Memorandum

U.S. Department of Transportation
Office of the Secretary of Transportation
Office of Inspector General

Subject: ACTION: OIG Investigation #I09Z000003SINV, Re: Memphis Air Traffic Control Facilities OSC File No. DI-07-2471

Date: May 19, 2010

Reply to Attn. of: R. Engler

From: Robert A. Westbrooks
Acting Assistant Inspector General
for Special Investigations and Analysis, JI-3

To: Judith S. Kaleta
Assistant General Counsel for General Law
Office of General Counsel

This memorandum follows up on emails to the Department from U.S. Office of Special Counsel (OSC) dated April 9, 2010, and March 30, 2010, requesting supplemental information from the Office of Inspector General's investigation into aviation safety concerns at Memphis International Airport's air traffic control facilities. We respectfully request that you forward this information to OSC.

1. **OSC request:** Please identify the date which Runway 27 became operational.

OIG response: November 30, 2009.

2. **OSC request:** Did FAA complete a risk assessment study regarding simultaneous independent operations on Runway 27 and 18R?

OIG response: Air Traffic Organization - Safety conducted an assessment; however, the report has not yet been finalized.

3. **OSC request:** Did AOV audit Memphis' simultaneous independent operations on Runway 27 and 18R within 90 days of implementation?

OIG response: Yes, in February 2010.

4. **OSC request:** Was the ATC briefing conducted? If so, when and was the briefing written or verbal? If written, please provide a copy.

OIG response: Memphis ATCs were briefed on Runway 27 prior to its re-opening. Briefings were conducted in four phases, beginning mid-October 2009, on applicable FAA orders, handling of go-arounds on Runway 27, CRDA operations and procedures, and midnight operations. The briefings were oral. However, simulation training was also provided to the ATCs in Atlanta by the FAA's contractor.

5. **OSC request:** "The report states . . . that AOV plans to determine how often wake turbulence is encountered by aircraft landing on Runway 27 and 18R during simultaneous independent operations. Will the review of wake turbulence be included in AOV's audit of operations, or will it be a separate review? If it is a separate review, has it begun? If not, when is it scheduled to begin?"

OIG response: Our report inadvertently misstated that "AOV plans to determine how often wake turbulence is encountered by aircraft landing on either Runway 18 or 27 during simultaneous independent operations." To explain, the OIG received an email from an AOV manager stating that "AOV is planning to conduct a follow-up audit of MEM Rwy 27 vs Rwy 18 wake turbulence issue by the end of FY2010." We later learned that the audit relates to possible wake encountered during Runway 18 and 27 simultaneous dependent operations (i.e., arrival operations on Runways 18L or 18C and 27). This audit is separate from that discussed in Number 2 above and is expected to take place during FY 2010.

6. **OSC request:** "The investigation also reviewed air traffic events from October 1 to December 16, 2008 and found that of the 75 events for which the digital audio and radar audio playback terminal operational recordings were available, 35 were most likely operational errors and 3 events were operational errors. Given this significant finding . . . did the investigators review whether this represented intentional underreporting by FAA officials? If not, why not especially in light of the intentional misconduct found to exist at facilities such as Dallas/Fort Worth? If it is not intentional underreporting, to what do the investigators attribute this level of underreporting?"

OIG response: We did not report that, of 75 events, "35 were most likely operational errors." We reported that of the 75 events for which digital audio tapes and radar tapes were available, "35 events occurring on December 2, 3, 9, 10, 15, and 16, 2008, were most likely to *present* an operational error." (Emphasis

added.) We based this initial conclusion, in part, on our review of notes on the events kept by one of the whistleblowers. Upon examining those 35 events in more detail, however, we identified only three actual operational errors - meaning that 32 were *not* operational errors. Of the three, only one was misclassified by *management* as a non-event and two were not reported by the *controller* — a number insufficient to raise suspicion of a cover-up. Memphis management misreported one event that should have been an Operational Error which equals 3% (1 of 35 events) as opposed to Dallas-Fort Worth's 25% of misreported operational errors (OIG Report CC-2007-083, page 8). Based upon the professional judgment of the OIG/AOV investigative team, there was insufficient specific evidence to suggest an intentional cover-up by management

In addition, we considered the following actions by FAA which are designed to improve the reliability of reporting operational errors at terminal facilities. First, FAA developed an automated system (Traffic Analysis and Review Program or TARP) to identify when operational errors occur at terminal facilities. FAA plans to have TARP used as a full time separation conformance tool in 2011. Meanwhile it is being used to conduct monthly audits of radar data. It was implemented at Memphis in December 2009 as an audit tool. Second, in 2008 FAA began to implement a voluntary reporting system (Air Traffic Safety Action Program or ATSAP) where controllers can anonymously report potential safety concerns (to include operational errors) without fear of reprisal. ATSAP was implemented at Memphis in May 2010.

