ANOTHER TITAN MISSILE EXPLOSION KILLS 53 IN ARKANSAS

THIS ARTICLE HAS TWO PARTS

PART ONE

SURVIVOR RECALLS 1965 TITAN II MISSILE SILO FIRE THAT KILLED 53 PEOPLE *NEAR SEARCY, ARKANSAS*

PART TWO

A BRIEF HISTORY OF THE TITAN II MISSILE

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SEARCY, Ark. – Directions to the site of the worst nuclear weapon accident in the history of the U.S. are hard to come by.

A teenage convenience store clerk had never heard the tale.

A cattle rancher said he thought it was “over on Clay Road.”

A utility worker said to look for a boatyard right before Arkansas Highway 305, then turn left.

Leaning against a red Chevy pickup in front of Pangburn Cafe, three middle-aged men squinted, one shrugged in bewilderment, and another tilted his head to the left. Then his eyes widened.

“Do you mean the place where all those men died?” he asked. He grimaced, looked down, and paused. “That was a sad day around here.”

The site itself — about 11 miles north of Searcy on a dead-end road off Arkansas 305, past a cattle guard and a "No Trespassing" sign — is unremarkable. A concrete slab sits among waist-high prairie grass. Broken, rusted steel pipes jut from the ground. A tree shoots up from a crack in the concrete foundation.

Fire breaks out

The new growth and leveled ground barely whisper of the searing tragedy that happened 50 years ago.

On Aug. 9, 1965, 55 civilian men returned from lunch to missile silo 373-4. By 1:10 p.m., 53 were dead.

At the height of the Cold War, ***the government had hired contractors to shore up the strength of the silo that was cradling one of 18 Titan II missiles in the state.***

The contractors were welding blast doors, improving the hydraulic system, and installing lighting to make the intercontinental ballistic missile less likely to be compromised in a nuclear attack.

Arkansas was one of four states — along with Arizona, Kansas, and California — that housed the 63 Titan II nuclear weapons. Each 340,000-pound missile was 103 feet tall and 10 feet in diameter and housed nine stories underground.

The silo near Searcy was fully loaded with ***150 tons of liquid fuel*** — Aerozine 50, a mixture of hydrazine, dinitrogen tetroxide, and unsymmetrical dimethylhydrazine — that is 78 percent oxygen.

The silo was covered at ground level by a ***750-ton door that moved laterally on rails***. It was closed on the day of the accident.

It was Gary Lay's first day on the job at the silo. He was 17, looking forward to playing football at the University of Arkansas in Fayetteville after he graduated from high school.

"I had been working at the very bottom all morning, then came out for lunch," said Lay, now 67.

"I stopped on the way back to talk with four or five other guys. We were right behind the gun barrel where the missile was."

Suddenly, Lay heard a loud "whoosh," an intake of air much like a gas stove lighting. A flash rose from the floor to the ceiling. The lights went out.

Nine stories, and 55 men in pitch blackness. Smoke filled the silo.

Another flash.

Men screamed and stampeded away from the fire — in complete darkness because of the smoke, clawing and climbing over one another on the emergency ladder. Dozens fell to the bottom.

Another flash

"My first instinct was to get away from the fire. I think God told me, 'Hey, you're going the wrong way.' There was no explosion. It was a blaze," Lay said.

2 survivors

Klaxons, sensors that the military officers wore on their belts, were screeching.

Climbing down toward the fire, Lay crept in the smoke-filled darkness, feeling his way along the wall. He made it to a horizontal passageway that led to the airmen-staffed underground control center. Lay had second- and third-degree burns.

It was there that he saw Hubert Saunders, who had been painting on the top level of the silo, 15 feet from the ground above. Saunders had escaped by holding his breath as he crawled on his hands and knees along a cable tunnel.

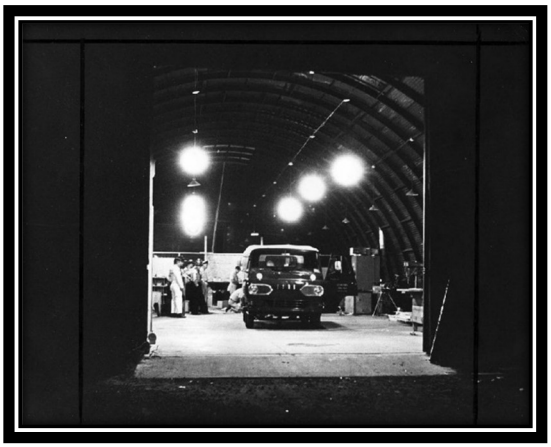
Saunders and Lay were rushed by ambulance to the Searcy Hospital. Medical staff prepared for massive numbers of casualties, but no one else arrived.

