

CASE STUDY
OKLAHOMA BOMBING CASE



Centurion
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BACHELORS OF SCIENCE IN FORENSIC SCIENCE (SEMESTER 6)

SUBJECT
CUFS2416- EXPLOSIVE ANALYSIS AND POST BLAST INVESTIGATION

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Introduction-

Details of the case-

- Location- Alfred P. Murrah federal building in Oklahoma City, United States
- Date- April 19, 1995
- Target- U.S Federal Government
- Deaths- 168
- Injured- 680
- Accused- Timothy McVeigh, Terry Nichols and Michael Fortier.

Overview of the case-

The Oklahoma City bombing occurred on April 19, 1995, when a truck bomb was detonated in front of the Alfred p. Murrah federal building in Oklahoma City, Oklahoma, united states. The bomb was made from a mixture of ammonium nitrate and fuel oil and was placed in a rental truck parked in front of the building. The explosion resulted in the deaths of 168 people, including 19 children, and injured more than 680 others. It was the deadliest act of domestic terrorism in the United States prior to the September 11, 2001 attacks.

Development of the case-

Timothy McVeigh was enlisted in the U.S. Army in 1988 and proved to be a model soldier, earning a Bronze Star for bravery in the Persian Gulf War (1990–91). He was a candidate for the Special Forces but dropped out of the program after only two days. The experience soured him on the military, and he took an early discharge and left the army in late 1991.

McVeigh returned to New York but was unable to find steady work. He reunited with Terry Nichols and Michael Fortier, friends from his days in the army, and sold guns at fairs throughout the United States. In March 1993 he drove to Waco, Texas, to observe the ongoing FBI siege of the Branch Davidian compound. He viewed the U.S. government's actions there as illegal . In September 1994 McVeigh began actively plotting to destroy the Alfred P. Murrah Federal Building in Oklahoma City. Over the next six months, McVeigh and Nichols planned the bombing.

On April 19, 1995, the second anniversary of the deadly fire that ended the Branch Davidian siege, McVeigh parked the truck containing the bomb in front of the Murrah Building.



Inside the vehicle was a powerful bomb made out of a deadly cocktail of agricultural fertilizer, diesel fuel, and other chemicals. McVeigh got out, locked the door, and headed towards his getaway car. He ignited one timed fuse, then another.

At precisely 9:02 a.m., the bomb exploded.

Within moments, the surrounding area looked like a war zone. A third of the building had been reduced to rubble, with many floors flattened like pancakes. Dozens of cars were incinerated and more than 300 nearby buildings were damaged or destroyed. 168 souls lost, including 19 children, with several hundred more injured. That building was 200 feet wide and 80 feet deep .

At first suspicion wrongly focused on Middle Eastern terrorist groups, attention quickly centred on Timothy McVeigh—who had been arrested shortly after the explosion for a traffic violation—and his friend Terry Nichols.

An early breakthrough-

- Within an hour of the bombing, the FBI sent teams of investigators to Oklahoma City to crack the case. One important clue came when an agent, searching the streets near the federal building, found a scrap of metal, twisted by the blast. It turned out to be a piece of a truck axle with a vehicle identification number etched upon it. These numbers are placed on auto parts to help identify stolen vehicles. A second important clue came from a bank videotape camera across the street from the federal building. Its tape showed a Ryder rental truck parked in front of the building just before the blast. The FBI traced the truck to a rental company in junction city, Kansas, some 270 miles from the bombing site.



Timothy McVeigh was arrested 90 minutes after the bombing when an alert trooper noticed that his vehicle (top left) did not have a license plate. The axle from the truck bomb (top right) contained an identifying number (bottom right) that was traced back to the Ryder truck McVeigh rented in Kansas. Special Agent Barry Black (bottom left) inspects parts of the Ryder truck that were collected as evidence, which are now archived at the Oklahoma

City National Memorial & Museum.