7. **OSC request:** "Did the investigation review the application of the Converging Runway Display Aid (CRDA) technology at Memphis and whether air traffic controllers received adequate training on the system, whether the misapplication [of] CRDA resulted in losses of separation, the failure to issue go-arounds or presented other safety concerns?"

OIG response: OIG did not review the application of and ATC training on the CRDA technology because these issues were not raised in the OSC investigative referral. In addition, CRDA was not operating during our investigation because Runway 27 was closed for reconstruction. However, because of the re-opening of Runway 27, all ATC personnel received either initial or refresher CRDA training. Finally, we did not find that the misapplication of CRDA was a contributing factor in the three operational errors we identified.

8. **OSC request:** "FAA was also to brief all Memphis air traffic controllers within 30 days that a loss of separation must be reported to a manager or a controller-in-charge, and on the need to conduct Quality Assurance Reviews in

sufficient detail so that the system performance can be assessed with reasonable accuracy. Has this review taken place? If so[,] was additional written guidance or instruction issued?"

OIG response: In January and February 2010, ATC personnel were individually briefed by their supervisors about their responsibility to report suspected operational errors. The Quality Assurance staff was briefed by the ATC Support Manager in November 2009 on our findings and instructed on the importance of conducting a review that is sufficient to ensure operational performance.

9. **OSC request:** Provide clarification on the meaning of "best practices" in Memphis' Standard Operating Procedures for "go-arounds" arising out of Runway 27 and 18R arrival operations," how often refresher training is scheduled and what it constitutes," and "[d]oes the training regularly include the issue of go-arounds?"

OIG response: Memphis' Standard Operating Procedures include "mitigations" or actions to be taken to reduce any hazardous impact of a go-around, which we characterized as "best practices" in our report. For example, the Local Controller announces to the cab when a missed approach is initiated (i.e., runway 27 go-around) and issues traffic information to aircraft landing on the parallel runways (i.e., 18R) when a potential conflict occurs with runway 27. These mitigations, sometimes referred by FAA as "practices," were also discussed in the 2007 Safety Risk Management Document referred to in our Report of Investigation.

Refresher training is scheduled at the facility on **a quarterly basis**. Refresher training generally includes a review of any new procedures or concerns involving the operations of the facility. According to facility management, go-arounds are always included as a topic of discussion. Also, go-arounds are often discussed in weekly team briefings.

10. **OSC request:** "Identify the names of the three individuals identified in the report only as 'Air Traffic Controllers.'"

OIG response: One ATC, Roman Greene, a Terminal Radar Approach Control ATC, agreed to the release of his name. The remaining two ATCs requested confidentiality pursuant to the Inspector General Act of 1978, as amended. Under the IG Act, the Inspector General shall not disclose the identity of any individual without the consent of the individual. OIG Chief Counsel will separately discuss this legal issue with OSC, and we will supplement our answer to #10 based on these discussions (if necessary).

If you have any questions or concerns, please contact me at (202) 366-1415, or Director of Special Investigations Ronald Engler at (202) 366-4189.

Federal Aviation Administration

Memorandum

Date: MAY 14 2010

To: Mr. Robert Westbrooks, Acting Assistant Inspector General for Special Investigations and Analysis

From: Anthony S. Ferrante, Director, Air Traffic Safety Oversight Service, AOV-1

Prepared by: Jonathan Gray, Manager, Operational Safety Branch, AOV-120, Ext. 7-8197

Subject: Follow-up Audit Requested by OIG Concerning Whistleblower Allegations of Unsafe Air Traffic Configurations at Memphis (MEM) Air Traffic Control Tower, Case #109Z000003SINV, November 6, 2009

SUMMARY

In response to the above referenced investigation AOV conducted an audit on February 24, 2010 to determine if the Air Traffic Organization (ATO) has enacted safety mitigations at the Memphis International Airport air traffic control tower (MEM ATCT). These mitigations were to prevent aircraft arriving to Runway 27 from conflicting with the flight path of aircraft arriving to runway 18R in cases where the Runway 27 aircraft executes a missed approach or "go-around." Operations on Runway 27 were initially discontinued, but recommenced on November 30, 2009 upon completion of Runway construction. The FAA concurred with a recommendation to conduct a risk assessment study of simultaneous independent operations on Runways 27 and 18R. At the time of this report, a signed copy of the assessment has not been provided to AOV. AOV auditors found that the facility had trained employees on the Runway 27 operation, but had not developed any specific procedures that would mitigate a safety risk associated with missed approaches or go-arounds for operations on Runways 27/18R.

