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United States Department of the Interior
National Park Service

National Register of Historic Places
Multiple Property Documentation Form

This form is for use in documenting multiple property groups relating to one or several historic contexts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. For additional space use continuation sheets (Form 10-900-a). Type all entries.

A. Name of Multiple Property Listing

We've Gotta Get Tough: History of World War II Home Front Efforts In Arkansas, 1941-1946

B. Associated Historic Contexts

C. Form Prepared By

Name/title Holly Hope date 11/13/08

Organization Arkansas Historic Preservation Program telephone 501 324-9880

Street & Number 1500 Tower Building, 323 Center Street

City or town Little Rock State AR Zip Code 72201

D. Certification

As the designated authority under the National Register Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards for Planning and Evaluation.

Catherine Matthews

4/13/09

Signature of certifying official

Date

State or Federal agency and bureau

Date

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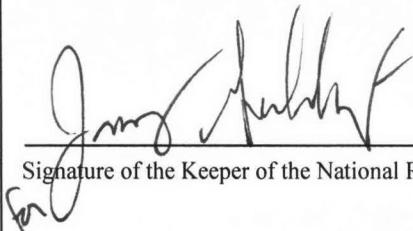
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Name of Multiple Property Listing

We've Gotta Get Tough: History of World War II Home Front Efforts In Arkansas, 1941-1946

D. Certification, continued

I hereby, certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.



Signature of the Keeper of the National Register

4/22/2009

Date

E. Statement of Historic Contexts

Discuss each historic context listed in Section B

Contexts & Endnotes

**See continuation
sheet**

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WE'VE GOTTA GET TOUGH: HISTORY OF WWII HOME FRONT EFFORTS IN ARKANSAS, 1941-1946

Americans had no clue in 1934 that the self-promotion of the Chancellor of Germany to Fuehrer would set in motion horrifying acts of hatred and oppression that would come to inspire dread in the hearts of practically every nation in the world. The Fuehrer, Adolf Hitler, quickly advanced an ominous agenda by joining in an Axis alliance with Japan and Italy to overtake Europe. Hitler's dictatorial actions grew more menacing with each year as violence raged across the Atlantic. The appalling conflict seemed distant enough that perhaps, Americans hoped, the Axis could be repelled in due time without the involvement of troops. President Franklin Roosevelt was not under the illusion that Hitler could be ignored and the memory of World War I could not continue to serve as a deterrent to involvement in another conflict. With the declaration of war by Britain and France against Germany in 1939 he began to strengthen his program to supplement America's military powers and assist European allies. The first American goal was an increase of 5,800,000 troops from the 1939 number of 174,000.

These troops would be woefully under armed in comparison to the German army. It was reported in the 1940 *Arkansas Gazette* that approximately 1,750 airplanes were combat-worthy enough to defend the continental United States, the Western Hemisphere and the Philippines. The total of American military planes, including trainers and personnel transports, produced in 1939 was 2,000 while German factories produced between 38,000 and 48,000 airplanes per year. The Neutrality Act of 1935 prevented Roosevelt from aiding France and Britain against Nazi aggression with American troops. But the German invasion of Poland in 1939, which signaled the official start of war, allowed the president to seek Congressional approval to provide arms to "belligerent" nations. Roosevelt stressed that the repeal of embargo provisions within the law would offer employment for thousands of Americans because weapons could be completed at home and sent overseas rather than distributing separate parts for finishing as required by the embargo.

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In addition, civilians and American ships would be protected from dangerous war zones because purchasers of materials and supplies would be required to transport goods on their own vessels.¹

Roosevelt relayed to hesitant Americans that the United States would be less likely to enter the war in 1940 if nations invaded by Hitler were assisted by provision of "...implements of war, the planes, the tanks, the guns, the freighters which will enable them to fight for their liberty and for our security." He reminded isolationists that entering the military-industrial arena could not be considered a breach of the Neutrality Act and that the national policy of protecting Americans from war was maintained if the nation sent supplies but no troops. As a result of Roosevelt's campaigning, he received congressional approval of the 1941 Pittman Bill, permitting the cash sale of arms to eligible nations, and the subsequent Lend-Lease Act. The Act postponed Allied payment for material until after the war. Such legislation brought Roosevelt closer to his generally unpublicized goal of enticing Germany to declare war on the United States. Roosevelt knew this would circumvent isolationist sentiment and allow him to maintain his public support while preparing a timely defense against Nazi designs on America. After Pearl Harbor and the declaration of war on the United States by Germany and Italy, neutrality was effectively quashed.²

The groundwork for protective mobilization plans had been in the works for the United States since the mid-1930s. The Industrial Mobilization Plan addressed the issues of industrial support and establishment of training centers for troops, which by 1940 were being pumped up with congressional appropriations preparatory to a limited national emergency. The Army was integral to the mobilization and procurement agenda as requirements for resources and labor to meet its needs in a potential global war shaped the ultimate process. Projected requirements to be met by 1941 were the provision of all articles essential for an Army and Air Corps numbering 1.2 million and the construction of industrial plants that could supply over four million troops. The Army and Navy Munitions Board approved contracts for

¹ "U.S. Has Only 450 First Line Planes," *Arkansas Gazette*, July 03, 1940; "*The Presidents, Franklin D. Roosevelt*," information from www.pbs.org/wgbh/amex/presidents, accessed July 10, 2007; information from <http://www.history.army.mil/books/lineage/mi/ch4.htm>, accessed October 15, 2008.

² Franklin Delano Roosevelt, "*The Great Arsenal of Democracy*," information from www.americanrhetoric.com, accessed July 18, 2007, 6; "*The Presidents, Franklin D. Roosevelt*."

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production of munitions in the United States and ascertained the amount and type of strategic raw materials needed by the military. The board also initiated the construction of arsenals and depots.

The timeline for deployment of troops was dependent on the availability of industrial facilities as the entire process could be jeopardized should America enter the war before training, housing and supply demands were met. As a result of the Depression there were many inactive factories available but they had to undergo modernization to be useful to the military. Roosevelt solved this issue by promoting accelerated depreciation and government financing in return for war production development. The plants were operated by private contractors who received management fees. The federal government also aided manufacturers in acquiring defense contracts by providing credit through the Reconstruction Finance Corporation to those who could not otherwise obtain funds.³

After the Nazi advance toward Britain in 1940, Roosevelt requested that Congress double the \$5,000,000,000 approved for defense at the last session. The immediate allocation would be for construction of arms and munitions plants, coastal defenses, military training camps and the enlargement of existing bases. In 1941, the Victory Program was implemented as a plan for determining projected American materiel needs such as output of weapons, vehicles, uniforms and other supplies. Totals were based on the assumed maximum troop strength date in Europe as of July 1, 1943.⁴

Arms production and mobilization had actually begun to slow in the summer and fall of 1941, but by January 1942, newspapers announced that Roosevelt “Plans to Fill Skies with Planes, Ground with Tanks and Seas with Ships During ’43.” This would be achieved by a production goal of 60,000 planes, 45,000 tanks and 20,000 anti-aircraft guns. The Office of Production Management (OPM) had been formed in 1941 by Roosevelt in order to meet those goals and speed the process of defense production. In 1942 the peacetime mobilization phase gave way to the industrial mobilization phase. By executive order, the War Production Board (WPB), was given power to direct military production and procure materials to

³ Frank N. Shubert., “Mobilization: The U.S. Army in World War II, The 50th Anniversary,” information from www.army.mil/cmh-pg/documents/mobpam.htm , accessed November 14, 2007, 8, 11, 13.

⁴ *Ibid*, 14.

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defeat a potential enemy rather than stockpile for defense. The peacetime economy was commandeered for overall war production.⁵

ARKANSAS'S HOME FRONT DEFENSE DEVELOPMENT

Arkansas eventually would come to be an important source of the strategic materials needed to meet the enemy. The state would provide ideal locations for manufacturing, training and industrial facilities in World War II. Despite a sluggish start, a diverse group of defense industries, training grounds, airfields and prisoner of war facilities spread across the state after the attack on Pearl Harbor. The agricultural character and landscape of some areas underwent a speedy transformation through the construction of federally and privately-financed factories, airports, quarries and war industry and camp housing. Some displaced agriculturalists were not happy with the price they received for their property, or the criticism they were subjected to in the face of their objections. Close timelines for evacuation also left some in dire straits as far as finding a new home in rural Arkansas. But in many instances relocated agriculturalists and sharecroppers that had never known another way of life, received job training unavailable within Arkansas's underdeveloped education system. They also received vastly improved wages in new fields and defense industries in other states. To maintain the population of Arkansas and provide jobs for those on the home front, war-era Arkansas governors Carl Bailey and Homer Adkins, with the help of the state's Representatives and Senators, had to persuade the federal government that Arkansas had the resources, manpower and logistical advantages required for military consideration.

Under the Industrial Mobilization Plan the Army and Navy Munitions Board had compiled an inventory of raw resources and industries essential to national defense. Governor Carl Bailey was spurred by those lists of strategic, critical and essential minerals and supplies to research the state's potential role in stockpiling for mobilization. Bailey directed the state planning board to organize the Arkansas Industrial Committee under the purview of the Chamber of Commerce. This committee would be responsible for accumulating data on Arkansas resources and then determining the proper channels for

⁵ "Roosevelt Plans to Fill Skies with Planes, Ground with Tanks and Seas with Ships During '43," *El Dorado Evening Times*, January 06, 1942, 1; "RFC To Make Loans To Defense Plants," *Arkansas Gazette*, November 27, 1940, 6; Shubert, 15-16.

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federal consideration of development. According to a 1940 editorial in the *Arkansas Gazette* this was the first state in the nation to form a committee for that purpose.⁶

Bailey understood what war industries might do for the state after the arduous Depression years and the committee was just the first step he took toward entering Arkansas in the national race for defense dollars. In the summer of 1940 he was informed by the governor of Georgia that the southern states were forming a Southwide Industrial Mobilization Committee in Washington. This committee would consist of representatives of each state that would sit on a board responsible for attracting southern war industry. Bailey sent Jack Pickens of Little Rock to the newly established Arkansas War Industry Office in Washington to disperse information about Arkansas's available resources and facilities. War Industry Office sources on the state level were Arkansas government agencies, the State Chamber of Commerce, the Arkansas Agricultural and Industrial Commission, municipal governments and civic organizations. Appropriations through the Agricultural and Industrial Commission financed the Arkansas War Industry Office.⁷

Bailey encouraged the State Board of Education to coordinate with the U.S. Office of Education in a search for vocational training facilities organized by colleges, denominational schools and high schools. The potentiality of defense industries coming to Arkansas provided the impetus for the introduction of new training courses into the curriculum of the state's colleges and high schools. By 1940, Arkansas was ready to take advantage of defense training funds available upon congressional approval. In addition to engineering, flying and drawing courses, training was also provided by Arkansas industries for those employees considered "non-eligible" for the military. People receiving such instruction efficiently filled the gap left in the defense workplace by conscripted workers.⁸

The spring 1940, plans of the Roosevelt Administration to move coastal war industries inland appeared to offer the Arkansas Industrial Committee the opening they needed. The protection of essential

⁶ "Industry is Called to Armed Defenses," *Arkansas Gazette*, August 25, 1940; "Little Rock Seeks War Industries," *The Arkansas Gazette*, May 29, 1940; "Statement Made By Land Owners," *Camden News*, April 04, 1942, 1.

⁷ "Bailey Names Pickens To War Industry Body," *Arkansas Gazette*, June 15, 1940, *Carl Bailey Scrapbook, 1924-1948*; "State Plans Bureau at Washington," *Carl Bailey Scrapbook*.

⁸ "Industry is Called to Armed Defenses;" "State Schools To Get Defense Training Funds," 1940, *Carl Bailey Scrapbook*; "Training Courses at Colleges Approved," *Southwest American*, Fort Smith, AR, September 11. 1939.

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war industries through relocation from susceptible coastlines to the area between the Rockies and the Appalachian Mountains invited optimistic conjecture by committee members. The group reported to the governor that “Arkansas would be the ideal place for most wartime industries.” Deeds quickly followed words as Bailey sent a contingent of industrial representatives to Washington in the summer of that year. The group was armed with information regarding the benefits of the state, key to which was Arkansas’s remote, yet accessible position. Such isolation would prevent attacks and allow the military vital ingress via developing and existing surface and water routes. The patriotism and dependability of the residents, mild winter temperatures, water supply, minerals and timber were also cited by the committee as draws for war service industries.⁹

The reliability of the weather in the south influenced the decision of the Army to construct Air Corps schools and training centers south of the 37th degree latitude, which followed the northern boundary of Arkansas. Despite the best efforts of the Arkansas Industrial Committee to provide the U.S. government with vital resource information, Arkansas initially received little federal favor. This was primarily attributed to expensive electricity and weak political clout in the Senate after the 1937 death of Senator Joe T. Robinson. An uneducated labor force and a deficiency of capital, research and training facilities translated to a historically lackluster manufacturing legacy in Arkansas, contributing to an initial lack of confidence on the part of the War Department.¹⁰

Arkansas had received no defense contracts in August 1940, so Representative William Norrell detailed the state’s positive agricultural and mineralogical qualities to John D. Biggers, Chairman of the national Defense Advisory Commission. Biggers informed Norrell that the commission was then looking to utilize existing defense resources and forestall building new industries, but the information was important to future undertakings. It seems though, that Norrell’s correspondence was ultimately noted by the commission because by the end of the month it was reported in the *Arkansas Gazette* that State Representative Clyde Ellis had been informed by the Defense Advisory Commission that Arkansas would

⁹ “Industry is Called to Armed Defenses”; “Little Rock Seeks war Industries.”

¹⁰ “New Pilots to be Trained in South,” *Arkansas Gazette*, May 31, 1940; Michael Dougan, *Arkansas Odyssey: The Saga of Arkansas from Prehistoric Times to Present*, (Rose Publishing Company: Little Rock, AR., 1994), 461; “Report Tells of Handicaps of Arkansas,” *Arkansas Gazette*, October 15, 1940, 15.

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be under consideration for defense construction. The next month the Army received a Congressional appropriation of \$244,000,000 for the expansion of armaments factories in interior regions situated 200 to 250 miles from international boundaries or coastlines. The interior was divided into five strips that were to receive groups of industries and Arkansas was included in strip E.¹¹

Governor Homer Adkins took over from Carl Bailey in January 1941, and continued educating the federal government about Arkansas's defense potential. In his first month in office the Joint Budget Committee adopted proposed budgets that could possibly provide Adkins with increased funds for attracting industry or national defense plants. Communities that desired defense contracts were asked by the governor to compile lists of available labor, raw materials, water supplies and power for the state Agricultural and Industrial Commission. In the spring of 1941, Adkins held a statewide conference in Little Rock for the organization of efforts to bring in defense industries. Civic, labor, industry, education and government leaders were invited to come up with a logical plan to expand and adapt existing industry or bring in new military enterprises financed through outside capital. The inspiration for this gathering was Adkins' previous attendance of defense industry conferences in Washington. His experiences in the Capitol empowered him to share his education with the state's leaders and reach out to federal players on behalf of Arkansas.¹²

Pierce Williams of the OPM counseled Adkins that the state needed to abandon the mindset of competition among regions for that of cooperation throughout Arkansas. He suggested that even the smallest rural machine shops form a pool and sub-contract to help out prime contractors working for the military. Heeding Williams' words the governor formed the Arkansas Defense Council. One of the council's duties was to organize counties in an effort to determine the capabilities and available equipment of all state manufacturing and processing plants. The Defense Contract Service (known as Contract

¹¹ "Defense Planners Get Full Story of Arkansas's Assets," *Arkansas Gazette*, August 22, 1940; "Arkansas Will be Considered in Arms Plans," *Arkansas Gazette*, August 23, 1940; "Interior Areas Zoned as Arms Factory Sites," *Arkansas Gazette*, September 03, 1940, 3; "Arkansas Gets New Assurance from Defense Planners for Part of Funds," *Baxter Bulletin*, September 06, 1940, *Clyde Taylor Ellis Papers, 1908-1933-1976*.

¹² "Large Fund to Get Industries Given Approval," *Arkansas Gazette*, January 10, 1941; "Industrial Plan Plays No Favorites," *Arkansas Gazette*, March 02, 1941; "Adkins Plans Development of Industries," *Arkansas Gazette*, March 14, 1941; "Governor Receives Favorable Replies to Invitations," *Southwest American*, April 07, 1941, 8.

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Distribution Division by September 1941), of the OPM established an office in Little Rock that was responsible for compiling cooperative contracts for smaller plants to contribute to the defense effort. A sample room at the office provided examples of wooden, metal and cotton articles made from Arkansas resources that could be produced for assembly under defense contracts.¹³

CIVILIAN PILOT TRAINING PROGRAM

Adkins' exertions to introduce the federal government to Arkansas's potential were essential to the later development of the state as a home front industrial center. But the path to Arkansas's economic improvements began in the area of pilot training as a result of the federal Civilian Pilot Training Program (CPTP). Prior to the 1941 U.S. declaration of war, Arkansas had offered training to civilian pilots through a government-financed college program. Land-grant colleges, technical institutes, four-year teachers colleges and junior colleges in the state submitted their applications to offer facilities for classes. After the start of war the state became home to several civil and War Department-sponsored pilot training facilities and air bases because of its clement weather and remoteness. The success of air training in Arkansas was made possible by growing awareness of the menace of German military successes in the late 1930s.

At the end of World War I all nations with Air Services continued to expand their production and knowledge of airborne bombers. The potential military threat to America inspired a campaign by the War Department for more military personnel and a beefed up Air Corps. Henry Arnold, Chief of the Air Corps, concurred with the War Department in 1939 when he ranked the United States Air Corps as 5th or 6th rate in an unfavorable comparison with the German air force. The American trend of strengthening military aviation led to the authorization of the Civil Aeronautics Act (CAA) of 1938. The CAA was publicized as an attempt to help the aviation industry bounce back from the Depression. A second stated objective was to provide volunteer opportunities for potential airmen ... "who in a time of national emergency could serve as a valuable pool from which our military and naval forces could draw material for accelerated

¹³ "Meeting Plans United Effort For Industries," *Arkansas Gazette*, April 15, 1941, 1; "Defense Council Work Outlined," *Arkansas Gazette*, June 05, 1941, 13; "Would Aid Small State Industries," *Arkansas Gazette*, June 08, 1941.

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training.” The government established the Civil Aeronautics Authority as a regulatory body with the duties of stimulating interest in flying through the training of 20,000 civilian pilots a year, regulation of pilot licensing, aircraft maintenance, airline operations, and certification. The primary presentation of the program as a commercial venture with a civilian nature served to reduce negative feelings on the part of a split Congress and isolationists, lending a social-cultural slant to a prospective military program. It was a timely design that dovetailed with imminent military events and future aviation training institutions under the Army Air Forces (AAF).¹⁴

Under the CPTP the government paid for a 72-hour ground school course supplemented by 35 to 50 hours of flight instruction at air facilities near colleges and universities. The student was responsible for a lab fee, which was applied to insurance and a flight physical. Flight contractors and schools received \$270-\$290 from the government for each graduate with a pilot’s certificate. Six Arkansas colleges had applications for aviation schools accepted by the CAA in 1939. Colleges approved under the act by September of that year were Little Rock Junior College (now University of Arkansas, Little Rock); Hendrix College and Arkansas State Teachers College in Conway (now University of Arkansas, Conway); Henderson State Teachers College and Ouachita Baptist College in Arkadelphia; and Arkansas State College in Jonesboro, (now Arkansas State University, Jonesboro).

The state was allowed a total of 120 students with 24 at each college, out of which three percent were required to be women. One woman out of thirty students is known to have trained in the first class at Fayetteville but five women altogether attended classes there under the program. Ground training classes were conducted at the colleges but obviously the need for runways and hangar facilities sometimes necessitated the use of local airports for the actual flight training. Little Rock Junior College classes were

¹⁴ “The Development of the Army Air Forces,” 59th AAFFTD, Southeast Army Air Forces Training Center Yearbook,” Helena, AR, 1942, NP; “The Massive Buildup; The Enormous Task of Training Pilots for WWII,” information from www.wingsofhonor.org, accessed May 22, 2008, 1; Roger Guillemette, “Civilian Pilot Training Program (CPTP),” U.S. Centennial of Flight Commission, information from www.centennialofflight.gov, accessed May 20, 2008; Mike Eckels, “The Fayetteville Experience: The Story of the Fayetteville, Arkansas Civilian Pilot Training Program, War Training Service, and the 305th College Training Detachment, (1939-1944),” 1995, 1; “Civilian Pilot Training Program,” information from www.nationalmuseum.af.mil, accessed April 20, 2008; “Training Courses At Colleges Approved,” *Southwest American*, September 11, 1939.

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held at Central Flying Service at Adams Field. Classes in Conway were held at Conway Flying Field while Henderson used the Arkadelphia airport. In October 1939, when the University of Arkansas at Fayetteville was added to the program, training took place at Fayetteville Field (now Drake Field). John Brown University trained ten men at their Siloam Springs campus in the airfield, hangar, wind tunnel, shop and laboratory the college built after being selected by the CAA. Other Arkansas schools participating in the CPTP by 1940 were A&M, Monticello; A&M, Magnolia; Arkansas Polytechnic College, Russellville; College of the Ozarks, Clarksville; Fort Smith Junior College and Beebe Junior College.¹⁵

The year 1939 was pivotal in the build-up of American military aviation. The emphasis on home front defense grew that year to encompass hemispheric defense when Roosevelt recommended that Congress authorize an expanded Army Air Corps. Pilot officer numbers were increased by 1,100 and allowed for an addition of 21,000 enlisted men. The education requirement of two years of college for pilots was eliminated in 1940 and the Aviation Students Act of 1941 lowered the prerequisite to a high school diploma. This allowed men who were unable to attend college because of the Depression to be eligible for flight training. It also opened training courses to more enlisted men.

