



When an Aircraft Crash is not an Accident: Experiences of an Air Safety Investigator at Ground Zero

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Author Biography:

Mr. Eric West is currently an Air Safety Investigator with the Federal Aviation Administration in Washington, D.C., a position he has held for the last 5 years. Prior to this he was an Aviation Safety Inspector with the FAA's Flight Standards District Office in Boston. Eric's aviation experience began in the United States Navy when he was attached to several helicopter squadrons. After attending the University of Colorado, he continued his aviation pursuits by receiving his A&P license at Colorado Aero Tech. Eric has a pilot's license with an instrument rating and holds an Inspection Authorization. He has participated in several major accident investigations that include JFK Junior, Egypt Air, Singapore 006, Air China 129, China Air 611 and was the FAA representative in New York City during the 9/11 investigation.

WHEN AN AIRCRAFT CRASH IS NOT AN ACCIDENT: EXPERIENCES OF AN AIR SAFETY INVESTIGATOR AT GROUND ZERO

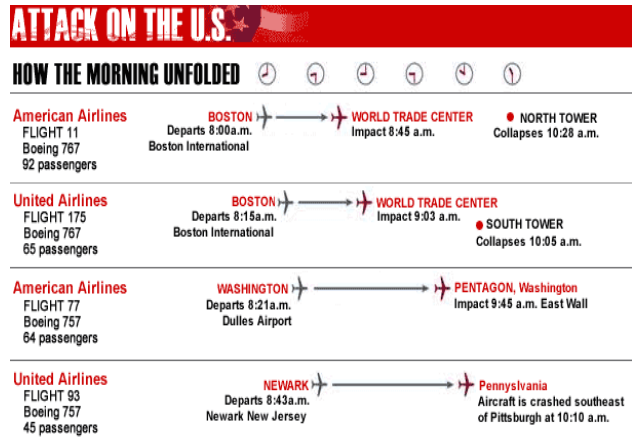
Good afternoon, ladies and gentlemen. It is an honor to be here with you today so I can share with you my experiences concerning a very tragic event that happened to my country. First, I am going to tell you what happened on that day from my perspective. Second, I will share with you lessons I learned from that experience. Finally, I developed a checklist of items for your consideration if you are ever involved with investigating a terrorist-induced aviation disaster.

Tuesday morning, September 11, 2001, just after 9:00 AM, my calm and ordered world changed forever when I received a telephone call from my wife. She informed me that an aircraft just crashed into the World Trade Center in New York City and did I know anything about it? "No," I replied, "but let me check it out." A minute later, the accident investigation staff gathered around the TV. CNN showed a live shot of one of the World Trade Center Towers with thick, black smoke pouring out of the upper stories.

At 9:02 AM, while still watching the news coverage, in a moment that I shall never forget, a large passenger jet aircraft came into view and made a sweeping turn towards the other World Trade Tower and aimed directly for it. I stepped back in horror as I watched the aircraft hit the other tower and disintegrate into a giant fireball.



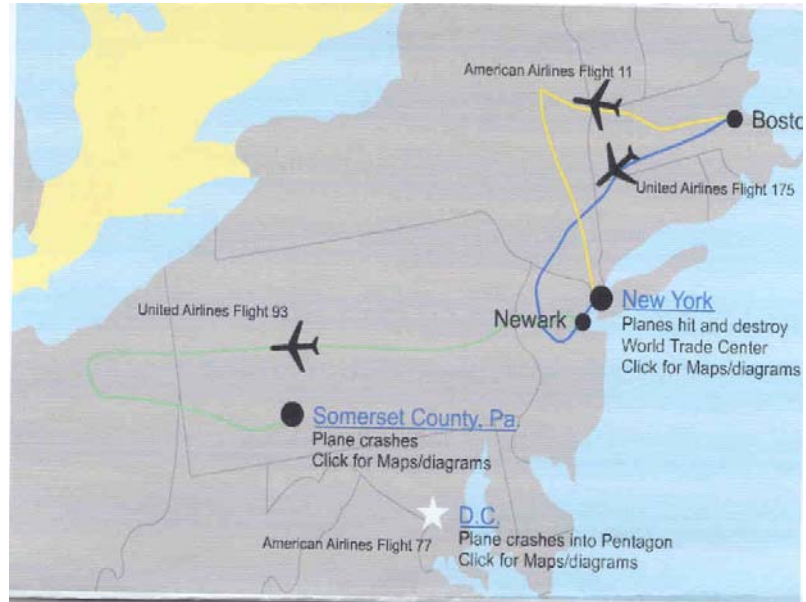
Frank DelGandio and I ran up to the Operations Control Center on the top floor. We watched and listened as emergency plans kicked in and systematically, major airports began to close. Air Traffic Controllers from the New York area were the first to stop aircraft from taking off from JFK and LaGuardia. The FAA's New England Region and Washington area soon followed. Nationwide, aircraft were directed by Air Traffic Control to land at the nearest "suitable" airport. All aircraft responded to Air Traffic's request except United Flight 93, which was flying west over the state of Ohio.



