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**MEMORANDUM FOR THE RECORD**

Event: Visit to the FAA Air Traffic Control System Command Center ("ATCSCC" or "Command Center") in Herndon, VA and Dulles Airport Control Tower

Type of event: Site Visit and Briefing

Date: July 22, 2003

Special Access Issues: None

Prepared by: Lisa Sullivan

Team Number: 7 and 8

Location: Herndon ATCSCC and Dulles Airport

Participants (Non-Commission) ATCSCC: Shirley Miller; Linda Schuessler, Air Traffic Tactical Operations - Manager Tactical Operations Division (on 9-11); Peter Lynch, FAA Counsel; John White, Air Traffic Tactical Operations - Manager System Efficiency Division; Jack Kies, Air Traffic Tactical Operations - Manager Tactical Operations Division

Participants (Non-Commission) Dulles: Shirley Miller; Linda Schuessler; ADD LAWYER; Charlotte Happle, Dulles Air Traffic Control Tower Assistant Manager; Michael Hawrysko, Dulles Air Traffic Control Operations Manager

Participants - Commission (both facilities): John Farmer, John Azzarello, Dana Hyde, Miles Kara, John Raidt, Bill Johnstone and Lisa Sullivan

**ATCSCC - Overview**

[U] Shirley Miller arranged this briefing for Commission participants. Linda Schuessler, the manager of the Command Center on 9/11, accompanied us on the visit as did Peter Lynch of the FAA Counsel's Office. Once at the Command Center Jack Kies led us on a tour of the facility. Participants first observed a Strategic Planning Teleconference (see below) and then toured the various areas of the main operations room. Participants then convened in a conference room to discuss the actual events of 9/11, directing questions primarily at Linda Schuessler and John White. Total time of visit was approximately two hours.

[U] The Command Center in Herndon became fully operational in 1996 [CORRECT? I thought it opened in 1997 but didn't become fully operational until a year or so later.]. Its primary purpose is to monitor the flow of air traffic from a system-wide perspective, combine data from the individual FAA centers, and adjust the flow of air traffic based on weather forecasts and to make decisions regarding capacity and demand of the national

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air space. According to Jack Kies, on average, there are 6,000 -7,500 aircraft in the national airspace at any given time; a third of which the FAA does not track.

[U] The floor of the Command Center is divided into four tiers. The first tier is made up of the weather monitoring group; the second tier is the Air Traffic Control area (divided into sections that handle the 21 ATC en-route facilities by section of the country); the third tier is the Command Center management; the fourth tier is the liaison desks for customers, including the military. Controllers at Central Command are assigned to an area/region of the country and he/she communicates between those facilities and the Command Center. These controllers report to the National Operations Managers (NAMs) on duty that have the authority to make decisions and hand down directives.

[U] As a means of enhancing communication with the Command Center and providing effective service to the airlines, other major organizations are represented at the Command Center such as the Air Transport Association (which represents the air carriers); the National Business Association; the Airways Facility; flight inspection officials; and a Central Alternate Reservations Facility (CARF) operated by FAA officials with security clearances to conduct military aircraft exercises. The military also maintains a cell at the Command Center.

[U] Every two hours, the Command Center hosts a Strategic Planning Teleconference (SPT) that includes all customers and users of the National Air Space system, including participants from the various flight control centers around the nation. They discuss weather fronts, projected delays, and essentially lay-out the day's plan for the nation's air travel. The teleconferences represent one dimension of the multilayered system of communication engaged in by the Command Center, en-route Centers, and some of the larger Traffic Control Centers (TRACON).

[U] In the event that the ATCSCC became inoperable, Mr. Kies stated that there are several back-up centers.

[U] Kies indicated that all operations phones are recorded. With respect to administrative phones, he said some are recorded and some aren't.

### **Traffic Situation Display (TSD)**

[U] The computer program used at the Command Center to monitor the flow of air traffic is called Traffic Situation Display ("TSD"). TSD receives radar data from field facilities by satellite communication and displays such data at the Command Center. The computer displays at the Command Center are not in "real-time"; the information is delayed approximately 1 - 5 minutes. In terms of technical capability, the Command Center can isolate one radar track of a plane, but it cannot "see" the radar information that an air traffic controller tracking the plane can view on his or her radar screen. TSD does not transmit transponder information (i.e., altitude, speed, etc.) to the Command Center [CORRECT?]. The Command Center does not talk directly to pilots, and it does not transmit text messages to pilots in the cockpits. However, the Command Center talks

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to the airline dispatch centers that then can forward text messages to pilots through the "ACARS" system.