After Pearl Harbor the importance of the CPTP as a military program and less of a New Deal holdover contributed to an integral format change. American involvement in the war prompted President Roosevelt to submit an executive order in 1941 calling for all civilian pilot training efforts to concentrate on procuring airmen for “ultimate service as military pilots....” At that point enlistment in the Army Air Corps or the Navy was encouraged within college training programs in order to add to the numbers of war-ready pilots. In January 1942, women were eliminated from the program to make room for more military-eligible men. The Civilian Pilot Training Program was referred to as the War Training Service (WTS) in December 1942. The CPTP/WTS eventually lost a good part of its civilian nature in 1942 through an agreement to accommodate the Army Air Forces (AAF, which had replaced the Army Air

¹⁵ Eckels, “The Fayetteville Experience,” 3; “Five Arkansas Colleges To Train Fliers,” *Carl Bailey Scrapbook*; “180 Arkansas Students in Pilot Courses,” *Arkansas Gazette*, August 01, 1940, 5; Don Holbert, Central Flying Service, Little Rock, AR, Telephone interview with author, May 29, 2008; “The History of John Brown University,” information from www.jbu.edu/library/archives/index., accessed June 03, 2008; “Central Flying Trains Over 600 Pilots,” *Arkansas Gazette*, September 06, 1942, 18.

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Corps in June 1941), and the Navy by providing training facilities and serving as a recruitment agency. Under its new military configuration the program increased its training courses to deal with changes in the structure of flying duties for war-bound troops. Seven courses were offered including Elementary, Secondary, Cross-country, Link Instruction, Instructors, Flight Officers and Liaison. Elementary and Secondary training enabled pilots to receive certification and a military commission while the remaining courses offered preparation for advance assignments. A second executive order, issued in December 1942, discontinued further Army and Navy enlistments because of a surplus in reservists, which eliminated one of the main jobs of the WTS - that of recruitment. However, training for other military and commercial aviation duties continued under the CAA and the AAF. The last division, College Training Detachment for air crew indoctrination was terminated in 1944, ostensibly because the Navy felt it had fulfilled its quota of pilots and the overall prediction was that the Axis forces would be defeated soon anyway. Discontent with the civilian structure of the CAA on the part of the Army Air Forces and criticism of Air Forces underutilization of program pilots and facilities have also been suggested as contributing factors for its discontinuance.¹⁶

Civilian classes at Central Flying Service in Little Rock ended in 1944. Little Rock Junior College administration was told by the WTS officials that there was to be a sixty day suspension of civilian classes in January. The sixty day suspension became permanent under orders of the War Department, which left students at Adams Field "without status." In the case of Little Rock the pilot instructor training center was retained and students were housed there until they could be reassigned under Army Air Forces command. Central Flying Service continued CAA pilot training at its Adams Field facility after the civilian program was ended. Fayetteville Field's WTS classes were discontinued in March 1943, but the 305th College Training Detachment, offering ten hour elementary instruction for air crew indoctrination, remained there until March 1944.¹⁷

¹⁶ Paul Lowery, "The Enlisted Pilot Program," *Mobility Forum*, (March/April 1998), information from www.findarticles.com, accessed May 22, 2008; Eckels, 4, 6, 9; Dominick Pisano, *To Fill the Skies with Pilots: The Civilian Pilot Training Program, 1939-46*, (University of Illinois: Chicago, ILL., 1993), 84-85, 93, 110.

¹⁷ "College Pilot Training To End Here," *Arkansas Gazette*, January 18, 1944, 14; Eckels, The Fayetteville Experience, 40; "Central Flying Trains Over 600 Pilots," *Arkansas Democrat*, September 06, 1942, 18.

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From the beginning of the Civilian Pilot Training Program there was a contentious relationship between the Civilian Aeronautics Authority and the Army Air Corps and Army Air Forces. Pilots who received training from the CPTP were considered inferior by the AAF to trainees from Air Forces schools. There was no formal plan for the absorption of WTS pilots into the Air Forces when the program ended but trainees could volunteer for the aviation cadet corps, train as glider pilots or enter technical training. Former instructors could take a flight examination and a physical to attempt to qualify as AAF pilots. Despite protests by trainees and flight school operators with dropped contracts, Congress never provided the program an appropriation for extension of civilian classes.¹⁸

PRIMARY CONTRACT FLYING SCHOOLS

Pre-war administrative recognition of Hitler's preparations for dominance beyond Europe in the late 1930s necessitated an expansion of American planes and recruit totals. At that time the Air Corps could only train 500 pilots a year at its single flying school in Texas. Once war was declared the administration had to move quickly to prepare for combat and build up recruits. President Roosevelt's production aim of 50,000 planes grew to 60,000 after Pearl Harbor. At the end of 1941, a summary of American industry's defense achievements listed a 245% increase in military planes. The Commanding General of the U.S. AAF, Henry Arnold, knew that he could not wait for Congressional appropriations or authorization to provide pilots to fill the growing number of planes. He also knew that there were not yet enough qualified airmen to serve as instructors. Most of them only had 100-120 hours above their students. In addition, the number of existing bases was considered inadequate to meet the defense needs of America.

Arnold's solution was to begin the move to civilian contract military training schools. The general negotiated with private flying school operators to supply instructors, mechanics, staff, gasoline, barracks and food for training schools while the Air Forces supplied planes and cadets. Sometimes municipalities

¹⁸ Pisano, 86, 111-112, 119, 122.

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would supply the land for the schools. In return for the contractor's provisions the government would pay them the cost plus fees and buy the buildings after the war.¹⁹

The contractors were amenable to the plan and financed the schools through their own means until Congress provided authorization for government-funded flying schools. The initial goal through the contract plan was to provide 2,400 pilots a year but by 1943, contract schools had certified 92,544 pilots from the primary training program and by the end of the war the eight major AAF training commands had provided 192,676 pilots.

Primary contract schools in Arkansas, with the exception of Grider Field in Pine Bluff, were managed by the Southeast training region, one of three training areas under the Flying Training Command. (Grider Field was under the Gulf Coast region). These schools provided the first 60 hours of flight training over a period of nine weeks, after which pilots graduated to basic training. The first of three primary contract facilities to open in the state was the 1941 Pine Bluff School of Aviation at the Pine Bluff Airport/Grider Field. The civilian operator of the school was Southern Air Service under Memphis businessman William R. Kent and his partner Bertrand W. Cohn. The city of Pine Bluff purchased a mile square tract of land located approximately five miles southeast of town from planter W.W. Phillips, which they added to a previously acquired tract for the school. Instructor training for the school of aviation took place at Pine Bluff's Toney Field in February 1941, while the city and the Works Projects Administration completed construction of the new municipal airport at Grider Field. Basic flying classes began at the new facility with 51 students on March 22nd. Two months later the school received its second class consisting of 57 students.²⁰

Ground school at Grider was held in buildings on the field when cadets were not putting in flying time to prepare for the next level of training in basic single-engine flying or special combat fighter schools. By 1942 the field qualified as one of the highest rated ground courses in America and the number

¹⁹ *El Dorado Evening Times*, January 01, 1942, 2; Harold Johnson, President Walnut Ridge Army Flying School Museum, Walnut Ridge, AR, Telephone interview with author, June 09, 2008; David Walker, "Falcon," information from www.cityofmesa.org, accessed June 11, 2008; Timothy Tellgren, "A Brief History of Air Education and Training Command," information from www.aetc.af.mil/library/history., accessed June 11, 2008.

²⁰ 59th AAFFTD, NP; "Pine Bluff to Have Aviation School," *Arkansas Gazette*, December 14, 1940, 2; "Pine Bluff Air School Opens Today," *Arkansas Gazette*, February 13, 1941, 2; Information from Harold Johnson, Walnut Ridge, July 28, 2008.

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of flying hours recorded there placed it among the most prolific in the nation as well. The total number of graduates from Grider Field was placed between 10,000 to 12,000 men.²¹

Kent and Cohn next joined Rudolph Van Devere of Akron Airways, Akron, Ohio, as minority limited partners in a primary contract school at Helena, Arkansas. The partnership was formed in 1941 and bids for preliminary construction were being taken by July of that year. The cities of Helena and West Helena acquired 640 acres located north of the airport at West Helena for the base of operations at the training school. Plans were made for two auxiliary fields to be situated from five to seven miles distance from the base. The school started operations in the fall of 1941 as Helena Aero Tech but it was dedicated as Thompson-Robbins Field in December. At the peak of operations 255 students were enrolled. A total of 3,985 men from the school were graduated to basic flying schools by 1944.

A third primary contract school for Arkansas was erected in Camden by contractor Wiggins-Marden Aero Corporation of New England. Local businessman W.C. McClure contacted the Army and offered possible sites in town for the air school after a local bond issue for construction of a new airport had failed a few years earlier. His correspondence prompted a visit to Arkansas by Lieutenant Colonel John Boushall of Maxwell Field, Alabama, in the spring of 1942. Boushall and other Army officials conducted a survey of the area from the air and on the ground. In the interest of speed the Murphy and Barnes farm east of town was selected as the optimal location for a field. The land was level and there were no trees that would throw the Army behind in construction of runways. The total of the land purchased from the Murphy and Barnes families was 1,000 acres but the flying school only needed 660 acres so the city planned to sell the difference. The Defense Plant Corporation bought 50 acres from the city for barracks and training buildings, bringing in \$5,000. Through public subscription Camden hoped to raise \$20,000, which coupled with \$30,000 from the reopening of the airport bond issue would enable the city to purchase the farmland.²²

²¹ "Grider Field, Arkansas 'West Point of the Air', Ranks With Leading Army Air Schools," *Arkansas Democrat*, September 06, 1942, 5.

²² "Pilot School at Helena Approved," *Arkansas Gazette*, July 06, 1941, 2; 59th AAFSTD, Helena, AR, NP; "259 F.2d 371," information from www.bulk.resource.org/courts.gov, accessed April 15, 2008; "Citizens Endorse Aviation School," *Camden News*, March 27, 1942, 1.

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After approval for the school from Washington was received Camden Mayor Don Harrell reported that the flying field tract was paid for in full. Classes began with a contingent of over 100 flying cadets but the projected capacity was 500 students every nine weeks. The flying school was dedicated in August 1942, as Harrell Field in recognition of the mayor's leadership in local efforts to bring the training ground to Camden.²³

By 1944 the numbers of pilots and technicians in training was reduced by the AAF. As with the Civilian Pilot Training Program the primary contract schools were closed due to the implementation of an Air Forces curtailment program. Allied victory seemed imminent at that point and the only training taking place was to provide replacements for theaters of war, so liquidation of training facilities and their property began. In August of 1944, Headquarters Central Flying Training Command notified Grider's administration that October of that year was to be the last month of operation. In August, Helena's Thompson-Robbins Field closed and on April 22, 1944, Harrell Field shut down. After the drawdown the Defense Plant Corporation held a sale of war surplus training planes and auctioned off the furniture and equipment from Arkansas's primary contract schools to the public.²⁴

FEDERAL FLYING SCHOOLS

President Roosevelt pushed Congress each year of the war to include authorizations for increased military funding for categories such as; enlistment, training, production and lend-lease aid. The president formed the Office of Facts and Figures in 1941, which informed him the next year, that America "shall have the plant capacity to increase our production to the point where we can seize control of the air in all areas of the world struggle." Basic and advanced flight training schools were central to fulfilling this prophecy and Arkansas was actively pursued by the War Department for establishment of four such facilities. The weather in Arkansas was a major drawing card for the Air Forces because more flying days

²³ "Aviation School Slated for Camden Area," *El Dorado Evening Times*, April 03, 1942, 1;

²⁴ Doug Hale, Pine Bluff Airport, Pine Bluff, Interview with author, June 18, 2008; "Grider Field Will Close October 16," *Arkansas Gazette*, August 13, 1944, 2; "Camden Field Gives Idea Of Waste Of War," *Arkansas Gazette*, May 07, 1941, 1; "Planes to Be Sold at Helena And Camden," *Arkansas Gazette*, August 04, 1944, 7; "Training At Helena Air Field Completed," *Arkansas Gazette*, August 04, 1944, 7.

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could be achieved in the state than most sections of the United States. The level topography of many sites in Arkansas was considered ideal for flying fields as well.

By 1942, Congress had provided General Arnold with the authorization he needed to further air training and this translated to a big year for Arkansas. Cadets who graduated from primary contract flight schools would move to basic where they would receive training in instruments, night flights, cross-country flying and radio use. This level required 65-70 hours of training over nine weeks during which cadets were schooled in protocol and procedure, bringing them closer to consideration as true military pilots. Advanced schools were the next step after basic and cadets were either assigned to single-engine school or to twin-engine school.²⁵

In spring of 1942, The *Arkansas Gazette* reported that Blytheville was to receive an advanced aviation school three miles northwest of town. Students at the school received training in twin-engine flying for bomber pilots and graduated with commissions as second lieutenants. The base covered over 2,000 acres and had five auxiliary airfields in a 20-mile radius of Blytheville with bombing ranges situated in the Big Lake area 12 miles west of the city. Ranges were also placed on an island in the Mississippi River eight miles east. Blytheville Army Air Base was activated in June 1942, with students from the primary flying schools in Helena and in Tuscaloosa and Decatur, Alabama. Initially the cadets trained in single-engine basic trainers but they began training in twin-engine planes in the spring of 1943. During the spring and fall of 1944, female transport pilots also received instruction at the base.²⁶

Stuttgart was approved by the War Department for an Air Force training facility encompassing 2,675 acres six miles north of town in the spring of 1942. Officials decided on Stuttgart because the prairie environment was perfect for air field operations. There was little clearing to be done and the hardpan soil was firm for runways. The school was originally an advanced twin-engine facility

²⁵ 59th AAFSTD, Helena, AR, NP; Army Air Forces Southeast Training Center, *Stuttgart Army Air Field Yearbook*, 1942, NP; "Great Advance in Output of Arms Reported," *Arkansas Gazette*, January 23, 1942, 3; "AAF Training: Advanced Flying School," information from www.nationalmuseum.af.mil, accessed April 20, 2008.

²⁶ "Air School Approved For Blytheville," *Arkansas Gazette*, March 31, 1942, 2; "Blytheville Air School in Operation," *Arkansas Gazette*, August 07, 1942, 14; Robert Mueller, "Air Force Bases, Vol. I: Active Air Force Bases Within the United States of America on 17 September 1982," (Office of Air Force History: Washington, D.C., 1989), 37.

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and was activated as such in August 1942. In that year glider training programs were begun in Columbus, Ohio, and Mobile, Alabama, but it was decided that the program needed to be moved south for more conducive weather. In October 1942, glider classes were transferred to Stuttgart so that students could take advantage of the optimal year-round flying conditions and obstruction-free prairie land.

Glider training at Stuttgart Army Air Field was discontinued in the spring of 1943 and the last graduates were transferred to Lubbock, Texas. The Air Forces cited the success of the program's progress from elementary and basic levels to advanced as the reason for closing glider classes at Stuttgart and those held at Little Rock's Adams Field as well. The prime location of Stuttgart's field was still valuable to the Air Forces so it was retained and reverted back to its use as an advanced twin-engine school.²⁷

At the beginning of 1942, the U.S. Engineers Office in Little Rock sent surveyors to assess a location in Newport. In May, Arkansas Congressman Wilbur D. Mills announced that Washington had approved the location of a flying school six miles east of Newport. The school was constructed for basic training and included four runways and four auxiliary airfields within 20 miles of the facility. It was reported that the mile-long runways made the airport one of the largest in the state at the time. After activation of the field it was named Tuckerman Army Air Forces Basic Flying School as dictated by the War Department, but by December of 1942 it had been changed to Newport Army Air Field.²⁸

Surveys for a fourth aviation school were conducted in spring 1942, in Walnut Ridge. The proposed location for the school had originally been in Dyersburg, Tennessee, but it was transferred after inspections by Air Forces officials determined that the site in Arkansas was suitable overall for an air field. Walnut Ridge Army Airfield was activated in August of 1942, but the 100 troops and key personnel that arrived in that month did not have housing so they lived in the Five Mile Springs Civilian Conservation Corps camp for thirty days. Up until September 1942, the school was considered for glider

²⁷ "\$3,000,000 Pilot School at Stuttgart," *Arkansas Gazette*, May 13, 1942, 2; "Stuttgart Location Declared Ideal For School," *Arkansas Gazette*, May 13, 1942; "History of Stuttgart Army Air Field," *Stuttgart Army Air Field Yearbook*, 32; "Stuttgart Air Field to Train Bomber Pilots," *Arkansas Gazette*, April 10, 1943, 1.

²⁸ "Army Air School For Newport," *Arkansas Gazette*, May 09, 1942, 11; "\$12,000,000 Flying Field For Newport," *Jackson County Democrat*, May 14, 1942, 1; "Tuckerman New Name of Flying School," *Arkansas Gazette*, November 04, 1942, 2; "Air School's Name Now Newport," *Arkansas Gazette*, December 30, 1942, 2.

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training but the Southeast Training Command moved the glider classes to Stuttgart and started cadets from Camden, Arkansas, and Decatur, Alabama, on basic flight training at Walnut Ridge.²⁹

Eberts Field, a WWI flying field in Lonoke, was surveyed at the beginning of 1942 for use as a large airplane landing field. But by the spring of that year it was slated to serve as a pre-glider school taught by Kenneth Starnes of Conway. Starnes was brought to Washington to meet General Henry Arnold who told him "I don't know any more about this than you do. I've got to have glider pilots. I don't care how I get them so long as they are good. It's up to you men to get the job done." Starnes was one of 19 flying instructors in the nation chosen by the War Department to implement preliminary glider training. He received the full support of the community as local rice farmers loaned their tractors and grading equipment to the school to remove irrigation ditches and rice crop terraces for construction of glider fields. With the help of the county's road building equipment two fields spanning approximately a half mile each, were constructed in seven days.

When the school was built there were no gliders available so the students took Cub planes up 4,000 feet and simply cut off the motors. After completion of the required 20 hours of pre-flight glider instruction, students received primary training at a larger glider school and upon graduation received second lieutenant commissions.³⁰

Adams Field in Little Rock also served in a military capacity beyond the Civilian Pilot Training program. In 1943, an Air Service Command depot at the airport employed civilians to supply airplane parts to other fields and by 1945 it was occupied by Squadron I, Auxiliary Army Air Forces, Civil Air Patrol. Students in these classes were taught to fly pursuit aircraft and to recognize the difference between hostile and friendly planes, tanks and naval surface craft.³¹

²⁹ Harold Johnson, "Walnut Ridge Army Flying School," *The Encyclopedia of Arkansas History and Culture*, information from www.encyclopediainarkansas.net, accessed May 08, 2007.

³⁰ "Arkansas Flier Chosen as First Glider Trainer," *Arkansas Democrat*, September 06, 1942, 17; "Eberts Field May Be Taken Over By Army," *Arkansas Gazette*, January 27, 1942, 6; "To Locate Glider School Near Lonoke," *Arkansas Gazette*, May 22, 1942; "Urgent Call Issued For Glider Pilots For U.S. Army," *El Dorado Evening News*, June 06, 1942, 2; "Rice Fields Transformed Into Flying Fields for Training of Uncle Sam's Gliding Pilots," *Arkansas Gazette*, May 31, 1942.

³¹ "CAP to Use Quarters At Adams Field," *Arkansas Gazette*, February 18, 1945, 7; "Air Force Depot to Be Located Here," *Arkansas Gazette*, August 14, 1943, 7.

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Air Forces training classes were terminated at Arkansas's schools in 1944 but further uses were found for all, either by the War Department or the city centers. Blytheville was utilized as a processing center for discharged military personnel and in 1946 the field was handed over to the city. By the 1950s the field was converted to a Strategic Air Command Base and it operated as such until 1992. After the deactivation of Stuttgart Army Airfield in 1944, the War Assets Administration took over 2,635.7 acres of the field in 1946. In 1949 the land was transferred to the city for use as a municipal airport but the government reserved the right to repossess the property in case of a national emergency.

Newport Army Air Field was placed on stand-by basis in July 1944. After formal deactivation Congressman Wilbur Mills wrote the Navy to request that Newport be used as a base for Marine Corps flying officers to stay in practice. The field was used as such from July 20, 1944 to 1946. At the war's end the city took over the field for use as Newport Municipal Airport.

Walnut Ridge Army Airfield was taken over by the Navy for Marine training in September 1944 and it was then referred to as the Marine Corps Air Facility, Walnut Ridge until it was decommissioned in 1945. From that year to 1946 the field was used as a Reconstruction Finance Corporation storage, sales and salvage site for the disposal of damaged, obsolete and surplus Army Air Forces aircraft. Five states besides Arkansas obtained these depots for WWII aircraft referred to as warbirds. The storage aspect of the operation was discontinued and by June 1946 what remained of the estimated 10-11,000 warbirds at Walnut Ridge was bid for scrap.

Over 4,000 of the planes at Walnut Ridge were sold to Texas Railway Equipment Company in 1946 for scrap. Two smelters were placed at the field to form aluminum ingots from the aircraft. The War Assets Corporation took over disposal duties from the RFC in 1946 and by mid-1948 scrapping at Walnut Ridge was finished. At the conclusion of the salvage operation the field was given to the city and utilized as an airport. The two smelters at the field were destroyed in 1951 and the bricks were utilized in the 1952 administration/terminal, which was constructed on the site of the former Base Operations building for the flying school.

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Eberts Field had been used between WWI and WWII as a municipal airport but by 2001 the training facility had been flooded and turned into a fish farm. Adams Field was returned to the city of Little Rock after the war to be used for commercial and private flights.³²

MILITARY TESTING FACILITIES

The defense phase of the Roosevelt Administration also spawned an airfield with a different use in Arkansas. The airport at Southwestern Proving Ground (SWPG) in Hope, constructed in 1941, was not used as a training facility but rather a contributing resource for a proving ground used to test bombers, artillery shells and air bombs. The proving ground was planned for Oklahoma City, but the location was changed to Hope because Arkansas was receiving so many new military facilities at the time that it was considered more efficient to construct the proving ground there as well.

