97, and 103.
61. Ibid., p. 106.
62. USAF Stat Dig, Jan 1949-Jun 1950, Table 80, p. 130.
63. Ibid., USAF Stat Dig, FY 1951, Table 28, p. 541.
64. USAF Stat Dig, Jan 1949-Jun 1950, Table 80, p. 130; USAF Stat Dig, FY 1951, Table 280, p. 541; USAF Stat Dig, FY 1952, Table 93, p. 483.
65. Hist Headquarters USAF, 1 July 1950 to 30 June 1951, File No. K16S.1501, p. 114.
66. USAF Stat Dig, Jan 1949-Jun 1950, Table 58, p. 88; USAF Stat Dig, Fiscal Year 1951, Table 250, pp. 486-87.
67. USAF Stat Dig, FY 1952, Table 79, p. 469.
68. USAF Stat Dig, Jan 1949-Jun 1950, Table 80, p. 130; USAF Stat Dig, FY 1951, Table 280, p. 541, File no. K134.11-6.
69. Ibid.; USAF Stat Dig, FY 1952, Table 93, p. 483.
70. Chapter AF T10, Air Force Manual 40-1, 19 Jun 50, pp. 3-4. Hereinafter cited as AFM 40-1, AF T10. In files of Employee Utilization Section, Civ Pers Office, AU, MAPB, Ala.

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71. Ibid.; AF Ltr No. 40-23, Civilian Training Program Policy, Dept of the Air Force, 2 May 49, AG Auth Lib, AU, MAFB, Ala.
72. AFM 40-1, AF TLO, pp. 4-5.
73. Ibid., pp. 7-23.
74. Department of the Air Force, Civilian Training in the Department of the Air Force (Pamphlet), passim. In AU Library, AU, MAFB, Ala.
75. Hist Headquarters USAF, 1 July 1950 to 30 June 1951, p. 114.
76. Training Division, Hist Rpt for Period 1 Jan 51-30 Jun 51, p. 1. In Folder, Hist of Civ Trg, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
77. Ibid., p. 4.
78. Ibid., pp. 5-10.
79. Ibid., pp. 11-12.
80. Career Planning and Training Division, Hist Rpt for Period 1 Jul 1951-31 Dec 1951, pp. 1-4. In Folder, Hist of Civ Trg, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
81. Ibid., pp. 4-6.
82. USAF Stat Dig, FY 1952, Organization Chart, p. ii.
83. Ehrmantraut interview.
84. Career Planning and Training Division, Hist Rpt for Period 1 Jul-31 Dec 51, pp. 7-11.
85. Ibid., pp. 12-19.
86. USAF Stat Dig, FY 1951, Table 280, p. 541; USAF Stat Dig, FY 1952, Table 93, p. 483.
87. USAF Stat Dig, Jan 49-Jun 50, Table 80, p. 130; USAF Stat Dig, FY 1951, Table 280, p. 541; USAF Stat Dig, FY 1952, Table 93, p. 483.
88. USAF Stat Dig, FY 1952, Table 93, p. 483.
89. USAF Stat Dig, FY 1952, Table 93, p. 483; USAF Stat Dig, FY 1953, Table 298, p. 505.

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90. Ltr, Maj Gen John H. McCormick, Acting Asst Deputy Chief of staff, Pers, Dept of the Air force, Hq USAF, Washington 25, D.C., to CG, ADC, Lmt AFE, Colorado Springs, Col, subj: Civilian Training Program, 30 Aug 51, in Folder, headquarters, 1951, Air Defense Com and 1951, Records Section AAG, 353, Training, 1 Aug 51 to 31 Aug 51.
91. Ibid. In this letter from Headquarters USAF, it was requested that the Commanding General of the Air Defense Command see to it personally that his command's civilian personnel office make a careful study of the ADC civilian training set-up, initiate necessary action, and report to Headquarters USAF on the results of the study and the action taken.