BACKGROUND

At the recommendation of the OIG and concurrence of the FAA, AOV conducted a follow up audit at the MEM ATCT regarding alleged unsafe operations involving Runways 27 and 18R. The audit focused on the ATO response to the above referenced OIG investigation (case #109Z000003SINV). Through this audit, the auditors sought to determine if the ATO had taken appropriate measures to mitigate the safety risk associated with operations on the aforesaid runways.

FINDINGS

The specific OIG recommendation, ATO response, and audit findings are noted below:

OIG Recommendation

> **Allegation 1 – recommendation**: When Runway 27 is used for arrivals, an aircraft executing a go-around or missed approach maneuver could come into conflict with traffic landing on Runway 18R. Given the frequency of go-arounds at Memphis, the use of Runway 27 for arrivals presents a significant threat to public safety. *Within 30 days of opening Runway27, FAA should conduct a risk assessment study regarding simultaneous independent operations on Runway 27 and 18R. In addition, we recommend AOV audit these operations within 90 days of implementation to ensure that appropriate safety mitigations are in place and complied with.*
>
> **Response:** Concur. The FAA will conduct a review of the simultaneous independent operations on Runway 27 and 18R within 30 days of the reopening of Runway 27. Additionally, the Office of Air Traffic Safety Oversight Service, (AOV) will audit the Runway 27/18R operation within 90 days of implementation.

The ATO communicated to AOV they were on site at MEM the week of January 18, 2010. As of April 21, 2010, a signed copy of the results of their assessment has not been provided to AOV.

While on-site at MEM the AOV auditors observed that tower controllers were not landing aircraft on Runway 27 simultaneously with arrivals to Runways 18L, 18C, and 18R. Radar data recordings were reviewed from three shifts of daytime operations and one midnight shift where the facility was landing aircraft on Runway 27 simultaneous with arrivals to Runways 18L, 18C, and 18R. No missed approaches or go-arounds were observed during the review of the data.

AOV auditors requested all training documentation relating to the reopening of Runway 27 at MEM. A review of the requested documentation revealed that prior to reopening Runway 27 all operational personnel received a verbal refresher briefing. The briefing was titled "RWY 27 refresher SOP and Orders." The training covered procedures and orders applicable to Runway 27 operations. The power point presentations for this briefing referenced MEM Order 7110.65 which notes a potential trouble spot as "Runway 9/27 missed approach." Nothing specific to Runway 27/18R arrivals was mentioned.

All personnel also participated in an operational discussion session that covered topics associated with Runway 27 operations. While it could not be determined exactly what was discussed, the "talking points" document for the discussion included references to go-arounds and missed approaches. Nothing specific to Runway 27/18R was noted.

Personnel with little or no experience with Runway 27 operations were identified by MEM and provided tower simulation training as well as lab problems on Converging Runway Display Aid (CRDA). The training plan for the reopening of Runway 27, indicated scenarios would be given on Runway 27 go-arounds; however, it did not specify whether the go-around was in conjunction with a Runway 18R arrival.

Subsequent to the refresher briefing above, the facility issued a change to MEM Order 7110.68, Use of Converging Runway Display Aid (CRDA) During Visual Flight Rules Conditions. This change was briefed to all personnel; however, not all personnel received the briefing prior to the effective date of the change. CRDA is utilized between Runways 18L/C and 27; however, it is not applicable to Runway 18R.

All personnel were also briefed on MEM Notice 7110.182 which amended MEM Order 7110.65. Notice 7110.182 clarified coordination and responsibilities. However, nothing specific to Runway 27/18R operations was amended.

Receipt of the above training was confirmed through review of each employee's official training record whereby employees acknowledge receipt by signing a page containing all training they have received in the last 90 days. However, additional documents, "Read and Initial cover sheets," provided to AOV to support validation of training were not initialed by individual employees. Instead, there were multiple employees with the same initials and on one document there were individual initials but all in the same handwriting. It should be noted that entry of training into the official record prior to signature is accomplished by transference of data from these cover sheets.

Other than heightened awareness of potential safety issues when Runway 27 is in use the AOV audit found no evidence of safety mitigations specific to Runway 27/18R operations.