The rumors of such a facility were reported by the Arkansas Agricultural and Industrial Commission in 1940, and Senator Lloyd Spencer of Hope verified its construction in the summer of 1941. Spencer said that he had received news of the proving ground's authorization from the War Department and that it would be located north of Hope on a five mile wide, 15-mile long parcel covering 37,000 acres. The War Department did not consider the location in Hope appropriate at first because it wasn't suitable for an airport, but it was finally decided airport facilities could be built outside the proposed area, southwest of the original reservation on a neighboring tract. With the addition of the airport the total acreage was raised to 50,780.27. The SWPG airport was reported to be the third largest in the United States in 1942, with three, 5,500 foot concrete runways, numerous taxi ramps from the 25,000 square foot hangar and 50-foot radius at the end of the runways for planes to make turns rather than traversing the entire length. The size of the runways was larger than those found at municipal airports and was ideal for

³² Jillian Hartley, "Eaker Air Force Base: aka: Blytheville Air Force Base," *The Encyclopedia of Arkansas*, accessed May 20, 2008; "Stuttgart Army Airfield, AR," information from www.uxoinfo.com, Accessed June 26, 2008; "Marine Officers Will Train At Air Field," *Jackson County Democrat*, May 18, 1944, 1; "Newport Field On Stand By Basis After July 1," *Jackson County Democrat*, March 30, 1944, 1; Johnson, "Walnut Ridge Army Flying School,"; Paul Freeman, "Abandoned and Little-Known Airfields: Southwestern Arkansas," information from www.airfields-freeman.com/AR/Airfields_AR.htm, accessed February 21, 2008; "The Wings That Carried Them to Victory," information from www.wingsofthonor.org/victory, accessed August 11, 2008.

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landing and launching army aircraft of any size in any wind direction.³³

After executive officers and employees arrived on the site in summer 1941, the proving ground began testing in January of the next year. The first test was on the Bolenge velocity of missiles fired from 75 mm caliber guns. Other tests were run on light cannon, anti-aircraft guns, Howitzers, ordnance material and ammunition. Military instruments that recorded time intervals of ordnance were investigated at the proving ground and the premature firing of 105 mm shells were determined by the personnel at SWPG to be the result of faulty rotating bands. The 616th Air Corps Detachment was located at the airport for testing the ballistics and tumbling of bombs. Before their arrival, bomber crews from Barksdale Air Force Base, Shreveport, Louisiana, used the runways for “touch and go” landings.

Southwestern Proving Ground was closed after the surrender of Japan in 1945. Since the immediate area around the airport was free of potentially unexploded shells or bombs, the city of Hope received it for use as a municipal field. The remainder of the land was considered contaminated and unsuitable for construction or farming but between 1993 and 2003, the area was cleaned up under the Formerly Used Defense Sites program, ridding the reservation of over 8,000 ordnance articles.³⁴

GROUND TROOP TRAINING CAMPS

The desirable weather in Arkansas proved to be a drawing card not only for pilot training but also for facilities that trained ground troops for combat. Two sites in the state were favorably considered by the War Department for army camps. One was a previously existing WWI camp used as a training center for officers and enlisted men in North Little Rock, called Camp Pike. In 1922 it became Arkansas National Guard headquarters and a Citizens Military Training Camp. Camp Pike was re-named Camp Joseph T. Robinson (also referred to as Camp Robinson), in 1937. Talks had begun by 1939 between the Seventh

³³Mary Nell Turner, “Southwestern Proving Ground, 1941-1945,” *The Hempstead County Historical Society* Vol. X (Spring 1986), 1, 3, 18; “Three Armament Plants Considered for Arkansas”; “Arkansas Being Considered as Site for Munitions Plant,” *Southwest American*, October 08, 1940; Information from Harold Johnson, Walnut Ridge, July 28, 2008.

³⁴ Turner, “Southwestern Proving Ground,” 13, 18-21, 25, 34; “Southwestern Proving Ground Airport Historic District,” information from www.cr.nps.gov/nr/travel/aviation/swp, accessed May 08, 2007; Carolyn Kent, “World War II Ordnance Plants,” information from *The Encyclopedia of Arkansas*, accessed July 01, 2008.

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Corps area headquarters and North Little Rock city officials about transforming Camp Robinson into a permanent training ground for Army regulars. The Army planned to lease 25,000 acres in addition to the 5,000 acres used in WWI, but the lack of an adequate water supply was impeding progress.

The city quickly amended the situation by assuring the War Department that a water pipeline would be laid as soon as they received the word. The original WWI buildings were destroyed and construction work for its new use began in 1940. The McDonald Construction Company and G.L. Tarlton Contractors of St. Louis, Missouri, were engaged to construct permanent buildings even though it was primarily planned as a “tent camp.” In October 1940, the camp became home to the Seventh Corps Service Command. By 1941 the 35th Infantry Division and associated units had taken up residence. The usual thirteen week duration of training courses were cut to eight at Camp Robinson in a modernizing move. Troops were trained at the Branch Immaterial Center and the Medical Replacement Training Center, which were collectively referred to as the Infantry Replacement Training Center, over those eight weeks. Courses were provided in Army laws, defensive tactics, bayonet, rifle and machine gun use, scouting, patrolling, use of cover and concealment and night work. The Medical Training Center taught men how to load and unload ambulances, field sanitation, gas casualty treatment, effects of drugs and bandaging.

The post’s use as a training facility ended in 1946 and the state took over ownership. The land was apportioned for different uses after the war such as a wildlife management area, the North Little Rock airport, consolidated reserve centers for the state’s Army, Navy and Marine Corps (re-named Camp Pike), and a national cemetery. Recent military uses include Arkansas National Guard’s Joint Forces headquarters and the National Guard Bureau’s Professional Education Center and Marksmanship Training Unit.³⁵

³⁵ “Arkansas Training Ground for Troops Being Considered,” *Southwest American*, November 01, 1939; “Further Step Taken to Obtain Army Training Camp,” *Southwest American*, November 03, 1939; “Local Guardsmen to Be Called for Training at Camp Robinson,” *Southwest American*, September 20, 1940, 1; “Many Changes Made Since World War I,” *Arkansas Democrat*, September 06, 1942; “Streamlined Training Awaits Recruits at Camp Robinson,” *Arkansas Democrat*, September 06, 1942, 5; Steve Rucker, “Camp Joseph T. Robinson,” *The Encyclopedia of Arkansas*, Accessed July 10, 2008.

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In March 1941, it was reported in the *Southwest American* that an Army colonel from the Seventh Corps area had surveyed sites for a possible Army camp near Fort Smith. War Department officials were attracted by the water, coal and natural gas in the Barling community but there were no plans in the spring of 1941 to begin construction because at the time additional camps were not required for the federal troop goal. Formal announcement of the installment was months away but municipal and federal officials proceeded with preparations upon news of the survey as though the Army had given the nod. The War Department provided the State Defense Council with some tips on what they could do to encourage federal authorization. Fort Smith Mayor Chester Holland, conjectured that the police department would have to be expanded, while the chamber of commerce requested that those citizens with rooms or houses to rent, contact them in the eventuality of an authorization. The water department had also given its approval for a doubling of output from Lake Fort Smith for the camp and had formulated tentative plans for laying an additional six miles of water mains to the site. Studies were also conducted on the possibility of a Farm Security Administration resettlement project for displaced Barling families.

Official announcement of the location of the camp came in August 1941, and August 25 was set for opening bids. Architectural engineers, Black and Veatch of Kansas City, Missouri, went to work on Camp Chaffee, which would be a training center for the Sixth, Fourteenth and Sixteenth Armored Divisions. Training in combat maneuvers took place over 73,000 acres in 28-ton tanks. The Fifth Armored Division moved in after the war until 1957, and in 1956 the center's designation was changed to Fort Chaffee. The Base Realignment and Closure Commission called for the closing of Fort Chaffee in 1995, but all training areas and facilities were retained as a Reserve Component Training area. Later that year, 7,192 acres were declared surplus and given to the state while 66,000 acres were utilized by the Arkansas National Guard for training. The site was declared a closed post in recent years and used for emergency services in the wake of the United States terrorist attacks of 2001, and for housing refugees affected by Hurricane Katrina in 2005.³⁶

³⁶ "City Is Considered as Possible Site for Army Camp and Defense Industries," *Southwest American*, March 12, 1941, 1; "Fort Smith Ready to Supply Water If Camp Is Erected," *Southwest American*, May 09, 1941, 1; "Survey of Site for Proposed Army Camp to Be Completed in About 90 Days," *Southwest American*, May 18, 1941, 1; "Camp Would Hike City's Own Population by About 12,000," *Southwest American*, May 25, 1941, 1; "Removal of Families Displaced by Defense Projects Studied,"

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CIVILIAN DEFENSE TRAINING

Representative Clyde Ellis had stated that the lack of an educated labor force prevented industries from locating in Arkansas. The state met this criticism through a concerted civilian training program on the home front in order for young people to prepare for potential military jobs or service. High schools in the state introduced strengthened math courses with an emphasis on application to military use, and classes on scientific principles and physics, and pre-flight aeronautics. Besides being the home of a Civilian Pilot Training program, Arkansas Polytechnic Institute in Russellville organized classes along a defense plan. Students attended lectures on civilian defense, classes on first aid and increased physical fitness, men's military drilling and special chemistry and radio instruction. The Wartime Production Training Act of 1940 allowed for the construction of government-funded vocational schools like the Arkansas State Trade School in Little Rock. Students received free training in aircraft sheet metal, aircraft woodwork, machine shop, pattern making, mechanical drafting, radio communication, arc welding, acetylene welding, marine pipe fitting and electric motor repair. Most students were able to immediately walk into defense jobs with their newly-earned certificates from the sponsor of the school, the United States Department of Education.

The Arkansas Council of Defense organized civilians to take volunteer training in home front aid to the military. Ordinary citizens could become members of the "civilian defense army" by volunteering to serve in the Combat or Emergency Division and the Community or Long-Range Division. Those in the Combat Division would offer assistance whenever there was an emergency, assisting hospitals, fire departments or utility departments. These people might serve as air raid wardens, auxiliary police and firemen or bomb squads. Community volunteers trained in areas that promoted public health, welfare, happiness and morale, offering support to defense workers, soldiers and families.³⁷

Southwest American, June 13, 1941, 1; "Army to Ask Bids on Camp By August 5," *Southwest American*, August 01, 1941, 1; Maranda Radcliffe, "Fort Chaffee," *The Encyclopedia of Arkansas*, accessed April 21, 2008.

³⁷"School System Revamped To Aid In Defense Effort," *Arkansas Gazette*, July 05, 1942; "Civilian Defense in College," *Arkansas Gazette, Sunday Magazine*, May 03, 1942, 3; "Training for Defense Workers," *Arkansas Gazette, Sunday Magazine*, April 19, 1942, 1; Information from Sandra Taylor Smith, North Little Rock History Commission, July 02, 2007; "We're in the Army Now," *Arkansas Gazette, Sunday Magazine*, February 22, 1942, 3;

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ELECTRICAL POWER FOR MILITARY INDUSTRIES

Training pilots, civilians and combat soldiers and testing of ordnance under the United States defense phase was only the beginning of Arkansas's home front contributions. The actual assembly of weapons and ammunition within the state also became big business once the War Department was convinced of the availability of Arkansas's natural resources and prime environment. The influx of these types of defense industries to Arkansas was made possible by the realization of Governor Adkins and the state's congressmen and senators that electric power would be the key to federal attention for Arkansas. The lack of power was a major deterrent to government favor but in the summer of 1941, Adkins began to work for improved power sources and lower rates for valuable kilowatts. He knew if this situation could be remedied, non-defense manufacturing could potentially locate in larger numbers in the state along with military facilities. Representative Clyde Ellis was also an ardent advocate of bringing electricity to the state's rural areas and he worked endlessly to attract federal attention to his home state by improving the power problem. In a 1940 address on the status of Arkansas as a defense state, Ellis said "Let us first get the power, then we can get the industries." He had been informed many times by government and industry representatives that the rates charged by the state's private utility for electricity were too exorbitant to attract them. Arkansas had lost a large aluminum plant to Sheffield, Alabama, because it was located in a Tennessee Valley Authority (TVA) development where rates for kilowatt-hours were lower. Ellis stated "We would definitely have had in Arkansas today, the aluminum plant that went to Sheffield, Ala., so it could use TVA rates, if only we could have furnished adequate power at comparative prices."³⁸

Arkansas possessed diverse resources to furnish electricity to defense industries. The state's many rivers placed it in a good position to receive federal funds for hydro-electric power construction. But the vice-president of Arkansas Power and Light Company (AP&L), Frank M. Wilkes, felt that steam plants would be superior to hydro-electric power. Wilkes said the oilfields of southwest Arkansas could potentially supply power at a lower cost than hydro-electricity and "sour gas" from the fields could be

³⁸ C.F. Byrns, "Off the Record," June 14, 1942, *Ellis Papers*; "Ellis Critical of Power Rate Paid in State," April 28, 1941, *Ellis Papers*.

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provided immediately upon the construction of any defense factories. He also stated that provision of power from one location, rather than through a co-operative pool from another state, would prevent the waste of copper and other materials used for transmission lines that could be utilized in war production.

The path to adequate power sources for Arkansas's earliest war industries was not without its trials. A struggle between private utility companies, rural co-operatives and the Rural Electrification Administration to obtain a power contract for an aluminum plant in Arkansas erupted in late 1942. Clyde Ellis was once again the champion of lower electric rates and patriotism as he fought in the House to keep the state's private utility from maintaining its monopoly at high rates, discouraging military development. The fight eventually made its way to the courts, which enabled Arkansas's resources to serve as an important draw to the military. As a result of Ellis's efforts the state was to receive a vital steam-electric plant and a dam with hydro-electric power capacity.³⁹

Governor Adkins was also passionate in his pursuit of power for Arkansas's share of the defense industry, holding conferences with federal agencies, AP&L, Southwestern Gas and Electric Company, Oklahoma Gas and Electric Company, the Arkansas Utilities Commission and the Oil and Gas Commission to encourage a build up of state power sources. Surveys and studies were conducted by the state and private industry leading to the conclusion that Arkansas had not only the capacity to produce power from its numerous water sources and sour gas fields, but it could also acquire up to 200,000 kilowatts annually from the slack coal of the northwest regions of the state. Arkansas was poised to expand its role as a vital conduit for the provision of war-ready troops. In addition, the state would be able to produce weapons and supplies needed in Europe and on the home front for men and women employed by the military. This was momentous because it would bring Arkansas out of its dependence on agriculture by laying the groundwork for peacetime industries and educating the population to do more than raise crops.⁴⁰

³⁹ "Cheap Power Said to Be Available," *Arkansas Gazette*, September 11, 1940, *Ellis Papers*; "A.P.L. To Sell 65,000 KW to Malvern Plant," *Ellis Papers*; "Finds Arkansas Utilities 'Up To Their Old Tricks Again,'" *Ellis Papers*.

⁴⁰ "Arkansas Having Big Part in Defensive and Offensive Plan," *Arkansas Gazette*, July 05, 1942, 17; "A.P.L. Offering New Contract to War Plant," *Ellis Papers*.

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For years prior to the declaration of war, Ellis had been pushing for hydro-electric power to be produced at Norfolk Dam in Baxter County (sometimes erroneously referred to as Norfolk Dam). As a Congressional Representative he was instrumental in the addition of \$25,000,000 to the flood control appropriation at the 1939 session. This would add a dual-purpose dam to his district upon approval of the Senate and the president, which was provided by the next month. Ellis predicted that the inclusion of power generation at the dam would be “a turning point of the economic history of Arkansas and the beginning of a new and prosperous era.” In 1941 the Omnibus Flood Control bill passed the House, granting full authorization for power facilities at Norfolk Dam. At that time Ellis wrote the director general of the Office of Production Management to request that completion of Norfolk be rushed in order to start power generation by December 1943.⁴¹

Congress had approved construction of four Arkansas dam and reservoir projects in 1938 for flood control. They were then categorized as civil projects rather than war projects. But it was stipulated by Congress that all authorized dams had to be outfitted for future power generating capacity if it was advocated by the Chief of Engineers and the Federal Power Commission (FPC), and if the Secretary of War approved it. Under the recommendations of the Chief of Engineers and the FPC, Norfolk Dam on the North Fork River and Nimrod Dam on the Fourche LaFave River included power-generating equipment. Although Nimrod was fitted with penstocks for power turbines it was completed by 1942 without the remainder of the equipment required for hydro-electric power generation. The other two dams, Blue Mountain on the Petit Jean River and Clearwater on the White, were tabled until after the war but Norfolk Dam received military priority status and became the Little Rock District Corp of Engineers’ first war project because of its categorization as a power source for future defense projects. The dam and reservoir at Norfolk was ready for power generation by the summer of 1944.⁴²

⁴¹ “Ellis Stresses Need of Power,” *Northwest Arkansas Times*, November 06, 1940, 8; “Flood Control Appropriation Sweetened by \$25,000,000,” *Journal Advance*, (Gentry, AR), May 18, 1939, *Ellis Papers*; “Ellis Critical Of Power Rate Paid in State,” *Ellis Papers*; Letter from Clyde Taylor Ellis to Hon. William S. Knudsen, Washington, D.C., July 01, 1941, *Ellis Papers*.

⁴² Mary Yeater Rathburn, *Castle on the Rock: The History of the Little Rock District, U.S. Army Corps of Engineers, 1881-1985*, (U.S. Army Engineers District, Little Rock, AR, 1990), 56-59; “Dams, Defense Plants and Airports Built,” *Arkansas Democrat*, September 06, 1942, 3.

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The McKamie, Dorcheat and Magnolia sour gas fields in southwestern Arkansas were also offered by the governor and the state utility as possible power sources for defense industries. The governor announced in a 1941 speech that the state utilities commission would be contracting with two engineering firms to explore the options of using sour gas in military projects. The next month, Arkansas Power and Light Company submitted an application to the FPC for permission to develop Blakely Dam, a hydro-electric project on the Ouachita River. The utility also stated in the application that they would be actively pursuing a 30,000 kilowatt unit steam-electric generating station in southwestern Arkansas, powered by sour gas. "Factual Data No. 24" distributed by the Arkansas Oil and Gas Commission, reported that there was a reserve of approximately 900 billion cubic feet of gas in the Arkansas oil fields that was simply being released into the air. Once the gas was sweetened, or desulphurized, it could be utilized as an economical power source in juxtaposition with hydro-electric sources such as the proposed Blakely Dam.

The Little Rock District had too many military construction projects going by 1941 to complete non-military civil works so construction of the Blakely Dam and the utility's petition for the steam generating plant were denied by the power commission. The executive vice president of AP&L said that they would pursue a certificate of convenience for the plant though, by presenting their case at a public hearing before the FPC. Governor Adkins put his support behind AP&L, attending the hearings. In the summer of 1941, he also made a trip to Washington with private power company officials to ask the OPM to prioritize the construction of a generator for the proposed steam generating plant. If it were categorized by the OPM as a priority project they could receive the generator within 14 months rather than the 20 months or more it could take because of military timelines.

Adkins and the utility were ultimately successful. The McKamie Gas Cleaning Company was built eight miles south of Stamps in January 1943 for conversion of sour gas. This plant was to be used in conjunction with the new Harvey Couch Power Plant in Stamps, which was dedicated in July 1943. The Blakely Dam had originally been the main goal for AP&L in a "Six-Year Program of Progress," presented to the FPC, but the steam plant eventually usurped the dam. The change-over was due to the need for high load power, which could be immediately provided by the plant, and the provision of a market for the sour

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gas. The steam generating plant has been continuously utilized for power in the southwest and is today used primarily at peak-load times during the summer months.⁴³

ARKANSAS MUNITIONS MANUFACTURING

These power facilities invited favorable attention from the government allowing the state to expand its defense role as a training nexus to a major manufacturer of military supplies. Arkansas was provided with three new ordnance factories and an important chemical arsenal in the early 1940s, and by 1944 the state had received an ammunition depot. In the late 1930s the Chemical Warfare Service (CWS) implemented its Protective Mobilization Plan under which the service had to form an estimate of supplies for a defense force numbered at 400,000. (This goal grew to 4,000,000 but actual numbers of troops mobilized during WWII have been placed at 10,000,000). By 1940 the CWS undertook a chemical munitions program funded by the government under the Military Appropriations Act. The next year General George C. Marshall, Chief of Staff of the Army, directed the CWS to organize a program for developing and obtaining incendiary bombs.⁴⁴

Officials of the CWS had notified Arkansas Congressman David D. Terry, that he would be allowed to choose the location of the nation's newest arsenal in his home state. Terry had originally requested it be placed in Little Rock but it was rejected because the Army felt that congestion due to the close proximity of two other new ordnance works and a resulting shortage of labor would potentially cause problems. Senator Hattie Caraway and Representative W.F. Norrell broke the news to Arkansas in October 1941, that the War Department had approved a new cutting edge CWS manufacturing plant for the assembly of magnesium and thermite incendiary bombs nine miles northwest of Pine Bluff. Output

⁴³ "Adkins Asserts State Must Have Cheap Power," *Southwest American*, March 22, 1941, 1; "Application for a Six-Year Program of Progress in Arkansas!," *Arkansas Gazette*, April 20, 1941, 3; Rathburn, 59; "Lynch Says Gas Plant To Start," *Camden News*, May 06, 1941, 4; "Adkins to Ask OPM to Invoke Priorities," *Southwest American*, June 05, 1941, 2; "Souvenir Booklet: Dedication of \$3,000,000 Harvey C. Couch Steam-Electric Power Plant of Arkansas Power and Light Company, Stamps, Arkansas, July 16, 1943," *Couch-Remmel Family Papers*, 7, 9.

⁴⁴ Dr. Burton Wright, III, "The Chemical Warfare Service Prepares for World War II," information from www.almc.army.mil/alog/issues/NovDec98, accessed January 29, 2007.

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would be approximately 2,000,000 bombs a month and its construction had priority over all military plants currently in process as it was the only such facility of its kind in the United States.

The arsenal was the 10th defense project granted to Arkansas in 1941 and was the first of three WWII chemical warfare installments in the nation. Selection of Pine Bluff by the Army was based on four criteria:

1. a mid-continental location as a defense against enemy bombardment
2. proximity to main railroad lines
3. availability of an ample water supply and sufficient electrical power for processing purposes
4. availability of suitable labor.

In the fall of 1941, the government officially took over the site and expanded total acreage from 5,000 to 15,000. By 1942 assembly line production of bombs had commenced and operations had begun to include manufacture and storage of war gases, smoke munitions and napalm bombs. The Pine Bluff Arsenal was one of four in America that produced lewisite and mustard gas.

