

Longhorn Army Ammunition Plant Karnack, TX

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Gail Beil
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Shortly before the Japanese attack on Pearl Harbor, Dec. 7, 1941, as war looked inevitable and plans for the manufacture of material and weapons to fight it leapt from old soldier's dreams to the drawing boards of the War Department, Monsanto Chemical Company was approached by the U.S. Army's Ordnance Department to consider the operation of a smokeless powder plant. Monsanto was willing to take on the charge, but the St. Louis-based firm answered that it would be better suited for the manufacture of TNT, "an explosive described as 'looking like maple sugar when cold and maple syrup when melted.'" From the beginning of operations at what was first called the Longhorn Ordnance Works there were two employers; the contractor, who employed the majority of the workers, and the Army, owner of the land and facility and in charge of all operations. The Army generally stationed a colonel, one or two other officers and three dozen or more civilians at the armament works.

The new installation was a six-line special TNT plant designed by E.I DuPont de Nemours C. Inc. and location for the plant was announced on December 15, 1941. The site chosen consisted of 8,493 acres in the unincorporated village of Karnack in Harrison County on the banks of Caddo Lake. This was not a random choice. At the time Lyndon Baines Johnson was a U.S. Representative from Texas and a favorite of President Franklin Delano Roosevelt. Johnson's wealthy, influential father-in-law Thomas Jefferson "Cap" Taylor, whose home was located less than three miles from Caddo Lake, happened to own a great deal of the land involved and assisted in the purchase of much of the rest. Taylor's general store, "T.J. Taylor - Dealer in

Everything,” on U.S. 43, was a prominent landmark in Karnack, and he had made a name for himself as a political powerhouse by snaring the second state park established in Texas, Caddo Lake State Park, which consisted of 478 acres on the Cypress Bayou just as it empties into the lake.

Production at Longhorn began on October 6, 1942, with the first flake of TNT produced at 12:20 p.m., Oct. 19. At its height in the 1940s, the plant had 1,518 employees, many of whom were imported from St. Louis by Monsanto. The influx caused a housing shortage in Marshall and permission was granted to construct a large housing addition, dubbed “Yankee Stadium,” normally impossible in the wartime economy, on the south edge of town. Loyal and patriotic, Longhorn workers “staunchly backed the War Bond program, 99 percent signing up for payroll deduction purchases averaging 10 percent of their salaries.” Longhorn had produced 414,805,500 pounds of TNT when production ceased on August 15, 1945. By then it had reduced the price from the original cost of seventeen cents per pound to approximately six and a quarter cents per pound, quite a reduction from the nearly fifty cents per pound the explosive had cost during World War I.

On April 23, 1946, the plant became what the Army called “a standby installation,” with Monsanto maintaining a small workforce until June 16, 1946, when the plant became a government owned and operated facility. At that point, the staff consisted of two Army officers and thirty two civilians. It soon increased to three officers and eighty five civilians when it became apparent that there was considerable deterioration of the final cleanup work done by Monsanto before it was relieved of responsibility for the operations or condition of the plant.

From November 1945, to June 1950, Longhorn remained in mothballs, with the labor force fluctuating between eighty-five and 210 - all employed by the U.S. Army - depending on the workload required to maintain the facility and keep the plant in operating order should it be needed again. By February 1952 it was, and this time Universal Match, also based in St. Louis, was the general contractor with the mission to manufacture a propellant fuel which would be

loaded assembled, and packaged as pyrotechnic ammunition, needed by a police action in South Korea that escalated into full-scale war. Universal Match's general manager arrived in Marshall on December 7, 1951 to begin operations. On July 27, 1953 an armistice between the U.S., Korea, and China was signed, and by March 14, 1956 Universal Match's contract was cancelled. A month later the production of all pyrotechnic ammunition items ceased and Plant One was again relegated to standby status.⁵

It should be noted that Longhorn was divided into three production units, each with a unique manufacturing capability. Plant One had opened with the arrival of Monsanto and produced TNT. Monsanto also opened Plant Two to meet the need for pyrotechnics; flares and illuminating bombs. By 1956 plants one and two were idle but work had begun on a new plant on Sept. 25, 1952. That was when Thiokol Chemical Corporation signed a contract with the Army to begin production of an altogether new product - solid fuel rocket motors. Longhorn was selected as the site to do the work following an engineering study by the chemical giant which already had two contracts with Redstone Arsenal, Huntsville, Alabama. Whether now-Senator Lyndon Johnson's position on the Armed Services Committee had anything to do with the ultimate decision to make rocket motors on the banks of rural Caddo Lake one is only speculation.

Plant Three cost \$10 million, an expenditure that included roads, railroad tracks, and eventually fresh water treatment and waste water treatment installations. The highly-guarded, intensely classified area was, for the most part, completely self-sufficient. Ray McElvogue was named Thiokol's general manager on October 2, 1952, and remained in that position until well into the 1970s. Plant Three grew in a series of five expansions, each built by Brown and Root Construction and costing \$11,503,411 by the time all were completed in 1962. Driven by the Cold War, the escalating problems in the Far East, and a growing number of American troops committed to the Vietnam War by 1964, the need for intermediate range, nuclear-tipped rockets escalated. Even though Longhorn, by 1964 known as Longhorn Army Ammunition (LAAP) had

no role in the manufacture of nuclear capabilities of the Redstone, Nike-Hercules, Falcon, Honest John, LaCrosse, Sargent, and Pershing I and II missiles, its employees, who reached a high of nearly 3,000, provided the muscular means of delivery. For that effort Longhorn had been funded with more than \$141 million in 1964. Additionally, Plant Two was reopened to again manufacture button bombs and the illuminating flares and other pyrotechnics needed in increasing numbers in Vietnam. A portion of those construction millions financed the construction of three huge powder magazines in a remote area away from the manufacture of the TNT and solid fuel.