- The truck had been rented two days before the bombing, but the two men who had



rented it had used phony identification. Still, the FBI got descriptions and turned them into composite sketches, which they broadcast nationwide. Armed with the drawings, the FBI spread out around junction city asking questions. At a local motel, the owner identified one of the sketches as Tim McVeigh, a man who had stayed at her hotel and checked out the day before the bombing.

- Tips from the public also started coming in. A former co-worker of McVeigh's recognized him from the composite sketch. He told the FBI that McVeigh had been in the army and hated the government. McVeigh, according to the informer, was especially angry about the federal raid on the branch Davidian compound in Waco, Texas. During the siege of the compound, 86 men, and children died, mostly in a fire started by cult members during the final assault. Four federal agents also died. The date of the final assault was especially important. It took place on April 19, two years to the day of the Oklahoma bombing. Investigators began to realize that the bomb had not been set off by foreign fanatics, but by Americans.
- Unknown to the FBI at the time, McVeigh was already in custody. A state trooper, spotting no license plates on McVeigh's car, had pulled him over some 60 miles north of Oklahoma City less than 90 minutes after the bombing. Noticing a bulge under McVeigh's jacket, the officer seized a 9-mm pistol hidden there and arrested him. By searching its national database, the FBI discovered McVeigh's whereabouts and took him into custody, just 30 minutes before he was scheduled to be released.
- McVeigh's real driver's license offered the FBI another important clue. He gave as his address a farm in Decker, Michigan, owned by James Nichols. FBI agents raided the farm and interviewed neighbours, who claimed Nichols built small bombs and had

some connection to extremist groups. Nichols' brother, Terry, an army friend of McVeigh, soon gave himself up to authorities as well. The two brothers were held as material witnesses.

- Nichols later voluntarily surrendered to police.
- Timothy McVeigh, despite his earplugs, heard the deafening roar of the blast and felt the thump of air lift him an inch off the ground. Falling bricks hit him in the leg and a snapped live wire threatened his life.
- According to the FBI, McVeigh and co-conspirator Terry Nichols, a native of Michigan, had constructed the bomb out of agricultural fertilizer, diesel fuel, and other chemicals. Michael Fortier, an Army buddy of McVeigh's, said he knew of the plot, which McVeigh had carried out with deadly precision using timed fuses and a getaway car.
- "Tim McVeigh is the epitome of a lone wolf," Tom O'Connor, a former F. B.I. agent, told Retro Report. "But even a lone wolf still has to be part of something that gets them to that point."

Planning

- ACCORDING TO ABC NEWS, McVeigh says he was the sole architect of the plan to bomb the Alfred P. Murrah Federal Building. No foreign terrorists or domestic militias helped him.
- Over six months, McVeigh and Nichols planned the bombing and acquired several tons of ammonium nitrate fertilizer, which, combined with fuel oil, would provide the explosive power for the bomb.
- On September 22, he rented a storage unit in Herington, Kansas, that would later be used to house explosive materials. A week later, Terry Nichols bought a ton of ammonium nitrate, a key ingredient in the bomb that would be used in Oklahoma City. Ammonium nitrate is a commonly used agricultural fertilizer and the purchase was made at a farm cooperative in McPherson, Kansas.
- October 1994 was a busy month for McVeigh and his co-conspirators. He and Terry Nichols bought a second ton of ammonium nitrate from the same farm cooperative. A burglary at a quarry near Marion, Kansas on October 3 netted McVeigh and Nichols a supply of dynamite and blasting caps. Wearing a biker disguise, McVeigh purchased nearly \$3000 worth of nitromethane, a racing fuel used in bomb construction, from a

Dallas track. In between these supply-gathering missions, McVeigh found time to visit Oklahoma City to inspect the building he had targeted, and to calculate his own position at the time the bomb would be likely to explode.