A representative from the CWS arrived in Pine Bluff October 23, 1941, to plot out a location for a bomb storage depot in connection with the arsenal. Colonel Edward Montgomery told reporters from the *Arkansas Gazette* that the storage facility would require 3,000 acres and that clusters of completed incendiary bombs manufactured in the Midwest would be placed in 400 munitions dumps holding 50,000 bombs. In 1942 igloos at the depot also held binary projectiles or lethal nerve agents.

The arsenal remained in operation as a chemical warfare facility through 1969, when President Richard Nixon banned the production and use of biological weapons. At that time a facility for microbiological research was installed at the site and re-named the National Center for Toxicological Research. By 2006 the arsenal produced smoke, incendiary and pyrotechnic devices and was utilized in the testing of chemical defense clothing. Remaining toxic nerve agents stored at the facility, some still in WWII containers, underwent on-site incineration beginning in 2005.⁴⁵

⁴⁵ "Pine Bluff To Get Big Bomb Making Plant," *Arkansas Gazette*, October 22, 1941, *Ellis Papers*; "Bomb Storage Site Sought At Pine Bluff," *Arkansas Gazette*, *Ellis Papers*; Jeffrey Hess, "Historic Properties Report: Pine Bluff Arsenal, Pine Bluff, Arkansas," (MacDonald and Mack Partnership: Minneapolis, MN.: 1984), 15-16; Russell Bearden, "Pine Bluff Arsenal," *The Encyclopedia of Arkansas*, accessed April 14, 2008; Lawrence Blackwell, "How Jefferson County Obtained The Pine Bluff Arsenal," *Jefferson County Historical Quarterly*, Vol. 14, #1, (1986), 4.

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An important national munitions supplier was the Arkansas Ordnance Plant (AOP) in Jacksonville. Governor Adkins and Congressman Terry were told of the government's plans for the plant in June 1941. AOP was constructed to provide American troops with bomb, flare and rocket fuses, boosters and primer detonators, Navy fuses, chemical warfare service fuses and primer and percussion elements. The construction company of Ford, Bacon and Davis had been requested to provide the government with the design of the plant earlier that year. By that fall construction supervisors and engineers had headed to Little Rock to begin surveys of the site. Within five months of the start of construction operations began.

The AOP was spread over 7,400 acres and units within the plant were divided into 13 fenced areas, which were strategically spaced in order to prevent accidental explosions from spreading. The working environment of the assembly line employees was considered very modern and was tailored to prevent exhaustion and monotony, an important feature when handling explosives. Workers were moved to different jobs throughout the day. Breaks before and after lunch and snack bars located in bomb shelters provided ice cream and cold drinks to keep workers alert. The estimated percentage of women to be employed at AOP was placed at 30-50% of the workforce in 1941, and they were considered valuable employees (ultimately the number of women overall on the staff grew to 70-75%). Female workers with college degrees were able to apply for positions as loading technicians, assistants to technical department engineers, technical report writers and as assistants in experimental work. *The AOP News* remarked on the unusual placement of women workers on a back-line machine unit, "The Amazons of old must step aside in homage to the new and more feminine examples of 'Womanhood in Action.'"⁴⁶

At the same time that the AOP and the Southwestern Proving Grounds were approved, Congressman Terry was told by the War Department that the government had chosen an area between Little Rock and Conway in the Marche community for the production of ammonium picrate, an acid used in explosives. Governor Adkins was informed that the proximity of White Oak bayou was the main factor in the selection of Marche for the Maumelle Ordnance Works (MOW), because large amounts of water were required and unfortunately, it was a perfect dump for waste, which flowed into the Arkansas River.

⁴⁶ Kent, "World War II Ordnance Plants,"; "History of AOP From Beginning," *Arkansas Gazette*, July 05, 1942, 12; "Modern Methods Keep Efficiency At Peak In Huge Ordnance Plant," *Arkansas Gazette*, Mary 21, 1944, 4; "New Positions Available to Women Meeting Requirements," *The AOP News*, August 14, 1942, 1; "'Back-Line' Invaded, Conquered by Enterprising Female Group," *The AOP News*, October 09, 1942, 1.

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Picric acid had been produced in Arkansas during World War I in the area of Adams Field in Little Rock, but the plant was closed after the end of the war. It was never put into full production and the buildings were destroyed for the WWII expansion of the air field.

A survey of 6,556 acres and construction on the administration building in Marche was begun in August 1941, by the Lummus Company of New York. The Cities Service Defense Corporation of New York was responsible for operation of the plant and employee training. Specifications for applicants were for men between the ages of 21 and 45 with the minimum of a high school education. The general superintendent of the plant stated that industrially trained men would be considered first but physical requirements were not as stringent as they would accept the “..... lack of a finger or two, high blood pressure with limits and certain other defects so long as the men show a bright mind and a willingness and capacity for moderately heavy work.” Plant operators worked in three, eight-hour shifts, which were rotated each week.

The MOW was smaller than the Arkansas Ordnance Plant in Jacksonville but its production level was increased in March 1944, when the New York Ordnance Plant in Syracuse, was closed. Up to that time only five or six units at the Maumelle plant had been in operation but with the boost in production nine units were utilized.⁴⁷

By 1941 natural gas was discovered to be an important ingredient in the production of anhydrous ammonia found in the explosives used by American troops. The natural gas reserves in El Dorado, Arkansas, thus made the Union County town a significant site for the construction of the federal Ozark Ordnance Works (OOW). Eleven natural gas and oil pools found in South Arkansas would provide toxic sour gas emitted from the extraction of crude oil and gas distillate that provided the base of the explosive materials. A desulphurization process that made the gas “sweet” and thus usable in munitions was developed by the Lion Oil Refining Company. This prevented waste and reduced the danger of its

⁴⁷ “Hope Proving Field, Marche Plant Assured,” *Arkansas Gazette*, June 07, 1941, 1; “Work Order Received for Marche Plant,” *Arkansas Gazette*, August 03, 1941, 1; “Maumelle Ordnance Works Seeking Men 21-45 As Operators,” *Arkansas Gazette*, June 07, 1942, 8; “Production to Increase At Maumelle,” *Arkansas Gazette*, March 26, 1944, 9; “Hope Proving Field, Marche Plant Assured,” *Arkansas Gazette*, June 07, 1941, 1.

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production and release into the air. Nitrogen was combined with the natural gas to obtain anhydrous ammonia and ammonium nitrate in liquid form to be shipped to explosives and shell loading plants.

OOW was the first such plant in America to use natural gas to produce explosive materials so the initial engineers hired by the operator, Lion Chemical Corporation, were sent to Canada in spring 1942, to receive training in the new process. In the meantime, construction began on the approximately 3,000-acre factory in June of that year. The plant was designed by Chemical Construction Company of New York, and was directed by the federal Ordnance Department. In 1942 it was estimated that the contracted output would be 300 tons of solution every day. Production officially began in 1943.⁴⁸

In 1944 Arkansas received the Shumaker Naval Ammunition Depot in East Camden, spread over Ouachita and Calhoun counties. It was reported that the facility was originally named Schumacher Station in honor of Captain Samuel Schumacher, killed in the Pacific. No explanation for the ultimate spelling of the name has been discovered. Government officials had received information and maps of the area from a Camden contingent of politicians and influential citizens prior to surveying visits. By September 1944, Senator John McClellan announced that James Forrestal, Secretary of the Navy, had authorized the construction of the depot on approximately 68,000 acres to produce and store ordnance rockets. Assistant chief of the Bureau of Ordnance, Navy, Rear Admiral W.A. Kitts, told Arkansans that Camden was chosen out of 120 possible sites for the new depot.

National Fireworks Incorporated of Massachusetts was the operator of the depot, which was charged with providing the Army and the Navy with a new weapon that was critical to the nation's victory over Axis troops. This was in reference to the use of aircraft rockets and a secret and innovative explosive. Louis Edward Sanders, plant engineer at Shumaker during the Korean War, reported that there was a "trick" incorporated into the design of the weapons produced at Shumaker that gave them increased power over previous weapons of the same size. The heads of 2.75 mm rockets shipped to Camden for assembly from eastern and northern factories were filled with extremely fine aluminum or manganese shaped around a cone, creating a void, which was then fitted with a fuse. This allowed for more explosive power

⁴⁸ Carolyn Kent, "Uncle Sam Needs Your Resources: A History of the Ozark Ordnance Works," *South Arkansas Historical Journal*, Vol. 5 (Fall 2005), 4, 6; "Ammonia For Ammunition," *Lion Oil News*, Vol. 1, (April 1944), np.

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that could penetrate 14-inch thick manganese steel such as that used on battleships and produce intense fire. The number of employees needed for the plant's operation was placed at 4,000, half of whom were women.⁴⁹

The Navy had always planned to maintain the Shumaker Depot even in peacetime. Arkansas's leaders and citizens who had worked to boost the state's economy through the installment of such facilities in the state also had hoped that future industries could make use of all the complexes after the war ended. In the case of the Ozark Ordnance Works and Shumaker, those plans were carried out. At the Arkansas Ordnance Plant employee numbers were decreased as it became obvious that the war was coming to an end and the plant finally closed its doors in February 1946. The non-profit Greater Little Rock Development Corporation, formed that year, passed a resolution to lease some of the buildings on the former plant grounds to new industrial concerns while some were sold and moved. In the 1950s the Little Rock Air Base took over part of the land. Some of the warehouses from AOP remain scattered throughout the town and are being used for various businesses, but other than the occupation of the Air Base on a portion of the land, no other large-scale employer took up position on the former complex.⁵⁰

The Maumelle Ordnance Works was shuttered in 1945 and was maintained by a staff of nine through the Korean War. In 1959 it was still under the ownership of the Army but Senator William Fulbright requested that it be declared surplus. The government complied and bids from several entities followed. Perry Equipment Company of Philadelphia, Pennsylvania, submitted a bid in 1961 that was accepted by the General Services Administration. Perry only wanted the equipment and had no interest in developing the area for industry, which was what the city of North Little Rock wanted. The city was unable to purchase the land under Arkansas's constitution so it entered into an agreement with Perry.

North Little Rock held a special election for approval of a bond issue backed by an *ad valorem* property tax that would enable them to buy the ordnance works tract from Perry. The legality of such a

⁴⁹ "Had Valuable Aid In Getting Camden Plant," *Arkansas Gazette*, September 28, 1944, 5; "Camden Plant will Be Huge, Admiral Says," *Arkansas Gazette*, October 10, 1944, 1; "\$60,000,000 Navy Ordnance Plant Goes To Camden," *Arkansas Gazette*, September 24, 1944, 1; "Navy Officers Study Camden Plant Site," *Arkansas Gazette*, October 05, 1944, 2.

⁵⁰ "Development Corporation Formed to Lease Ordnance Properties at Jacksonville," *Arkansas Democrat*, May 20, 1946, *Crip Hall Scrapbook, 1941-1946*, roll 2; Kent, "World War II Ordnance Plants."

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move was questioned and introduced a time issue since the city only had 120 days to come up with the money. A separate \$1 million bond issue was put to the voters, which was approved and North Little Rock bought the site from Perry. A few local industries were enticed to Maumelle in 1961, but it was not the boom envisioned by the newly formed Maumelle Industrial Development Commission. When the land was offered for sale again in 1966, it was purchased by Arkansas investor Jess Odom to implement his idea for the planned community of Maumelle New Town.⁵¹

In 1945 a reporter for the *Lion Oil News* noted that even though the Ozark Ordnance Works was built as a defense project it was always accepted that it would continue to serve Arkansas after the war in some capacity. The Post-War Planning Committee of the Department of Agriculture had conducted a study for the state on the peacetime uses of nitrogen in America. The study noted that almost three-fourths of nitrogen use in the United States was for agricultural fertilizer and it was estimated that annual utilization of nitrogen fertilizers would be approximately double that of pre-war use. The OOW was in a good position even before the end of the war because it would not require much investment on the factory's part to convert to production of finished ammonium nitrate fertilizer. It was thought that local agricultural education programs and the promise of low-cost fertilizers would also encourage an optimal post-war market for the ordnance works.

After the War Assets Corporation declared the OOW surplus and announced it was for sale or lease in March 1946, the Lion Chemical Corporation leased it with the option to purchase. By 1948, the corporation was the owner of the complex and it became the first ammonium prilling plant in the United States. In the 1950s Lion merged with Monsanto Chemical Company until 1983 and it was then sold to the El Dorado Chemical Company.⁵²

The WWII-era use of the Shumaker Naval Ammunition Depot as a producer of rockets was short-lived but Senator McClellan had stated in 1944 that the depot was designed with a future under the ownership of the Navy in mind. The depot began assembly of rockets in April 1945, but seven months later work levels had been reduced and the facility was on maintenance status until 1951. In that year the

⁵¹ Frederick Green, "A Brief History of Maumelle, Arkansas," Masters Thesis for Public History Program, University of Arkansas, Little Rock, June 07, 1996, 16-20.

⁵² "Ozark Has Many Post War Possibilities," *Lion Oil News*, Vol. 2, (April 1945), 8, 10; Kent, "Uncle Sam," 9.

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Fireworks Corporation contracted with the Navy to manufacture, test, distribute, disassemble, re-work and destroy ammunition, bombs and explosives. The contracts with the Fireworks Corporation were completed in 1957 and the Navy then took it back until Shumaker was declared surplus in 1960. At that point the remaining acreage was purchased by International Paper and Highland Resources.⁵³

DEFENSE HOUSING

Towns in Arkansas that received training schools or munitions industries naturally faced problems in infrastructure. Local chambers of commerce and municipal and state government happily dealt with the issues, providing water, improved roads, public transportation, electricity, rent control and housing. A lack of new housing during the Depression coupled with rapid growth in areas that were often sparsely populated resulted in unprecedented housing shortages in WWII. National priorities lists of critical materials also affected the ability of military towns to obtain building supplies as the war cranked up. President Roosevelt created the Office of the Coordinator of National Defense Purchases in 1940 and assigned it the job of ascertaining which materials would be considered essential to defense rather than for private use or export. Other regulatory entities created for materials conservation by Roosevelt included the Office of Production Management, the Supply Priorities and Allocations Board and the War Production Board.

L and M orders (limitation and materials conservation), were issued to hundreds of industries by the WPB, including L-41, which restricted private or commercial construction. In 1941 Roosevelt directed the WPB to designate priorities for construction in areas that demonstrated “an acute shortage of housing.” These defense areas could obtain new construction materials because they were essential to the protection of the nation. The Federal Housing Administration (FHA) was authorized to assist private contractors in providing homes for defense areas under Title VI, an amendment to the National Housing Act, in 1941. A \$100,000,000 FHA home mortgage insurance authorization was set up under the amendment. This allowed for the construction of over 25,000 homes with no money down, to be paid later, in those areas

⁵³ *Arkansas Gazette*, September 24, 1944; Travis Daniel, “Shumaker Ammunition Depot, (1944-1957),” information from www.asms.k12.ar.us/armem/danielr/index., accessed June 04, 2008.

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that suffered from such a severe shortage of housing that it interfered with national defense efforts. At that time there were no designated defense areas in Arkansas, but the state office of the Federal Housing Administration announced that there was already a private builder interested in providing 200 houses in Little Rock upon President Roosevelt's approval.

Aviation schools did not cause as much of a strain on the local housing situation as the munitions storage facilities, camps and ordnance works that came to the state. Pilot trainees were often younger and unmarried and could stay on the base in barracks, but the scores of civilian employees required by other military industries and camps might bring families and pets. The extensive employment needs of ordnance plants and camps brought in workers from miles away who could not return home after their shift, necessitating the designation of defense areas for employee homes. Although Little Rock was considered a big town, it became cramped in 1941 as men arrived to begin training at Camp Robinson in North Little Rock. The situation in Little Rock and North Little Rock was further exacerbated by the construction of the Arkansas Ordnance Plant and the Maumelle Ordnance Works. In the summer of 1941, the Pulaski County Housing Authority was created in response to the shortage of suitable rental housing or new housing within the county. The authority would coordinate with the Pulaski County Planning Board in assembling housing projects for defense workers and their families. The State Defense Council also formed the Housing Works and Facilities Division, which concentrated on provision of defense dwellings for Arkansans.

In March of 1941, Roosevelt gave the go-ahead on United States Housing Authority (USHA) loans for three low-rent housing projects in Little Rock to be constructed by the Little Rock Housing Authority. A total of 250 duplex units at three sites; two for white families and one for African Americans, were proposed to potentially house defense workers. An innovative design for the projects, said to be a first for the United States, was offered by Little Rock Housing Authority chairman, Redding Stevenson, and Little Rock Mayor, J.V. Satterfield. Features such as landscaping, sidewalks, yards and a swimming pool would be included as well as administration buildings set within parks at the entrances. Gently curving drives rather than straight rows would approximate modern subdivisions. President Roosevelt named Little Rock

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as a defense area in July 1941, and the three previously planned local duplex projects were included under the authorization as official defense housing.⁵⁴

Although the need for housing in Arkansas reached alarming proportions during WWII, it was thought that encouraging single-family home owners to convert their property into multiple-unit homes for rent would prevent future issues caused by a building glut in areas that might be essentially abandoned after the war. A poll conducted by the Volunteer Service Bureau gathered the needed information preliminary to an organized war-time rental movement. The Home Owners Loan Corporation offered free architectural information such as plans and estimates for those who took part in the remodeling program. The National Association of Real Estate Boards reported that the approval of new housing in communities other than declared defense areas would offset the movement to provide appropriate rental properties because it allowed for balanced rental rates.

Forward thinking defense industries and communities provided transportation and help in locating closer housing to workers who traveled from long distances. The Traffic Department of the AOP, which maintained rail, bus, truck and car transportation insured that employees had a ride to work. When 500 defense houses were proposed for Little Rock in 1942, the Missouri Pacific Railroad entered into an agreement to run a shuttle train for employees of the AOP and the MOW from the new subdivisions. Pine Bluff also reported that long railroad spur lines would be built to transport arsenal workers. Residents within defense areas assisted new military industry employees by offering their own homes or joining the mayor and the Boy Scouts in going door-to-door to find a room for rent, while churches or civic organizations would offer recreational buildings. Any space for a body, such as attics, cars or garages would be utilized.⁵⁵

⁵⁴ Donald Albrecht, *World War II And The American Dream: How Wartime Building Changed a Nation*, (The MIT Press: Cambridge, MA., 1995), 49-51, 55; "Building In Defense Area To Be Aided," *Arkansas Gazette*, April 06, 1941, 10; "F.D.R. Approves Housing Units at Little Rock," *Arkansas Gazette*, March 29, 1941, 1; "Housing Here Inadequate to Soldier's Need," *Arkansas Gazette*, March 15, 1941, 7; "Sites Selected For Low-Cost Housing Units," *Arkansas Gazette*, June 15, 1941, 1; "Defense Areas Given Call on Housing Items," *Arkansas Gazette*, September, 20, 1941, 3; "Defense Rating To Aid Housing In Little Rock," *Arkansas Gazette*, July 25, 1941, 1; Arkansas Council of State Defense, *Manual of Activities*, (ACD: Little Rock, AR, 1941), 13.

⁵⁵ "House Survey Will Begin This Week," *Arkansas Gazette*, September 14, 1941, 10; "Free Plan Service for Remodeling," *Arkansas Gazette*, October 12, 1941, 11; "Survey of Dwellings To Be Extended," *Arkansas Gazette*, September 23, 1941, 16;

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The Farm Security Administration installed a house-trailer project at AOP in 1942 with 150 standard trailers for four people and 50 “expandible” trailers that could house as many as six people. Southwestern Proving Grounds also had an FSA trailer camp of 170 units as did Stuttgart Army Air Field and Pine Bluff. Some construction workers at the Pine Bluff Arsenal brought their own trailers or tents but others were aided with lodging needs by the War Department’s provision of seven U.S. Engineer’s quarterboats docked on the Arkansas River. A former FSA cooperative project on Lake Dick Farms in Jefferson County was put to use housing war workers when 45 vacant farm houses were leased to arsenal employees.

Military officers were often better situated than the average war worker as far as housing because acreage would be put aside for the construction of officer housing when military installments were planned. The Southwestern Proving Grounds included a small subdivision of twenty Colonial Revival homes called Oakhaven for executive officers southwest of the testing facilities. The AOP encompassed two residential areas for staff officers and operating personnel that were to be rented during their tenure at the plant.

Housing needs for the general employees and enlisted men’s families in Arkansas’s defense areas were addressed by approval of a \$5,000,000 private building program for 1,450 new defense houses. Seven hundred of the homes were intended for central Arkansas including Little Rock, North Little Rock, Park Hill, Levy, Benton and Bauxite. The remaining 750 homes would be built in Pine Bluff, Fort Smith, Texarkana, Texas, and El Dorado. Texarkana received an additional 500 houses and Hope, 100 in a second approval for 1,000 prefabricated units.

In February 1942, the Arkansas Housing Corporation took on the construction of 300 rental houses for Central Arkansas war workers northwest of the city limits on land owned by realtor Wiley Dan Cammack. The rent for two and three-bedroom units in Cammack Woods Addition (now known as Cammack Village) was fixed under the federal ceiling of \$50.00 and 100 of the houses were required to be rented to officers at Camp Robinson or their families in order for the corporation to receive FHA benefits.

“All Plant Activities Revolve Around Planning Department,” *The AOP News*, June 12, 1942, 3; “500 Defense Houses To Be Built Here,” *Arkansas Gazette*, February 15, 1942, 19; “Walnut Ridge,” *The Encyclopedia of Arkansas*.

