



U.S. OFFICE OF SPECIAL COUNSEL
1730 M Street, N.W., Suite 218
Washington, D.C. 20036-4505
202-254-3600

**Analysis of Disclosures, Agency Investigation and Reports,
and Whistleblower Comments**

**OSC File Nos. DI-11-1675 and DI-11-1677
(Vincent Sugent and Brian Gault, Detroit, MI)**

Background

The allegations in these matters were disclosed by two whistleblowers from the Department of Transportation (DOT), Federal Aviation Administration (FAA), Detroit Metropolitan Airport (DTW), Detroit, Michigan. Mr. Vincent Sugent and Mr. Brian Gault (the whistleblowers), Air Traffic Controllers who consented to the release of their names, disclosed that officials at DTW are engaging in conduct that constitutes gross mismanagement and a substantial and specific danger to public safety. They alleged that current rules for protecting airspace in the event of a missed approach are in direct conflict with rules for maintaining separation between aircraft arriving and departing on parallel runways, resulting in unavoidable operational errors and a risk to safety.

Since 2008, Mr. Sugent has brought multiple disclosures to the Office of Special Counsel (OSC), reporting unsafe procedures in the operation of air traffic at DTW.¹ The majority of those allegations have been substantiated by the OSC-directed agency investigations.

In this matter, Mr. Sugent, joined in his disclosure by Mr. Gault, has raised concerns that were once again substantiated. As discussed below, OSC has concluded that the safety issues raised in this current disclosure are far from resolved. At a minimum, the agency has been on notice since December 25, 2009 that the facility's simultaneous operations on parallel runways may violate FAA Order 7110.65. The conflict presented by the whistleblowers has yet to be satisfactorily resolved over two years later. It is unacceptable that after an incident in which airplanes came dangerously close together that a controller should have to persist so long in raising the alarm both inside and outside the agency to ensure that an appropriate review of the matter is initiated.

Specifically, Mr. Sugent and Mr. Gault disclosed that two FAA rules are in direct conflict with each other and cannot be simultaneously observed. These inconsistent requirements create confusion, put controllers in the untenable position of committing regular operational errors (which usually go unreported), and create a threat to public safety. Controllers in the air traffic control tower are charged with keeping aircraft properly and safely apart while efficiently

¹ In January 2011, OSC selected Mr. Sugent as the recipient of its Public Servant Award for 2010, in recognition of his substantial contribution to public service through his disclosures of serious aviation safety hazards and public health risks at DTW.

landing and departing. At DTW, similar to other airports nationally, controllers land and depart aircraft simultaneously on parallel runways. They are required to keep these aircraft a certain distance apart, while also protecting airspace in the event that an arriving aircraft cannot land and must “go around” for another attempt. Mr. Gault and Mr. Sugent alleged that in poor weather conditions when aircraft are not visible and radar separation is in use, they are not always able to follow all of the requirements for keeping these planes apart.

On May 19, 2011, OSC referred the allegations made by Mr. Sugent and Mr. Gault to The Honorable Ray LaHood, Secretary of Transportation, to conduct an investigation pursuant to 5 U.S.C. § 1213(c) and (d). The Secretary delegated the investigation to the DOT, Office of Inspector General (OIG), who conducted the investigation jointly with FAA’s Air Traffic Safety Oversight Service (AOV). OSC received the agency’s report on December 1, 2011, and a supplemental report on April 18, 2012. Mr. Sugent and Mr. Gault each provided comments on the reports pursuant to 5 U.S.C. § 1213(e)(1).

Summary of Agency’s Findings

The OIG's investigation substantiated Mr. Sugent and Mr. Gault’s allegations. The OIG reported that depending on the specific circumstances under which their use is attempted, FAA Order 7110.65, Paragraphs 5-8-3 and 5-8-5 cannot be simultaneously followed at DTW. Given the airspace at DTW and the specific geometry of the instrument flight procedures established there, along with the speed and turning capabilities of aircraft, it may not be possible to issue headings to departures that will allow for the required 30-degree divergence for the arrival’s missed approach course.² Additionally, OIG found that DTW air traffic control staff received inadequate guidance concerning the proper degree of divergence required to protect for missed approaches during simultaneous arrivals and departures. As a result of these findings, the OIG concluded, it is likely that operational errors resulting from violations of radar separation rules have occurred at DTW.