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FOOTNOTES

Chapter V

1. Memo, Brig Gen Bartlett Eaman, Ch, Civ Pers Div, AC/AS-1, to CG, TAC, Langley Field, Va, attn: Civilian Personnel Officer, subj: Approved Job Training Activities for Civilian Employees, 23 Dec 46, in Folder, Policies (Misc Tng), files of Career Dev Div, Dir of Civ Pers, Hq USAF.
2. Civilian Personnel Regulation No. 111, Apprenticeship, War Department, 10 Sep 45, in Regs Folder, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
3. Daily Diary for 2 October 45, Civ Pers Div, AAF Hq, in 121.02.
4. AAF Letter 40-88, subject: Apprentice Training (Subject Classification III), 7 Dec 45, in Regs Folder, Career Dev Div, Dir of Civ Pers, Hq USAF.
5. Daily Diary for 22 Apr 46, Civ Pers Div, AAF Hq.
6. AAF Regulation No. 50-1, Apprentice Training Program, Hq, AAF, 19 Jul 46, p. 1, in Regs Folder, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
7. Ibid., pp. 2-5.
8. AAF Letter 40-88A, subj: Apprentice Training (Subject Classification III), AAF Hq, 11 Sep 46, and inclosure, KCIC, Central Files, 353 Training, 1 Sep 46 thru 30 Nov 46.
9. Reports on AAF Civ Tng for FY 1947--12 inclosures with ltr, Brig Gen Bartlett Eaman, Ch, Civ Pers Div, AC/AS-1, to OSW, Washington, D.C., attn: Dir of Civ Pers & Tng, subj: Congressional Inquiry on Civilian Training, 18 Nov 46, in Folder, Hist of Civ Tng, files of Career Dev Div, Dir of Civ Pers, Hq USAF.
10. USAF Stat Bll, 1948, Vol 1, Table 125, p. 158, in 134.11-6.
11. Ibid., Table 126, p. 158.
12. Ibid., Table 127, p. 159.

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BIOGEOGRAPHICAL NOTE

The Air Service Command led the Air Force in civilian personnel strength and pioneered in civilian training. As a result its training activities played a major part in the story of the Air Force civilian training program. Consequently there has been incorporated into this study a large part of the excellent account of the World War II A.C. civilian training program contained in an A.C. monograph, "Procurement and Training of Air Service Command Civilian Personnel," prepared by Dr. Inogene E. Walker.

Other source materials found useful in the preparation of this study include extensive files of correspondence, reports, and other training documents made available by the Departmental Records Branch, Alexandria, Virginia, and the Kansas City Records Center, Kansas City, Missouri; historical reports, statistical reports, and other training documents from the files of the Career Development Division, Directorate of Civilian Personnel, USAF headquarters, Washington, D.C.; various USAF historical studies; and numerous documents from the USAF Historical Division Archives, Maxwell Air Force Base, Alabama. Materials were also obtained from such government publications as the Congressional Record and reports of congressional hearings.

The submission by USAF and USAFA of short accounts of their civilian training programs in the period 1945-1951 greatly facilitated the preparation of those parts of this study dealing with civilian training overseas. Valuable information was also obtained by means of interviews with USAF civilian training officials and by the use of materials they made available from their own files.

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Appendix I

REPORT AND RECOMMENDATIONS

by the

Temporary Committee Appointed to Survey AAF Civilian Training Programs

11-15 January 1944

1. General. The conference membership as a whole and its committee and sub-committees pursuant to the provisions of Headquarters directive dated 23 December 1943 has in session surveyed the presently existing AAF Civilian Training programs. The conference approached this problem from the standpoint of analyzing the adequacy of presently operating civilian training programs within the AAF with respect to the intensification and integration of such programs into an over-all AAF Civilian Training program with exception of Civilian Flying Training programs.

This problem was considered in the light of certain outstanding factors, namely: the transfer of Air Service Command sub-depots to the various Air Forces and Commands effective 1 January 1944, the tapering off of military training activities of the Training Command, the interest exhibited by the Secretary of War's Office in the establishment of an over-all Civilian Training program within the AAF and the present critical condition of manpower now facing the Army Air Forces.

The most immediate of the above factors is the series of problems created by the transfer of sub-depots. Prior to the transfer, the Air Service Command was conducting approximately 95% of all civilian training in the AAF as measured in terms of numbers of employees undergoing training. The Air Service Command civilian training program was integrated and operated in three echelons, namely, Headquarters Air Service Command, the Control Area Depots, and the sub-depots. The transfer of the lowest of these three echelons to jurisdiction of other Commands and Air Forces poses the question of ascertaining how much of the former flow of training material through Air Service Command echelons can continue to reach the sub-depots and of ascertaining and installing alternatives where that flow must be discontinued.