If you have any questions, please contact Jonathan Gray, Manager, Operational Safety Branch, at (202) 267-8197.

cc:

Hank Krakowski, Chief Operating Officer, AJO-0
Robert Tarter, Vice President, Office of Safety, AJS-0
Richard L. Day, Senior Vice President, Operations, AJN-0

U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
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DEC 3 2007

The Honorable Scott J. Bloch
The Special Counsel
U.S. Office of Special Counsel
1730 M Street, NW.
Washington, DC 20036

Ref: OSC File No. DI-07-2471

Dear Mr. Bloch,

Secretary Peters asked me to respond on her behalf to your October 3 letter referring to a whistleblower disclosure alleging Memphis Federal Aviation Administration officials may have violated laws, rules, and regulations that would constitute a danger to public safety. As a result, she asked us to conduct an investigation into the alleged violations at Memphis International (MEM) Airport Traffic Control Tower (ATCT) and Terminal Approach Control (TRACON). We have concluded our investigation and the results are described below, in accordance with 5 U.S.C § 1213(d).

SUMMARY

The FAA Air Traffic Safety Oversight Service (AOV) and the Air Traffic Organization, Office of Safety Services (ATO-S) conducted an investigation at MEM from October 22 to November 16. The investigation addressed allegations concerning: safe and proper use of arrival procedures to runways (RWY) two-seven and one-eight left/center/right (RWY27, RWY18L/C/R); management's failure to disclose safety violations; simultaneous departures from RWY27 and RWY18L/C/R during the midnight shift; recent workforce schedule changes; MEM tower regularly exceeding limitations on tailwinds; improper lighting in the MEM TRACON; and improper adherence to classification bravo (Class B) airspace procedures.

Investigators interviewed management personnel, the National Air Traffic Controllers Association (NATCA) facility representative, the whistleblower, approximately 12 Certified Professional Controllers, 2 Operations Managers, 9 Front Line Managers (FLM), 2 Support Managers, the Air Traffic Manager (ATM), and the Assistant Air Traffic Manager. Investigators collected and analyzed facility orders, training materials, records, radar data, and voice

re-recordings. The investigative team also observed both tower and TRACON operations at various times including the midnight shift. We were unable to substantiate the whistleblower's allegations with the exception of the failure of a single individual to report three incidents (operational errors) during a single work shift and the Class B airspace procedures. No other violations of law, rule, or regulation and no substantial or specific danger to public safety by management personnel or air traffic control specialists at MEM ATCT or TRACON were found. A specific review and analysis of each allegation and the air traffic rules, regulations, and procedures applicable to MEM are detailed in the following paragraphs.

INVESTIGATION RESULTS

The first issue identified by the whistleblower was the possible conflict with one aircraft executing a go-around while attempting to land on RWY27 and another aircraft attempting to land on RWY18R because the Converging Runway Decision Aid (CRDA) only provides separation from aircraft arriving to RWY18L and RWY18C. RWY27 and RWY18R do not intersect, nor do their final approach courses. Simultaneous arrivals to these runways are only authorized when weather conditions provide controllers the ability to visually observe and when authorized to provide visual separation. The procedures for simultaneous arrivals on RWY27 and RWY18R meet all requirements in FAA Order 7110.65, Air Traffic Control, concerning intersecting runways and flight paths (Chapter 3, paragraph 3-9-8). MEM managers have also routinely met with airport users to determine the safest types of aircraft to land on RWY27 and have cooperatively decided to prohibit heavy aircraft (typically wide body jets exceeding 255,000 lbs.) from landing on RWY27 due to a lack of maneuverability. An increased margin of safety is provided by allowing only smaller airplanes to use RWY27 in the event an aircraft is not able to successfully complete a safe landing.

The whistleblower also stated that an aircraft executing a go-around from RWY27 would be at risk of a wake turbulence encounter from the flight path of a heavy jet arrival to either RWY18L/C/R. FAA Order 7110.65, Air Traffic Control, Paragraph 7-2-1a.2, prohibits a tower controller from providing visual separation when additional wake turbulence spacing (such as for a heavy jet) is required. Investigators identified procedures in MEM notices and training methods that instruct controllers to separate a RWY27 go-around aircraft from traffic utilizing RWY18L/C/R, by turning the aircraft south, paralleling the RWY18 traffic and passing above and behind the landing airplane or turning the go-around to the northwest. (This is a safe method that meets all FAA requirements contained in FAA Order 7110.65.) We also found, in some cases, the traffic landing on RWY18L/C/R may also be given alternate instructions to provide additional spacing or separation. The approach end of RWY27 is approximately one mile from the nearest runway, RWY18L, and over two miles from RWY18R. We found that this distance, combined with the weather requirements for this airport configuration, provide an appropriate level of safety, and meets all FAA requirements regarding wake turbulence separation for intersecting runways and flight paths contained in FAA Order 7110.65, Air Traffic Control, Paragraph 3-9-8b.3.