Procedural History

After two requests for extensions of time to respond, the report in this case was due to OSC on November 21, 2011. Despite notification to the DOT, Office of General Counsel (OGC) on November 9, 2011 that no further extensions would be granted, we did not receive the report at that time. Late on November 21, 2011, we received a third request for extension of time. A chronology of events is noted below.

- May 19, 2011: OSC referred Mr. Sugent and Mr. Gault’s allegations to Secretary LaHood
- July 19, 2011: Original due date for report to OSC.
- July 19, 2011: OSC received a request for an extension of time to respond.

² A heading is the direction in which the aircraft is pointing, measured in degrees clockwise from North.

- July 27, 2011: OSC granted the extension and provided a new due date of September 19, 2011, noting that “future extension requests will be reviewed critically and will require a detailed explanation of the need for the request.”
- August 17, 2011: OSC held a telephone conference with representatives from OGC, OIG, and FAA’s Office of Audit and Evaluation (AAE) to discuss OSC policy on extension requests and the status of investigation.
- September 13, 2011: OSC received a second request for an extension of time to respond.
- October 17, 2011: OSC sent an email seeking dates from OGC for a meeting requested by OGC.
- October 27, 2011: OGC sent an email to OSC indicating the desire to meet, but noting that scheduling has been difficult. OGC promised to contact OSC by October 31, 2011.
- October 27, 2011: OSC sent an email to OGC requesting a meeting or telephone conference to discuss the matter, specifically in reference to the request for extension of time. OSC received no response.
- November 9, 2011: OSC sent an email to OGC noting that in the absence of a response to OSC’s prior communications, OSC expected the report would be delivered no later than November 19, 2011, and that no additional extensions of time would be entertained.
- November 21, 2011: OGC requested an extension of time to December 5, 2011 to submit the report.

OSC did not grant the final extension request, but notified Secretary LaHood by letter dated November 28, 2011 that if the report was not received by December 5, 2011, the Special Counsel would notify the President and Congress of the Secretary’s failure to submit a report. OSC received the report on December 1, 2011.

The Whistleblowers’ Disclosures

FAA Order 7110.65, Paragraph 5-8-3

FAA Order 7110.65, Paragraph 5-8-3 governs successive or simultaneous departures in a radar controlled environment. It requires that controllers separate aircraft departing from the same airport by the number of miles specified in the paragraph, provided, in pertinent part, that the courses of the aircraft will diverge by 15 degrees or more. This means that controllers must provide appropriate headings to departing aircraft to comply with this provision. If, for example, aircraft are departing from the same runway one after another, the courses must diverge by 15 degrees or more within 1 mile of the departure end of the runway, as reflected below in Figure 5-8-1. (Paragraph 5-8-3a.) This is also true for simultaneous departures on two parallel runways, where the aircraft must immediately diverge by 15 degrees or more, as reflected below in Figure 5-8-7. (Paragraph 5-8-3c.)

FIG 5-8-1
Successive Departures

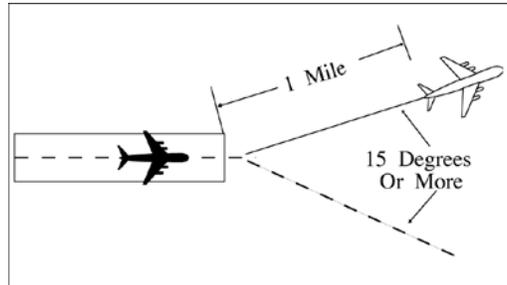
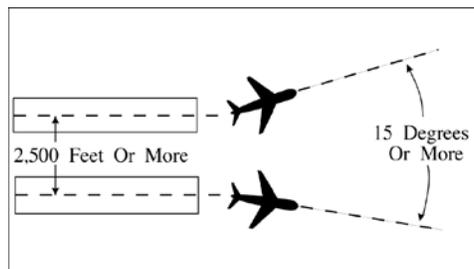