To meet the objectives of the Army Air Forces in providing necessary measures in the establishment of an over-all civilian training program, the committee submits the following findings for consideration and disposition:

2. The Scope of Existing Training Facilities. A review of present practices in the individual Air Forces and Commands indicated that Air Service Command had established and is maintaining an adequate training program to meet its own needs. The Training Command and Materiel Command had in operation training programs which were determined to be inadequate to meet the new individual needs of the Commands. Other individual Air Forces and Commands indicated that no organized training programs had been established.

While the sub-depots were under the control of the Air Service Command Area Commands, provision was made for the training of sub-depots personnel by using the Area Command on-reservation post school facilities. Pre-service training was carried on in the post schools and in certain off-reservation schools. In addition the up-grade and supervisory training programs were implemented by sending sub-depot personnel to post schools or itinerant instructors were sent to the sub-depots. The transfer of the sub-depots brought about the cancellation of such services by the Air Service Command Area Commands; therefore, new provisions will have to be made for continuation of such training.

Considerable use is being made of off-reservation civilian training facilities. Air Service Command has had virtually all of these facilities to-date and is using approximately forty off-reservation state cooperating schools, seven off-reservation contract schools, and factory training facilities developed in cooperation with the Training Command for a wide variety of training courses. Transfer of the sub-depots has made it necessary to establish procedures whereby all Army Air Forces Activities will utilize these facilities on a uniform basis.

The training program now being conducted by Air Service Command is not wholly applicable to an over-all Army Air Forces training program.

The training program conducted by the Training Command is based on the training responsibility being vested in the operating echelons with advice and assistance made available through Command channels. A voluminous amount of course material has been produced by individual Commands, but no method of coordination exists between the various Commands for the planning, exchange or the joint use of these course outlines.

Facilities are lacking and personnel is not available in Headquarters, Army Air Forces to organize properly and conduct a satisfactory, coordinated training program.

3. On-Reservation Schools. At present three types of training are conducted in all on-reservation schools:

Pre-service - which is interpreted to mean training given an employee prior to assignment to productive work.

Up-grade training - which is interpreted to mean training given an employee after assignment to productive work.

Supervisory training - which is interpreted to mean training in the principles of supervision.

These types of training are accomplished by the following methods:

Group instruction - which is interpreted to mean that instruction given to homogeneous or selected groups, not on production.

On-the-job training - which is interpreted to mean planned training of employees while engaged on actual work. The trainer must possess knowledge of the job, ability to perform a job and must be able to teach others. Training must be conducted under the same discipline, with the same standards of performance, using the same equipment and materials on the same job being performed by the regular worker. It is further recommended that jobs related to forming, shaping, and critical assembly operations not to be included in on-the-job training.

Misassignments:

Past experience shows that due to the manpower situation, many workers are misassigned.

Recommendations:

It is recommended that particular attention be given to the placement of employees on specific jobs for which they have been trained.

Supervisory and Instructor Training:

At the present time, there are two recognized supervisory training programs being used in the AAF. One is the 52 hour course prescribed by the Air Service Command and the other is a 30 hour course made available through the Training-Within-Industry Branch of the War Manpower Commission.

Recommendations:

It is recommended that Army Air Forces Headquarters approve both courses and that the Air Forces and Commands shall confine their supervisory training to the course selected without alteration.

It is further recommended that a standardized instructor training program will be established by Army Air Forces Headquarters for all installations.

Orientation Course:

Many installations have found a general orientation course, for the new employees of short duration comprising from two to eight hours before entry on the job, has proven worthwhile. This course consists of a general introduction to War Department Regulations, the Army Air Forces as an organization, and considerable general information about the using agency, Civil Service Commission Regulations, and employee welfare.

Recommendations:

That the above type of orientation course be given to all new employees in the AAF.

It is further recommended that for all new unskilled or untrained employees being placed in training for or directly into shop production where basic skills are involved, that an orientation course of instruction emphasizing the application, maintenance, and safe use of tools and equipment will be established by the training agency.

Equipment and Property:

In the past due to the priority ratings allowed on training tools, equipment, Class 26 property, new planes, and new accessories, the civilian training programs have experienced considerable difficulty in adequately equipping the shops. However, it is believed that there is considerable equipment of this nature now available. To conduct an effective training program, such materials and equipment are vitally essential.

The transfer of Command jurisdiction of the sub-depots to the individual Air Forces and Commands has created a serious problem in that the sub-depots do not now have available for civilian training purposes adequate material and equipment.