At 9:45 AM, we heard that American Airlines Flight 77 had hit the Pentagon just across the river from us.



This confirmed the fact that this was a large, coordinated terrorist attack involving at least three large air carrier aircraft. A fourth aircraft, United Flight 93, was being tracked by the Cleveland Air Traffic Control Center. Radar showed that the aircraft had TURNED AROUND over Ohio and was now headed southeast, on a bearing that pointed directly toward WASHINGTON, DC.



Frank and I went back downstairs to our office conference room. We needed a window. From our 8th floor vantage point, we could see black smoke rising high in the sky from the direction of the Pentagon. Together, we searched the skies for Flight 93. At 10:10 AM, we got the word that flight 93 crashed in a wooded area outside of Shanksville, Pennsylvania. At the time, we did not know it, but the aircraft crashed because of the courageous actions of the passengers trying to take back control of the airplane. By sacrificing their lives, Washington, DC was saved from another terrorist attack.



In the midst of all this confusion and uncertainty, I tried to figure out where an Air Safety Investigator would fit into this rather new and dangerous situation. Silently, I asked myself one important question.

DOES A CRIMINAL ACT INVOLVING COMMERCIAL AIRCRAFT ELIMINATE THE PARTICIPATION OF AIR SAFETY INVESTIGATORS IN THE INVESTIGATION?

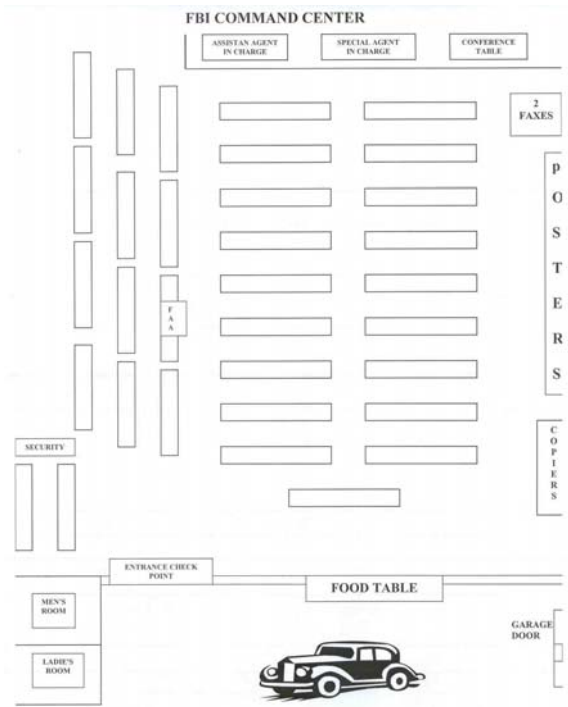
My question was answered the next day, September 12th, when the Federal Bureau of Investigation, the FBI, asked for FAA participation at all three locations. Air Safety Investigators from our office went to Pennsylvania, the Pentagon and New York City. Since I was third on the “go list”, I was instructed to go to New York City. In a matter of a few hours, I rented a car, went home to pack and said goodbye to my apprehensive wife and two children. Then I set off to the site of the largest disaster in America’s history since Pearl Harbor---New York City---Ground Zero.