Saunders and Lay were the only survivors.

The other 53 civilians suffocated within seconds when the smoke — sealed in by the 750-ton door — sucked all the oxygen out of the silo.

"I know it doesn't make it any better, but I think it's important for the families to know that their loved ones didn't suffer," Lay said. "It was a bad moment for 40 seconds, and then it was over."

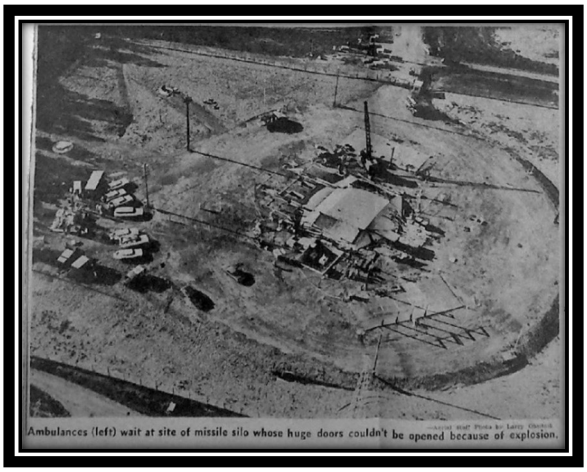
CAUSE DISPUTED



Doctors and officials examine the bodies of victims of the Titan missile fire before placing them in ambulances for transportation to funeral homes. (File photo/Arkansas Gazette / LARRY OBSITNIK)

The Air Force concluded that the fire started when a welder nicked a high-pressure hydraulic line on Level 2 of the silo. ***Lay testified at hearings in Washington, D.C., that nobody was welding on Level 2 that day.***

Lay said he believed wires shorted out, sparking the flames.



Ambulances (left) wait at the site of the missile silo whose huge doors could not be opened because of the explosion

Retired Air Force Col. Jimmie Gray — who had worked with nuclear weapons for 27 years and curated a display on the 1965 disaster at the Jacksonville Museum of Military History — ***said the Air Force proved that it was the welder's human error that caused the tragedy.***

52 people died from asphyxiation, and one — the welder — drowned in hydraulic fluid, he said. "The hydraulic fluid went into his lungs and killed him," Gray said.

The fire burned for less than an hour, but more than 12 hours later smoke continued to billow inside the silo.

"They said they found bodies still on the ladders," said Lynn Hamilton, president and general manager of the Arkansas Democrat-Gazette.

The then-18-year-old Hamilton was picking cantaloupes with a group of teenage boys near Huron, Calif. when his parents told him that his brother, Archie Hamilton, 34, had died in the fire.

"We drove from California to Arkansas the next day," Hamilton said. "I remember just an overwhelming grief that his widow, who was a young woman, and his children were experiencing. And my mother. My mother was a real stoic person who never showed emotion. I saw her break down and cry. I had never seen that before in my life. It made an impact on me."

Hamilton's parents, who had just suffered the death of a granddaughter only months earlier, did not talk much about the accident in the years that followed.

"Our family, my parents, had suffered a lot of tragedy. They were raised in a real backwoods upbringing. It was a different time with lots of death and illnesses," Hamilton said.

"By the 1960s most of society had moved away from that. It wasn't such a hard life for people. But this was just more of the same for my parents, and they stood up to it well. They did not show a whole lot of emotion. I suppose that's not entirely healthy, but I suppose that's how they dealt with it."

Deborah Ritschel was 2 years old when her father, Charles McMahon, perished in the fire. Her mother, Evelyn Smith, didn't talk about the accident as Ritschel was growing up.

"My brothers were instructed not to talk about it too much," she said. "There were no pictures on the walls. When my mom was gone, I would sneak in to look at old pictures she had hidden away."

In her 20s, Ritschel, now 52, searched through newspapers and began seeking out family members of other survivors. At 32, she traveled from her home in Stockton, Missouri, to see a memorial that had been moved to the Little Rock Air Force Base. She took her children on subsequent trips and told them stories about their grandfather.

She recently met her brother, Michael McMahon, 59, in Jacksonville to tour the museum exhibit, which is where the memorial currently rests.