Recommendations:

That consideration be given to revising AAF Regulation 65-53 with a view toward giving all civilian training programs the highest priority possible for the procurement of Class 26 equipment.

It is further recommended that Headquarters AAF take such action from time to time as is necessary to assure adequate and equitable distribution of civilian training equipment.

4. Off-Reservation Schools. The off-reservation schools now developed and being utilized for pre-service and up-grade training of civilian employees are:

a. Public schools operated under the State Boards for Vocational Education.

b. Private schools normally operating under direct Army Air Forces contract.

c. Factory schools established by cost-free agreement or contract for training Army Air Forces civilian personnel at manufacturing establishments.

It is in the interest of the Army Air Forces, and in keeping with the policies of the War Manpower Commission, to utilize training facilities already in existence to the maximum extent possible, and to utilize facilities supported by Federal training funds wherever compatible with Army Air Forces objectives. Maximum utilization of off-reservation training facilities offer advantages in the centralization of equipment, experience, and procedures. Many of these schools assist materially in

securing personnel in non-critical labor markets. Others provide quick and efficient methods for training key personnel in new types of equipment with a minimum of delay. Future civilian training requirements of the Army Air Forces will necessitate continuation of off-reservation training.

Recommendations:

a. Public Schools

- (1) Army Air Forces Activities are authorized to utilize the facilities of public schools to assist in civilian training wherever practical and economical.
- (2) Negotiations for the use of such schools may be initiated by the Army Air Forces Activity concerned, subject to the approval of the Command Headquarters.
- (3) An operating agreement approved by Headquarters, Army Air Forces will be used by the Army Air Forces Activity concerned in establishing training in the public schools, subject to such modifications as may be dictated by local conditions. (Form attached. Tab A.)
- (4) Standardized courses will be used to the extent specified by higher authority.
- (5) Joint use of such school facilities by various Army Air Forces Activities is authorized and recommended.
- (6) When an operating agreement has been established by any Army Air Forces Activity, other activities making joint use of the facilities will not introduce a new agreement, but will work under the provisions of the existing agreement. Quotas and curriculum will be determined by the Army Air Forces Activity which established the operating agreement.
- (7) In the event of the transfer of use of public schools, to other Air Forces or Commands, the entire Air Forces equipment located in these schools will also be transferred in order to keep these schools intact.
- (8) Problems in connection with the joint use and transfer of public school training facilities will be settled by coordination between the Headquarters of the Air Forces or Commands concerned and, where necessary, by reference to Headquarters, Army Air Forces.

- (9) Headquarters, Army Air Forces shall inform the various Air Forces and Commands as to the status of the public school facilities being used to train Army Air Forces civilian personnel.

b. Private Contract Schools

- (1) Army Air Forces Activities are authorized to utilize the facilities of private contract schools to assist in civilian training whenever practical and economical.
- (2) The Training Command will supervise training at private contract schools and make necessary contract arrangements, when directed by Headquarters, Army Air Forces.
- (3) The curriculum will be specified by the Command or Air Force requesting the training. If more than one Command utilizes the same school, the Training Command will attempt to provide each with the curriculum requested. When this is impractical, coordination will be effected between the various Commands with the assistance of Headquarters, Army Air Forces.
- (4) Civilian trainees at private contract schools will be carried on the payroll of the Command for which they are being trained. The personnel procedures required by that activity will be accomplished at the school by the Air Force or Command administering the contract.
- (5) Air Forces or Commands administering such contracts^{*} will be responsible for notifying Headquarters, Army Air Forces, of the availability of contract school facilities.

c. Factory Schools

- (1) Factory schools will be used to provide up-grade civilian training which cannot economically be provided within the Air Force or Command using existing training facilities. Instructors will be included among those trained so that provision can be made locally for future training needs.
- (2) The Training Command will provide Army Air Forces, Commands and Hq. AAF with complete information concerning factory schools (location, types of courses taught, entrance qualifications of personnel to attend and dates of courses).

*Note: It is believed that this means the Air Forces or Commands having jurisdiction over such contract schools. - Ed.

