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Mr. James Hall, Chairman
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, DC 20594

Dear Chairman Hall:

In your response to my letter of February 19, 2000, dated May 17, 2,000, you stated, "On August 22 and 23, 2000, the board will meet in public to discuss the final accident report, which will address technical issues raised in your letter."

My February 19, 2,000 letter discussed the evidence available on the Islip ASR-8 radar videotape of a missile impact on TWA 800. It also discusses the clear presence (established on radar) of a separate missile debris field. The existence of that debris field was independently predicted by both myself [in the [Wall Street Journal, 24 April 1997](#)] and U.S. military missile experts working with the FBI more than three years ago.

The "technical issues" as you call them, that factually support an anti-aircraft missile attack on TWA flight 800 are myriad. This letter is a discussion and partial checklist of those "technical issues" which must be addressed at the August hearing if it will indeed be the "final accident report". These issues are hereby submitted for the public record because the loss of TWA Flight 800 was assuredly no accident:

WITNESSES

Not once in the 46 months while this investigation has languished in the offices of the NTSB has the administration treated witnesses with any semblance of respect. Indeed, the political leadership in the Justice Department and the NTSB were so fearful that the public might give credence to witness testimony if appearances were made before the media, not a single minute of testimony was taken nor even the word witness itself was allowed to be spoken in the 1997 public hearing.

We know now the CIA's videotape production alleged to depict what the witnesses saw [swallowed whole by gullible aviation writers and promulgated nationwide by television producers] was based on the testimony of a single witness who like all the rest was never even interviewed by the CIA. That witness was Mr. Wire. The problem is his FBI 302 form [the alleged source of CIA information] agrees with his current statements that he thought he saw something launched from the beach but totally disagrees with the CIA's video depiction.

Mr. Chairman, this administration has run a simple shell game on the American people, you know the game, find the pea under one of three walnut shells. Except in this case the pea is hundreds of witnesses. First the Justice Department shilled for the NTSB then the CIA shilled for the Justice Department.

Those unnamed CIA analysts also made several ridiculous assumptions; that only one weapon could have been fired at TWA, and even more ludicrous, that the weapon only produced noise at the site of the aircraft explosion.

FBI 302 forms and notes taken during interviews with eyewitnesses indicate that very large numbers of persons observed a missile attack on TWA flight 800. The following witnesses provided descriptive accounts of events that match part of or all of the profile of a shoulder-fired missile engagement: Witnesses 8, 9, 34, 36, 39, 59, 72, 73, 75, 80, 81, 82, 83, 84, 87, 88, 92, 96, 108, 129, 144, 145, 151, 152, 153, 157, 158, 178, 175, 178, 179, 185, 186, 197, 221, 233, 243, 249, 251, 268, 276, 277, 280, 286, 334, 341, 352, 354, 359, 361, 363, 364, 367, 369, 379, 380, 385, 386, 391, 392, 409, 411, 412, 427, 434, 435, 436, 463, 465, 467, 469, 472, 473, 478, 484, 485, 486, 492, 493, 496, 497, 498, 499, 502, 503, 507, 506, 508, 525, 529, 532, 535, 536, 540, 541, 542, 543, 547, 548, 562, 563, 567, 571, 575, 590, 602, 606, 634, 637, 638, 641, 642, 643, 649, 650, 665, 668, 675, 678, and 754.

In many cases these witnesses described:

- a) a vertical or near vertical launch from the surface,
- b) a supersonic track opposite or near opposite the course of the aircraft,
- c) the exact burn time of the shoulder fired missile rocket motor,
- d) the proper smoke trail during rocket burn from the missile,
- e) the proper appearance of the missile after rocket motor burnout (lost sight or missile trailing thin smoke),
- f) the missile maneuvering for the intercept,
- g) the proper speed and angle of climb of the missile,
- h) the proper total flight time of the weapon, and
- i) even missile impact on the aircraft's wing root.

Note: The forensic evidence overwhelmingly indicates a missile hit in the left wing root [front wall #2 main tank].

By July 20, 1996, only three days after the aircraft was shot down, elements of the Suffolk county marine police and the FBI realized that these eye witnesses were pointing to at least two distinct [missile launch positions](#) offshore.

A memorandum ¹ drafted by deputy inspector Douglas S. [Matulewich](#) of the Suffolk county marine police September 18, 1996, explains how the global positioning system [GPS] was used with a hand bearing compass at eight witness locations to establish two probable missile firing positions at the points where witness sight bearing lines crossed. These people were most assuredly not pointing at the crashing aircraft.