[U] Air carriers, businesses and individuals may access TSD data by purchasing software from the FAA or through the internet via a subscription service such as [www.trip.com](http://www.trip.com). Trip.com users can access the speed and altitude of commercial aircraft that have activated their transponders. Commission staff questioned the FAA participants about safety concerns related to TSD, given that it is readily accessible through the internet. Mr. Kies stated that the FAA "combs" the feed sent to subscribers and excludes information and data related to the movement of Air Force One, military aircraft, U.S. Customs aircraft and other government aircraft. Similarly, the National Business Aviation Association has filtered certain information from the TSD related to the movement of corporate jets. Both the FAA and the TSA have evaluated the data distributed over the TSD system and determined that the information provided to consumers through the sale of TSD does not present a threat to national security.

**The National Airspace System (NAS)**

[U] The National Air Space is divided between ATC towers, TRACON Centers, and en-route Centers. Airport Ground Control puts pilots in the "system" once they are cleared for departure. The ATC tower gets the plane in position for take-off and tracks the plane within the tower's air space after take-off. The TRACON picks up the track of the plane once it leaves the tower's airspace. The en-route Center, which has more air space than the tower and TRACON center, works the plane through the air space system. There are 21 en-route Centers located domestically, with a higher percentage of them concentrated in the Boston, Chicago, and Miami "triangle." Some FAA Centers do not have primary radar capability. In recent years, the FAA has consolidated TRACON facilities at individual airports in areas of high volume air traffic to one TRACON that tracks flights from 3-5 airports or bases. This has already taken effect in areas around cities such as New York, Miami, and Washington-Baltimore.

**On September 11<sup>th</sup>, 2001**

[U] Jack Kies said that the ATCSCC was the eyes and ears for information gathering on 9-11. They possessed all the coordinated information for the system on that day. Linda indicated that while there was a military liaison presence at the command center (attached to the Air Traffic Services Cell), it was greater than usual on 9-11 because of previously scheduled activity.

[U] Linda Schuessler was the ATCSCC operations manager on duty that morning. She was in a staff meeting in the conference room adjacent to the Command Center floor (now the national Capitol Region Council Command Center) when she received word of CNN's report that a general aviation flight had hit the World Trade Center North Tower. Controllers were engaged in a standard SPT at the time. John White, who was on the Command Center floor, interrupted Schuessler from her meeting a second time to inform her that a second plane, clearly a commercial jet, had hit the other tower. The meeting

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adjourned and all the participants including Schuessler joined White on the Command Center floor to watch CNN on the big screen.

[U] Schuessler asked controllers at each regional desk to call their field facilities and ask them to report any unusual occurrences, such as loss of radar. A total of 11 unusual instances were reported. One man kept track of the reports on a white board on the Command Center floor. Another individual called out to field facilities to follow up on the reports. John White said that he heard a controller in "strategic planning" calling the airlines to tell them what was going on. White said that ATCSCC (unsure if it was the controller in strategic planning or someone else) contacted the airlines' dispatchers about notifying their aircraft to beware of cockpit intrusion. White said that while it was up to the airlines to make the effort, "the expectation was that they would have contacted their aircraft." No indication was give about what time these notifications to the airlines were made. Every three minutes Schuessler and the two national operations managers (NAMs) on duty that morning (one of whom was Ben Sliney) would huddle in the center of the room and share information. The threat was determined to be terrorism after the second plane hit the WTC. "After the second plane hit the WTC and prior to the plane hitting the Pentagon, we made the conscious decision to ground all flights," reported Schuessler. In the strategic planning area on the floor, the controllers began calling all the air carriers to report that "FAA Command Center was notifying all the ATCs, and advis[ing] the Airlines to alert their crews" that the Command Center was grounding all flights. [CORRECT? Please fill in the context here if you have notes on it]

[U] Meanwhile, John White was talking to the FAA Operations Center about the information the Command Center was receiving. Mr. White was speaking to, among others, Jeff Griffith (Special Assistant to Air Traffic Services), [REDACTED] and [REDACTED] [QUESTION: ADD reference to David Canoles (who now heads the Washington Operations Center) on the teleconference with the Air Traffic Investigation Office from the Command Center conference room - what is this about??]