- (3) Army Air Forces and Commands will submit requests for quotas to the Training Command, and will schedule personnel in accordance with quotas provided by Training Command.
- (4) The advent of new equipment requiring special training of civilians at factory schools will be anticipated in advance and recommendations as to the extent and type of required training will be furnished by Air Forces and Commands.
- (5) Air Forces and Commands with approval of Headquarters, Army Air Forces, will request the Training Command to establish necessary new courses and will provide complete information as to the echelon and extent of training desired.
- (6) Factory schools and special schools established through agencies of the Office of the Chief Signal Officer to provide up-grade training in aircraft maintenance are exempt from the foregoing and will be administered by Air Service Command. Quotas and curriculums will be established by Air Service Command and provided to each Air Force or Command.
- (7) A uniform per diem policy will be established by Headquarters, Army Air Forces for civilian personnel attending factory schools.

d. Schools for Personnel from Other Commands

- (1) All Air Forces and Commands are authorized to utilize training courses conducted by other Air Forces and Commands when quotas are available by Command conducting the school.
- (2) The arrangements for this training will be made directly between the Air Forces and Commands concerned. Clearance will be accomplished through the Air Force or Command Headquarters for the purpose of maintaining records and issuing necessary travel orders.

5. Functions and Responsibilities. In order to initiate an effective civilian training program to accomplish required results the over-all planning, policy making and direction must be instituted in Headquarters, Army Air Forces.

a. It is recommended that:

- (1) The Assistant Chief of Air Staff, Personnel maintain in the Civilian Personnel Division a civilian training branch and that adequate staff and facilities be made available to insure proper accomplishment of the training program within the Army Air Forces.

- (2) AAF Regulation 40-6 be revised to outline the policies and procedures prescribed by Headquarters, Army Air Forces and to outline further the functions and responsibilities of the individual Air Forces and Commands and at all echelons. Proposed revisions are as follows:

(a) Headquarters, Army Air Forces will:

1. Plan, organize, prescribe policies for, evaluate and supervise the training programs for all civilian personnel under the control of the Commanding General, Army Air Forces.
2. Outline objectives and establish uniform standards of training. Assemble, coordinate and disseminate outlines of courses. Maintain and distribute current records of all types of training available for AAF personnel. Establish prescribed periodic reports and maintain necessary records.
3. Maintain liaison with outside agencies including War Manpower Commission and United States Office of Education.

(b) Headquarters of the individual Air Forces and Commands will:

1. Execute the civilian training program through the staff officer responsible for civilian personnel administration and provide the necessary assistance, direction, staff and facilities to insure proper accomplishment of the program within the respective Commands.
2. Formulate plans pertaining to civilian training within the individual Command, outline objectives and methods of training.
3. Determine organizational structures.
4. Utilize available training material to the maximum extent possible. Requests will be submitted to Headquarters, Army Air Forces for available course outlines or training material.
5. Supervise the maintenance of training records and statistical progress reports on civilian training.

6. Aid and advise subordinate Commands and stations in establishing, maintaining and coordinating training programs.
 7. Maintain liaison involving civilian training with other agencies including Public Schools and State Departments of Vocational Education.
- (c) Headquarters of each AAF station employing civilian personnel will:
1. Through the staff officer administering civilian personnel be responsible for organizing and conducting a program of civilian training for all activities at the station, according to the policies and procedures established by higher echelons of Command.
 2. Plan the civilian training program to fulfill the requirements established by the various operating divisions. The necessary assistance, direction, staff and facilities to insure proper accomplishment of the program within the station will be provided.
 3. Select currently employed personnel assigned to productive work for up-grade and supervisory training. Continuous supplementary training will be conducted to encourage the advancement of qualified individuals.
 4. Maintain liaison with regional representative of War Manpower Commission, State Department of Education and local educational institutions with suitable facilities for training.
 5. Ascertain training facilities available at Technical Schools of the Training Command and investigate facilities available in local colleges, vocational schools and other outside establishments.
 6. Plan and recommend use of suitable outside facilities when necessary to maintain training schedules.
 7. Maintain training records as to civilian training and progress. Prepare and submit required reports to higher headquarters.

6. Training Reports. Present training reports submitted to Headquarters, AAF contain excessive detail by occupational grouping and yet fail to provide comprehensive data on training activities. It is recommended that an additional table be prepared for AAF Form 134 in place of using Column I. Tab B is the proposed table*.