"We told my mother we were coming down to visit the site," Ritschel said. "She didn't react. She wasn't upset. She just files that away as trauma to never be thought of again."

Her oldest brother, Charles McMahon Jr., 62, of New Orleans, has not been back to Arkansas. He was 12 at the time of the accident.

To this day, Hamilton said, he has not been to the site where his brother died;

"I have no desire to go. It's just too sad," he said. "It's just something I'd rather leave in the past."
A second Titan II missile accident happened on Aug. 24, 1978, in Kansas. Air Force Staff Sgt. Robert

Thomas was killed by a leaking propellant. Airman 1st Class Erby Hepstall later died from lung injuries related to the spill.

A third Titan II missile accident happened on Sept. 19, 1980, in Damascus, Arkansas. A tool rolled off a platform and punctured the missile's fuel tank. An explosion a few hours later killed Senior Airman David Livingston.

Missiles deactivated

In 1981, President Ronald Reagan ordered that all of the nation's Titan II missile sites be deactivated.

The massive weapons were pulled from their silos and transferred to Davis-Monthan Air Force Base in Arizona and the former Norton Air Force Base in California.

The last Titan II missile in the nation was deactivated on May 5, 1987. It was housed in Silo 373-8 near Judsonia, Arkansas.

All but one of the missiles were broken up for salvage in 2006. ***A single Titan II is on display at the Titan Missile Museum at Sahuarita, Arizona. (see picture below)***

Lay, who has spoken publicly on numerous occasions about his experiences, is the founder and owner of a Little Rock advertising agency, the father to three and grandfather to four. *He has never been back to the site of the accident.*

"I didn't so much have guilt that I survived and others didn't, but I have always wondered, 'Why me?'

Fifty-three guys got up that morning and kissed their wives and kids goodbye," Lay said. "When the families look at me and say, 'Gary Lay got out, but my brother didn't, my dad didn't,' I think it's important that they know that I tried to do the right thing.

"I've always had a sense that maybe there was something I was supposed to do, and that's why I survived. I've tried to help people in every way that I can. I've been a good husband and a good friend. I live life to the fullest."

PART TWO

A BRIEF HISTORY OF THE TITAN II MISSILE

The Martin Company first proposed the development of the Titan II in 1958, and the Air Force approved the program in October 1959. Construction of the launch complexes began in December of 1960. The first missile was installed in December of 1962, and the first unit was turned over to the Strategic Air Command (SAC) on March 31, 1963.

Four important changes distinguished the Titan II from its predecessors, the Atlas F and the Titan I.

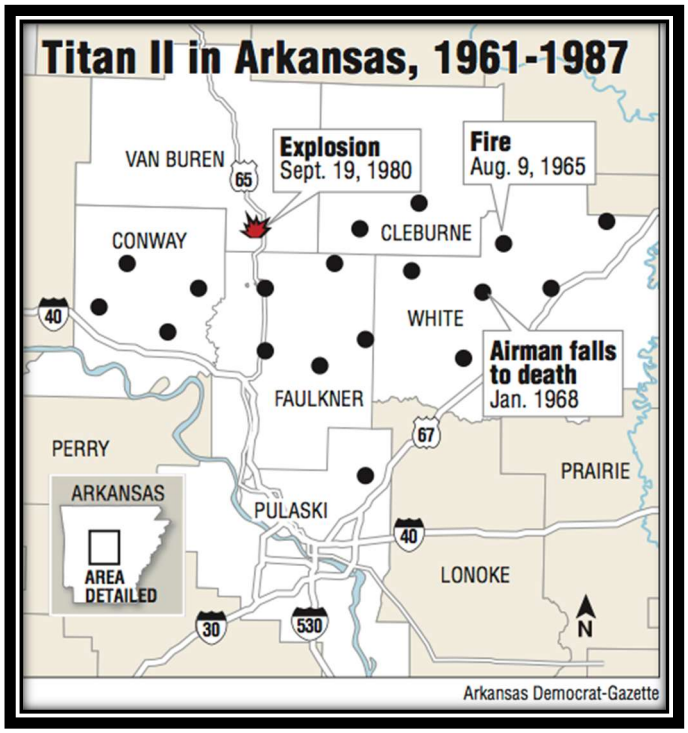
First, the Titan II used nitrogen tetroxide (oxidizer) and unsymmetrical dimethyl hydrazine (fuel) as its propellants. These liquids are hypergolic, meaning that they do not ignite until contact. This increased the reliability of the Titan II, both at liftoff and when the Stage II engine ignited at high altitude.