[U] In addition, Mr. White stated that he and others at the Command Center were calling various military bases on 9-11 in search of military assets, such as fighter aircraft, to defend the surrounding air space. Mr. White stated that "we [the FAA Command Center] became the Department of Defense" on 9/11.

[U] When asked about the military presence at the Command Center, FAA staff confirmed that because the CARF team had a scheduled military movement exercise that day, military personnel were on hand to help man the phones in the conference room. It was not clear, however, who these military personnel communicated with or what exact role they played.

[U] When asked about hijacking protocols and procedures, John White stated that he believed that Claudio Manno, the hijack coordinator for the FAA, reported directly to the Aviation Control Center ("ACC") on 9-11 sometime after the first plane hit the WTC. In a separate exchange with Mr. Kies, he stated that the standard operating procedure in a hijack situation is for a controller to call the supervisor and "notify the military." John

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[U] White said that the command center was "calling all over the military bases to find assets. It was very difficult to get anyone." He mentioned who they were looking for jets, air carriers -- anything to respond. (The sense given to commission staff was that the search for military assets was ad hoc).

[U] FAA staff repeatedly emphasized that the Command Center was in constant communication with approximately 11-13 FAA facilities on September 11, 2001 [QUESTION: where does this number come from? There are more than that, correct?]. John White stated that the Command Center had significant information on all hijacked airplanes except for American flight 77. White said that AA77 was the only flight about which they were "disappointed" because they didn't have information. White or Kies indicated that AA 77 got all the way to Virginia before they picked up the primary target on radar. John indicated that there's a gap in radar coverage at certain altitudes which can contribute to the problem. White further reported the Command Center had "great information" on United Airlines flight 93. According to White, FAA Cleveland Center tracked AA 77 until sometime after 9:00 a.m. when it disappeared from radar. The Command Center thought AA 77 had crashed shortly after it disappeared from radar. FAA lost primary radar on AA 77 on the morning of 9-11. Since there is a gap in primary radar coverage somewhere over Ohio, White theorized that AA 77 may have been lost in Cleveland Center because it traveled through the zone that lacked primary radar capabilities.

[U] John White spoke often with FAA Headquarters on 9-11. According to White and Schuessler the command center had a lot of reports of strange acting aircraft that day. They added a lot of "inaccurate reports" flowed into the Command Center on 9-11. With respect to AA 11, White speculated that a "tag jump" may have generated reports that AA 11 was airborne after it crashed into WTC One. A "tag jump" could have occurred because when a plane turns its transponder off, it is referred to as "coasting." The plane does not "disappear" from the screen when this happens; the controller is simply unable to find any specific information on the plane. The host computer will continue to look for the plane in the system after it loses the transponder signal. Specifically, the host computer will attempt to locate the plane through tracking its primary radar return. It is possible that the host computer could identify the wrong target in such a search.

[U] White indicated he may have talked to the military on 9-11. If he called the military (i.e., NORAD) on 9-11, White believes he would have called CONUS at Cheyenne Mountain in Colorado. The Command Center was cognizant that the military lacked the radar capability to look inside the U.S. airspace on 9-11.

[U] Schuessler ordered all non-essential persons on the physical plant of the Command Center to leave the premises. The nation-wide ground stop was verbally communicated to controllers in the field and planes were actually brought down after the Pentagon was hit. The Command Center made the decision to bring down all air traffic after the Pentagon was hit. Ms. Schuessler indicated that that option was considered before the Pentagon was hit -- when the Command Center made the decision to ground stop all aircraft -- but that course was not chosen. After the Pentagon was hit, the Command Center decided to

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bring down all air traffic and started communicating that order to the field. Subsequently the Command Center sought and received approval for this decision from DOT Secretary Mineta.

[U] In response to Miles Kara's question whether or not SCATANA (security control of air traffic and navigation aids) was declared by the military, Schuessler explained that declaring SCATANA would necessitate not only bringing down all aircraft, but also force the FAA to turn off all navigational equipment and relinquish control of the NAS to the military. According to Schuessler, SCATANA was never called for reasons related to the FAA's need to maintain control over navigational equipment. Therefore, the airspace was not transferred from the FAA to the military on 9-11. In the briefing, none of the FAA staff had recollection of a special ops flight out of BWI to Pope AFB that day; nor did they recollect the C-130 that passed over the Pennsylvania crash site that morning.