Definitions:

a. Pre-service trainees. A pre-service trainee is defined as one who is undergoing a prescribed training course of seven days or more duration prior to his initial assignment to a job. (Column A will indicate the number of pre-service trainees present for duty as of the last day of the reporting month.)

b. Pre-service graduates. This will be defined as the number of people who graduate from pre-service courses as defined in paragraph 1, above, during the month. (Column B will include all employees who were graduated during the reporting period.)

c. On-the-job trainees. An employee receiving instruction while engaged in actual work. The number of these trainees to be reported in Column C will be the number of such trainees in this assignment as of the last day of the reporting month.

d. Up-grade trainees. Up-grade training is organized training designed to prepare an employee for a higher skill and conducted under competent instruction. The number in Column D will report the number of those employees undergoing up-grade training as of the last day of the reporting month. The figure entered in Column E will report the total number of man-hours spent in this type of training in courses either on or off the reservation during the reporting month.

e. Supervisory training. Supervisory training is that training designed to acquaint the supervisor with the principles of supervision. Figures shown in Column F represent the number of those employees completing training during the reporting period. Column G will represent the number of employees presently employed who have at any time completed the prescribed program of supervisory training. Column H will represent the number of supervisors and potential supervisors attending courses of supervisory training.

7. Manpower Allotment for Trainees. Present personnel allotments have been made without consideration of the need for maintaining adequate full time training for new personnel. The ceilings provided many Air Forces and Commands include only personnel already engaged on productive work. Due to the length of time required to train replacements,

* Note: Table submitted by Committee has been redrawn and clarified, but contains all information as recommended by Committee. - Ed.

provisions must be made so that this training can be accomplished in advance of the production assignment of replacements. It is, therefore, recommended that Headquarters, AAF secure an allotment of an additional 5% of AAF personnel for each Air Force and Command, such allotment to be used exclusively for personnel maintained in full time pre-service training.

8. General Recommendations. It is recommended that :

a. The conference report be approved and copies distributed to Headquarters of the several Air Forces and Commands.

b. The attached proposed manning table for the Training Branch, Civilian Personnel Division, AC/AS, Personnel be authorized in order that the recommended civilian training program may be accomplished. Tab C. (withdrawn)

c. The attached proposed AAF Regulation covering the AAF Civilian Training Program be approved and published.

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Appendix 2

Schools Authorized to Receive Army Air Forces Class 26 Equipment

Alabama.	Alabama School of Trades Gadsden, Alabama
Arizona.	Globe Vocational School Globe, Arizona Mr. Marvin Smith, Local Director Tucson Senior High School Tucson, Arizona C.A. Carson, Local Director
California.	Central Trade School Oakland, California Mr.M. Wright, Director Long Beach Trade Extension School Long Beach, California Mr. T. Horridge, Director San Diego Vocational School San Diego, California Mr. W. Thatcher, Director Sacramento Junior College Sacramento, California Mr.Nicholas Ricciardi, Director
Colorado.	Denver Emily Griffith Opportunity School Denver, Colorado Mr.J.J. Ball, Receiving Officer Trinidad Junior College Trinidad, Colorado Peter P. Mickelson, President
Connecticut.	Hartford State Trade School Hartford, Connecticut A.S. Boynton, Director
Florida.	Miami Technical High School Miami, Florida
Georgia.	Macon Vocational School Macon, Georgia Mr. A. McCauley

Idaho.	University of Idaho Southern Branch Pocatello, Idaho Mr. Roy Christensen, Local Director
Illinois.	Lane Vocational School Chicago, Illinois Mr. Philip L. McNamee, Assistant Superintendent of Schools
Indiana.	Evansville Vocational School Evansville, Indiana Mr. W.G. Pease, Director
Iowa.	Davenport Vocational School Davenport, Iowa Mr. L.E. Wass, Director
Kansas.	Wichita Vocational School Wichita, Kansas Mr. Woodin, Director
Kentucky.	Ashland High School 17th & Central Avenue Ashland, Kentucky Lafayette Vocational School Lexington, Kentucky Louisville Vocational School Louisville, Kentucky Mr. Paul Harris, Director Mayo State Vocational Paintsville, Kentucky Western Trade School Bowling Green, Kentucky
Louisiana.	Shreveport Trade School Shreveport, Louisiana Robin Hood, Director
Maine.	Bangor Vocational School Bangor, Maine Mr. M.P. Crates, Assistant Director
Maryland.	Baltimore Vocational War Production Training School # 453 775 Waesche Street Baltimore, Maryland Mr. David E. Waglein, Superintendent of Schools