FIG 5-8-7
Parallel Runway Departures



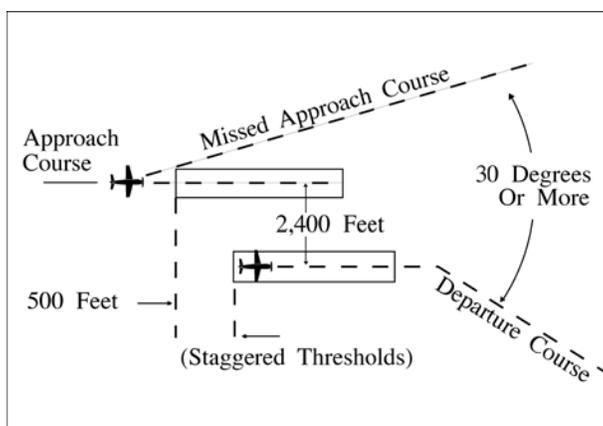
At DTW when aircraft are departing on two departure runways (usually runway 4R and runway 3L in the north flow), controllers are required to use *both* Paragraph 5-8-3a for same-runway separation, and Paragraph 5-8-3c for adjacent runway separation. Usually, this will be manifested in the following headings: 360 and 20 degrees on Runway 4R, and 40 and 55 degrees on runway 3L. For successive departures from runway 4R the aircraft must diverge by 15 degrees within one mile of the departure end. For simultaneous departures from runway 4R and runway 3L, the courses must diverge by 15 degrees immediately upon departure.

FAA Order 7110.65, Paragraphs 5-8-4 and 5-8-5

FAA Order 7110.65, Paragraph 5-8-4 governs departures and arrivals, and requires controllers to separate a departing aircraft from an arriving aircraft on final approach by a minimum of two miles if separation will increase to a minimum of three miles within one minute after takeoff. As noted in Paragraph 5-8-4, this procedure permits a departing aircraft to be released so long as an arriving aircraft is no closer than two miles from the runway at the time, as determined at the time the departing aircraft commences takeoff roll. This paragraph applies except as provided in Paragraph 5-8-5, Departures and Arrivals on Parallel or Nonintersecting Diverging Runways.

Paragraph 5-8-5 permits the authorization of simultaneous operations between an aircraft departing on a runway and an aircraft on final approach to another parallel or nonintersecting diverging runway if the departure course diverges immediately by at least 30 degrees from the missed approach course until separation is applied, provided certain minimum conditions are met. Controllers at DTW are authorized to use the simultaneous operations as described in Paragraph 5-8-5. At DTW, the parallel thresholds are staggered and the 30 degree divergence requirement is reflected below in Figure 5-8-11.³

FIG 5-8-11
Parallel Thresholds are Staggered



As background, there are four primary use parallel runways at DTW. Aircraft land on the outer runways (depending on whether landings are coming in to the South or North, respectively), and departures are conducted from the inner runways. Mr. Sugent and Mr. Gault reported that the use of simultaneous operations occurs at DTW primarily when aircraft are arriving either on runway 4L/runway 22R and departing on runway 4R/runway 22L or arriving runway 3R/runway 21L and departing runway 3L/runway 21R. A diagram of the runways at DTW is enclosed as Enclosure A.

To clarify the standards of separation used at DTW, Mr. Sugent and Mr. Gault explained generally that if air traffic controllers in the tower can see both aircraft in question and remain in communication with one, then they are providing "Tower" visual separation, and standard radar separation is not needed. Where there is low or zero visibility, or if there is a low ceiling because of cloud cover, controllers will not be able to see the departure aircraft enter their initial turn, or see both the arrival and departure. This is when they are required to account for the 30-degree divergence from the missed approach course.

³ At DTW, both Paragraphs 5-8-4 and 5-8-5 are used. When departing to the south, controllers use Paragraph 5-8-4, due to the stagger of the runways. When departing to the north, controllers use Paragraph 5-8-5. As discussed above, because Paragraph 5-8-5 authorizes simultaneous arrivals and departures, the rules are inconsistent for controllers.