[U] According to Mr. Kies, "The only shot controllers at Boston Center and Rome, NY had of finding the planes was to stay on the phone with each other." Without a transponder signal, the controllers resorted to primary radar to locate and manually track flights AA11 and UA175. He explained that primary radar relies on the controller's observation. The controller must contend with a lot of clutter on the screen. The assurance of a positive identification of a target increases only with time. Long-range, secondary radar tracks traffic at higher altitudes and identifies flights with absolute certainty. Turning off the transponder in the plane disables secondary radar. The FAA is looking into installing permanent transponders in aircraft, making it impossible for pilots to turn the device off.

**Potential Additional Disasters Averted on 9-11:**

[U] Jack Kies states that he is absolutely certain that the grounding order that was affected by ATCSCC (not Sec. Mineta) stopped other terrorist plots from occurring. Jack referred to an individual named [REDACTED] who works for NavCanada who told him that Air Canada had a plane scheduled to depart Toronto Canada and arrive at JFK International Airport in New York on 9-11. According to [REDACTED] that plane never got off the ground and authorities found box cutters secreted in the luggage compartments in the first class section of the aircraft and two people who fit a terrorist profile on board. Jack Kies also mentioned the St. Louis incident in which two passengers on a flight that landed after the grounding order, fled the plane and hopped a train.

**ATCSCC in Emergency Situations**

[U] Jack Kies indicated that decision-making for the National Air Space system, including in times of emergency, rests with the ATCSCC. He seemed to indicate that decision-making generated from the command center was even above the WOC. Kies stated, "The buck stops here."

[U] Either John or Jack said the procedure calls for getting the military up to follow a hijacked aircraft.

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**Miscellaneous**

[U] Shirley Miller was queried on whether there were any "lessons learned" on how the system worked on 9-11. She indicated she was unaware of any.

**Second Site Visit to Dulles Air Traffic Control**

[U] The Dulles ATC tower is operated by 10-11 controllers and is approximately 40 years old. Dulles operates 24 hours a day and 7 days a week. On 9-11-01, Dulles had its own TRACON, which was moved to Potomac, Maryland on December 17, 2002, where a large TRACON facility was built to service Dulles, Washington Reagan, BWI, Andrews AFB, and Richmond. On 9-11, the Dulles TRACON was located on the 12<sup>th</sup> floor of the tower. The facility has a direct line to the White House (U.S. Secret Service) which they test on a weekly basis, according to [REDACTED]. A white telephone marked "WH" is located on the wall of the 12<sup>th</sup> floor in the old TRACON area. The Dulles facility is run by Metropolitan Washington Airport Authority. Personnel did confirm there was a direct link to the White House from the TRACON on 9-11 (CAN SOMEONE ELSE CONFIRM WHAT I BELIEVE THEY TOLD US).

[U] Dulles ATC owns and controls a 7.5 mile radius of airspace up to an altitude of 2,000 feet. The Dulles local controllers pass flights to the TRACON facility which, in turn, passes flights to FAA "en-route" centers. The ramp tower, which is operated by the airlines or private entities, controls ramps and gates at the airport.

[U] The Dulles ATC Tower generally has 2 ground controllers, 2 local controllers who clear planes for departure and 1 supervisor. The tower also has a flight data controller who records basic flight information (e.g., destination, flight altitudes, etc.). The tower has an AMASS system designed to prevent runway incursions.

**Dulles ATC on September 11<sup>th</sup>**

[U] [REDACTED] the supervisor of Dulles Tower and TRACON, arrived for work at 6:00 a.m. on September 11, 2001. AA 77 took off from runway 3 and tracked the path of Highway 29 (also referred to as the "Dulles corridor"). [REDACTED] first heard of the World Trade Center attack in the break room (on the 12<sup>th</sup> floor) below the tower. [REDACTED] saw CNN's footage of AA 11 and UA 175 striking the WTC towers. The personnel we met with said they received their information from CNN. The Washington en-route Center notified Dulles' TRACON facility of the World Trade Center crashes. Washington Center advised Dulles TRACON to look for any suspicious aircraft activity and asked TRACON if it had any information regarding AA 77. Specifically, Washington Center talked to the Traffic Management Coordinator in Dulles TRACON regarding AA 77. Washington Center advised Dulles that AA 77 was "unaccounted for." And to keep a look-out for it. [REDACTED] told Air Traffic Management that AA 77 had indeed departed from Dulles and gave them the exact time of take-off. He began searching for the flight on Dulles TRACON's primary radar, which Dulles Tower always displays. According to [REDACTED] the supervisor of Dulles TRACON called the White