Dynamics other than war and threats of war began playing a part in the growth of the plant, particularly in the recruitment of employees as the need for them grew from the dozen Thiokol brought to Karnack in 1952 to the 2,663 who suited up in white in 1968 to run the production lines. What had been a white man's world as far as skilled and semi-skilled workers were concerned in 1941 now included women and minorities. Lale described employment efforts that extended from advertisements in scientific journals to recruitment forays into the Job Corps and the Neighborhood Youth Corps - both programs of Johnson's "Great Society."

Longhorn again had its place in the sun in 1988 when it came time to eliminate the Pershing Missiles once manufactured there. On Dec. 8, 1987, U.S. President Ronald Reagan and USSR General Secretary Mikail Gorbachev signed the Treaty of Intermediate Nuclear Forces in which the United States and the Soviet Union consented to eliminate an entire class of nuclear missiles that had been aimed at each other since 1963. The U.S. agreed to destroy the entire class of medium-range Pershing I and IIs and the USSR an equivalent class of SS 20 Sabers. The Soviet-manufactured Saber motors were done away with at Kapustin Yar Missile Test Complex in the USSR at the same time the majority of Pershing motors were static-fired, then crushed at Longhorn.¹⁰

On September 8, 1988, before a U.S. delegation led by Vice President George H.W. Bush and a Soviet entourage led by Chief Inspector Nikolai Shabalin, along with representatives from several of the NATO countries, local, state and federal dignitaries watched as Thiokol engineers fired the first Pershing I motor, bound into the harness at the static testing site, and it burned itself out. It was then rolled from the platform and beaten into small bits by the bucket of a bull dozer. Pieces of the spent and blackened casing were then presented to many of those in attendance. The routine was repeated with a Pershing II rocket motor. They were the first two of 700 Pershing I and II rocket engines eventually static fired at Longhorn. Covering this first destruction on American soil of a ground-launched cruise missile, as specified in the INF Treaty, were media representatives from more than a hundred foreign and domestic publications and radio and television networks. But the dignitaries and the press were not the only observers. High on a utility wire above the site perched two or three dozen bluebirds. When the engine roared to life the little birds vanished, but as quiet once more returned to the shores of the lake and the tall pines surrounding the ceremonial grounds, so did the flock of bluebirds, which returned to the wire. The missiles and manufacturing activities are all gone now. The bluebirds remain, harbingers of Longhorn's future.

Following the official ceremonies, the work of carrying out the treaty began in earnest. Every six weeks until May 1991, a team of Soviet scientists, military officers and KGB agents would arrive in Marshall, occupying a special "secure" wing of the Ramada Inn hotel, and remain a month. When their job of witnessing the elimination of the missiles ended each day they were free to do almost anything they wished or go anywhere in the county with the exception of private homes. Trips to Wal-Mart and automobile showrooms were a favorite, and many also accompanied their official escort, Colonel Jim Kealey, to St. Joseph's Catholic Church in downtown Marshall. Visits to schools and colleges provided a particularly enjoyable experience

for both students and Soviets. Marshall High School Mavericks won the state UIL football playoffs in 1990, and the inspection teams attended many of the home games. Tongue in cheek, they claimed credit for bringing luck to the Mavericks with their presence. When acclaimed journalist and Marshall native Bill Moyers updated and reissued his Emmy Award winning documentary, "Marshall, Texas/Marshall, Texas" in 1992, he included a segment of one of the Soviet Inspection Teams playing tag football with some of the Mavericks. "M.T./M.T." opens with scenes from "Max Lale Day" when the town honored its official historian with festivities on the town square.

When the task was completed in May 1991, the last pair of Pershing and Saber rockets and launchers were delivered to the Smithsonian Museum in Washington, D. C, and its scientific counterpart in the Soviet Union.⁴

In 1990, Longhorn was listed as one of the Department of Defense facilities with known contaminants in the soil, surface, and ground water sufficiently toxic to be named to list of federal Superfund Sites. Under the supervision of what is now known as the Texas Commission on Environmental Quality and the federal Environmental Protection Agency the five locations on the plant identified were to be abated using funds allotted by the DOD. Perchlorate, heavy metals and other armament-related debris, petroleum, oil, and lubricants were identified in one or all. Work to clean up Longhorn began soon afterward.

Longhorn, already reduced to a skeleton crew of Morton-Thiokol and Army civilian workers, fell victim to the "peace dividend" following the cessation of the Cold War between the United States and the Soviet Union. On June 27, 1995, Officials of the U.S. Army, with Congressman Jim Chapman as a guest, held inactivation ceremonies, though clean up continued under the direction of the environmental protection agencies. The Army had the choice of retaining the land or offering it to any other federal agency, with top priority going to the

Department of the Interior, which quickly snapped it up. About 900 acres of the most pristine land and the two-remaining cinder block-constructed facilities had been leased to the private, non-profit Caddo Lake Institute in 1997. The remaining land not a part of the clean up sites was transferred to U.S. Fish and Wildlife Service, and as each of the Superfund areas is pronounced safe it is added to the Caddo Lake National Wildlife Area. Public access is expected to begin in September 2006, said U.S. Fish and Wildlife Director for Longhorn Mark Williams.

Most of the termite-ridden and contaminated buildings are gone. The three powder magazines still stand as lonely sentries on a narrow road at the south end of the old plant. When the U.S. Fish and Wildlife Service took over, Williams decided to "open their doors and see what came in." What came in were several varieties of bats, and Williams and other nature enthusiasts and tourism-promotion officials envision visitors to the magazines equaling the level of excitement at the Congress Avenue Bridge in Austin and the Waugh Drive span in Houston where hundreds of people gather at twilight to watch the bats' departure.