As you can imagine, security in and around New York City was extremely tight on the day I arrived. Nowhere was that more evident than Lower Manhattan. I drove south along the Hudson River where police set up several barricades in order to keep the public from getting close to the world’s largest crime scene. At each checkpoint, I showed my credentials and was allowed to pass. When I reached my destination, there were swarms of heavily armed FBI agents and Army National Guard soldiers guarding an old building.

Everyone had heavy-caliber weapons hanging off their shoulders and automatic pistols strapped to their legs. All I had on was a windbreaker with “FAA” in big yellow letters on the front and back and...NO gun. “What is the FAA?” asked an FBI agent as I got out of the car. “The Friendly Aviation Administration,” I replied. My attempt at humor in a difficult time must have worked because the agent smiled and allowed me to proceed.

The FBI command center was in an old, rundown garage. At the top of the garage’s ramp was an overhead garage door with a regular door cut into the middle of it. An armed agent guarded that door and checked my credentials. Upon entering, I was greeted by the smell of old oil and gasoline that was spiced with the musty smell of 450 people, who darted in and out of a maze of tables like frenzied electrons each attempting to find the path of least resistance. In the background was the steady hum of voices, talking on telephones. Each phone was attached to one of a hundred telephone wires hanging loosely from the ceiling. “Mr. West,” I said to no one in particular, “welcome to your new home.”



The garage space was expansive with large rectangular columns that supported the roof. In the center of the room, numerous tables were arranged in horizontal rows from left to right. Each table was task-identified by a piece of poster board taped to the front. To the left of the center tables was a row of about twelve tables. They were perpendicular to the center tables and seated the supporting agencies. My table was in between the New York/New Jersey Port Authority Police and the United States Post Office Inspector General. Plastered on the right-side wall were life-sized posters of the nineteen terrorists. It reminded me of the FBI's most wanted bulletins that are on the wall at most post offices.

Now another question came to mind...

CAN AN AIR SAFETY INVESTIGATOR HELP LAW ENFORCEMENT AUTHORITIES IN THEIR QUEST TO DETERMINE WHAT HAPPENED?

My table came with a black telephone and one in/out basket. I sat down with my notebook, pens, markers and "go bag." First, I made a request log and a running telephone number contact directory. Second, I called the FAA Operations Control Center. They were a very important source because:

1. They established links to anyone, anywhere.
2. They authenticated my identity; this allowed me quick access to information.
3. They arranged telecons.



For the first week, I could not access the Internet nor could I access the FAA via my laptop computer. This delayed my response time to the various agencies that needed my help. During this hectic week, I found that the FBI wanted hard copies of FAA documents and aircraft design specifications. To rely on the FBI's heavily taxed fax machines was impossible. So working through the FAA command center I got the local FAA district office to deliver the documentation directly to me. Now that I had established a link to any information I could possibly need, I asked myself one final question.

WHAT COULD THE FBI POSSIBLY WANT OR NEED FROM THE GUY WITH ONE PHONE AND A BASKET?

At first there were questions I could answer immediately, such as how a person obtained a pilot certificate. How flight-training facilities were monitored and how airport security was handled. The questions I could not answer right away turned into my requests for documentation. I remember providing information on several of the terrorists that had taken flight lessons in the U.S. Another need had such priority that the FBI dispatched one of their own aircraft to go and pick it up. My time was filled with a never-ending list of requests from the FBI that had to be tracked and logged into my notebook, and answered, one by one.

During the aftermath of 9/11, everyone in New York City was very sensitive to any aircraft flying overhead. Once the airspace in New York was opened to commercial traffic again, I was asked to prevent airplanes from flying over large gatherings of people during special events. One of these events was the first baseball game to be played in New York City since 9/11. Another was the memorial to the victims of that tragic day. I contacted Air Traffic Control and initiated Temporary Flight Restrictions over such places as Shea Stadium, Yankee Stadium, the Statue of Liberty, and Ground Zero.