- The in-depth letter of 3 page from timothy McVeigh to his friend bob Papovich were found, in which he wrote about the reason why he bombed the Murrah building. McVeigh told Michael Fortier of the plot nine months before the bomb went off on April 19, 1995. Later, diagrammed how he intended to build the bomb, using soup cans in the Fortier's' kitchen to show how he would place barrels of ammonium nitrate and nitromethane racing fuel so as to cause maximum damage. Fortier even cased the federal building with McVeigh. Lori Fortier, who watched McVeigh build the bomb model and heard him discuss his planned attack, joined in, too. Using an iron at her home, she laminated the fake driver's license that McVeigh later used to rent the Ryder rental truck in which he assembled the bomb.

Motive-

- In 1992 at Ruby Ridge, Idaho, the wife and son of a white separatist, Randy Weaver, were killed by federal agents during a standoff. This unfortunate event grew his anger against the federal government led him to commit this crime.

Target selection-

- McVeigh chose that building because it had everything he wanted, including federal agents with offices there, glass in the front of the building, which made it especially vulnerable and good camera angles for media coverage.
- The date of the bombing was significant. It was the two-year anniversary of the final day in the federal government's siege of a heavily armed religious compound in Waco, Texas.

Forensic evidences found-

Traces of chemicals ,McVeigh's clothes ,business card , driver license, scrap of metal, piece of a truck axle, bank videotape camera, crater, bomb laden vehicle, witness building , automobiles, ammonium nitrate crystals, dynamite wrapper, white plastic fragments, blue plastic fragments and black plastic fragments, Knife, tire fragments, yellow film, paint chips, broken pills, receipt, fingerprint, set of earplugs, knife sheath.

Investigation at a Glance-

The bombing was quickly solved, but the investigation turned out to be one of the most exhaustive in FBI history. No stones were left unturned until all the clues were identified and culprits were identified.

A massive investigation was undertaken by the FBI, as lead agency, with the assistance of other agencies including the Bureau of Alcohol, Tobacco and Firearms (ATF).

The Oklahoma City Bombing Investigators:

- Conducted more than 28,000 interviews
- Followed more than 43,000 investigative leads
- Collected more than 3 tons of evidence
- Searched more than 13.2 million hotel registration records
- Reviewed more than 3.1 million truck rental records
- Searched more than 682,000 airline reservation records.



A surveillance camera captures an image the Ryder truck being driven by McVeigh, just minutes before the truck blows up in front of the Murrah Federal Building

Forensic reports-

All the evidence not only positively linked the timothy to the crime scene but that McVeigh helped mix the ammonium nitrate and fuel oil that made up the bomb but also that he helped stack barrels containing the bomb ingredients into the back of a rented Ryder truck.

- Traces of residue allegedly found in the pockets of his jeans and on two T-shirts he was wearing, his knife and the knife's sheath. the plugs tested positive for NG, or nitro glycerine , which is used in high explosives and the production of dynamite, and EGDN, or ethylene glycol dinitrate, also used in dynamite.
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- McVeigh's jeans. The left pocket reportedly gave a positive "identification" for NG and a finding "consistent with" PETN. The right pocket tested positive for both NG and PETN.
- McVeigh's T-shirt with blue sleeves- Steven Burmeister, a chief analyst in the lab's chemistry and toxicology units, who is expected to be a key expert witness for the government, confirmed that PETN was identified on the shirt.
- A second T-shirt worn that day by McVeigh- It too was identified by Burmeister as carrying traces of PETN. McVeigh's knife and the knife's sheath. Lab reports show that the knife blade gave a test result "consistent" with PETN and that the sheath registered "consistent" with NG.
- Pieces from the inside of the rented Ryder truck box- The back of the truck allegedly carried 4,800 pounds of ammonium nitrate and fuel oil mixed into barrels, with the barrels wrapped by a detonator cord. Debris from the bombing scene allegedly proved positive for NG and other compounds.

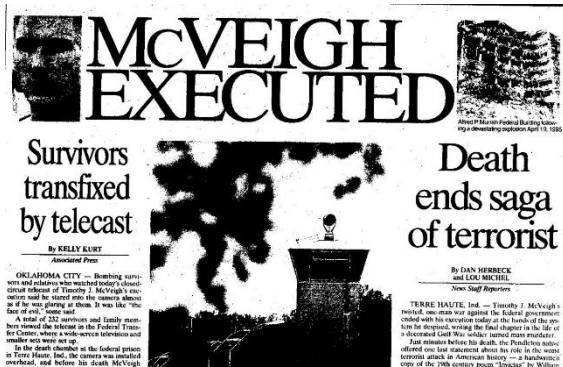
The forensic evidence successfully linked Timothy J. McVeigh to the crime.