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Permits for a planned 32-house development were also obtained for the Altheimer Addition, west of Cammack Woods. The community of Levy in North Little Rock had been established in 1917, but in 1942 it received 100 new defense units. Otis Neely, the mayor of North Little Rock, announced that it was “Known as the Gateway to the Defense Area,” and that “Levy is in the direct center of the most intensive war industry of the state,” citing the proximity of the munitions plants at Marche and Jacksonville. Aviation Realty Company completed Pine Bluff’s first defense housing addition within a thirty-day window and the town of East Camden came into being as a planned defense community for Shumaker Naval Ammunition Depot. Housing projects at AOP provided 375 new homes designed by the Little Rock architectural firms of Brueggman, Swaim and Allen and Ginocchio and Cromwell. Parkview Realty Corporation built 100 houses in groups of 25 each on an 80-acre tract at El Dorado. The war housing situation for Arkansas, while certainly dire, was met head-on by the government, private contractors and state and local officials with organization, imagination and private and federal funding to adequately handle the onslaught of war workers and their families.⁵⁶

STRATEGIC AND CRITICAL WAR MATERIALS IN ARKANSAS

An additional area of military production in Arkansas that became an important draw for war workers was that of mining. Arkansas Geologist George Branner, announced in 1939 that pending congressional legislation would enable the state to enter the arena of military mineral purchasing. Arkansas had been confirmed as possessing 17 of the strategic and critical war minerals listed by the Army and Navy Munitions Board. Out of those 17 Branner stated that bauxite, manganese and cinnabar

⁵⁶ “New Trailer Village Ready For Occupancy by AOP Families,” *The AOP News*, August 14, 1942, 3; “Pine Bluff To Get Big Bomb Making Plant,” *Arkansas Gazette*, October 22, 1941, 1; “At Home Afloat,” *Arkansas Democrat*, Sunday Magazine, May 24, 1942; “War Workers To Live At Lake Dick,” *Arkansas Gazette*, December 07, 1941, 24; “Big Arkansas Ordnance Plant Designed As Efficient Unit In United Nations War Program,” *Arkansas Gazette*, May 03, 1942, 14; Ralph Wilcox, National Register nomination for Southwestern Proving Ground Officers Quarters Historic District, (Arkansas Historic Preservation Program, Little Rock, AR, 2007), 5 of 8; Roberta Allen, *The Cammack Village Story*, (Self-published, Little Rock: AR, 1963), 13; “Levy In the Heart Of the Defense Area,” *Arkansas Gazette*, 1942; “2,500 Houses for Arkansas War Areas,” *Arkansas Gazette*, February 20, 1942, 18; Turner, “Southwestern Proving Ground,” 12; “Housing at Jacksonville Progresses,” *Arkansas Gazette*, July 05, 1942, 15; “Housing Project To Be Started In El Dorado,” *El Dorado Evening Times*, March 21, 1942, 1.

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would be the most pertinent to the military's needs. Bauxite was extremely lucrative for the state as the aluminum needed for the nation's necessarily expanding fleet of planes and ships as well as industrial and structural components, would be provided in large part from the town of Bauxite. The Saline County ore fields would also attract a large aluminum plant to the west on Lake Catherine in Malvern.

The town of Bauxite was established at the location of the Pittsburgh Reduction Company's ore-drying plant in 1903. Initial sales were slow but picked up some during WWI because of research into new markets for military applications. These new markets subsequently spawned peacetime uses that kept the company afloat through the Depression. By 1937 aluminum production began to pick up as further military uses were developed. Early 20th century ore extraction in Arkansas was through strip-mining, but during WWI and into the early 1920s, companies went to surface-mining. Advances in earth-moving equipment in the 1930s allowed mines to meet urgent war demands by exposing larger volumes of ore in a shorter period of time, which revived the use of strip mining in Bauxite.⁵⁷

After the beginning of WWII German U-boats off the Gulf of Mexico began intercepting South American shipments of bauxite so the government approached the Republic Mining and Manufacturing Company, a subsidiary of Aluminum Company of America (ALCOA) in Arkansas, about stockpiling domestic bauxite (Republic officially took the name Alcoa Mining Company in 1945 so that the public would associate it more closely with its parent company). As Roosevelt's program to increase airplane production kicked in, Donald Nelson, Chairman of the War Production Board, contacted ALCOA and informed them that they needed to significantly step back on exports and step up on production for the military. When company officials replied that they could not afford the equipment or manpower to meet the effort, Nelson politely replied that they had no choice. The company then began negotiations with the government to construct a refining plant in Bauxite. The Hurricane Creek Alumina Plant completed in

⁵⁷ "Arkansas Has Many Major War Minerals," *Arkansas Gazette*, April 02, 1939, *Clyde Ellis Papers*; Army and Navy Munitions Board, *The Strategic And Critical Materials*, (Commodities Division Army and Navy Munitions Board, 1940, 20; Gordon Bachus, *A Printed and Pictorial History of Bauxite*, (Heritage Publishing Company: North Little Rock, AR., 1968), 16-18, 20-21, 39; "50 Years of Arkansas Bauxite," *Arkansas Gazette*, January 19, 1941, *Sunday Magazine*, 3; MacKenzie Gordon, Jr., Joshua Tracey, Jr. and Miller Ellis, "Geology of the Arkansas Bauxite Region," *Geological Survey Professional Paper 299*, (U.S. Government Printing Office: Washington, D.C., 1958), 160.

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1942, was the result of a contract between the United States Defense Plants Corporation and ALCOA and was the largest refining plant in the world. The new 360-acre Bauxite complex produced aluminum fluoride and synthetic cryolite and refined the ore it received from various mines in Arkansas to produce alumina residue, an intermediate step in the production of aluminum. End-products from Bauxite would be shipped to an Arkansas reduction plant and to other Defense Plant Corporation companies in the United States for the manufacture of aluminum metal.⁵⁸

As Nelson was sending his telegram to inform ALCOA of their newly-imposed role as a provider of the nation's bauxite needs, plans were in the works to bring an aluminum reduction plant for the production of aluminum ingots to the state. In 1941 Representative W.F. Norrell had been working for two years to get a federal aluminum company to settle in his district in Saline County. Norrell reasoned that since Arkansas provided 90 percent of the bauxite in the country that it would make sense to locate the plant near the mines instead of sending all the ore it extracted to other states. The OPM agreed and in that year it recommended that Arkansas receive a 100,000,000 pound capacity plant. Arkansas Power and Light and the Rural Electrification Administration both obtained contracts with the Defense Plant Corporation in 1941 to provide interim power for the plant until the steam-electric generating plant in Stamps could be built, and until the new aluminum facility could construct its own generating station.

The exact site of the plant had not been determined as of June 1941, but Camden was under consideration and Malvern in Hot Spring County was also being investigated. In the summer of 1941 the chairman of the FPC announced that the aluminum plant should be at Camden and by November it was formally named as the home of the plant by the OPM. That same day the OPM rescinded the announcement "because of new information regarding temporary power facilities." AP&L had maintained that if the plant were located close to its source of ore it would incur a significant cost saving over

⁵⁸ Republic Mining and Manufacturing Company was also known as Pittsburgh Reduction Company, the Aluminum Company of America, the American Bauxite Company, the Alcoa Mining Company and Alcoa, Bob Glennon, "History of Hurricane Lake," *The Saline*, Vol. 18, #2, (September 2003), 7; "From Arkansas' Bauxite," *Chemical and Metallurgical Engineering*, June, 1942; Bachus, *History of Bauxite*, 41; "The Battle of Bauxite: Bauxite's Contribution To World War Two," (ALCOA, 1995), CD from Bauxite Historical Association, Bauxite, AR.; Gordon, Jr., et al., "Geology of the Arkansas Bauxite Region," 158-159; *Pick and Shovel*, Vol. 2 #6, (April 1945), 2; "12 War Plants In Arkansas To Be Disposed Of," *Arkansas Gazette*.

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constructing lines of scarce materials. Congressman Oren Harris of Camden disagreed about the accuracy of such a statement, but his arguments were discounted and the Jones Mills aluminum plant was approved for Malvern. The Defense Plant Corporation announced that the first unit would be ready to start production in July 1942.

Operations at Jones Mills were curtailed by the first month of 1944 under orders of the War Production Board. The Metals Reserve Company did not award any new contracts as the ones made prior to December 31, 1943, expired. Bauxite mines were classified as non-essential industries and it was announced that aluminum supplies exceeded the demand at that time. By August 1944, production at Jones Mills was cut back by one third and about 150 employees were let go. In October the Reconstruction Finance Corporation announced the sale of 12 war plants including the Jones Mills facility and the Bauxite mines. War production continued but the anticipation was that there would be no further need for them as defense industries and in 1946 Reynolds Metals Company leased the Arkansas refining and reduction plants until they were purchased by the company in 1949. Production levels rose again during the Korean War but the Hurricane Creek plant was ultimately disassembled in the 1980s. The Jones Mills plant was operated by Reynolds until the 1970s. In 1971 Arkansas state law required that open-cut mining areas had to be reclaimed by moving waste rock material into the old excavation pits. The soil at the top of the in-filled pits in Bauxite was neutralized and the area was rehabbed for various uses such as wildlife rehabilitation and planting.⁵⁹

Other materials in Arkansas that made it onto the federal list of critical and strategic minerals and supplies were manganese, quartz, clay, cinnabar and timber. Interest in manganese mining, which had been discovered in the 19th century in west-central Arkansas, was being revived by 1939 as essential to the production of steel for defense industries. The west-central mining area included Pulaski, Saline, Garland, Hot Spring, Montgomery, Pike, Howard and Polk counties. A second mining area called the Batesville District, which encompassed parts of Independence, Izard, Sharp and Stone Counties was

⁵⁹ "Aluminum Firm May Locate in Arkansas," *Southwest American*, April 11, 1941, 16; "Aluminum," *Northwest Arkansas Times*, July 01, 1941, *Clyde Ellis Papers*; "Memorandum For Aluminum Company File And A.P.&L. File," November 07, 1941, *Clyde Ellis Papers*; "Aluminum Units Near Completion," *Arkansas Gazette*, July 17, 1942, *Clyde Ellis Papers*; "Operations To Continue At Jones Mill," *Arkansas Gazette*, January 02, 1944, 2; "Jones Mills Aluminum Output Cut," *Arkansas Gazette*, August 30, 1944, 1.

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Garland, Hot Spring, Montgomery, Pike, Howard and Polk counties. A second mining area called the Batesville District, which encompassed parts of Independence, Izard, Sharp and Stone Counties was investigated by the Bureau of Mines for its potential beginning in 1940 and became the major producer of the mineral. A third area was discovered in northern Searcy County.⁶⁰

There were several separate periods of increased activity, including the span from 1941 to 1943. During this period the War Department did not allow any mining unless it was essential for defense. One facility that was cleared for WWII activity was the 1943 Shady Lake mine in the Ouachita National Forest, Polk County, operated by Southern Mine and Milling Company. The mine did not produce much and only operated as a concentrate mill for less than a year then closed down in 1945. In 1943 the government called for a curtailment of manganese production, saying that the crisis had passed and Batesville ore was no longer essential. Representative Norrell called for an investigation of the curtailment, saying that foreign mining interests were using the United States government to make a profit and that ships from Africa and India were still exporting manganese to the U.S. Regardless of the representative's assertions, government markets for manganese in Arkansas continued to fall after 1943.⁶¹ Quartz obtained a sizeable defense market in Arkansas after the War Production Board, the Metals Reserve Company and the U.S. Geological Survey investigated its use as radio-oscillator quartz crystals. During the war, 9,500 pounds of quartz was mined in Arkansas with the majority coming from Garland County in the period 1943 to 1944. Quartz sliced into wafers for radio transmitters and seismographs that could detect the approach of enemy equipment was extracted from Beaudry, Jessieville, Blue Springs, Lena and Avant and the area west of Crystal Springs. Coleman's mine in Garland County was initially

⁶⁰ "Raymond Stroud, Robert Arndt, Frank Fulkerson and W.G. Diamond, "Mineral Resources and Industries of Arkansas," *Bureau of Mines Bulletin #645*, (Department of the Interior: Washington, D.C., 1969), 39; Arkansas Geological Commission, *History of Bauxite in Arkansas*, (Arkansas Geological Commission: Little Rock, AR., 2005).

⁶¹ Michael Pfeiffer, "Archeological Investigations in the Southern Ouachita Mountains: Excavations at the Shady lake Recreation Area and Vicinity," *AAS Project 856 Final Report*, (Arkansas Archeological Survey: Fayetteville, AR., 1995), 77, 79, 83; "Large Mining of Manganese Being Held Up," *Arkansas Gazette*, May 18, 1943, 5.

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operated by the Metals Reserve Company in 1943 and was called Dierks No. 4 mine or the Blocker Lead.⁶²

Cinnabar, also known as mercury, was found in Arkansas in 1931. Cinnabar was the ore mineral that resulted from a combination of mercury and sulfur and its military application was as a fulminate for explosives, calomel for tracer bullets and chemical warfare compounds. Cinnabar could also be found in thermometers, barometers for ships, mercury vapor lamps and mercury vapor motors. Southwestern Arkansas produced the cinnabar in the state and it was obtained from Pike, Clark and Howard counties.⁶³

Saline County again provided various essential military materials through the production of clay products from Niloak Pottery Company in Benton. Scarcities during WWII prompted the War Production Board to experiment in alternative materials such as chemical stoneware that could be used in the place of rubber and metal. Niloak was considered qualified for conversion to war production in 1941 and the company produced jars for caustic solutions used in the Texarkana, Jacksonville and Marche ordnance plants. Other products included stone jars for acids and powder kegs, hospital supplies, mugs in hundred dozen lots for the Army and Navy and flasks for shipping quicksilver. The WPB began experiments on electrical porcelain in 1941, which opened up markets for insulators, generator bushings, electrical retort parts and acid-resisting ceramic linings. Niloak reported that art pottery fell off during the war but the president of the company said that demand for some gift items had risen because soldiers were looking for flower holders and flower pots to be sent home to mother or to families that had lost a member in the war.⁶⁴

The timber of Arkansas became a strategic military material that was provided in a steady stream from the state's large lumber concerns and smaller industries as well. Conservation orders on softwood lumber by the War Production Board after August 27, 1942, made new supplies for timber retailers difficult to obtain unless the company was presented with a high priority order. The concerns were also

⁶² Stroud, et al, "Mineral Resources," 113, 235; "Geological Survey To Help Develop State's Rich Quartz Deposits," *Arkansas Gazette*, August 22, 1943, 8.

⁶³ Stroud, et al, "Mineral Resources, 86, 255; Noel Stearn, "The Cinnabar Deposits In Southwestern Arkansas," *Economic Geology*, Vol. 31, (January-February, 1936), 1; "Ore Deposits Replace Far Eastern Sources Cut Off By Enemies," *Arkansas Gazette*, July 05, 1942, 5.

⁶⁴ Diana Sherwood, "Arkansas Clay Goes to War," *Arkansas Gazette, Magazine Section*, March 28, 1943, 1.

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faced with labor shortages because of military enrollment and the demand for higher wages in those areas producing for defense.

By 1942 the entire production of the Crossett Saw Mill was going to the military. The sawmill division at the plant provided lumber for cantonments and under the “stock and pile” plan the government stored and tagged millions of board feet for future construction at Crossett. The company paper mill contributed materials for the War Production Board’s paper industry section. Smaller concerns like the Black Lumber Company in Corning was participating in total war production in 1942. Black produced lumber used in ships, trench shovel handles, bomb skid racks, precision parts for air bombers, railroad construction and barracks.

Ammunition boxes were big business in Little Rock as the Wonder State Basket Company changed over from basket production to shipping cases for arms. Besides ammunition boxes, the Leird Lumber Company produced wood trays and racks for the government as well as construction beams used at the Pine Bluff Arsenal. The 555 Plant in Little Rock normally made restaurant equipment but they changed over to boxes during the war. Other central Arkansas industries that received government contracts for ammunition boxes were West End Lumber Company, Coffield and Moore Manufacturing Company and the Little Rock Box Company.⁶⁵

Partnerships between the government and Arkansas mines and timber industries ended just as quickly as they had begun. Over 1944 and 1945 Arkansas newspapers reported decreases in demand and output across the state in concerns that had been operating 24 hours a day and struggling to find employees to fill the orders. Most of the timber industries managed to continue in production after the war, though not always at the levels previously seen. The Forestry and Wood Products Committee of the Arkansas Economic Council determined through questionnaires sent to lumber industries in 1944 that most were optimistic that they would be able to absorb returning service men in areas such as stave and furniture plants, wood chemical plants and paper and saw mills. Mineral mining in some areas was

⁶⁵ “Arkansas Lumber Industry Geared to War Needs, Despite Handicaps,” *Arkansas Democrat*, September 06, 1942, 9; “Crossett Industries Making Contributions To War Program,” *El Dorado Evening Times, Seventh Annual Oil and Industrial Edition*, January 30, 1942; “A Lumber Mill Goes to War,” *Arkansas Gazette, Magazine Section*, December 06, 1942, 1; “Production of Ammunition Boxes in Little Rock Area Paced By Good Record of Small Factory Converted From Basket-Making,” *Arkansas Gazette*, August 09, 1942, 4.

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intermittent with any significant recovery occurring up to 1959 for manganese and 1946 for cinnabar. Quartz mining in Arkansas remains big business with industrial and medical facilities and crystal collectors running neck-in-neck as far as demand. The government continues to maintain large stockpiles of quartz for military use such as a component in cylinders for nuclear missiles. By 1946 Niloak's business dropped off and it was bought out by Winburn Tile Company.⁶⁶

RELOCATION CENTERS AND PRISONER OF WAR CAMPS IN ARKANSAS

The home front in Arkansas was utilized by the military in a capacity other than training and production. Under executive order of the president the War Relocation Authority was created in 1941. The concentration of Japanese-Americans on the west coast was seen as a distinct threat after Pearl Harbor, so to diffuse the danger of invasion supported by Japanese loyalists in America, the president created relocation centers. The easternmost centers would be situated in Rohwer and Jerome, Arkansas. This was one federally-sponsored program that Governor Adkins did not support. He was not enthusiastic at all about the centers and requested that the government place them elsewhere. Adkins was against their presence in his state because he did not want to financially support them and he didn't want the internees to stay after the war. He felt that Arkansas wages would rise if the evacuees were paid minimum wage for doing agricultural work. To prevent this, Adkins emphasized to the War Department that the evacuees were to remain under armed guard and could not be in competition with the local labor force, but could be used to supplement labor supply only in the case of a shortage. The internees would earn their living while in Arkansas by helping clear the sites for the centers. To thwart unwelcome post-war settlement, they would not be allowed to buy land in Arkansas. Local farmers eventually were not so averse to their presence because the work they performed in clearing the land meant valuable post-war development could occur when they left.

Construction bids for both camps were accepted by the Vicksburg Office of the Corps of Engineers. The Rohwer center located on cutover Farm Security Administration land began in July 1942

⁶⁶ "Big Growth In State's Lumber Business Seen," *Arkansas Gazette*, March 14, 1944, 2; Terri Coleman, Ron Coleman, Inc., Hot Springs, AR, telephone interview with author, July 24, 2008.

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and construction bids were being rushed for Jerome in September of that year. Although the camps were publicized as centers for those who were required to accept, or who had sought out government protection, Regular Army guards were to be placed at Rohwer and Jerome to watch over the projected population of approximately 10,000 evacuees each. A government official made the comment that these were not prisons as “these people are practically all coming because they want protection.” However, in 1943 a Senate investigating committee found that Japanese relocation centers were “trouble breeders” and advocated their closure. Those internees who were considered dangerous to the United States would be placed in prison camps or “isolation centers” and not evacuee centers such as those in Arkansas. Loyal Japanese-Americans who proved that they were not disloyal were allowed to leave for employment in other states. If no government intelligence against them was unearthed and they had a job lined up, they could file their location with the government and were released. If the new community found them “acceptable” they would be considered on indefinite leave. Others that proved their allegiance to America could join the Army as a member of an all Nisei (of Japanese descent, born in America) combat team.⁶⁷

By 1944 the restriction on Japanese-American West Coast residency was being lifted. Gradually, the colonists in Arkansas were allowed to leave. The *Arkansas Gazette* reported in July 1944, that Jerome was the first of ten Japanese relocation centers in America to shut its doors. Out of the approximately 8,000 evacuees housed at Jerome by 1943, three hundred remained at the closing of the centers. Those residents were transferred to Rohwer until its closing date in November 1945.⁶⁸

Soldiers of a different allegiance were present on the home front in Arkansas during the war. Due to a successful conclusion to Allied operations in North Africa, thousands of German and Italian prisoners of war (POW) were brought into the United States in 1943. Inexperience in managing POW camps in accordance with treatment policies under the Geneva Convention made the administration nervous about supporting such facilities in America. There was also the consideration of possible security issues. But the

⁶⁷ Guy Vanderpool, *All Together Now: The Arkansas Home Front During World War II*, (Texarkana Museums System: Texarkana, AR, 1995), 9-11 “Work Rushed on Units To House 20,000,” *Arkansas Democrat*, September 06, 1942, 19D; *Arkansas Gazette*, July 04, 1943, 4; “Chandler Body For Abolishing Jap Camp Plan,” *Arkansas Gazette*, May 08, 1943, 16.

⁶⁸ “Jap Center At Jerome Closed,” *Arkansas Gazette*, July 01, 1944, 2; “Rohwer Colony Hails New Order,” *Arkansas Gazette*, December 20, 1944, 12.

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government could see that if POWs continued to be housed overseas, the U.S. would be responsible for provisions to maintain them that could be better utilized by American troops. So after initial resistance to taking an overflow of prisoners from Great Britain the federal government hastily organized to accommodate them within the year.