¹ available at web site twa800.com, attached to witness statement 364

A memorandum ² drafted by FBI Special Agent Stephen [Bongardt](#), October 14, 1996 passes the identical information up the FBI chain of command. This document further stipulates a recommendation to use side scan sonar to find and recover Stinger missile ejector cans [the missile's first stage] and, or MANPADS launching tubes.

There is a significant body of evidence that indicates SA Bongardt's commendable efforts to initiate side scan sonar search for weapon artifacts [based on analysis of credible witness testimony] was successful. There is an irrefutable body of [evidence I introduced](#) before the Aviation subcommittee in the house on 6 May 1999, that proves the Justice Department manned a six month secret search for missile components that was funded through the NTSB. Throughout that period of time, you and other members of the NTSB consistently denied the possibility of a missile attack, indeed, you vigorously and pro-actively spun your theory to the media.

In the fall of 1997, approximately one year after the law enforcement memos were released, operating without foreknowledge of the Suffolk county police/FBI effort, *I used GPS and a hand bearing compass with a different mix of eye witnesses and came to an absolutely independent but nearly identical conclusion, that the aircraft had been ambushed by at least two missiles fired from offshore.* [Eyewitness Triangulation](#)

After recent review of the [755 FBI 302](#) forms just released by your office, almost 4 years after the fact, and meshing that information with our additional witnesses not interviewed by the FBI, there is a significant body of evidence indicating there was a third firing position ashore.

Although MANPADS missiles fired from shore would have been out of range of TWA flight 800, such an attempt as part of a multiple weapon engagement would have been tactically sound. If such a missile was fired it would completely discredit the widely published CIA "speed of sound analysis" used by the administration in a sophomoric attempt to undermine witnesses statements. Although officials immediately put out false information that Flight 800 was out of range of a Stinger missile, it was clearly within range according to military Army experts quoted on page 2 of Mr. [Bongardt's](#) memo.

In their public position, [CIA analysts](#) inexplicably erred by assuming the only source of anti-aircraft weapons sound that evening had to come from the location of the aircraft's first explosion more than 7.3 nm offshore. This is ridiculous for many reasons.

Both the probably of hit [Ph] and the probability of kill [Pk] go up dramatically as the numbers of missiles simultaneously launched at a single air target increase. Ph and Pk further increase when the firing points are widely dispersed while overlapping in-range fields of fire. For example: assuming the use of a missile with a three nautical mile range, if one firing position was on the beach, another 2 ½ nm offshore and a third at 5 nm offshore on a north south line perpendicular to the flight path of the aircraft; when the target passed between two adjacent sites it would come in range of two missiles attacking from opposite directions. If the aircraft passed over the center of the line it would come under attack from all three missiles.

² Also available at [twa800.com](#)

These are basic precepts of military anti-aircraft weaponing. The CIA should have expected any serious attempt at downing an airliner, particularly when at least three shoulder-fired missiles were available, would involve multiple weapons properly deployed. In addition, several of the eyewitnesses in the recently released 302 forms saw multiple missiles and one eyewitness saw three missiles. See [witness 86](#), [witness 158](#), [witnesses 396 & 397](#) and [witness 261](#).

Analysts should have expected loud launch, acceleration and sustainer rocket burn and sound barrier noises to originate along the entire tactical firing line. Those unexpected noises during a mild summer evening would cause people to immediately look up and see a closer event, depending on the missile firing order, happening either before or after TWA 800 was actually hit by an in-range weapon fired from sea.

Further compounding this inexplicable conduct by the CIA is the fact that White House antiterrorism staff admitted to the [Times of London](#) less than five weeks after the shoot down they had seen intelligence reports of three Stinger missiles smuggled into the country five months prior to the event.

The sights and sounds of that shore based missile shot are documented by witnesses in different locations who reinforce each other's testimony of hearing noises, looking up to see a streak either climbing or already at altitude and going south out to sea.

It strikes this investigator as extremely odd and perplexing that the CIA would attempt to maintain that extremely credible witnesses at Dockers restaurant were only looking at the burning aircraft. Several police officers, who were located at least 60 seconds at the speed of sound from the aircraft explosion point, testified they heard crackling thunder, then looked up and saw a streak going out to sea. If what they heard was the exploding aircraft, then 60 seconds after the initiating event, TWA flight 800 was already in the water!