The whistleblower stated a FLM allowed operational errors to occur and failed to report these incidents. Investigators learned from the ATM, Mr. William K. Wertz, that the situation had indeed occurred and that he too found the actions of the FLM unacceptable when made aware of the incident. We learned that MEM management became aware of the incident nearly eight hours after it had occurred, when an Air Traffic Control Specialist reported to a supervisor that an error might have occurred the previous day. During the review of the shift in question, quality assurance personnel identified three operational errors and processed those incidents in accordance with quality assurance program requirements.

Investigators reviewed operational error packages MEM-T-07-E002, E003, and E004 associated with those incidents, as well as the corrective actions taken by the ATM. The review indicated that FLM, Mr. Herbert Brown, did not accurately recognize what had occurred and then failed to investigate and report those incidents as required by FAA Order 7210.56, Quality Assurance. The ATM found FLM Brown responsible for two of the errors and at fault for failing to properly address all three occurrences. As a result, FLM Brown was suspended for one day and assigned remedial instruction consisting of approximately eight hours of classroom refresher training, ten hours of on-the-job training in the control tower, and a follow-up performance evaluation. The MEM ATM also determined that FLM Brown "exercised very poor judgment [and failed] to properly evaluate and address these issues in a timely manner, [causing a negative impact to] the safety and efficiency of the service that this facility provides to the users." In addition to remedial *technical* training, FLM Brown was assigned forty-one hours of academic training, (to specifically address team building, communications, and leadership) recertification on all operational positions, and daily, direct supervision from an Operations Manager for one additional month. Investigators found that FLM Brown successfully completed all necessary requirements prior to resuming his duties as a FLM and that these incidents were handled appropriately by the MEM ATM.

During midnight shifts, MEM ATCT commonly uses a configuration in which aircraft depart and land on RWY27 and depart from RWY18L/C/R. This operation, used from 3:30 a.m. until 4:45 a.m., consists of approximately 160 Federal Express (FedEx) departures, and 5 arrivals. Some 25-30 airplanes typically depart from RWY27, while the remaining airplanes use RWY18L/C/R. Because of the MEM airport layout, RWY18 traffic must cross RWY27. The whistleblower alleged this number of runway crossings is unsafe. We found, however, that MEM ATCT developed specific operating practices over ten years ago to mitigate the increased risk of a runway incursion during this specific operation. We determined that these procedures are compliant with all FAA requirements. In addition, a review of runway incursion databases showed lower than average numbers indicating that these additional safeguards have proven effective.

The complaint also states that Airport Movement Area Safety System (AMASS) is not certified for use on RWY27. While there are no rules or regulations that require an airport to have surface movement radar, it is a safety enhancement available for surface movements. AMASS is only available for those portions of the airport that are within view of the Airport Surface Detection Equipment (ASDE), a ground-based radar system. During installation of the ASDE at MEM, it was not physically possible to locate the antenna on the control tower due to weight limitations. As a result, the antenna was placed on a separate structure providing the maximum coverage of

the airport. RWY27 could not be covered by this antenna due to terrain and building locations. Current plans have already been approved for more advanced surface movement radar; ASDE-X is schedule to be installed at MEM in late 2009. This improved system is able to use multiple radar sensors and is not limited by elevation or obstructions. Once this system is operational, RWY27 will be provided with the same radar coverage as all other runways at MEM.

The whistleblower stated that recent schedule changes have resulted in controllers with less experience working the midnight shift. Investigators learned through interviews with facility managers that previous schedule imbalances had resulted in some controllers working midnight shifts almost exclusively while others rarely worked the shift. This resulted in complaints by controllers of unfamiliarity with the different traffic situations and presented a potential safety problem. MEM quality assurance personnel also reported that this unfamiliarity with the demands of the midnight shift may have contributed to other safety incidents. To address these potential safety problems, MEM implemented a new schedule that more evenly distributed midnight shifts among all air traffic control specialists, reduced the total number of quick-turns throughout the schedule, and ensured all controllers are exposed to the various types of operations associated with each shift.