Massachusetts.	Springfield Trade School Springfield, Massachusetts Mr. Burridge, Director
Michigan.	Detroit Vocational School Detroit, Michigan Mr. George Abraham, Supervisor
	Western Michigan College of Education Kalamazoo, Michigan Mr. Buck Weaver, Supervisor
Missouri.	Hadley Technical High School St. Louis, Missouri Mr. F. J. Jeffrey, Administrator
Nebraska.	Omaha Public Schools Department of Vocational Education Omaha, Nebraska Mr. W.C. Cumming, Director
New Jersey.	Camden County Vocational School Camden, New Jersey Joseph M. Hall
	Essex County Vocational School Newark, New Jersey Mr. R. Kent
New Mexico.	Albuquerque High School Albuquerque, New Mexico Lester Hitchens, Supervisor
New York	Brooklyn Aviation Trade Center Brooklyn, New York Mr. Morris Siegel, Assistant Superintendent
	Burgard Vocational High School Buffalo, New York William Campwrath, Principal
	New York State Aviation Ground School Utica, New York Mr. Horace Griffiths, Director

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Ohio	<p>Akron Vocational School Akron, Ohio Mr. H.Jellison, Director</p> <p>Cincinnati Vocational School Cincinnati, Ohio Mr. W.S. Dickson, Director</p> <p>Ironton High School Ironton, Ohio</p> <p>Martins Ferry Trade School Martins Ferry, Ohio</p> <p>Portsmouth High School Portsmouth, Ohio</p> <p>Wilberforce University Wilberforce, Ohio</p> <p>Zanesville High School Zanesville, Ohio</p>
Oklahoma	<p>Oklahoma City Trade School 918 North Broadway Oklahoma City, Oklahoma Mr. E.J. Spady, Local Director</p> <p>Oklahoma A & M College Room 107, Industrial Building Stillwater, Oklahoma Mr. H.P. Adams, Supervisor</p>
Oregon	<p>Eugene Vocational School Eugene, Oregon Mr. Charles Bauder, Director</p>
Pennsylvania	<p>Harrisburg Vocational School Harrisburg, Pennsylvania Mr. J. Reese, Director</p>
Rhode Island	<p>Providence Vocational School Providence, Rhode Island Mr. George R. Baldwin, Director</p>
South Carolina	<p>Palmetto School of Aeronautics Columbia, South Carolina W.F. Guy, Director</p>

Tennessee	<p>Hume Fogg Vocational School Nashville, Tennessee Mr. Jack Binns, Director</p> <p>Memphis National Defense School Memphis, Tennessee Mr. E.B. Hudgens, Director</p> <p>Shelby County School of Aeronautics Whitehaven, Tennessee</p>
Texas	<p>Amarillo College Amarillo, Texas</p> <p>El Paso Technical High School El Paso, Texas J.T. Reynolds, Director</p> <p>Will Rogers War Training School Fort Worth, Texas Sidney Wilson, Director</p>
Utah	<p>Utah State Agricultural College College Hill Logan, Utah Mr. E.C. Jeppsen, Local Director</p> <p>Weber College 550 25th Street Ogden, Utah Mr. R.A. Clarke, Local Director</p>
Washington	<p>Edison Vocational School Seattle, Washington Mr. Marshall Goodwin, Director of War Production Training</p> <p>Spokane Trade School Spokane, Washington Mr. F. Griffin, Director</p>
West Virginia	<p>Huntingdon Trade School Huntingdon, West Virginia Mr. Lightner, Director</p>
Wyoming	<p>Wyoming Aircraft School Cheyenne, Wyoming Mr. C.C. Jackson, Director</p>

This appendix is extracted from a list of schools authorized to receive Army Air Forces Class 26 equipment. The list was attached to a letter from Chief, Dist. Sec. AC/AS, to Dir. ATSC, Wright Field, subj: The Supply of Class 26 Material to AAF Certified Civilian Training Schools, 24 Nov 44, in KGRG, TAGO, 353 Civ.Tng. Washington, Feb-May 45.