CENTER TANK EXPLOSION WAS NOT THE INITIATING EVENT

Proper analysis of the aircraft debris clearly show the initiating event that caused the breakup of the aircraft was a massive Hydraulic Ram over-pressure of the fuel in all three left wing tanks. There is evidence that, nearly simultaneous to this event, the center wing tank bottom floor was [domed up](#), most probably by a fuel air explosion in the bay containing the air-packs and hot engine bleed air ducts underneath the CWT tank.

The left wing structure failed at its strongest point... why?

Mr. Chairman, there's no easy way to say this, for almost four years now, because of your insistence on a center wing tank initiating event, NTSB investigators have been looking for non-existing mice all-the-while there's been an elephant sized clue you have ignored right in front your face.

The [common wall](#) between the center wing tank and the left wing number two main tank was shattered into small pieces by this initial explosive ram hydraulic force and documented by department of defense missile expert, Mr. Richard Bott. *His excellent drawings also show*

*severe damage to the front wall of the number two main tank, [[front spar](#)] much of which remains missing. The entire left wing eventually separated from the aircraft at its strongest point because of this initial asymmetrical loss of structural integrity of the number two main tank and the left side wing box. The severe aerodynamic loads, applied when dynamic stability was lost and when nose and tail came off, finished the job. The failure of the NTSB to study and report in detail the unique damage to the left wing is very disconcerting to this investigator. *Any time a wing separates from an aircraft in an airborne crash break up sequence, it is a major event that demands meticulous study.**

DOD missile expert hired then ignored by DOJ and the NTSB Brass

In the fall of 1996, FBI agents tracking missile evidence brought in Mr. Richard Bott, a DOD missile expert from the Navy's China Lake Air Weapons facility to study the aircraft wreckage. His [October, 1997 report](#) clearly indicated that shoulder-fired weapons employed by terrorists or third world armies against large aircraft were a severe threat noting 26 such incidents had occurred world wide prior to flight 800. Mr. Bott laid out four forensic criteria to be expected if a large aircraft was hit by such a weapon in a full fuel tank. *All four were in evidence on flight 800. In his 20 page report he explained the odd damage found on flight 800's left wing, a subject the NTSB has refused to address for almost 4 years.*

Mr. Bott included seven recommendations in his report. They were succinct and to the point. He recommended detonation of live warheads in full inboard 747 fuel tanks, firing both live and inert missiles at full tanks etc.

He was aware the small warheads on these weapons would be contained in a deep fuel explosion. That is, the dense fuel would stop the small metal fragments from the warhead and not leave tell-tale damage on parts of the aircraft. He also was aware, 747 wing tanks have common side-walls therefore a sealed full wing becomes a nearly homogeneous hydraulic containment vessel. Because he knew, liquids are non compressible he understood if a high-explosive event or extremely high kinetic energy hit occurred anywhere inside the wing tanks the shock would be immediately conveyed through the fuel to all inside parts of the wing.

The top left wing skin failed instantly at the initiating event, why??

Some of the earliest pieces of metal in the debris field came from the [top of the left wing](#). Mr. Bott surely realized that, in-flight, a 747's upper wing skin is carrying the entire weight of the aircraft because of the partial vacuum that forms above the wing. At the same time it is carrying this normal flight load, the upper skin itself is under a high compression load imposed by the upward bending moment of the entire wing structure [when the wing lifts the weight of the aircraft on takeoff the wing tips bend upward causing the top skin to pinch together under compression]

The combination of those forces makes the upper wing skin the weak link in the structure when exposed to a high-energy shock wave. The fact that the right wing was unaffected, the left wing lower skin was unaffected and only the left wing upper skin suffered from this asymmetrical damage, proves the left wing was subjected to an in-tank HE bomb or a antiaircraft weapon detonation that generated *a high energy shock wave in the fuel of the left wing tanks.*

Bruntingthorpe Explosion proves NTSB theory wrong

Destructive testing done by the NTSB and FBI at Bruntingthorpe England on a Boeing 747, proved that when 8 lbs. of propane gas, [not a low volatility liquid jet fuel] mixed with air in an explosive atmosphere, is ignited in the center wing tank, the resulting damage to the tank left side wall [the CWT, #2 Main common wall] is exactly opposite of what was found on flight 800. The test explosion destroyed and caused massive structural failure of the CWT top, bottom, front and back walls leaving the side-walls barely damaged [cracked].