GROUND ZERO



My first visit to Ground Zero was a three-mile ride from the garage in a New York State Police car. The purpose was to educate the workers at Ground Zero. By educate, I mean an NTSB investigator and I delivered a brand new Cockpit Voice Recorder (CVR) and Flight Data Recorder (FDR) so the workers had a better chance of identifying them in the debris. Two blocks from the site, we transferred to a golf cart to get closer. A Lieutenant with the Brooklyn New York Fire station drove the cart. He told us his station lost seven men when the South Tower collapsed. That moment is forever burned into my memory.

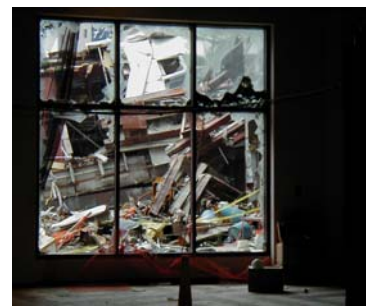
NOTHING, in my lifetime, prepared me for the sight and smell of Ground Zero. The pictures I am going to show are two-dimensional. What are missing in these slides are the smell, the gray dust and smoke, mixed with the grit on your teeth as your eyes record the results of wanton destruction. It overpowers one's senses, making words meaningless. Before entering Ground Zero, I “suited-up” in a hard hat, respirator and work boots.



The entrance to the main wreckage site was located between two small parts of the trade centers that remained standing.



As I entered the site between the remnants of the two towers, I noticed what appeared to be a bagel store.



I took this picture to remind me that when this attack occurred, people were busy with normal everyday activities. The World Trade Center was now a wasteland, accented by the very distinctive outside steel facades sticking out of the rubble.



White smoke and steam billowed out of the many hills of scrap and debris as if they were miniature volcanoes on the surface of another world.



The millions of tons of building wreckage generated so much pressure that infrared scanners recorded temperatures as high as 1800 degrees Fahrenheit inside the debris field.



Buildings surrounding the Trade Center monoliths took their share of damage. The pressure wave that was created as the towers collapsed under their own weight blew out hundreds of surrounding office windows in an instant.



Dozens of bordering structures would be officially condemned and rendered structurally unsound, never to be used again. During the cleanup operation, hundreds of pieces from both aircraft were found on the rooftops of buildings as far as five blocks away.



One day, I was summoned to an FBI tent near Ground Zero and shown a piece of evidence. It was a U.S. pilot's certificate that was found in the rubble, yet it was in perfect condition. As the agent handed it to me, I immediately recognized the Department of Transportation symbol in the upper left-hand corner. I was holding the certificate that belonged to one of the airline pilots. I couldn't help thinking how on earth this fragile piece of paper managed to withstand such an explosion and why almost 3,000 innocent people had died. Again I was hit with another dose of reality but this time I almost broke down.

Toward the end of September, the FBI decided to change command center locations. We moved to the FBI Federal Building about three blocks from Ground Zero. The workload had lightened and the investigation was running smoothly until Monday, November 12, 2001. At 9:30 in the morning, an FBI agent tapped me on the shoulder and pointed to a television monitor. Breaking news on a local channel announced that American Airlines Flight 587 out of JFK airport crashed just after take-off.



Then I was told that the FBI Special Agent in Charge wanted me at the accident site immediately. I was ushered outside where two squad cars were waiting and directed

to get into the NYPD squad car. Inside the car were two NYPD detectives. After quick introductions, the detective behind the wheel secured my seatbelt, flipped on the siren and shoved the car into gear.



Beginning in Lower Manhattan, the detective cut across street centerlines and weaved in-and-out of stalled traffic as drivers heeded the wail of the siren and flashing lights. We crossed the Brooklyn Bridge at 75 miles per hour with the FBI car right behind. From Brooklyn it is a short distance into the heart of Queens. In less than 25 minutes, we drove 20 miles through New York City traffic to within two blocks of the crash site.