The administration's concerns of sabotage led the government to utilize remote areas of existing military reservations for German prisoners in the early stages of the program. Three such facilities in Arkansas were immediately designated as German prison camps. Camp Chaffee was the first to accept prisoners in January 1943. Eighty-three acres on the military reservation were set aside for approximately 4,000 prisoners housed in three compounds. In that same month three hundred acres on Camp Robinson in North Little Rock was put to use as a three-compound prisoner facility with accommodations for 4,000 like those at Camp Chaffee. In 1945 another compound with room for 1,100 was opened at Robinson and branch work camps in eastern and central Arkansas were set up and supplied with provisions and administrative staff. Camp Dermott prisoner of war camp was on the site of the former Jerome Relocation Center. Within weeks of the departure of the Japanese in 1944, the center was converted to a prison compound with the purpose of housing German officers and enlisted men considered to be hard core Nazis. Construction on Camp Monticello for Italian prisoners of war was begun in July 1942, but the War Department moved in Women's Army Auxiliary Corps (WAAC) for training in 1943. This camp was different from the previous three because it had been built for the purpose of housing Italian prisoners only. By June of that year the WAACs had moved out and the Italians began arriving in August 1943. Italians were also detained on the site of a former CCC camp in Magnolia after a tornado destroyed original camp buildings occupied by conscientious objectors.⁶⁹

In Arkansas agriculture had historically supported the majority of the population but the war took away thousands of farmers and farm laborers, resulting in a shortage that dangerously impacted the state's

⁶⁹ Merrill Pritchett and William Shea, "The Afrika Korps in Arkansas, 1943-1946," *The Arkansas Historical Quarterly*, (Spring 1978), 3-7; Michael Pomeroy, "Prisoner of War Camp Locates Near Town...Keeps Italian Men Captured During War," *Drew County Historical Journal*, Vol. 3, #1, (1988), 24-25; William Shea, "From WAACs To Weevils: A Sketch Of Camp Monticello," *Drew County Historical Journal*, Vol. 3, #1, (1988), 17; Mike McNeil, "Columbia County," *Encyclopedia of Arkansas*.

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major sources of income. In March 1943, the War Department announced that prisoners of war could be put to work outside of their base camps for non-military purposes. This was an important decision to Arkansas farmers because it meant prisoners could be put to work in the fields. A contract labor program was organized in the state allowing farmers or businessmen to enter into a contract with the War Manpower Commission (WMC) to pay the prevailing local wage for the prisoner's labor and to make sure they were properly cared for while at work. By February 1944, branch work camps were being established in eastern and Central Arkansas in order to take the labor to the areas of greatest need. Thirty branch camps for prisoners of war were placed primarily in the eastern region. Branch camps were located at Altheimer, Bassett, Blytheville, Crawfordsville, Dermott, Earle, Elaine, Grady, Harrisburg, Hughes, Jonesboro, Keiser, Knoble, Lake Village, Luxora, Marked Tree, Murfreesboro, Newport, Osceola, Pine Bluff, Russellville, St. Charles, Simsboro, Springdale, Turrell, Stuttgart, Victoria, Walnut Ridge, West Helena and Wynne.

Arkansas farmers had requested that the War Department supply approximately 16,000 prisoners to bring in the rice and cotton harvest in August of 1943. The demand was so great that the WMC allowed camp commanders to appoint prison labor without previously required clearance from the state and regional offices. The paper mill industry in Arkansas also made use of the prisoners in gathering pulp wood. The vice president of International Paper Company reported to Congressman Oren Harris that the labor shortage had impacted the paper mill industry in that there were not enough civilians to gather wood. Harris responded that prisoners could be allocated to that task if there were enough to take care of the agricultural needs of the state first. The prisoners were not allowed to work in the state's forestry industry though, until 1944. Other work activities assigned to prisoners were civic projects such as construction of municipal buildings, ditching, fencing, clearing and repair. Some labored on chores at the campus of Arkansas State College in Jonesboro. Small industries throughout the state also employed prisoners in rock quarries, brick companies, canneries and wood products companies.⁷⁰

⁷⁰ *Ibid*, 13-14, 18, 20; "Use of War Prisoners Simplified," *Arkansas Gazette*, August 25, 1943, 12; "War Prisoners May Work For Paper Mills, *Arkansas Gazette*, June 20, 1943, 2; Kent Goff, "World War II PW Branch Camps in Eastern Arkansas," information from www.mvep.org/ww2pwcamps, accessed September 08, 2003.

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In June 1945, the War Department announced the repatriation program for prisoners of war. The return of the men took place over incremental stages beginning with the sick and wounded; cooperative prisoners next and hostile men last. German and Italian prisoners of war remained in Arkansas for a considerable period after the end of the war. The nation's farmers were hesitant to release their steady supply of labor so President Truman postponed repatriation for two months after the announced deadline of the beginning of 1946. Prisoners of war continued to work in Arkansas until May 1946, when they were shipped to the East Coast for transport home.⁷¹

POST WAR ARKANSAS

Post war Arkansas had undergone a profound alteration because of home front war industries and training facilities. The state was estimated to have employed 93,000 people in manufacturing at the peak of the war and the federal government had invested approximately half a billion dollars in war plants. Remaining military bases provided new employment and industrialization was actively pursued by an emboldened Arkansas Economic Council, formed in 1943 with the intent of providing continued employment for returning service men and women. Learning from the initial disinterest of the government in locating war industries in Arkansas, the council organized county units to outline areas for growth. The state Chamber of Commerce merged with the Economic Council in 1945 and obtained legislative appropriations for improvement of various state agencies. Businessmen were encouraged to actively recruit new industries to utilize the state's natural resources. A program of research was embarked upon to study costs and processes of setting up new concerns and determining diverse possibilities for future economic stabilization.

Arkansas had gleaned valuable experience during the war and was prepared for a new era. Her politicians had entered the military-industrial arena and obtained renewed faith in the state's possibilities from the population and the nation. While still an agricultural state, Arkansas had been exposed to modern

⁷¹ Arnold Krammer, "German Prisoners of War in the United States," *Military Affairs*, Vol. 40, (1976), 71.

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methods, which it put to work in manufacturing and improved mechanized farming. The state was ready to move on after the end of the war.⁷²

⁷² "The Arkansas Story," *Manufacturer's Record*, (August 1947), 5, 12-14.

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ASSOCIATED PROPERTY TYPES

Property types associated with WWII home front efforts in Arkansas include buildings, structures, objects, sites and districts. The associated characteristics of these properties stems from their construction or adapted use for military production, military training, military housing or prisoner of war facilities in Arkansas from 1941-1946.

The physical appearance of the property types will differ according to the use of the resource. Those resources that were adapted from existing building stock on city streets or college campuses will exhibit typical architectural styles of the era. Properties constructed expressly for the military by the federal government were built to be functional and usually followed design and engineering techniques recommended by the Corps of Engineers and the Quartermaster General. Standard plans were generally used as a starting point for working drawings and they could be altered from the standard to conform to topography, available materials and site conditions. There are also properties associated with WWII that display Colonial Revival, Classical Revival, Art Deco, Craftsman styles or vernacular adaptations.

In-depth information about individual WWII home front property types has only begun to be researched in the state. The information on relevant property types thus far cannot be considered complete. On-going research and field surveys will probably necessitate adjustments in associated property type descriptions and requirements in the future.

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NATIONAL REGISTER CRITERION

A – EVENT

Some eligible properties under this context will be significant under Criterion A for their direct association with federal and state movements to prepare and organize the nation's people against a common enemy during World War II. The resulting institutions and training programs on American soil propelled the nation out of the Depression and brought about social changes that altered gender-specific expectations, introduced new technologies and offered educational opportunities to a broader spectrum of the population. These properties must have existed during WWII and be associated with the preparation for and execution of war in Arkansas

B – PERSONS

Properties eligible under this context that are linked with figures associated with administrative, engineering or training levels of the military or theaters of war during WWII may be significant under Criterion B. The resource will be considered eligible under this criterion if it is the most important property associated with that person or if it is the last remaining property associated with them. That person's importance within his or her profession or group must be demonstrated through this property. Such properties must demonstrate that person's achievements as relates to their contributions to WWII and must be linked to the productive period of their life within that context. Those properties connected to living persons are usually not eligible for the National Register.

C - ARCHITECTURE

Those resources considered eligible under this context that display distinguishing characteristics of standard military-industrial architecture will be significant under Criterion C. Resources that are designed by engineers rather than architects may also be eligible if they are significant examples of such types. Properties used for WWII home

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front purposes may also reflect nationally popular 1940s styles like Art Deco, Colonial Revival, Classical Revival, Craftsman or vernacular adaptations of those styles, and will be eligible under Criterion C. It is not likely that a particular architect was engaged to design properties for the military. None are known to have executed any such structures considered to possess individual artistic merit or innovative architectural characteristics in Arkansas at this time. If future research yields that information then Criterion C can be applied to a property as the work of a master.

D – INFORMATION POTENTIAL

Properties may also be eligible under Criterion D if it can be demonstrated that they have yielded or are likely to yield information important to history within the context of WWII home front efforts in Arkansas. Areas where this criterion could be applied include sites of relocation camps, prisoner of war camps or mines and timber operations. Training, production and testing facilities that have been abandoned may also provide information. Information must relate to WWII home front facilities, a link must be made between the property and WWII home front efforts and there must be an adequate amount of information at the site to make the case for Criterion D.

Some properties may be eligible under more than one criterion if a link may be made in all areas.

Overall, property types may share some general registration requirements:

1. Resources must have been constructed for the use of United States military entities or for local educational or support purposes that contributed to the development or recreational and housing needs of America's fighting forces and military facility workers during WWII.

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2. Construction should have been essentially completed by the end of 1946.
3. Resources will probably be considered locally significant. In the case that they represent the only known example in the state of a particular property type, or they are one of the few remaining examples of that property type associated with a specific WWII home front facility or program, they might be considered for state-wide significance. In some cases if a property's significance is pertinent to the nation as the first of its kind or the only one of its kind within the context of preparation for or execution of war, it may be considered for national significance.
4. Individual resources that are the only remaining property of a larger facility may be considered eligible if they possess enough integrity to convey their historic function within the context of the former complex. Individual resources may be considered eligible if they represent a direct association with federal and state movements to prepare and organize the nation's people against a common enemy during WWII.
5. Individual resources may also be considered eligible if they are significant examples of an architectural style, an engineering or construction method, or the work of a master, or if they best represent a person's productive life that was important in WWII home front efforts in Arkansas or the nation.
6. Collections of resources, such as home front facility worker housing, military housing or military factory, training or research complexes or power generating

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7. stations for the production of power in military facilities may be considered eligible as contributing resources in districts or cultural landscapes.

Movable objects, such as airplanes or railroad cars were designed to be moved, thus it is not required that movable objects be at their original location in order to retain integrity. Those objects that are part of a collection in a museum setting will be considered eligible if the setting is appropriate to an airplane or railroad car and they are allowed to convey their significance as an aircraft or railroad car. They will also be considered eligible in that setting if they are proven to be significant under National Register criteria and they retain integrity of materials, setting, design, workmanship, feeling and association.

A resource must possess sufficient integrity to convey its significance. Generally, a resource will possess several of seven aspects of integrity set forth by the Secretary of the Interior:

1. Location: When resources are moved, the relationship between that property and its historic association can be destroyed. A resource should be situated in its original location. Buildings, structures and objects moved from their original locations must meet Criteria Consideration B for moved properties as outlined in the National Register guidelines.
2. Design: Resources should retain a combination of elements that convey their original design. Typical elements would be materials, style, form, plan, spatial organization, structural framework and technology of construction. A resource

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should exhibit overall original form and massing. A resource should still retain enough integrity to exhibit its function from the period. In cases of engineering, integrity of designed form is important as the function dictated the form and must therefore still reflect that engineering design. Any additions after the period of significance should be set back in order to prevent obstruction of the original form, should be of similar scale and should not be placed on the front façade of the building. Window replacements within historic districts may be acceptable if the original fenestration pattern and size is retained. Enlargements of windows and doors may result in a building being considered ineligible if this alteration results in eradication of its original form. Those openings that have been in-filled, but are still evident, may be acceptable on secondary elevations only. Original forms and spatial organization should be detectable, even if the property's use has changed. Any ornamentation present on resources must reflect original styles or the period of subsequent acceptable historic alterations.

3. Setting: The physical environment of the resources should reflect their historic surroundings. This would include topography, vegetation and similar rural or urban character of place.

4. Materials: Resources must retain the key exterior materials dating from the period of its historic significance. Original materials in some properties used by the military are essential to convey historic function, such as bomb shelters, gunpowder storage buildings or weapons testing buildings. If a resource has been rehabilitated, historic materials and significant features must be preserved. In

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historic districts, new exterior sheathing is acceptable if the modern material reflects a property's original texture and does not obscure historic features or change the original architectural intent. Resources whose historic materials have been lost and then reconstructed may be eligible only if they meet Criteria Consideration E for reconstructed properties as outlined in the National Register guidelines.

- 5 Workmanship: Resources constructed for the military were not elaborate or heavily ornamented. The serious work of preparing for war was reflected in the utilitarian structures associated with home front resources. Workmanship should illustrate aesthetic principles and technological practices associated with military programs and associated home front buildings, structures and objects. Resources should retain evidence of federal construction workers' labor and skill, as well as their original design and materials.
- 6 Feeling: Resources should retain sufficient original physical features that, when taken together, convey the resource's historic character. This will generally include the combination of original design, materials, workmanship and setting. This will be particularly important within the context of a historic district.
- 7 Association: There should be a proven and direct link between WWII and a historic property or person. Features that can communicate the function of a property within the context of preparation for war in Arkansas or as the single remaining structure associated with a person important to the process and preparation for war should be intact to convey association.

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Resources do not have to be currently used within their original capacity as long as sufficient integrity is present.

PROPERTY TYPES

AIR TRAINING FACILITIES

Air training buildings such as terminals, ground school buildings, barracks, recreational buildings, hospitals and offices were often constructed in the popular architectural styles of the 1940s. Although not architecturally elaborate, they sometimes displayed Colonial Revival or Classical Revival influences with cupolas and full front porches with full-height square columns. Less extensive facilities might be constructed in the simpler Craftsman style with double-hung, multi-paned windows and exposed rafter tails beneath gable roofs. Permanent housing or administrative structures of masonry were less likely than frame construction in military complexes because it was more expensive and added 10 to 15 percent more man hours to the required construction time. It is more probable that frame construction with wood novelty siding or tar paper cladding could be found on these building types.

The topography and climate of northeastern and eastern Arkansas attracted the attention of the federal government in the early 1940s. Many flying training facilities were located on the West Coast at the beginning of the war, which caused concern for the Roosevelt administration. Fears of attack by the enemy in easily accessible coastlines led to the movement of such schools to the interior between the Rockies and the Appalachian mountains. By 1940, Arkansas was included in the national defense industry grid and was being considered for construction of flying training schools. The eastern region of the state contained flat, prairie-like environments that would take little effort to clear. Unimpeded flying space made Arkansas attractive to the Air Corps, the Air Forces and the Navy. Flat

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expanses such as that found in Blytheville, Pine Bluff, Stuttgart, Lonoke, Walnut Ridge and Camden were conducive to constructing runways, as well. Arkansas also offered a steady climate that allowed for year-round training.

The following structural types can be included as Air Training Facility property types:

Hangars

Arkansas had flying training facilities at numerous colleges and schools around the state that were taking part in the Civilian Pilot Training Program by 1939. Drake Field in Fayetteville was used prior to the war for civilian pilot training (White Hangar, Drake Field, AR listed 06/05/96) as was the airfield at the Siloam Springs campus of John Brown University. Most of the classes took place at already existing airfields close by the campus. Many pre-WWII hangars were constructed of wood with low-pitched gabled roofs or arched roofs. Some might be built of corrugated metal. Large expanses of windows were sometimes included to light the cavernous interior workspace and sliding pocket doors provided access. The early purpose of these hangars was often simply to shelter the airplanes.

As airplane design changed and they became larger, the hangars had to accommodate the increasingly sophisticated machines and offer space to work on them. Speed and efficiency in construction were the goal as the air program rapidly increased to meet the emergency after the declaration of war. The buildings were referred to as temporary structures yet they could be quite expansive with masonry corner piers and intricate monitor roofs. Air Corps policy began to call for steel construction during the war to save money so there were frame and steel examples of military hangars.

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This policy was changed again as steel became more urgent for ship building. Wood trusses were then utilized. Hangar design basically followed standard military plans but there were levels of standardization between building programs, which led to distinctions between Air Depot facilities, technical training facilities and flying training field facilities.

World War II hangar types were categorized by the form of the structural cross section over the hangar bay. Those types found in the early to mid-1940s with steel trusses exhibited open arch, crossed flat gable, sawtooth and monitor forms. Those types with wood trusses from the same period exhibited closed arch and closed flat gable configurations. Concrete arch trusses were found only in the open arch form.

Additional character-defining features include open interiors with concrete floors and space to allow large airplanes to be stored or worked on. Lean-tos may be present for office space or tool storage.

Runways

Runways for the state's civilian and federal flying training facilities and their auxiliary fields either consisted of turf or asphalt. Runway lengths in the state have been placed between 2,000 and 7,500 feet. Runway configurations often included aprons, taxiways and turning radii. The length of runways could be determined by the type of airplane that utilized the facility and also the purpose of the facility. Erwin Auxiliary Army Airfield in Newport (NR Listed 10/02/08) contained a 4,500 foot hard-surfaced runway. The airfield was composed of two runways and two taxiways used for military training and exercises, particularly practice landings in B25 bombers.

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Runways that displayed hard surfaces were common during WWII. Despite the fact that most runways in areas of combat were unimproved, hard-surface runways in training facilities were more practical because deteriorated conditions could postpone or impede training.

Construction of improved runways picked up as aircraft became more sophisticated. The Civil Aeronautics Act of 1938 provided funds for landing areas utilized for national defense. Forty-million dollars was made available by Congress in 1940 for Development of Landing Areas for National Defense.

Other types of runway facilities present might be overrun pavement, taxiways and parking aprons.

Characteristics of runways include turf, asphalt or concrete surfaces and the structures must maintain the form of an aviation runway.

Associated Buildings

Several properties contributed to the mission of air training facilities. Some examples are:

- Repair Shops
- Maintenance Buildings
- Terminals
- Testing Facilities
- Fuel Storage and Dispensing
- Control Tower
- Recreational Buildings
- Fire Station-Crash/Rescue
- Parachute and Survival Equipment Shops

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- Administrative Offices
- Weather Facility

This is only a partial list and further research will determine other types.

Characteristics of buildings associated with runways will vary widely, depending on usage and predominant architectural style of the overall facility. Interiors will exhibit configurations according to their purpose with open interiors of concrete and other fire resistant materials or warrens of offices arranged down hallways with open lobby areas.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Air Training Facilities for the National Register of Historic Places in the context of this multiple property listing:

Air Training Facilities should be considered eligible under Criterion A as being representative of resources within the outlined boundaries of a WWII air training facility that would have been utilized by the United States Army Air Corps or Air Forces. The resources should have been present on the site during WWII activities and must have some association with the activities at the site. These property types must demonstrate a significant contribution to the national movement to mobilize and prepare the United States for war by being an integral part of federal flying training activities ultimately used in the Allied war effort. The size and scope of the training offered at the facility and how the results of training at the facility were used in WWII theaters of war can contribute to its eligibility under Criterion A.

Individual properties significant under Criterion A can be linked to significance areas of education, engineering, community planning and development, transportation, social history, science and/or military.

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Air Training Facilities can be considered eligible under Criterion C for demonstrating the distinctive characteristics of a type, period, or method of construction. These buildings can also show the work of a master in engineering or the work of a craftsman. They can reveal significant doctrinal developments when a change in technology or tactics led to a change in form, design and function. This criterion can be exhibited if such facilities were constructed using a method associated with the needs and uses of typical facilities of the WWII era or if it was constructed using a method associated with standardized plans of the Corps of Engineers or if it is representative of a typical example of its type.

Those elements that define a building, structure or object as that typically found in Air Training Facilities should be intact. Emphasis should be on distinctive characteristics of the type, design elements, materials, workmanship and setting.

TRANSPORTATION AND TRAINING CRAFT

Arkansas's surviving transportation and training craft are eligible for the National Register because of their industrial design, construction materials and workmanship. They are also eligible because of their representation of national military trends in aviation and transportation advances from 1941 to 1946.

During the war many types of military planes and gliders were utilized in Arkansas's training facilities. After the war there was little use for military airplanes and many were destroyed for the aluminum but some do remain, mostly in museum settings. The same is true of rail cars used for WWII military purposes.

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The following structural types can be included as Transportation and Training Craft property types:

Aircraft

Airplanes were a key component in the Allied victory over Germany and Japan. The lack of air support at the beginning of World War II was cause for concern for President Roosevelt as Germany was producing airplanes at a rapid pace. "In 1939, Congress authorized the Air Corps to expand its fleet to 6,000 airplanes. On May 16, 1940, with the war in Europe expanding, President Roosevelt called for the U.S. to increase aircraft production to 50,000 per year. America's massive military expansion was now underway. The events of December 7, 1941, unleashed an unimaginable flurry of activity throughout the military, as well as massive expansion and mobilization of America's Industrial Complex. Army Aviation expenditures sky-rocketed, going from \$74 million in 1939 to \$3.9 *billion* in 1941 to \$22 *billion* in 1942. Aircraft production soared from 3,611 in 1940 to peak at 96,270 per year in 1944. All told, the U.S. produced some 296,000 airplanes for WWII." (www.wingsofhonor.org)

As the United States involvement in the conflict grew it became clear that air bombardment was vital to the protection of the country and its allies. The state's flying training schools utilized military airplanes and gliders produced specifically for the war effort.

Some types of WWII trainers utilized in Arkansas were:

Blytheville: AT-9, AT-10, BT-13, AT-6

Stuttgart: Waco CG-4 gliders, AT-10 twin-engine

Newport: BT-13, BT-15 single-engine

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Walnut Ridge: BT-13, BT-15 single-engine

Pine Bluff: PT-19 single-engine, BT-15, AT-17

Helena: PT-19, PT-23, PT-17 single-engine

Camden: PT-19, PT-23, PT-27, PT-17 single-engine, BT-13, L-5, AT-6, AT-10.

Aircraft should exhibit the proper construction materials for their body type, wings, engine housing, cockpits, wheels and body forms that signify them as a bomber, glider, or transport plane produced for the military during WWII.

Train Cars

Railroad cars were used for various purposes during WWII in Arkansas. Transport cars moved troops back and forth to training facilities and embarkation points. Hospital cars were used for carrying wounded soldiers to military hospitals. There were three kinds of hospital cars used during WWII: ward cars, ward dressing cars and kitchen cars. Arsenals, mining operations and testing and training facilities used railroad cars to transport munitions, minerals and chemicals to and from their facilities as well as within the facilities.

