Memories still strong of 1974 rail explosion
CHRIS LUSVARDI H&R Staff Writer
Jul 20, 2014

DECATUR — The events of July 19, 1974, left a mark on Decatur that is still felt 40 years later.

A gas explosion in the Norfolk & Western rail yard had Decatur leading the national news and remains one of the most devastating events in the city's history. Norfolk & Western is now Norfolk Southern Corp.

The explosion killed seven railroad workers. It injured more than 140 people, destroyed nearly 80 houses and damaged nearly 600 other buildings in a one-square mile area. The shock wave from the blast was felt 40 miles away in Pesotum. Property damage was in excess of $14 million, about $65.5 million in today's dollars.

Following the blast, memories remained vivid for those who lived through the disaster.

“I remember being awakened by the tremendous sound of the explosion around 5 a.m., then hearing breaking glass from our front door,” said James Guinnee, who was 7 at the time and whose family lived on Harrison Avenue on Decatur's east side. “Our house, like many others, was actually knocked off its foundation by the force of the explosion.”

About 30 minutes after the blast, the Decatur Police Department began ordering residents to evacuate the area due to the concern of additional explosions, which never occurred. Guinnee said he was on the front porch with his dad about 7 a.m., sweeping up glass when a patrol car came by with the evacuation order.

Decatur historian Bob Sampson later described the disaster as one of the worst in the city's history.

“We've had a lot of major fires downtown, but nothing with the economic impact of the rail yard explosion,” Sampson said. “There were a lot of big stories in Decatur's past, but nothing comes close to matching that blast.”

The explosion happened when a jumbo tank car carrying isobutane gas rolled down a track too rapidly during switching operations and slammed into an empty boxcar, the coupler of which rode up over the tank car's coupler and punctured the tanker.

Escaping gas created a vapor cloud in the yard. The gas escaped and vaporized for eight to 10 minutes before it exploded. Investigators later concluded that whatever created the spark that ignited the cloud of gas will never be known.

The explosion made intense work for firefighters.
“I remember the enormous cloud of smoke from the firefighting efforts that hung over the city for much of the day — that alone made a lasting impression,” Guinnee said. “I also remember the National Guard troops who were brought in to patrol the streets of the neighborhoods that were evacuated. These troops stayed on patrol for several weeks that summer to prevent looting of damaged property.”

In addition to the National Guard troops, other emergency responders worked tirelessly to take control of the situation. Fire throughout the rail yard started by the blast left rail cars and buildings burning throughout the day and smoldering into the night. Decatur firefighters called to duty early in the day remained on the job for 36 hours. Police officers and state troopers worked 12-hour shifts for several days after the explosion.

Many of those who were displaced from their homes gathered in Fairview Park. Guinnee's family was among those able to return home about 4 p.m., he said.

The damaged condition of more than 560 houses meant many of their occupants had to find temporary shelter until repairs could be made. The Macon County Chapter of the American Red Cross initially set up an emergency medical station at Brush College Park No. 2. The station was moved to Nelson Park as concern for another explosion remained.

Guinnee was among those watching the national news that evening on ABC.

“I can still see Harry Reasoner opening the news broadcast with that story — it was that important in terms of national impact,” Guinnee said.

Rail traffic through the yard was disrupted for nearly a week before operations returned to near normal. During that period, the Illinois Central Gulf Railroad brought in extra equipment to help shippers move stalled freight.

Retired Decatur Fire Chief Donald Minton later said he thought of the explosion when he heard trains in the rail yard.

“A lot of people hear that and don't pay any attention,” Minton said. “But when I hear that, I think about the explosion.”

Minton had been head of the Decatur Fire Department less than three months when the explosion occurred. It was just one of several events in 1974 that led it to be described as a year of disasters. The city also endured a major tornado, a minor earthquake and a spring flood.

Guinnee, who now works as a management consultant and lives in New York City, still remembers the events of July 19, 1974, each year when the anniversary comes around. It was something initially others tried to push out of their memories, although forgetting was difficult, he said.

Guinnee entered second grade that August.

“On the first day of school, the children exchanged stories of what happened that day,” Guinnee said. “Our teachers related that they had been advised by school administrators not to bring up the events, for fear of upsetting students.”
The disaster was the second, and worst, of three nearly identical explosions at U.S. rail yards that year. The explosions pushed federal authorities to immediately adopt more stringent safety standards for American railroads. Norfolk & Western changed its car-switching procedures so cars would no longer roll freely through its yards.

The railroad company paid more than $5 million in damages for deaths and injuries caused by the explosion. A circuit court found the railroad was liable for the blast.

[https://herald-review.com/news/local/photos-norfolk-western-railway-co-explosion/collection_a8ea1cd6-e8c0-11e2-9d3a-0019bb2963f4.html#1](https://herald-review.com/news/local/photos-norfolk-western-railway-co-explosion/collection_a8ea1cd6-e8c0-11e2-9d3a-0019bb2963f4.html#1)

**PHOTOS: 1974 Norfolk & Western Railway Co. Explosion**

Jul 20, 2013
Bill Martin, N&W public relations director, looks at the gutted bunkhouse where seven railroad employees had perished as a result of the early morning blast.
Janice Reed, who operated the N&W cafeteria, surveys the destruction.

A house on E. Division St. was riddled with debris from the blast.