Once again I was going to an aircraft crash site surrounded by law enforcement and criminal investigators. Great speculation as to the cause of the crash was prevalent that morning. Another American airplane was down in New York; it was a Federal holiday and only 2 months and a day since 9/11. Everyone gathered on a street corner about two blocks from the crash site. Behind us stood an ordinary, single-family, brick house. Two by two, 20 agents and I snaked our way toward the front door. I thought I was in a movie when the head agent rang the doorbell, held up his badge and commandeered a little old lady's house.

Once everyone was inside the house, the lead FBI agent raised his hand and called for silence. You could hear a pin drop it was so quiet. The agent pointed over at the dining room table that was empty except for a lone, black telephone. In a clear, loud and authoritative voice he told the room full of agents, "THAT IS THE FAA PHONE." The FBI directed me, in no uncertain terms, to find out what I could. This was no time for guesswork; I had to get something concrete.

Remembering the events of 9/11 and the takeover of the cockpits by the terrorists, my gut told me to contact the JFK Air Traffic Control tower. I acted quickly and explained to the tower chief where I was and who I was with and that I needed details of what he knew. He replied, "No abnormal communications between the aircraft and the tower." Apparently, that sole piece of information was enough for the FBI. We left the little brick house and walked to another building a short distance away.

Thick black smoke and ferocious flames continued to rise from the crash site off to our left. We entered a Catholic Elementary School that was filled to the brim with police and emergency personnel. I was ordered by the FBI to remain outside a classroom until called. Soon I heard a loud voice shout out, "FAA!" I entered the room and came face-to-face and shook hands with the Mayor of New York City, Rudolph Giuliani. The FBI asked me to explain to the mayor exactly what I was told by the JFK tower chief.

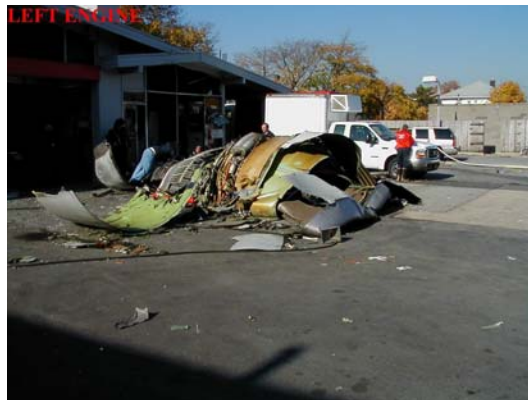
**“NO ABNORMAL COMMUNICATIONS BETWEEN THE TOWER AND
THE AIRCRAFT”**

The mayor looked over at the lead FBI agent and asked for his advice. His answer was short and to the point. “Let’s keep this investigation with the NTSB.” The decision was made and Mayor Giuliani went public with the information; a “normal” accident investigation began.

After that, I went to the crash site. There must have been a thousand rescue workers in and around the residential area battling widespread fires where the aircraft came down.



I received information that both engines had separated from the aircraft so I went to find them. The left engine fell in front of a gas station.



It must have come straight down because it did not hit the station or the gas pumps. The right engine landed next to someone’s house and destroyed a boat and garage.



The NTSB and FAA Go Teams arrived later that day and after briefing the FAA IIC, I returned back to the FBI command center.

Now for some lessons learned. First, nothing is more important than preparation, so it is suggested that you;

- **Be prepared for ANYTHING because if it can happen it will happen.**
- **Make sure there exists an agreement between the accident investigation agencies and the criminal investigation agency.**
- **Keep a log of everything that you have done, who you called, phone numbers, etc.**
- **I found that it worked well to have one person as the point of contact at the FBI command center.**
- **Keep your boss informed of what you are doing and what you need. Give a briefing to the home office at least once a day.**
- **Have a security clearance of SECRET or higher from your government because you will be exposed to very sensitive information.**
- **Don't pretend to know everything. No one does. So call on the experts within your organization for assistance.**
- **Remain in the loop when information passes between your organization and other outside agencies.**
- **Let people do their jobs. Do not pressure experts in your organization by constantly calling them and urging them to move faster.**