Some of these cars were converted from older boxcars or constructed using American Association of Railroad standards in 50'-6" single-sheathed steel boxcar designs with reinforced ends. Such cars were referred to as troop transport cars or troop sleepers. Sometimes baggage cars were converted into kitchen cars. Hospital cars were constructed with bunks to make loading and unloading litters easier. In 1943 a new car design was developed and authorized in 1944. These new hospital unit cars with a 36-patient capacity included kitchens, a receiving area, a pharmacy, two rooms for doctors and nurses, a bathroom, and a sterilization room.

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Train cars must exhibit original configuration and be composed of original materials with wheels for propulsion on rails. Train cars must exhibit characteristics that would indicate their military and transportation use.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Transportation and Training Craft for the National Register of Historic Places in the context of this multiple property listing:

These examples may be considered eligible for the National Register under Criterion A if they were utilized in military training or mining, testing and storage facilities in Arkansas with the mission of WWII mobilization, materials acquisition and/or provision of trained troops that participated in the national movement to protect the United States and its allies from a hostile enemy. Those bombers, gliders or transport planes that received new parts during their active life as military resources may be eligible as it was not uncommon for such craft to receive a new wing, tail section, landing gear, etc. as necessary to keep it in the air.

Properties significant under Criterion A can be linked to significance areas of transportation, engineering, science and/or military.

Transportation and Training Craft may be considered eligible for listing on the National Register under Criterion C for demonstrating the distinctive characteristics of a type, period, or method of construction. The mode of movement of these property types – land or air – and their connection with certain military uses will dictate the distinctive characteristics of these types.

As rare and historically important objects related to World War II, most bombers, gliders, transport planes and rail cars may be found on display. Since these property types

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were designed to be moved during their productive life, these may be considered eligible if the setting of the museum is in an airport, rail yard or mining environment. Such properties must also have a relationship with the state of Arkansas, having been used in Arkansas airfields and military complexes and on Arkansas rail routes.

MILITARY TESTING FACILITIES

The remote location of Arkansas and its relative inaccessibility to undetected enemy attack were important factors in the federal government's choice of the state for construction of testing facilities. Arkansas was chosen for one such facility in Hope. The 50,780.27 acre facility contained mess halls, recreational buildings, barracks, warehouses, testing facilities and magazines. Many of the structures in the Southwestern Proving Ground (SWPG) were constructed of wood but those that contained explosives or unstable materials were built with brick, concrete and steel.

Ammunition and guns were put through a series of tests at the proving grounds, which required testing bays and special buildings. For protection against fire and explosions, materials used in these buildings and test areas would be ceramic tile, asbestos, concrete or steel. Some magazines were built up with earthen sides and steel doors to disguise their purpose from the air and to contain the materials in a stable environment.

Military Testing Facilities were large, sprawling complexes with buildings strategically spaced according to their functions. A partial list of resources found on the Southwestern Proving Ground in Hope includes:

- Smokeless Powder Magazine
- Hangar
- Radio Tower
- Cartridge Case Testing House

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- Tool and Equipment Building
- Assembly Plant

The interiors of some buildings associated with Military Testing Facilities will contribute to character definition as their use of space can lead to their designation as a certain property type. This would be those structures used for storage of unstable materials or testing of weaponry or hangars.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Military Testing Facilities for the National Register of Historic Places in the context of this multiple property listing:

Resources that were components in the state's Military Testing Facility may be eligible for the National Register of Historic Places under Criterion A as integral to the functioning of a testing facility that contributed to WWII mobilization and the provision of trained troops that could competently execute their duties using the weapons and materiel that were tested in the state.

Individual properties significant under Criterion A can be linked to significance areas of education, invention, engineering, transportation, science and/or military.

Military Testing Facilities may be considered eligible for listing on the National Register under Criterion C for demonstrating the distinctive characteristics of a type, period, or method of construction. There were a wide variety of building types at Southwestern Proving Ground in Hope. The buildings and structures were utilitarian and the character of the facility and its mission dictated its sparse architecture as it was not designed for public visitation.

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Military Testing Facility resources may be eligible under Criterion C if they demonstrate a particular construction method in accordance with function. This will dictate its materials and floor plan. A Military Testing Facility building, object or structure may be linked to Criterion C if it was constructed using a method associated with standardized plans of the Corps of Engineers or if it is representative of a typical example of its type.

Those elements that define a building, structure or object as that typically found in a Military Testing Facility should be intact. Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting.

POWER GENERATING FACILITIES

The early lag in the awarding of military contracts to Arkansas was largely the result of a lack of inexpensive power sources. Arkansas was bypassed for two large military facilities because of this. Representative Clyde Ellis, Governor Homer Adkins and the state's utility, Arkansas Power and Light, worked hard to introduce lower rates and easier access to electricity through the state's numerous rivers and sour gas fields. Because of the wartime restrictions on building materials and the number of projects that the Corps of Engineers was responsible for during the war, the construction of several dams that were proposed for Arkansas was postponed unless they were considered war projects. Simply providing flood control did not qualify them for such categorization; they had to provide a military purpose as well. In the case of Norfolk Dam it provided hydro-electric power that was used for defense industries.

Other plants associated with the desulphurization of sour gas, which was used in the Stamps steam-electric plant that dates from WWII may exist in the area. The oilfields

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of southwest Arkansas were the source of the sour gas used to produce electricity for war projects in the state.

The following structural types can be included as Power Generating Facility property types:

Dams

Norfolk Dam, the only such war project approved for the state, was completed using concrete aggregate because it could be obtained from a nearby source. Components include:

- Penstocks
- Turbines
- Generators
- Gates
- Spillway
- Pipes
- Powerhouse
- Reservoir

Machinery for the operation of the dam included:

- switchboard
- transformer
- auxiliary power unit

During construction there were buildings associated with the crew working on the dam which were located away from the construction site.

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Housing for the crew was constructed in the typical sparse style of WWII cottages. Small porches or simple stoops, low gabled roofs and single double-hung windows would be typical features of such housing.

Oil fields

Oil fields may contain associated war-era buildings to house equipment for the production of electricity. War-era machinery within the fields may remain. Examples of property types found in oil fields would be:

- Pumping units
- Pipelines
- Pumping stations
- Vacuum pumps
- Combustion engines

Power plants

During periods of little rainfall the dams needed an auxiliary source of output to supplement power generation. Since there was no uniform level of precipitation in Arkansas and drought conditions occurred often, the state's utility explored the use of sour gas for production of electricity. The Harvey Couch Steam-Electric Generating plant in Stamps displayed restrained industrial masonry architecture in order to conserve scarce materials by keeping the square footage of the main plant low, the boiler equipment was placed in an open structure with removable metal housing. Machinery associated with the plant included:

- Boilers
- Deep-well pumps

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- Settling basin
- Transfer pumps
- Heat exchangers
- Turbogenerator lubricating oil system
- Evaporator
- Electrical load centers and switch-gear.

Associated buildings on the site of the complex displayed masonry or metal construction.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Power Generating Facilities for the National Register of Historic Places in the context of this multiple property listing:

Power Generating Facilities may be eligible for the National Register of Historic Places under Criterion A if they were utilized by the Federal Government to provide power for other WWII-era facilities that trained troops, produced munitions and stored weapons. It was because of the power produced by these facilities that Arkansas was able to participate in the movement to supply and train the nation's troops and civilian workers.

Properties significant under Criterion A can be linked to significance areas of engineering, science and/or military.

These facilities may also be eligible for listing under Criterion C if they demonstrate a particular construction method in accordance with function. This will dictate its materials and interior floor plan. A Military Testing Facility building, object or structure may be linked to Criterion C if it was constructed using a method associated with

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standardized plans of the Corps of Engineers or if it is representative of a typical example of its type.

Those elements that define a building, structure or object as that typically found in a Power Generating Facility should be intact. Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting.

MUNITIONS PRODUCTION FACILITIES

The Pine Bluff Arsenal was located on 14,944 acres and was constructed for the production of magnesium and thermite incendiary munitions used during WWII. By 1942 it also served as a chemical stockpile facility. Many of the 1940s structures associated with the arsenal remain on the land. Building types include earth-sheltered igloos or magazines, clay-tile warehouses or chemical plant structures and wood-frame housing and administrative and recreational buildings. The Pine Bluff Arsenal was placed on standby status after the war and its gas producing facilities were dismantled. Approximately ninety percent of the buildings associated with World War II activities at the arsenal remain on the site; however, most of the machinery was removed by the 1980s.

The grounds were divided into sections according to the functions of the buildings such as war-gas production and storage area, administration area and incendiary and smoke production area. The arsenal was reactivated for manufacture of incendiary and smoke munitions during the Korean War and continues in limited production today, utilizing those historic structures as well as modern buildings.

The Arkansas Ordnance Plant in Jacksonville covered over 7,000 acres of former cotton land. The primary job of this facility was to load and assemble munitions. The complex included administration buildings, warehouses, bomb shelters, loading buildings,

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recreational structures, housing and assembly buildings. Loading buildings were designed with firewalls subdividing the interior in order to minimize damage in case of an explosion. This segregation design was a configuration used by the government and commercial entities as well. After the war, some of the land for the ordnance plant was sold back to original owners, industries and the Little Rock Air Force Base. Some buildings were moved off the property but many structures remain in the town of Jacksonville.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Munitions Production Facilities for the National Register of Historic Places in the context of this multiple property listing:

Munitions Production Facilities may be considered for eligibility under Criterion A as assembly and production centers for weapons that were used by the United States military in WWII theaters of war.

Munitions Production properties significant under Criterion A can be linked to significance areas of engineering, science, social history and/or military.

These facilities may also be eligible for listing under Criterion C if they demonstrate a particular construction method in accordance with function. This will dictate its materials and interior floor plan. A Munitions Production Facility building, object or structure may be linked to Criterion C if it was constructed using a method associated with standardized plans of the Corps of Engineers or if it is representative of a typical example of its type. Properties may also be listed under C if they exhibit the work of a master engineer or were indicative of a type of pioneering engineering development.

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Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting. As such, these facilities should also retain the functional and engineering elements in use during the World War II period.

MINING AND TIMBER FACILITIES

The Army and Navy Munitions Board had compiled a list of raw resources and industrial material that the states could provide for national defense at the beginning of the war. Termed "strategic and essential minerals and supplies," the state of Arkansas provided 17 of those items. Three minerals out of the 17 found in the state, bauxite, manganese and cinnabar, were termed the most important to the military by Arkansas Geologist George Branner. Other Arkansas minerals utilized by the military were quartz and clay.

The company town of Bauxite grew up around an early 20th century bauxite mining industry but it became more concentrated during WWII for the large numbers of employees required to run a 24-hour operation. The Aluminum Company of America (ALCOA) was contacted by the War Production Board about producing bauxite, an intermediate ingredient in the production of aluminum, for the military. The company's subsidiary in Bauxite, Republic Mining and Manufacturing Company, used strip mining methods to extract the mineral in order to obtain larger volumes in a shorter period of time, thus meeting the federal government's timetable.

Industrial buildings connected with the mining concern were spread around the immediate area of Bauxite and a complete town with housing, a school, theater, churches, post office, community building and landscaping were situated around the mining complex. The associated Hurricane Creek Alumina Plant, which performed the refining step for the

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alumina residue received from the mining facility in Bauxite, was destroyed and the mine pits and slurry ponds have been reclaimed. It is possible though, that some buildings from WWII might remain in the area. Much of the Republic Mining and Manufacturing buildings have been destroyed also, as was the majority of the town of Bauxite. A reclamation program was carried out in the area, which covered the company pits.

The Jones Mills Aluminum Plant in Hot Spring County was established to produce aluminum ingots for the war effort. Production for the military was curtailed by 1944, but the company remains in business into the twenty-first century. A survey of the plant has not been undertaken, but it is possible that WWII resources related to the production of those ingots may remain on the site.

Clay was produced in the Saline County area by Niloak pottery, which is known today as Winburn Tile. The military found numerous uses for clay since many essential materials were rationed so Niloak remained busy with War Department orders through 1946. There are no known associated buildings or machinery from Niloak Pottery but it is possible that the clay quarries remain in Saline County or that some structure or object may remain in the area of the open-pit quarries. It is also possible that some washing, screening or grinding structures or sites may be found.

Cinnabar, quartz and manganese were important military industries during the war and were found in the west-central area of the state. The region contains many mining sites with concrete remains of housing and industrial facilities related to the extraction of these minerals. Waste piles and tailings can indicate earth-moving activities. Adits that remain from speculative mining can be part of a site. Many of the manganese mining concerns were in what is now National Forest land, so there are no active industries in those areas. The large bauxite industry in the town of Bauxite has dwindled to a few

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scattered buildings, which are being destroyed rapidly so much of the information potential will come from surface or sub-surface archeological investigations.

The timber industry in the state produced various essential military materials in the form of architectural elements, tool handles, railroad track elements, ammunition boxes and parts for bombers. Most such facilities were in business before the war and afterwards many converted back to pre-war production. Rail tracks, machinery and associated buildings may remain from the WWII era. It is possible that there are rail tracks for movement of materials from these facilities or WWII-era buildings on the site or in the immediate area of the former military industries.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Mining and Timber Facilities for the National Register of Historic Places in the context of this multiple property listing:

Mining and Timber Facility resources may be listed on the National Register under Criterion A because these home front facilities were put into service for the military producing essential materials for the production of weapons, parts for equipment and aircraft and troop supplies.

Mining and Timber Facility properties significant under Criterion A can be linked to significance areas of engineering, industry, science and/or military.

Mining and Timber Facility resources may also be considered under Criterion C if they demonstrate a particular construction method in accordance with function. This will dictate its materials and interior floor plan. A Mining and Timber Facility building, object or structure may be linked to Criterion C if it was constructed using a method associated with standardized plans normally used in such property types or if it is representative of a

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typical example of its type. Properties may also be considered under C as the work of a master engineer or as an example of an engineering innovation.

Intact Mining and Timber Facilities in the state that date from WWII are rare. Equipment and methods have undergone changes that made some structures associated with the industry obsolete. Sites that are linked to WWII mining and timber industries have been recorded that would be considered under Criterion D. Questions answered by archeological investigations of mining and timber sites should address technological, geological, cultural and architectural issues.

Investigations of such sites would yield information regarding building placement, building materials, processing equipment and products. Information discovered at these sites could also reveal cultural material that would provide clues to the day-to-day working environment of mining and timber employees working to produce the materials needed for WWII supplies.

Those elements that define a building, structure or object as that typically found in a Mining and Timber Facility should be intact. Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting.

Mining facilities were purely industrial and thus likely exhibit concrete or stone construction, using available materials. Buildings associated with mining industries would probably consist of open interiors for placement of machinery or rows of beds for workers.

Rail tracks will likely be considered as elements within a historic district. Any rail tracks associated with the movement of materials from quarries or timber facilities must maintain the form of a short line or spur track.

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HOUSING

After Arkansas obtained military contracts for training, assembly or testing, employees and military men and their families flocked to areas that were not ready for a large growth in population. Many facilities for training or arms production would provide a section of housing for military personnel but the hundreds of civilian employees that traveled from rural areas, miles away from their family home would need local lodging. Conservation of essential materials by the War Production Board meant that priorities needed to be designated for construction in those areas that required defense housing. Such areas had to be considered essential to the protection of the nation to receive construction materials.

Subdivisions for the purpose of housing military industry workers were erected in every area that contained a military facility. Southwestern Proving Ground and Arkansas Ordnance Plant each had developments on site for military men and their families. Little Rock received some federal housing complexes for military personnel that consisted of duplexes within a landscaped area containing parks and community buildings. The prototypical WWII-era home with minimal ornamentation and small floor plans sprang up in areas like Cammack Village and Levy in Little Rock and North Little Rock. Such buildings conserved space and building materials, featured single double-hung windows, rather than ribbons of openings and small porches or stoops with no embellishment. The dire need for housing spurred the formation of Farm Security Administration trailer parks in defense industry areas. Inventive solutions to the housing problem in Pine Bluff included the use of U.S. Engineer's quarterboats on the Arkansas River.

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SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Housing for the National Register of Historic Places in the context of this multiple property listing:

Housing may be eligible under Criterion A if it is associated with the construction of significant home front industries or training grounds that provided materiel and troops utilized during WWII.

Housing properties significant under Criterion A can be linked to significance areas of social history, landscape architecture, community planning and development and/or military.

Examples of Housing resources may also be eligible under Criterion C if they were constructed using a method associated with standardized plans normally used in such property types or if they are representative of typical examples. Housing constructed on military complexes typically displayed the Colonial Revival style. Housing subdivisions built for workers as official defense housing exhibited minimal adaptations of Colonial Revival and Cape Cod.

Those elements that define a building, structure or object as that typically found in a defense housing division should be intact. Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting.

RELOCATION CENTERS, PRISONER OF WAR CAMPS

Arkansas received two relocation centers for Japanese-Americans under executive order. These were small towns within barbed wire boundaries and consisted of rows of multi-family housing, recreational buildings, schools, infirmaries and administrative buildings. Structures found in such complexes were usually frame covered in tar paper or

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weatherboard. Interiors of the “military style” barracks usually consisted of open spaces for multiple families. Schools and recreational centers were open on the interior as well and administrative buildings normally displayed the typical warren of offices around a central hall inside.

Early prisoner of war camps in Arkansas were located on training camp grounds and were divided into guarded compounds with associated shops, recreational and administrative buildings and infirmaries. These buildings would likely display barracks-type Craftsman architecture with no ornamentation and open interiors for rows of beds. Satellite camps were usually collections of tents in rural areas in order to be close to the agricultural or construction jobs they were assigned to.

It was approved by the War Department that prisoners of war could be put to work on non-military projects off their base. The farmers of the state thus made use of them for labor replacements in their agricultural fields, but they also were assigned work on construction of various buildings or landscaping elements.

Cemeteries associated with the internment of Japanese-American relocation center detainees and German and Italian prisoners of war were constructed in association with the compounds.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Relocation Centers and Prisoner of War Camps for the National Register of Historic Places in the context of this multiple property listing:

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Any remaining buildings, structures or objects that were associated with Arkansas's Relocation Centers or Prisoner of War Camps may be eligible for the National Register under Criterion A as representatives of the cultural attitude of Americans toward Japanese-Americans and foreign enemies as a result of World War II.

Relocation Centers and Prisoner of War properties significant under Criterion A can be linked to significance areas of social history and/or military. Any cemeteries may be considered under Criterion A with Criteria consideration D.

Relocation Center or Prisoner of War Camp buildings, structures or objects may also be considered eligible under Criterion C if they were constructed using a method associated with standardized plans normally used in such property types or if they are representative of typical examples.

Those elements that define a building, structure or object as that typically found in a Relocation Center or Prisoner of War Camp should be intact. Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting.

Many such buildings were moved after the war and utilized as family homes or storage buildings. If such structures survive in a new location they may be eligible under Criterion C with Criteria Consideration B if they are rare surviving examples of housing or other buildings associated with Relocation Centers or Prisoner of War Camps.

The sites of Relocation Centers or Prisoner of War Camps in Arkansas no longer survive as complete complexes and Jerome and Rohwer Relocation Centers are considered sites now since all buildings were moved. For this reason, these properties may be eligible for the National Register under Criterion D for any archaeological information they may yield. Potential digs may provide information regarding the location of buildings, sizes and

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configurations of the structures, sanitary facilities or types of crops raised by internees. Middens may reveal types of food consumed, articles of clothing or types of tools and utensils that internees might have used.

Relocation Center or Prisoner of War cemeteries may be considered under Criterion A or C with Criteria Consideration D as burial grounds constructed for those internees or prisoners that were held in Arkansas because of World War II or as significant examples of funerary architecture.

CIVILIAN DEFENSE TRAINING FACILITIES

Civilian defense training facilities on the home front were encouraged by the federal government and many such institutions received government funding. This enabled a cash-poor state like Arkansas to form such schools for the state's youth and adults to prepare for anticipated defense jobs. Students in such classes could learn the basics that would give them a leg up in applying for jobs in home front industries.

Civilian volunteers who supplemented municipal fire department and police labor were trained in the proper procedures for assistance in case of a war-related emergency. There were also training opportunities for civilians to provide psychological help for families of soldiers or defense workers.

College campuses installed such civilian training classes in existing buildings or sometimes new structures were built for the purpose. Buildings outside of college environments were also utilized, such as downtown storefronts or office structures.

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SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of Civilian Defense Facilities for the National Register of Historic Places in the context of this multiple property listing:

Civilian Defense Facilities may be considered eligible under Criterion A as examples of buildings utilized by federally-financed or federally-favored institutions that prepared Arkansans to efficiently perform jobs in home front industries that produced munitions and supplies for troops during World War II.

The areas of significance these properties may be listed under include education, social history and/or military.

Civilian Defense Facilities may be eligible under Criterion C if they were constructed for use by an institution or group for classes in defense industry training or civilian volunteer training. Most buildings used for classes in areas such as welding and woodworking would likely have displayed an International influence with flat roofs, large banks of metal casement or awning windows and little ornamentation. The prevailing styles of the day, such as Colonial Revival or Craftsman were used as well.

Interiors of such buildings would be open with concrete floors for industrial training or arranged in small classrooms or offices around a central hallway.

Those elements that define a building, structure or object as that typically found in a Civilian Defense Facility should be intact. Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting.

STATE DEFENSE COMMITTEE BUILDINGS AND RESEARCH BUILDINGS

Arkansas governors Carl Bailey and Homer Adkins educated themselves thoroughly in the methods of obtaining defense industries for the state. Under Bailey the

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state formed the Arkansas Industrial Committee to attract federal attention to Arkansas's strategic, critical and essential minerals and supplies, which were utilized by the government to stockpile for defense.

Bailey also appointed a representative for the Arkansas War Industry Office in Washington, which was provided information on the state's resources and industrial facilities by a local office. Homer Adkins succeeded Carl Bailey as governor in 1941. Adkins held a statewide conference to organize civic, labor, industry, education and government leaders in the effort to attract federal industries. He also formed the Arkansas Defense Council that was responsible for obtaining information from the counties that would determine the capabilities and available equipment of all the manufacturing and processing plants that could be utilized in the home front effort. The state also received a local Defense Contract Service office under the federal Office of Production Management to compile cooperative contracts for small plants.