The whistleblower asserted that MEM ATCT and TRACON personnel regularly violate FAA and facility guidance for runway tailwind limitations. All personnel interviewed stated that FedEx provides input regarding operational requirements via telephone conferences with the Memphis Air Route Traffic Control Center (ZME) Traffic Management Unit (TMU). Collaborative decision making is a standard FAA practice nationwide to determine effective traffic management controls; this system has proven effective in providing safe air traffic volume controls for airports, approach control airspace, and en route flows. Supervisors reported to investigators that they are responsible for determining runway configurations due to wind and numerous other factors. Those determinations are then communicated to ZME TMU so that traffic flows can be changed to comply with the decisions made by MEM. FAA Orders 7110.65, Air Traffic Control, Paragraph 3-5-1 and 7210.3 Facility Operation and Administration, Paragraph 10-1-7, provide the requirements for runway selection; however, MEM ATCT has a more comprehensive runway wind usage chart due to the large number of heavy aircraft operating at the airport. Individual pilots also have the responsibility to only operate on runways according to strict aircraft operating parameters. Investigators found no evidence of increased go-arounds, unusual runway requests, or other safety incidents to support the allegation of inappropriate runway configurations at MEM.

The whistleblower indicated that glare on the Standard Terminal Automation Replacement System (STARS) displays compromised safety. Investigators learned that STARS is designed to safely operate in better lighting conditions than other systems previously used in radar facilities. After the initial STARS installation at MEM, FAA-approved upgrades were made to improve the lighting in the TRACON. Managers at MEM reported that increased light levels provided a safer working environment while remaining compliant with STARS operating specifications. During interviews, air traffic controllers and supervisors said that in the past there were reflections on displays from ambient light sources, but the effect was never unsafe. Thus we found that lighting conditions in the control room did not compromise safety, as alleged by the complainant.

Regarding the improper adherence to classification bravo (Class B) airspace procedures, controlled airspace regulations indicate the following: FAA Order 7110.65, Air Traffic Control, Paragraph 7-9-3a, specifies "*to the extent practical*" larger aircraft *should* remain within Class B airspace but also acknowledges that it may be necessary to extend an aircraft flight path outside Class B for spacing so long as it is infrequent and pilots are informed when it is done. 14 CFR Section 91.131 provides for the same exception and further clarifies that "such authorization *should be the exception* rather than the rule." Ongoing evaluations conducted by AOV and ATO-S that precede this complaint, indicate that aircraft exiting and re-entering Class B airspace are not always provided the appropriate advisories as required by FAA Order 7110.65, Paragraph 7-9-3. Facility management indicated that this requirement has been an area of emphasis by FLMs during performance evaluations, and that facility management will continue to monitor performance in this area and ensure compliance with referenced requirements. At MEM specifically, the Class B airspace was realigned in October of 2002 to coincide with the relocation of a navigational aide; managers and controllers who have worked at MEM since before the change reported that vectors outside the protected airspace are much less common now.

CONCLUSIONS

We were unable to substantiate the whistleblower's allegations with the exception of the failure of a single individual to report three incidents (operational errors) during a single work shift and the Class B airspace procedures. Specific to the reporting of incidents, we found that although FLM Brown did not recognize that the incident occurred, another air traffic controller reported an incident and MEM management appropriately reviewed the event, determined and reported that three operational errors had occurred and that MEM management took appropriate actions to remediate FLM Brown. No other violations of law, rule, or regulation or substantial and specific danger to public safety by employees of MEM ATCT were found. The new CRDA procedures implemented for simultaneously landing on RWY 27 and 18L/C are safe and compliant with FAA orders. MEM conducts frequent and thorough quality assurance and performance reviews, and no evidence was found of MEM personnel failing to report safety violations. The procedures supporting simultaneous use of RWY 27 and RWY18L/C/R during the midnight shift have been in use for over ten years at MEM and are more restrictive than FAA requirements while providing an appropriate level of safety.

While schedule negotiations between facility management and NATCA were not completed, the work schedule is compliant with all FAA orders and the Collective Bargaining Agreement, dated June 5, 2006. MEM appropriately plans and reviews operational configurations with airport users and traffic management personnel at ZME several times each day, and no evidence was found of non-compliance with the wind and runway guidance. Lighting levels in the MEM TRACON were found to be appropriate and ambient lighting was not found to produce unsafe glare on the radar displays. Ongoing evaluations conducted by AOV and ATO-S that precede this complaint, indicate that aircraft exiting and re-entering Class B airspace are not always provided the appropriate advisories as required by FAA Order 7110.65, Paragraph 7-9-3. Facility managers are aware of this noncompliance and continue to monitor performance in this area to ensure compliance with existing requirements.