- **Have dark T-shirts made with your agency's name in yellow so you can be easily identified by anyone who needs you.**
- **These investigations last a long time, so be prepared to set up a relief schedule.**
- **Make sure the credit limit on your business credit card is set high enough for an extended stay.**
- **Throw preconceived notions out the window about where you are going and what the people are like. We all hear tales about how tourists complain about the people from New York City. Nothing was further from the truth. New Yorkers are great people.**
- **Keep a separate phone line or cell phone available for your family.**

Copies of my Investigator Checklist are available for you after my presentation. Comments are welcome. Contact me through my email address that will appear at the bottom of the checklist.

I am going to end my presentation by reading to you a short passage taken from the New Yorker Magazine.

On September 15th, at Denver International Airport, the pilot of United Airlines Flight 564 said the following just before departure.

"First I want to thank you for being brave enough to fly today. The doors are now closed and we have no help from the outside for any problems that might occur inside this plane. As you could tell when you checked in, the Government has made some changes to increase security in the airports. They have not, however, made any rules about what happens after those doors close. Until they do that, we have made our own rules and I want to share them with you. Here is our plan and our rules. If someone or several people stand up and say they are hijacking this plane, I want you all to stand up together. Then take whatever you have available to you and throw it at them. Throw it at their faces and heads so they will have to raise their hands to protect themselves. The very best protections you have against knives are the pillows and blankets. Whoever is close to these people should then try to get a blanket over their heads. Then they won't be able to see. Once that is done, get them down and keep them down and keep them there. Do not let them up. I will then land the plane at the closest place and we will take care of them. After all, there are usually only a few of them and we are two-hundred-plus strong. We will not allow them to take over this plane. I find it interesting that the US Constitution begins with the words "We the people." That's who we are, the people, and we will not be defeated."¹

¹ The New Yorker Magazine, October 15, 2001, page 53

AND, WE WILL NEVER FORGET!

THANK YOU



ADDENDUM: INVESTIGATOR CHECKLIST

Now I would like to offer my INVESTIGATOR CHECKLIST in addition to the standard GO Bag for your review and evaluation.

Setting up

1. Credentials – make them as valid and bona fide as possible.
2. Business cards---have as much information on them as possible.
3. Notebook with your agency contact points, phone numbers and other agencies contact points, including the military. This is the backup to your computer.
4. Develop a request log to document your answers to the who, what, when, where, why, and how questions.
5. Employ a turnover log (if there is a need to man the station for more than 12 hours).
6. Have an ample supply of office supplies such as pens, paper, highlighters, markers, file and expandable folders, FAX cover sheets and graph paper.
7. You must have access to a fax machine and copier.

Personal Vehicle

1. Drive a rental or government car with no fewer than 4 doors, and 4-wheel drive.
2. Obtain, as soon as possible, an official permit from agency in charge of the investigation that gives you access to sensitive areas.
3. A magnetic logo for your car door that has your agency or company name and symbol. Note: Keep magnets away from your computer.
4. Use “Official Vehicles” as much as possible.

Communication Equipment:

1. Digital camera with extra batteries
2. Laptop computer with extra batteries, room and car charging units, Internet capability and a CD Burner
3. Non-sensitive communications can be done over the Internet
4. For sensitive information you will need an encrypted program
5. Computer must have picture downloading capability
6. Administrative rights for different printers
7. Cell phone with charger, and extra batteries
8. Small portable printer with lots of paper and print cartridges
9. Extension cord with multiple outlets for plugs
10. Pager. For those times you are in a meeting and all cell phones are turned off

Personal needs:

1. A month's supply of aspirin, and other medication
2. Scissors
3. First aid kit
4. Enough money to last a month and a roll of coins for vending machines
5. Arrange for hotel accommodations for a long-term stay
6. Obtain local maps
7. Bottled water and snacks to keep you going for 3 days
8. Your own personal respirator and extra filters
9. Maintain personal hygiene, including washing one's hands and face before eating just like your mother taught you to do. If not, have a bottle of Imodium AD handy.

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