This would not be a surprise to a good high-school physics student because on both TWA 800 and the test aircraft the CWT side walls were buttressed by tons of fuel [or water] in each wing. **In order to damage the side walls from an explosion inside the empty Center tank, the gross tonnage of fuel in the wings must be instantly displaced.** No matter how powerful an explosion in the center tank it won't move that wing fuel before first taking the path of least resistance and totally destroying the remainder of the tank not backed by fuel mass.

This testing disproved the NTSB's theory that the CWT explosion was the initiating event that caused the crash of TWA Flight 800. *On Flight 800 the CWT's left side wall was shattered into small pieces by an overwhelming hydraulic force acting in the opposite direction coming from the #2 main, inside the left wing moving into and under the CWT.*

Mr. Chairman, again I must be blunt. I cannot imagine a military crash investigation team finding the evidence you have in your possession, not immediately testing the metal in the common wall between the center wing tank and the number two main tank to determine which tank exploded first. As I [testified](#) before the Aviation Subcommittee on 6 May, 1999, I would testify in any court in the land, failure to do such testing before closing the case in my opinion would be criminal malfeasance.

NTSB fails to find any CWT ignition source

Despite 46 months of efforts, the NTSB has failed to find a defect in any Boeing aircraft that could have led to the ignition of a fire in an internal tank much less an explosion.

NTSB fails to prove CWT flammable at FL 800's explosion point

The NTSB's extensive flight testing has proven the Boeing 747 100 classic aircraft, while using Jet-A fuel in the environment TWA 800 was operating, demonstrated a non agitated CWT tank was not flammable much less explosive at the altitude at which TWA 800 actually did explode [13,800 ft.]

CIT proves NTSB theory wrong, even if the marginally flammable tank ignites, it would not explode

In tests commissioned by the NTSB at California's Institute of Technology [CIT] researchers were only able to ignite a 1 gal. puddle of jet A fuel in a test chamber evacuated to a pressure altitude of 14,000 ft. by using a Driver. This device spews 2,000-degree flaming gas at over 20 times ambient pressure into the center of the test chamber.

Under the above conditions, when flames from the Driver lick the surface of the fuel puddle it ignites a thin vapor layer laying over the liquid [but only at pressure altitudes of 14k and above],

eventually raising the pressure in the **sealed test chamber** to less than 40 psi. before the fire snuffs itself out. See [my letter](#) to you dated 23 May 2000.

In the actual aircraft this is little more than half the pressure required to cause the tank to fail and open a seam. Furthermore, the 747 CWT has four large air vents designed to maintain ambient air pressure equilibrium in the tank during dynamic flight conditions [climbs and dives]. *This design feature that allows the free flow of air, in and out, virtually precludes the center wing tank from failing from the impotent pressures generated in the CIT tests.*

April, 1997 the nonsense theory begins

In April 1997, you began an earnest release of trial balloons to spin the media. Literally ignoring witnesses, the physical evidence, the bizarre damage in the number two main tank, the inexplicable loss of the left wing, debris field evidence, [radar evidence](#), positive hits of high explosive [RDX and PETN residue](#) on debris [HE in missile warheads] and a multimillion dollar [search for missile parts](#) being conducted by the FBI, you announce in a letter to the Wall Street Journal that it "wasn't a missile". Instead, it was a first in the annals of aviation, an explosion of stable jet A-1 kerosene in the center wing tank, ignition source unknown.

The corollary to this theory, because you were unable to find a perfect through hole in the center wing tank, was that a missile wasn't the source of ignition. That theme was picked up and expanded by the FBI when they dropped the investigation in November of 1997.

The FBI's media routine simply paraphrased was, "there aren't any holes in the aircraft caused by a missile, therefore a missile didn't bring this airplane down". How that was done with a straight face amazes me. Tons of aircraft skin and parts were not recovered, nor can the hundreds of pounds of shattered metal that was recovered from the probable impact area be reconstructed.

This may have been the perfect grist for morning television show tours of the Calverton hangar but it is nonsense for two reasons;

1. Just as witnesses have stated, the entry point was through the missing front wall [forward spar] of the number two main tank and.
2. A high explosive detonation of a missile warhead in a sealed full fuel tank doesn't leave a discernible entry hole because the weapon itself destroys the evidence by shattering the entry wall of the tank with hydraulic RAM over pressure. See our [video demonstration](#) at twa.com.

Sincerely,

William S. Donaldson, Cmdr. USN, Ret.