Arkansas Representative Carl Ellis and Governor Adkins had examined how other states obtained defense contracts and were aware that research facilities were one area that Arkansas was deficient in. So the state implemented research institutions to become more competitive and offer the federal government a reason to set up defense-related businesses. The Arkansas Senate authorized a state program to promote industrialization in 1943, with the formation of a committee that would study Arkansas resources and industries.

SIGNIFICANCE

In addition to the general registration requirements initially noted, the following criteria should be applied for consideration of State Defense Committee Buildings and Research Buildings for the National Register of Historic Places in the context of this multiple property listing:

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Any remaining buildings associated with State Defense Committees and research may be listed on the National Register under Criterion A as examples of structures utilized by state-funded and sponsored groups that headed up home front efforts that would inform the federal government about resources useful to the military during WWII.

The areas of significance these properties may be listed under would be education and/or military.

It is doubtful that any buildings were constructed specifically for the purposes of military research or meeting space for committees. More likely, pre-existing university buildings or state government buildings would have housed such entities. In the case that a building constructed for those purposes is discovered, those elements that define a building, structure or object as that typically found in a State Defense Committee or Research Building should be intact. Emphasis should be placed on design elements such as form, space, fenestration patterns and style, materials, workmanship and setting.

Research buildings in this case would probably not exhibit laboratory settings, rather office or classroom environments. The same would likely be true for Defense Committee structures.

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G. Geographical Data

The geographical data covered by *We've Gotta Get Tough: History of World War II Home Front Efforts In Arkansas, 1941-1946* will include all counties in the state of Arkansas.

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H. Summary of Identification and Evaluation Methods

In 2007 Arkansas Historic Preservation Program (AHPP) historians determined that World War II properties, which played an important part from the home front in the provision of supplies, training, testing and storage, should be chronicled. The properties were becoming eligible for listing on the National Register of Historic Places due to their construction date and many were disappearing or had been destroyed before eligibility.

Books had been written by Arkansas authors pertaining to certain aspects of World War II history in the state but none had been inclusive of the majority of areas related to the home front effort. The National Register area of the AHPP had asked the public through statewide press releases to submit any information on WWII related properties for potential listing. Based on this information the National Register historians conducted architectural surveys of the remaining WWII properties that had been brought to its attention and also those that were previously known to the department. Subsequent research and contacts made through that research has also yielded properties for survey and nomination to the National Register.

Holly Hope of the AHPP researched the topic, primarily through newspaper accounts, and wrote the context, *We've Gotta Get Tough: History of World War II Home Front Efforts In Arkansas, 1941-1946*.

Buildings, sites, machinery, landscaping, roads, trains and airplanes will be considered for nomination under this context. The properties must retain 51 percent of their original integrity. Integrity requirements are based on the Secretary of the Interior's Standards for Eligibility to the National Register of Historic Places. For each recorded property, locations are

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noted on USGS topographical maps; photographs, black and white prints and color slides, are taken of several elevations and research, utilizing primary, secondary and oral history sources was conducted.

These properties represent a sea change for the state of Arkansas. The state government utilized new resources and took what it learned from the federal government to attract military industries. The men and women of the state learned new skills and were able to break free from the agriculture-driven economy. Because of home front defense industries young people as well as adults received education in new fields or were able to find jobs at home and in other states that paid more than they had ever earned. The committees and organizations formed by the state government used their new knowledge and modern resources after the war to help Arkansas continue to rise out of the Depression, rather than backsliding into the dead end economy and undereducated labor force that had been the norm prior to the war. By publicly recognizing the importance of these resources to the understanding and appreciation of Arkansas history through this project and the accompanying media campaign, the Arkansas Historic Preservation Program hopes to encourage the preservation and protection of these historic properties.

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Continuation Sheet

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National Park Service

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National Park Service

National Register of Historic Places
Continuation Sheet

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United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

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National Park Service

National Register of Historic Places
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UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: COVER DOCUMENTATION

MULTIPLE We've Gotta Get Tough: History of World War II Home
NAME: Front Efforts in Arkansas, 1941-1946 MPS

STATE & COUNTY: ARKANSAS, Multiple Counties

DATE RECEIVED: 08/20/08 DATE OF PENDING LIST:
DATE OF 16TH DAY: DATE OF 45TH DAY: 10/03/08
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 64501021

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N NEW MPS: Y NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 10/2/2008 DATE

ABSTRACT/SUMMARY COMMENTS:

See Attached Comments

RECOM./CRITERIA Return - Patrick Andrus
REVIEWER J. Galters DISCIPLINE Historic
Phone _____ Date 10/2/08

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the National Park Service.



United States Department of the Interior

NATIONAL PARK SERVICE

1849 C Street, N.W.

Washington, D.C. 20240

The United States Department of the Interior National Park Service

National Register of Historic Places Evaluation/Return Sheet

Property Name: World War II Home Front in Arkansas MPS Cover Document

Reference Number: 64501021

Reason for Return

This nomination is being returned for technical and substantive revision.

Most of the problems that are found in this cover document lie in the Property Types section, specifically in defining eligible properties and outlining registration requirements.

You have outlined 10 property types, each with multiple components. However, not all of these components are clearly defined and the significance of each component is not clearly defined.

In property type 2, Airplanes, gliders, train cars is it your contention that any examples of the noted planes, gliders, or train cars is eligible if it existed during the period 1941-1946? Should the plane, glider, or train car have a direct association with Arkansas? What about those that were produced but never put into service? Do cannibalized planes (ones made up of parts from numerous other planes) count? In evaluating the eligibility of planes, gliders, or train cars in museum settings, you should be more specific in defining how they retain integrity. Is a train car in a building located near a rail yard eligible?

Property types 3 and 5, testing and production facilities, list machinery, associated buildings, and even street grids as eligible resources under Criteria A and/or C. Are all extant buildings, pieces of machinery and the like individually eligible merely because they exist? Should they not demonstrate significance in and of themselves? If the registration requirements are taken at face value, any shed or out building is given equal weight with an intact WWII era hangar or an administration building. Please clarify how buildings moved out of their associative environment retain sufficient integrity to be individually listed. Please clarify which elements of munitions testing facilities are

Property Name: World War II Home Front in Arkansas MPS Cover Document
Reference Number: 64501021

significant and warrant individual inclusion in the National Register. Discussion of integrity issues are limited to external changes. Additions up to 49% of square footage are acceptable; is this true for all additions or does placement of the addition matter? Many of the buildings in production and testing facilities are defined by internal arrangements of space. Please expand the integrity evaluation of individually-eligible buildings to include aspects of interior integrity.

Property type 4, including power generation facilities is a worthy category. I question the eligibility of buildings associated with the construction of the facilities (especially Norfolk Dam) in conjunction with this MPS. I question even more the eligibility of these buildings if they have been removed from their original location. The significance of the dam and other power generating facilities lies in their use.

Property type 6, mining, timber, quarries, and other associated raw materials clearly had a significant role in the productive capacity of our defense industries. However, the registration requirements for these resources is rather open-ended. As in the munitions plants' registration requirements, the cover document would allow the listing of any building or piece of equipment that existed during the period of significance without any analysis of its role in the industry and without a justification for its significance in the war effort.

Property type 7 deals with defense housing. The inclusion of street grids as an eligible property type is questionable. Please elaborate on their eligibility. The assertion that "...historic district...will be eligible if they display fifty-one percent historic integrity and convey WWII architectural elements". This is a broad assertion; 51% of what? If half of the buildings are gone, is the district still eligible? The assertion that trailer houses are eligible if they exist with high integrity also needs clarification. What are the most important elements of integrity in evaluating trailer homes? Under what conditions and which criteria can these properties - houses or trailers, removed from their original locations and associations, be eligible? Please, also, define how street grids divorced from the buildings that faced them demonstrate significance.

Relocation centers and POW camps are ripe for evaluation under Criterion D, especially since little is left of these types of properties.

The civilian training centers, as mentioned in the cover document, often incorporated already existing buildings. Interior integrity of a building used for classrooms is necessary to define the activities that took place within. Purpose-built buildings needs overall integrity, as well, especially when the activities that took place within them are significant and rely on particular spatial arrangements. This holds true for State defense commission and committee buildings, war industry, and research buildings. Please clarify the necessary internal integrity aspects for all individually eligible properties in these categories.

Property Name: World War II Home Front in Arkansas MPS Cover Document
Reference Number: 64501021

For many of these property types, especially those with the potential for numerous resources, historic districts should be identified as a way of including those features. It is more likely that the parts of a mine mine complex, or a component of a munitions storage or testing facility will be eligible as a contributing resource to a district than as an individual property.

Technical Issues

Section B - Associated Historic Contexts - is not completed. Please provide the appropriate context(s) in this section.

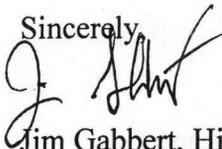
The narrative in Section E contains a number of small errors or incomplete thoughts. For example, on Page E-1, first line; Adolf Hitler did not "ascend" to Fuehrer, he declared himself Fuehrer. There was no such title to ascend to (it is also misspelled in the narrative). The third sentence in the same paragraph used the word "empirical" incorrectly; the word empirical refers to actions or observations that are measurable, not that deal with empires. The last line of the paragraph notes that Roosevelt's goals was to increase the American armed forced by 5.8 million troops but does not tell us the baseline number that would be increase - how many men were in the US armed forces in September, 1939?

On page E-33, paragraph 2 relates the story of a "new bomb that was critical to the nation's victory over Axis troop." What bomb was this? What made it different from the other conventional bombs that the US used?

Please review the text for other minor mistakes.

We appreciate the opportunity to review this nomination and hope that you find these comments useful. Please feel free to contact me if you have any questions. I can be reached at (202) 354-2275 or email at James_Gabbert@nps.gov.

Sincerely,



Jim Gabbert, Historian
National Register of Historic Places
10/03/08

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: RESUBMISSION of COVER DOCUMENTATION

MULTIPLE We've Gotta Get Tough: History of World War II Home
NAME: Front Efforts in Arkansas, 1941-1946 MPS

STATE & COUNTY: ARKANSAS, Multiple Counties

DATE RECEIVED: 11/19/08 DATE OF PENDING LIST:
DATE OF 16TH DAY: DATE OF 45TH DAY: 01/02/09
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 64501021

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N NEW MPS: Y NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 12/18/2008 DATE

ABSTRACT/SUMMARY COMMENTS:

See Attached Comments

RECOM./CRITERIA Return - Jay Shy
REVIEWER _____ DISCIPLINE _____
Phone _____ Date _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the National Park Service.



United States Department of the Interior

NATIONAL PARK SERVICE
1849 C Street, N.W.
Washington, D.C. 20240

The United States Department of the Interior National Park Service

National Register of Historic Places Evaluation/Return Sheet

Property Name: World War II Home Front in Arkansas MPS Cover Document

Reference Number: 64501021

Reason for Return

This nomination is being returned for substantive revision.

The National Park Service has prepared a theme study for the National Historic Landmark program that provides a good background for many of the issues raised in this MPS and that can help address some of its deficiencies. Consult the NHL Program's World War II and the American Home Front Theme Study for additional information.

There are still a number of problems and ambiguities in the registration requirements for many of the property types. The same language is used for nearly every property type, but the physical characteristics and significant aspects of the resources in question are disparate. The arbitrary use of percentages is not acceptable and does not address the specific aspects of integrity that are most important to each property. To quote the NHL WWII Homefront Theme Study (pages 135-136): "The property being nominated must retain the essential physical features that enable it to convey its historical significance. Essential physical features are those that define *why* a property is significant and *when* it was significant. They are features without which a specific property can no longer be identified as, for instance, a military training camp or a government office or a factory from the World War II period. The first step in assessing the integrity of a specific property is to define the essential features a property must have to represent its significance, then to determine whether those features are present to a high degree so that they can readily convey the property's significance." You might want to review the registration requirements for the NHL WWII Homefront Theme Study for additional guidance.

Each of the numerous property types must be analyzed as to which specific aspects of integrity are most important in conveying the significance of the respective property. These aspects might differ depending on the Criterion under which it is judged. Also,

arbitrary percentages do not work for evaluating integrity. How do you differentiate 51% from 49%? A building, site, structure, object, or district has integrity or it does not. If the property has lost enough fabric, or has changed in its form or design, or location, or setting enough, then it has lost integrity. But each property is weighed on its own merits. Comments on Specific Property Types:

Airplanes, Gliders, Train Cars

You should differentiate the requirements under Criterion A and Criterion C. Unless you can document a direct connection between a particular plane, glider, or train car to home front activities in Arkansas, it will not be eligible under this cover document using Criterion A. It is more likely that a plane, glider, or train car is eligible under Criterion C, as representative of the design, style, or type that was utilized in the state. Please review the National Register Bulletin *Guidelines for Evaluating and Documenting Historic Aviation Properties* for guidance on evaluating the integrity of these structures, especially as it relates to museums and collections of similar resources (pages 36-40). You need to be more specific in defining aspects of setting and materials in relationship to eligibility.

Military Testing Facilities, etc.

The opening sentence on page F-10 under "Registration Requirements" reads: "Arkansas's surviving military testing facilities, runways, associated buildings, street grids, railroad tracks, and machinery are eligible for the National Register because of their industrial design, construction materials, and workmanship; they are also eligible because of their representation of local, state, and national trends in military architecture between 1941 and 1946." This statement reflects only a Criterion C argument. Please include some reference to eligibility under Criteria A and D (especially D if "street grids" is included as a property type). The registration requirements later refer to moved buildings used for agriculture and, on page F-11, to additions that "...must not overwhelm by more than 49% the original structure..." As noted above, using percentages is not the best way to convey integrity. Each property type should be analyzed for the physical qualities that lend to its significance and the registration requirements should be tailored to that type.

On page F-11, there is a paragraph that reads, in part, "(I)n the opinion of the Arkansas Historic Preservation Program any structure that conveys the function and association with the military activities of SWPG would be considered eligible, but each and every one that is presented for nomination is considered equally by the program within a determination of eligibility process." Later, there is mention of "associated buildings" that might have been moved within the historic boundaries of the WWII facility and that designation of "associated buildings" of unknown name or unidentifiable historic use is possible. This is problematic; for individual listing, a property must demonstrate significance within a context. If the function of a building is unknown, and there is reason to believe it has been moved from its original site, how can the significance of the building be established outside of Criterion C?

Runways, railroad beds, and street grids also need specific statements reflecting their respective integrity issues when evaluated under the various criteria. The simple statement on page F-12, "Turf runways must maintain the form of an aviation runway" is clear and concise and reflects eligibility under A and C. But with railroad tracks and paved runways, you fall back into the percentage assessment. You can eliminate that if you mention aspects of integrity that are most important - location, design, association, feeling, and perhaps setting. Both railroad tracks and runways should retain original configuration, orientation, and a reasonable level of materials - enough to identify the use and nature of the resource. Street grids, though, without the associated buildings and structures that they served, are problematic under Criteria A and C for individual listing. A well reasoned argument, with appropriate research questions, could be made for Criterion D. More likely, though, is that any of these property types, rail tracks, runways, and especially street grids, would serve as contributing resources in eligible districts.

When evaluating machinery, use the same sort of guidance as you would for movable structures (use the *Aviation* bulletin for the importance of setting).

Power Generating Facilities, etc.

Again, refrain from using percentages and provide a more analytical discussion of which aspects of integrity are most important regarding the selected Criterion.

It is in this section where the paragraph discussing interiors first makes its appearance. On page F-17 the description of interior integrity is written like an op-ed piece, rather than a discussion of the salient aspects of integrity that are necessary for demonstrating the significance of particular resources. This is especially notable in assessing the civilian defense training facilities and state defense committee buildings. Please refer to those sections for a more detailed critique.

Munitions Production Facilities, etc.

See the comments for all above-mentioned property types.

Mining Facilities, etc.

Emphasis should be placed on the direct association of these types of resources to the WWII homefront efforts. Because of the nature of the property type, integrity is especially important. On page F-22, the discussion of Niloak pottery mentions moved properties. The document needs to distinguish properties that retain their significance under Criterion A versus Criterion C when evaluating moved properties. It is less likely for a property to retain its significance under A if it has been moved. Please refer to Bulletin 15 and criteria consideration b.

When discussing machinery in the context of individual eligibility, it is important to identify what types of machinery can or should be evaluated. Also, please refer again to the *Aviation* bulletin for evaluating structures in a museum setting.

Military Housing, etc.

On page F-26, does the sentence beginning “Little Rock received some federal housing...” refer to housing for defense workers or housing for military families (off post)? The description of the “prototypical WWII home” and the description of the landscape and street pattern sounds reminiscent of the FHA minimal standards espoused by the federal government beginning in the 1930s. A reference to the Bulletin *Historic Residential Suburbs* might help identify salient physical features in determining eligibility for districts. The word “military” should be deleted from the last line in the “significance” section, found on page F-27. The design of worker housing, or off post military housing is not necessarily “military architecture.”

The opening statement of the registration requirements on page F-27 should include a Criterion A reference - these properties are eligible for their association with significant homefront defense efforts. As it is, the requirements read like Criterion C is the only eligible criterion. Again, avoid percentages in discussing integrity. Rather than saying that additions are acceptable if they “are not more than 49% of the structure if placed on the sides...”, substitute language like “if they do not detract from the historic form and design of the building.”

Street grids in and of themselves would not be an individually eligible property. If the setting of the development has been radically altered, i.e. if the houses the streets served have been demolished or have otherwise lost integrity, the street grid itself lacks any individual distinction. The street grid is more likely to contribute to an eligible district.

Relocation Centers, POW Camps, etc.

These resources will nearly always be eligible primarily under Criterion D. For the most part, other than cemeteries or already-existing buildings utilized in satellite camps, the resources at these sites are long gone. A better focus on research questions that can be answered is needed. Buildings removed from these types of properties will lose associate integrity and are likely not eligible under Criterion A. Significance under Criterion C might be established, under criteria consideration “b.”

Civilian Defense Training Facilities

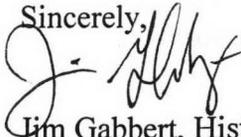
In the “significance” section on page F-32, the statement reads as if all eligible properties must be listed under Criteria A & C. Please correct this - some resources may be eligible under one or the other as well as both.

Only properties constructed specifically for the war effort would have significance under Criterion C under this cover document. Of course, these buildings might have architectural significance in their own context.

For the most part, however, the resources associated with Civilian Defense training and also the next property type, State Defense Committee and Commission Buildings, etc. will have Criterion A as their primary focus. It is the events that happened within these properties that is of paramount importance. And, it in these two property types where interior integrity is of utmost importance. The near dismissal of interior integrity found on pages F-23 and F-26 is unacceptable. For resources, especially those constructed for other purposes and utilized for WWII defense work, whose purpose was to house activities of significance, a high degree of interior integrity is required. The significance of the activities that happened in an office building or a classroom or a laboratory setting can only be conveyed if the offices, classrooms, or laboratories are present and intact.

We appreciate the opportunity to review this nomination and hope that you find these comments useful. Please feel free to contact me if you have any questions. I can be reached at (202) 354-2275 or email at <James_Gabbert@nps.gov>.

Sincerely,



Jim Gabbert, Historian
National Register of Historic Places
12/18/08

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: RESUBMISSION of COVER DOCUMENTATION

MULTIPLE We've Gotta Get Tough: History of World War II
NAME: Home Front Efforts in Arkansas, 1941-1946 MPS

STATE & COUNTY: ARKANSAS, Multiple Counties

DATE RECEIVED: 04/16/09 DATE OF PENDING LIST:
DATE OF 16TH DAY: DATE OF 45TH DAY: 05/29/09
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 64501021

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N
NEW MPS: Y

COMMENT WAIVER: N

ACCEPT RETURN REJECT 4/22/2009 DATE

ABSTRACT/SUMMARY COMMENTS:

Addressed Comments from previous two returns.

new Signature page emailed 4/22/2009

RECOM./CRITERIA Accept
REVIEWER J. G. Galt DISCIPLINE _____
Phone _____ Date 4/22/2009

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the National Park Service.



The Department of
**Arkansas
Heritage**

Mike Beebe
Governor

Cathie Matthews
Director

Arkansas Arts Council

*

Arkansas Natural Heritage
Commission

*

Delta Cultural Center

*

Historic Arkansas Museum

*

Mosaic Templars
Cultural Center

*

Old State House Museum



Arkansas Historic
Preservation Program

1500 Tower Building
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info@arkansaspreservation.org

website:

www.arkansaspreservation.com

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August 20, 2008

Dr. Janet Matthews
Chief of Registration
United States Department of the Interior
National Register of Historic Places
National Park Service
8th Floor
1201 Eye Street, NW
Washington, DC 20005

RE: *We've Gotta Get Tough: History of World War II Home Front
Efforts in Arkansas, 1941-1946*

Dear Dr. Matthews:

We are enclosing for your review the above-referenced multiple property context. The Arkansas Historic Preservation Program has complied with all applicable nominating procedures and notification requirements in the nomination process.

If you need further information, please call Holly Hope of my staff at (501) 324-9148. Thank you for your cooperation in this matter.

Sincerely,

Cathie Matthews
State Historic Preservation Officer

CM: hh

Enclosure



**The Department of
Arkansas
Heritage**

Mike Beebe
Governor

Cathie Matthews
Director

Arkansas Arts Council
*

Arkansas Natural Heritage
Commission
*

Delta Cultural Center
*

Historic Arkansas Museum
*

Mosaic Templars
Cultural Center
*

Old State House Museum



**Arkansas Historic
Preservation Program**

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Little Rock, AR 72201

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info@arkansaspreservation.org

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November 13, 2008



Dr. Janet Matthews
Chief of Registration
United States Department of the Interior
National Register of Historic Places
National Park Service
8th Floor
1201 Eye Street, NW
Washington, D.C. 20005

RE: Multiple Property Context – “We’ve Gotta Get Tough: History of World War II Home Front Efforts in Arkansas, 1941-1946

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April 10, 2009

Dr. Janet Matthews
Chief of Registration
United States Department of the Interior
National Register of Historic Places
National Park Service
8th Floor
1201 Eye Street, NW
Washington, D.C. 20005



RE: We've Gotta Get Tough: History of World War II Home Front Efforts in
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