Trials

- When the officer discovered that McVeigh was illegally carrying a concealed handgun, McVeigh was arrested and held in jail, pending a trial on the gun charge. While he was in custody, McVeigh was identified as "John Doe No. 1," the primary suspect in the Oklahoma City bombing.
- Two days after the bombing, McVeigh was taken into federal custody, and Nichols turned himself in to authorities. The two were indicted in August 1995, and Attorney General Janet Reno stated that the government would seek the death penalty against both.
- McVeigh's month-long trial began in April 1997, and Fortier testified against him as part of a plea agreement.
- It took the jury three days to reach a unanimous guilty verdict.
- Later that year, Terry Nichols was found guilty of conspiracy and eight counts of involuntary manslaughter and was sentenced to life in prison.

Verdict-

On June 2, 1997, McVeigh was convicted on 15 counts of murder and conspiracy, and on August 14, under the unanimous recommendation of the jury, he was sentenced to die by



lethal injection.

Terry Nichols and Michael Fortier

- Michael Fortier was sentenced to 12 years in prison and fined \$200,000 for failing to warn authorities about McVeigh's bombing plans. In a federal trial, Terry Nichols was found guilty on one count of conspiracy and eight counts of involuntary manslaughter and was sentenced to life in prison.
- In a later Oklahoma state trial, he was charged with 160 counts of first-degree murder, one count of first-degree manslaughter for the death of an unborn child, and one count of aiding in the placement of a bomb near a public building. On May 26, 2004, he was convicted of all charges and sentenced to 160 consecutive life sentences without the possibility of parole.

Challenges faced by the Investigators

- Due to dust and debris floating in the air, it became difficult for investigators to see the things clearly.
- The time FBI realised that Timothy was prime suspect, and all his belongings were taken. The handling of McVeigh's belongings, which were transferred from local authorities to the FBI, was crucial to determine whether any of the materials were contaminated. The items were mishandled, placed in wrong containers and exposed to other possible contamination in the lab. So, The admissibility of their evidence on the grounds of contamination and unqualified personnel

- Misusing or inappropriately using scientific methods to reach conclusions not supported by the data.
- The investigation was also challenged as it showed that it is biased in favour of the prosecution, and contains unjustified conclusions.
- The conclusions incriminated the defendants without a scientific basis and that were not explained in the body of the report.
- Improperly deviated from the explosive's residue protocol in examination of some specimens led to improper conclusions
- Velocity of Detonation lacked an adequate scientific and empirical basis.
- Identification of explosive was inappropriate as the report contained opinion that the main charge was ANFO. It is inappropriate for a forensic Laboratory examiner to identify the main charge based on knowledge of the explosive components purchased by a defendant. Such an identification is not based on scientific or technical grounds and appears to tailor the opinion to evidence associated with the defendants.
- Method of determining weight was inappropriate because it was based on the receipts.
- The investigation was complicated because of the poorly maintained lab environment
- The investigation was challenged by the prosecutors because of the lack of scientific data and calculations and improper way of addressing about the explosives and its component.
- The forensic experts faced difficulty in examining the components , amount of evidence for examining were few but they had to perform more than 60 experiments by 32 personnel's in getting a positive report.

Inference

McVeigh and Terry Nichols, both were former US army soldier and were associated with the extreme right-wing and militant Patriot movement. They held a different view against the federal government. The particular reason for the circumstance is due the incident that happened in Waco. The movement was the turning point for the timothy McVeigh where he decided to attack the federal government.

To sum up everything that has been stated so far, it was due to the hatred and the anger that timothy has against the white federal government which led him to take his revenge by choosing this path of destruction.

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