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LOCAL STORY
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TNT plant began production in '42

By Bill Casteel
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Only the temperature — and perhaps a few taxpayers upset over Chattanooga's annual city budget inching ever closer to $4 million — was hotter than Tennessee's Democratic gubernatorial primary election between incumbent Prentice Cooper and challenger Ridley Mitchell.

Local thermometers topped out at 98.6 to notch the 13th straight day that Chattanoogans had wilted in 90-plus degree weather. Clemons Bros. Co. was offering a hot deal to its sweltering customers, "50 cents a week terms on the purchase of fans."

Ed "Boss" Crump, a political kingmaker based in Memphis, was traveling the state, boosting Cooper and firing broadsides at Mitchell. Sillman Evans, publisher of the Nashville Tennessean and an avid supporter of Mitchell, a self-described "old plowhand," was on the road chastising Cooper for "riding in a Cadillac" and making much of the fact that the governor had attended Harvard.

Patients of H.P. Hewitt were also in a fever of sorts over their doctor being called up by the Army. They cooled down only slightly upon learning that Hewitt, the city's only registered obstetrician, had volunteered his services.

Out of necessity, cooler heads prevailed at a sprawling new addition to the industrial community in nearby Tyner.

Fifty years ago this week — specifically, July 20, 1942 — the first batch of TNT was started "down the line" at the Volunteer Ordnance Works, a $60 million military complex that over the next three decades would play a vital role in three wars.

At the time — seven months after the Japanese attack on Pearl Harbor that hastened the United States entry into World War II — America's supply of ammunition was so short that battleships and gun emplacements, using compressed air, were firing bags of coal dust and flour to give the ficient for training purposes.

The only TNT-manufacturing plant in operation in the country when the war began was in Kanakee, Ill., near Joliet.

Grady Gant and a handful of others — 90-day wonders they called themselves — were dispatched to Kanakee for a crash course in making trinitrotoluene, commonly known as TNT.

"We went to school eight hours, slept eight hours and worked eight hours," Gant recalled recently, "finishing in three months what was normally an 18-month training program."

Stone and Webster Construction Co. built the multimillion-dollar facility on an 8,600-acre federal reservation in record time. The plant eventually consisted of 16 production lines, but the flow of TNT commenced with the completion of line one.

"When the first line was finished," Gant said, "our Kanakee-trained crew moved in. Line two was still under construction."

Realizing the historic significance involved, Gant collected a 1-ounce scoop of the TNT from the first box. Wisdom later overtook him, and he disposed of his potentially dangerous souvenir.

Save for the Kanakee trainees, the original supervisory-management technical crew was recruited from all over the United States. "It was a real experience," Gant recalled, "to watch those Yankees tackle corn pone, grits, fried pies, 'poke sallit' and other standard Southern dishes."

Procuring production-line workers was no easy chore either, despite the fact that 2,000 WPA workers had just lost their jobs because federal relief appropriations had been sharply reduced to free up more money for the defense effort.

Not even starting wages of $2.20 an hour, at a time when the local average hiring rate was 40 to 60 cents an hour, proved attractive enough for VOW to enlist a sufficient number of employees from the Chattanooga area. The inherent dangers of working with explosives was too much.

board priorities for hiring, we had to recruit from over a 50-mile radius," Gant said.

Because gasoline was being rationed, car pooling — ride-sharing they called it back then — became commonplace for VOW employees. In addition, VOW operated its own transit line to pick up workers in surrounding areas.

In many respects, the VOW network was a city within itself. The plant had its own water system with a pumping capacity of 105 million gallons a day, at that time a volume considerably higher than the City Water Works company was capable of processing.

Large power plants generated steam that was used in the manufacturing process. Seventeen miles of railroad track and almost 90 miles of vehicle roads, most of them paved, snaked their way in and around the vast piece of real estate.

The roads and tracks were used to transport the TNT to and from storage bunkers and beyond.

The TNT was shipped by railroad freight cars to other plants for further processing and loading into bombs, artillery and mortar shells, land and marine mines, and torpedoes. An average of 15 freight cars a day loaded with between 80,000 and 100,000 pounds of TNT left the VOW premises, some of it destined for England and Russia under a lease-lend agreement.

Given the potential for an explosion of catastrophic dimensions, it was somewhat miraculous that the only wartime excitement came when a loaded freight car caught fire while in the overnight storage area. The cars, while still in flames, were pulled away from the area. The cars burned, but there was no explosion.

Employment peaked at the plant in January 1943, when 4,062 people were on the payroll. When production ceased on Aug. 15, 1945, VJ Day — that number had been reduced by almost 50 percent. Still, production lier date, thanks to increased efficiency over the months.

Between May 1944 and April 1945, VOW produced some 20 percent more TNT than any similar plant in the country. Production hit an all-time high in March 1945, when workers turned out 39,500,000 pounds of the explosive.

Before the Japanese surrendered, 821 million pounds of TNT, enough to make 410,500 1-ton bombs, had come off the production lines.

The plant was constructed and commenced operation quietly if not in total secrecy. Its operation ceased Aug. 15 with little more fanfare. It was announced that the hourly workers would be terminated immediately, but with severance pay and assistance in finding new jobs.

One of those workers was Edythe H. Carroll, who exemplified the patriotism and dedication that went into the war effort at VOW.

"Edythe received word at 9 o'clock one evening that her husband had been killed in action, " Gant recalled. "Two hours later she reported to work because, she said, 'this is the best way to honor him.' "

The plant was reactivated during the Korean War, providing jobs for some 1,900 people who produced 283 million pounds of TNT. When that conflict was ended, production again ceased.

Another start-up came during the war in Vietnam. Before the United States quit that conflict, a total of 1.75 billion pounds of TNT had been manufactured, according to Hoyt Fitzsimmons, a plant official for 39 years.

Over the years, the plant's official name was Volunteer Ordnance Works and the Volunteer Army Ammunition Plant, but since its conception it has been generically referred to as simply the TNT plant.

And should the need arise, the plant will again be known as a TNT plant. Its explosives-manufacturing capabilities are still