People who were evacuated from the area following the blast wait to return to their homes.
The recently-finished addition to Lakeview High School suffered tremendous damage.
Elise Tague inspects the damage to her children’s bedroom after the explosion. The Tague’s children escaped injury because they were sleeping in the living room.
Donald Gentry in charge of a switching crew at the time of the explosion testifies before a NTSB hearing.
Death before dawn

The Norfolk and Western rail-yard explosion of 1974 and how it changed an industry

By Laura Voyles

The early morning hours of July 19, 1974, were like any other in the Norfolk and Western railroad yard in Decatur, Illinois. The forecast was typical for July; hot, sunny, and with a gentle breeze blowing from the northwest. At 5:03 a.m., the third shift crew busily switched car drafts on the twenty-three track Westbound Yard, while other employees slept in the railroad's Annex, a makeshift hotel and cafe for those who lived out of town but were stationed in Decatur overnight.

The men working the Yard assignment Number One were repositioning railcars on the series of tracks directly in front of the Annex. Among the eighteen-car draft were several boxcars and a series of "cuts," five jumbo tank cars, loaded with isobutane gas. Typically in the Decatur railroad yard, cuts were allowed to roll freely into each other at slow speeds so the cars would automatically couple.

But that unwritten rule was about to explode and with tragic results.

The end tanker car of the cut, GATX 41623, slightly off center and rolling in the darkness, collided with boxcar N&W 49203, but their coupling mechanisms failed to meet. The boxcar jumped up and over the tank car's coupler and punctured the tank, releasing the liquid isobutane.
Isobutane is compressed for transport in tankers as a liquid. Though commonly confused with propane (Decatur newspapers made this mistake), isobutane is heavier than propane and has a higher boiling point, specifically -0.5 degrees Celsius. With such a low boiling point, the liquid in the tanker automatically formed a gaseous cloud as soon as it seeped through the ruptured wall of the car. Twice as heavy as air at normal atmospheric pressure, the isobutane cloud did not rise or move substantially in the light morning breeze. Instead, it hung near the ground in the rail yard, waiting for the fatal spark that set off a massive explosion.

"It looked like a bomb going off, one local resident told the Decatur Review. Another, Clem Webster, was on his motorcycle on Route 36 at the time of the accident. He describes the scene further: "At first, it seemed like something bright, just like the sun. Then I looked over there and it appeared that the whole town was going up."

When the gas cloud ignited, a
A concussive explosion rocked the rail yard and damaged several buildings around the perimeter of the switching area. The exact cause of the spark was indeterminable; even the national Bureau of Surface Transportation Safety failed to identify the source of the spark.

Fortuitously, the timing of the explosion saved countless lives. Most Decatur citizens were at home preparing for a normal Friday and had not reached businesses or schools near the explosion area; Lakeview High School (about one-half mile southeast of the blast) sustained severe damage to a new addition and most of its classrooms.

Less fortunate, however, were the sleeping shift workers in the rail yard Annex. Without warning they were jolted from their beds by the blast and unpleasantly bombarded by flying shards of glass. The most serious injuries were suffered by rail workers outside the protective walls of the Annex, as the flash seared clothing and skin from their bodies.

Initial reports from both the Decatur Herald and Decatur Review confirmed two fatalities from the accident and more than 140 people injured, with damages to local infrastructure estimated by then City Manager Jack Loftus as "million after million." Official tallies from the National Transportation Safety Board several months after the accident reported 7 fatalities, 33 serious injuries, 316 other injured persons, and $18 million in property damage.

Blame for the accident went to poor switching communication and improper safety standards among the rail yard employees. Even though switchmen knew and understood the hazardous nature of the tankers’ contents, none had been properly trained or educated about switching techniques that could have prevented the fiasco.
Investigators determined that the tank cars were allowed to roll freely at a speed three times the normal allowance for coupling, and the effects of letting cars ram together at will on the switchyard's downslopes had never been fully explained or demonstrated to them. In addition, the chain of events leading up to the explosion was an anomaly hardly anticipated by Norfolk and Western, other railroad companies, or the NTSB. Consequently, no plan of action for preventing this type of accident had ever been established.

One of the few positive outcomes of this horrible accident is that tank cars carrying hazardous materials such as isobutane are properly labeled and may no longer be cut off while in motion; no other car of any type shall be allowed to freely roll into one of these tankers. The sad part of the revised Department of Transportation ruling is that it took three serious rail yard accidents in 1974 to reach this conclusion and make the necessary changes.

Other changes were made as well: After the accidents, yard masters were required to notify all switching employees of the arrival of tanker cars carrying dangerous chemicals; trainmen were required to be present at car couplings to advise the locomotive operator of the cars' proximity to the next cut; and all railroads were mandated to implement a safety program in regards to the handling of hazardous materials.

Two other difficult lessons were learned from the Decatur blast. No longer was it considered wise to house overnight employees so near the switching yards. From that point forward, workers were housed in local hotels. At the time of the accident there were no fire hoses or any type of...
fire-fighting materials available to the switching area. Firefighters found it difficult to get water to the burned areas and two firemen were injured fighting the blaze. Norfolk and Western decided it would behoove them to make those materials available nearby in the future.

The Decatur railroad yard explosion has remained a vivid memory for local residents, many of whom heard the blast as far away as Tuscola (about 30 miles). The blast's unexpectedness and the extraordinary luck of the town in escaping more serious injury or death are still topics of conversation. If only yard supervisors had paid closer attention to switching operations; if only the men changing the cars had slowed them down; if only the grade on the tracks had been a bit less steep.

But caution and a giant cloud of isobutane were thrown to the wind that fateful July morning.

It's a tragedy that seven men lost their lives before new industry standards could be adopted, but the changes have improved the safety and well-being of railway operations nationwide and, hopefully, made communities across the country safer places to work and live.

Laura Voyles is a senior at Millikin University in Decatur, where this article originated as an Illinois history research project.