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Appendix 3

RECAPITULATIONCIVILIAN TRAINING IN ARMY AIR FORCES
FOR FISCAL YEAR 1947

AREA OF TRAINING	NO. IN- STALLA- TIONS	NO. OF TRAINEES	NO. OF GROUPS	COURSE AVERAGE LENGTH	HOURS PER WEEK	NO. EQUIV- ALENT IN- STRUCTORS	TOTAL COST	TRAINEE SALARY	COST LESS TRAINEE SALARY
Apprentice	5	518	63	153	4.5	10.54	\$ 51,731	\$ 29,644	\$ 22,087
Clerical	44	13,602	965	23	7	21.67	432,604	353,026	79,578
Inspection & Testing	5	133	16	100	35	1.47	30,899	24,496	6,403
Management & Supervision	62	29,079	1,858	30.5	8.5	38.85	754,447	593,494	160,953
Manual, Unskilled, etc	2	276	17	30	3	1	9,926	8,026	1,900
Orientation	40	15,316	1,023	5.6	4.9	4.84	91,210	76,425	14,785
Protective	12	10,938	313	13	5	2.04	111,529	97,768	13,761
Safety	28	34,689	1,194	9.2	5	9.36	269,573	233,869	35,704
Skilled Trades	36	9,736	862	94	13.7	22.72	318,616	278,826	39,790
Supply	23	9,455	640	25	6.5	17.50	244,755	197,121	47,634
Technical & Scientific	15	1,219	51	80	17.5	2.52	300,545	56,526	244,019
TOTALS		124,961				132.51			666,614

1. There is no training given in the Army Air Forces on basic skills; no pre-induction or pre-service training conducted.

2. All training is to increase the efficiency of the employees after they have qualified and have been employed.

3. The lives saved, accidents prevented, equipment and material saved, work production increased because of the training given can never be fully appreciated. The war could not have been won without the training given and the peacetime operation will be more efficient by the continuation of training. This is to take care of turnover, refresher training for veterans, cross training so individuals can assume additional duties because of reduction in force, supervisor and management training, skills training including apprenticeship, scientific and research training and safety training.

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G L O S S A R Y

AAFSAT	AAF School of Applied Tactics
AAFTAC	AAF Tactical Center
AAFTRC	AAF Training Command
AAFTTC	AAF Technical Training Command
AAG	Air Adjutant General
AG/AS	Assistant Chief of Air Staff
ADG	Air Defense Command
AFOMO	Air Force Office of Manpower and Organization
AG	Adjutant General
AGO	Adjutant General's Office
AMA	Air Materiel Area
AMC	Air Materiel Command
ASC	Air Service Command
ASF	Army Service Forces
ASWAAF	Arms and Services with the AAF
ATC	Air Transport Command
ATRC	Air Training Command
APGC	Air Proving Ground Command
ATLD	Atlantic Division
ATSC	Air Technical Service Command
AU	Air University
CAA	Civil Aeronautics Administration
C/AC	Chief of Air Corps
CDD	Career Development Division
CFTC	Central Flying Training Command
ConAC	Continental Air Command
CPO	Civilian Personnel Officer
C/S	Chief of Staff
DAFC	Department of the Air Force, Civilian
DCS/P	Deputy Chief of Staff, Personnel
DRE	Departmental Records Branch
EFTC	Eastern Flying Training Command
ETTC	Eastern Technical Training Command
EUCOM	European Command
FEAF	Far East Air Forces
FEAMCOM	Far East Air Materiel Command
FY	Fiscal Year

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JIT	Job Instructor Training
JMT	Job Management Training
JRT	Job Relations Training
KCRC	Kansas City Records Center
MAAMA	Middletown Air Material Area
MAFB	Maxwell Air Force Base
MATS	Military Air Transport Service
MOAMA	Mobile Air Material Area
MOASC	Mobile Air Service Command
NYA	National Youth Administration
OAAB	Orlando Army Air Base
OC&R	Operations, Commitments, and Requirements
OCAG	Office, Chief of Air Corps
OCAMA	Oklahoma City Air Material Area
OCATSC	Oklahoma City Air Technical Service Command
OOCMA	Ogden Air Material Area
OSW	Office of the Secretary of War
R&R	Record and Routing Sheet
RIF	Reduction in Force
SAAD	San Antonio Air Depot
SAAMA	San Antonio Air Material Area
SAC	Strategic Air Command
SAD	Sacramento Air Depot
TAC	Tactical Air Command
TAGO	The Adjutant General's Office
TTC	Technical Training Command
TWI	Training Within Industry
USAFE	United States Air Forces in Europe
VEND	Vocational Education for National Defense
WDO	War Department Order
W-PAFB	Wright-Patterson Air Force Base
WRAD	Warner Robins Air Depot
WRATSC	Warner Robins Air Technical Service Command