Second, nitrogen tetroxide is noncryogenic so both propellants could be stored on board the missile for indefinite periods. Third, the Titan II would also launch from its underground silo, reducing the launch time of the missile to just under a minute. Finally, the Titan II utilized an all-inertial guidance system, increasing its accuracy over the Titan I.

Carrying the largest nuclear warhead ever deployed on an ICBM by the United States, and with a range of 5,500 miles, the Titan II was the ultimate liquid-propellant ICBM.

Fifty-four Titan II ICBMs were deployed in groups of eighteen around three Air Force Bases, with the first units coming on alert in early 1963. All fifty-four missiles were on alert by December of that year. Davis-Monthan AFB, Arizona hosted the 390th Strategic Missile Wing (SMW) which was comprised of the 570th and 571st Strategic Missile Squadrons (SMS).

Little Rock AFB, Arkansas hosted the 308th SMW which was comprised of the 373rd SMS and 374th SMS. And McConnell AFB, Kansas hosted the 381st SMW which was comprised of the 532nd SMS and 533rd SMS.



Location of Arkansas Missile Silos from 1961-1987

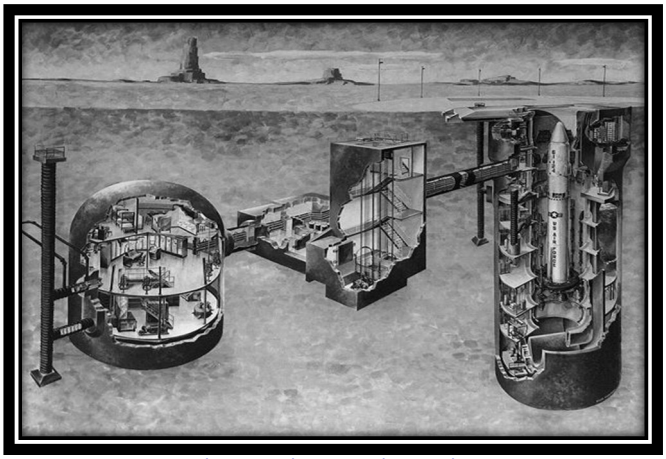
Classified as combat duty, Titan II crew duty was only open to men when the system became operational in 1963. This all changed in 1978 when the Air Force opened the Titan II career field to women. First Lieutenant Patricia M. Fornes was the first woman to pull a Titan II alert on September 16, 1978.

Originally designed for a ten-year deployment, the Titan II program was extended by a series of modifications and upgrades. One such modification replaced the all-inertial guidance system with the Universal Space Guidance System (USGS) developed by MIT and Delco Electronics. In the end, the Titan II more than doubled its planned deployment.

But in October of 1981, President Reagan announced the start of his Strategic Forces Improvement Program.

As part of this program, the land-based ICBM programs would be modernized, and the Titan II was identified for deactivation to make way for more advanced systems such as the MX Peacekeeper.

Deactivation of the Titan II began in 1982 at the 390th SMW. The 381st SMW followed, and finally, in 1987, *twenty-four years after its initial deployment*, the Titan II program came to an end when the 308th SMW was deactivated.



Titan II Site Configuration

Construction of Titan II Missile Site

Titan II Warhead

The fire represented the greatest loss of life ever suffered at a US nuclear facility. However, the disaster is not considered a Broken Arrow incident, since the missile's nuclear warhead was not installed at the time.

By coincidence, that Titan II missile, serial number 62-0006, ***was the same missile involved in the 1980 Damascus Titan missile explosion***

This Memorial For The 53 Men Who Died Is Located In Jacksonville, Arkansas, And Carries The Following Inscription In Addition To The Name Of Each Man.

THE INSCRIPTION

Not all soldiers wear uniforms and carry rifles. Those civilian workers who went into the Titan II Missile complex near Searcy on August 9, 1965, were dressed in work clothes, wore hard hats, and carried hammers and paint brushes, but who's to say they were not soldiers?

The 53 workmen who were trapped when an explosion ripped through the missile silo gave up the greatest gift any soldier anywhere could give his life.

Their sacrifice and that of their families is no less than any other.

We gratefully acknowledge these men and dedicate this monument to their memory with love and respect.

We Miss You...