FOLLOW-UP ACTIONS

Because of the recent implementation of CRDA procedures, we will conduct a safety audit of those procedures within six months to evaluate the simultaneous use of RWY 27 and RWY18L/C. AOV and the ATO-S will continue to monitor compliance with the requirements of Class B airspace.

Sincerely,

Robert A. Sturgell
Acting Administrator

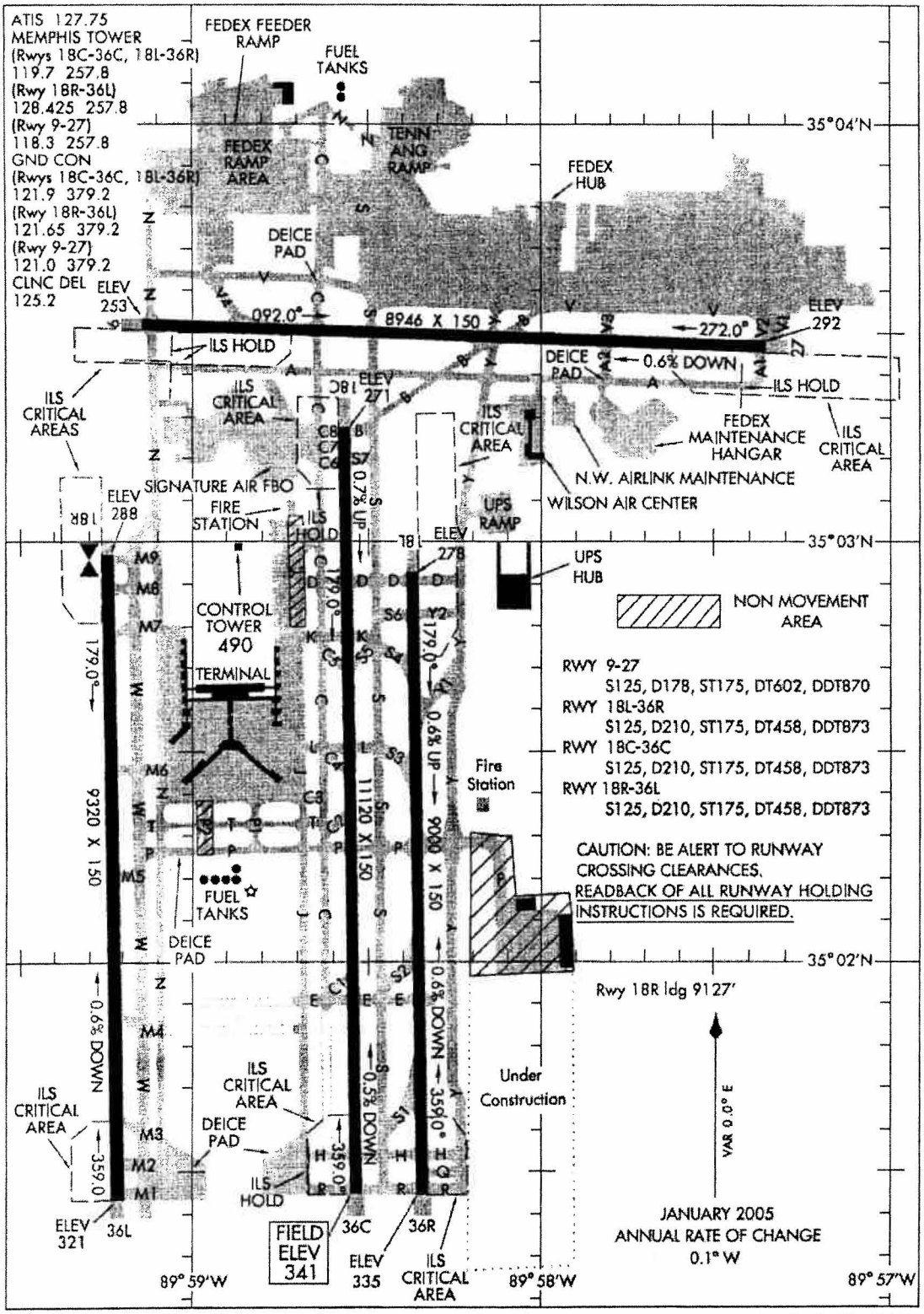
Enclosure

07186

AIRPORT DIAGRAM

AL-253 (FAA)

MEMPHIS INTL (MEM)
MEMPHIS, TENNESSEE



AIRPORT DIAGRAM

07186

MEMPHIS, TENNESSEE
MEMPHIS INTL (MEM)