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[U] House on the direct telephone line and advised the U.S. Secret Service that AA 77 had just flown over Dulles at a high rate of speed and was headed towards Washington, D.C. In addition, Dulles TRACON's supervisor notified National Airport via a direct telephone line that AA 77 was quickly approaching the area. Dulles TRACON also called Washington Center Traffic Management and Herndon Command Center to warn them about the plane that sped over Dulles and was speeding towards the Washington, D.C. Capital region. During that time, [redacted] said that he was also looking for another United Airlines jet that was reported missing. It was not until after the plane hit the Pentagon that they realized it was AA 77. Personnel we met with said there was not discussion of notifying the Capitol.

[U] [redacted] noted that Dulles initially heard that AA 77 had struck the WTC's North Tower.

[U] Dulles Tower received word from Traffic Management at Washington Center to "sterilize airspace." Command Center had initiated this order to ground all flights. This occurred after the Pentagon was struck by AA 77.

[U] [redacted] was not aware that a C-130 military aircraft was in the airspace and had attempted to identify AA 77. While protocol existed on 9-11 for Dulles TRACON to notify Washington Center Traffic Management, Herndon Command Center and the FAA Regional Operations Centers, no such protocol existed to notify the military.

[U] The personnel we talked with were unaware of any actions taken to check the grounded airplanes for terrorists once they were grounded by the order to clear the skies.

**Changes Implemented after September 11<sup>th</sup>:**

[U] Subsequent to the events of September 11<sup>th</sup>, the FAA developed a "more robust" communications system. Washington Operations Center Headquarters' Air Traffic Management has a moderator on an open telephone line that connects all major TRACONs, traffic management centers and "tower caps" in the United States. Procedures for flight crew in the event of a hijacking or in response to suspicious activity are broadcast over the Domestic Event Network (DEN) which includes the military, the Herndon Command Center, larger TRACONs, and en-route Centers. The DEN is run by the Washington Operations Center 24/7.

9/11 Closed by Statute

The creation and implementation of DEN is a significant change in the system since September 11<sup>th</sup>.

[U] The FAA has initiated crisis management drills with Department of Homeland Security focused on, "what if?" scenarios.



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[U] Of the hundreds of radar facilities located throughout the country, the military only attached itself to coastal locations before 9-11-01 because it positioned itself to detect a threat coming from abroad, rather than within the U.S. borders. Now, the military has access to all domestic radar.

**Miscellaneous**

[U] --Dulles is the diversion airport for airplanes going into National that show some kind of problem or suspicious activity, including NORDO, transponder off, airspace violation, course deviation, etc.

[U] --TSA is doing a MANPAD assessment at airports. One of the Dulles personnel we talked to thought it was a matter of when, not if, an airplane is attacked by a MANPAD.

[U] --When asked about the subject, one of the personnel indicated that he was concerned the heightened profile and awareness for security issues can take the controllers eye off of managing aircraft and airspace.

**Follow Up**

[U] Shirley Miller said she would try to obtain for the Commission copies of the recorded phone conversations from Command Center on September 11<sup>th</sup>. She reiterated that calls on administrative lines were not all recorded. Miller could not say with certainty if there was an "after-action" report done by the FAA following the attacks. She responded that routinely voice/data information is collected and given to the Air Traffic Investigation Office. David Knowles synthesized that information into a book organized by flight after September 11<sup>th</sup>. That information was delivered to the National Transportation Safety Board, which ultimately turned it over to the FBI for the criminal investigation. The NTSB, for its part in the investigation, corroborated the FBI's findings that the attacks were not attributed to a mishap on the part of the FAA, but rather, to the deliberate steps taken by the terrorists. Again, Miller promised to advise the Commission whether a narrative and/or after-action report was written after the attacks.