U.S. Department
of Transportation
**Federal Aviation
Administration**

Aviation Safety
Air Traffic Safety Oversight Service (AOV)

800 Independence Ave.
Washington, DC 20591

DEC 21 2007

Scott J. Bloch
The Special Counsel
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1730 M Street, N.W., Suite 300
Washington, DC 20036-4505

Ref: OSC File No. DI-07-2471

Dear Mr. Bloch,

In response to a letter from the Office of Special Counsel dated October 3, 2007, OSC File No. DI-07-2471, the FAA conducted an investigation at Memphis International (MEM) Airport Traffic Control Tower during October and November 2007 and provided a response dated December 3, 2007. Subsequently, the FAA Air Traffic Safety Oversight Service (AOV) conducted a follow-up investigation based on additional information; therefore the following report is provided in accordance with 5 U.S.C § 1213(d).

On November 21, 2007, Mr. Peter Nesbitt contacted AOV to report safety violations that may have occurred at MEM ATCT during a midnight shift; from 10:00 p.m., November 13, 2007 until 6:00a.m., November 14, 2007. AOV is also in receipt of an email from Mr. Nesbitt, dated November 23, 2007, in which he had additional concerns.

Mr. Nesbitt alleged that on November 14, 2007, the Airport Movement Area Safety System (AMASS) issued an alert that was too late for control instructions to be effective and secondly, he had concerns about the Converging Runway Display Aid (CRDA) procedures.

Mr. Nesbitt stated that an AMASS warning was given to an arriving aircraft while that aircraft was touching down because the previous aircraft was exiting but still too close to the runway. Mr. Nesbitt was not responsible for that particular runway but said it appeared to him and the other controllers that the previous aircraft was "clear of the runway." Mr. Nesbitt said that the warning given was too late for the aircraft to execute a rejected landing.

AOV reviewed the operational logs at MEM ATCT and investigated the surface movement radar activity for the time period reported. No technical data exists indicating a safety alert by AMASS nor do the logs indicate any false alerts were issued during the referenced time period. Mr. Nesbitt's description of the event does not indicate that a safety violation occurred but only raised concerns about the taxi activity/instructions by an individual flightcrew. After receiving Mr. Nesbitt's email, AOV personnel called him and reviewed the FAA regulations relating to "clear of the runway" with Mr. Nesbitt and referred him to his supervisor or instructors for further clarification, if necessary. Additionally, AOV staff explained to Mr. Nesbitt that

AMASS warning parameters are based on proximity of aircraft and closure rates and do necessarily match the same guidelines used by air traffic controllers.

During the phone conversation Mr. Nesbitt had questions about the CRDA procedures and requirements at MEM. At no time did Mr. Nesbitt disclose safety violations, but he did advise that supervisors and controllers had used a variety of techniques during CRDA operations. AOV recommended that Mr. Nesbitt review the events of the November 13, 2007 midnight shift, along with his instructor and the supervisor on duty. If questions still remained, he should address them with his own supervisor or training department personnel. AOV advised Mr. Nesbitt that a review of the AMASS event would be conducted.

Later, on November 26, 2007, Mr. Nesbitt carbon copied AOV on an email that alleged further safety violations occurred on November 25, 2007, involving MEM air traffic control personnel and Frontier Airlines Flight 754 (FFT754). Mr. Nesbitt was working the west final control position at MEM TRACON and was responsible for traffic landing on runway 36 left (RY36L). While FFT754 was on final approach to RY36L separation was rapidly decreasing with an aircraft on a parallel runway; the tower supervisor ordered Mr. Nesbitt to cancel FFT754's approach clearance and re-sequence the aircraft. Mr. Nesbitt alleged that the action was either unnecessary or untimely.

AOV found no violations of separations standards or requirements for conducting parallel, *dependent* approaches (commonly referred to as *staggers*). While Mr. Nesbitt alleges that he was not informed that simultaneous *independent* approaches (commonly referred to as *simuls*) had been terminated in a timely manner, the investigation found that Mr. Nesbitt was made aware of the operation in sufficient time to apply appropriate procedures for the aircraft under his responsibility.

AOV also determined that the actions of the tower supervisor, concerning FFT754, were very timely in preventing a loss of separation.

During the follow-up investigation, AOV found no violations of laws, rules or regulations that would constitute a danger to public safety. AOV continues to maintain an "open door" policy for allegations of safety violations and is available to discuss these findings if necessary.

Sincerely,

Anthony S. Ferrante
Director, Air Traffic Safety
Oversight Service (AOV)