Conflict Between Paragraphs 5-8-3 and 5-8-5

According to Mr. Sugent and Mr. Gault, the requirements to a) maintain a divergence of 15 degrees between departure headings, and b) simultaneously protect for a missed approach by maintaining at least a 30-degree divergence between the missed approach course of the arriving aircraft and the departure course of the aircraft departing on the parallel runway, are in conflict and cannot be achieved in the circumstances described at DTW.

Runway 4R is also able to accommodate arrivals during inclement weather. Mr. Sugent and Mr. Gault reported that this is more complicated when simultaneous operations occur on more than two runways. DTW may conduct simultaneous departures on runways 4R and 3L, while conducting arrivals on runways 4R and 4L. Controllers must protect for the possibility of a missed approach on runway 4R by ensuring the departing aircraft commences departure roll when the arrival is a minimum of two miles away, if separation will increase to a minimum of three miles within one minute after takeoff. Controllers must also protect for the 30 degrees from the missed approach course of the aircraft on runway 4L. At the same time, controllers must also protect for the possibility of a missed approach by the aircraft landing on runway 4L, by ensuring that the departure course for the aircraft departing runway 4R also diverges immediately from the missed approach course of the aircraft arriving on runway 4L by at least 30 degrees.

It is not clear in each case when the controller must begin to protect for the missed approach, and the FAA Order does not provide guidance on when to initiate the 30-degree divergence. Mr. Sugent and Mr. Gault reported that it is therefore unclear when, during the arriving aircraft's final approach and in the circumstances described above, they must apply the 30-degree rule.

Mr. Sugent and Mr. Gault reported that the safety implications of these conflicting requirements became clear in two incidents occurring on December 25, 2009 and November 13, 2010. During inclement weather operations on December 25, 2009, Mr. Sugent was on the local Northwest position controlling traffic on runway 4L (arrivals) and runway 4R (departures). An aircraft, NWA7332, was on approach to runway 4L. Mr. Sugent had NWA7332 in sight when he cleared another aircraft, FLG3845, for departure and issued a departure heading off of runway 4R of 330 degrees, which would take the aircraft over runway 4L. This is a routine practice at DTW. In accordance with Paragraph 5-8-3, the departure heading of 330 degrees issued to FLG3845 ensured at least a 15-degree divergence with traffic departing on runway 3L, immediately to the east of runway 4R. If Mr. Sugent had instead issued a runway heading (straight out from the runway), he would have violated this rule and been subject to an operational error.

Prior to the pilot reporting the action, Mr. Sugent observed that NWA7332 was going around, i.e., he would abort the landing and approach again. Mr. Sugent instructed FLG3845 to fly runway heading, which FLG3845 acknowledged. NWA7332 then reported going around. Mr. Sugent instructed NWA7332 to turn to a heading of 330 degrees, which NWA7332

acknowledged. NWA7332 did not turn promptly, so Mr. Sugent issued an easterly heading to FLG3845, which was not acknowledged. Mr. Sugent again attempted to turn FLG3845. Although FLG3845 stated that he was heading 70 degrees, it did not appear to be the case. There was a loss of separation.

After DTW management filed a pilot deviation report due to NWA7332's delay in turning, FAA Headquarters charged Mr. Sugent with an operational error. The stated basis for the error was that Mr. Sugent violated the requirement to protect for the missed approach by ensuring that the departure course and the arrival missed approach course diverged by at least 30 degrees, pursuant to FAA Order 7110.65, Paragraph 5-8-5. This incident demonstrates the difficulty faced by a controller in maintaining both the 30-degree divergence while also maintaining the 15-degree divergence required between aircraft on parallel runways.

On November 13, 2010, in weather conditions less favorable than during the incident described above, a more complex situation arose, according to Mr. Sugent and Mr. Gault. One controller was required to land and depart runway 4R while another controller was responsible for runway 4L arrivals. Mr. Sugent was the controller assigned to land and depart runway 4R; another controller was responsible for runway 4L arrivals. Departures were also occurring on runway 3L, which particularly required coordination because, due to weather, some of the departures on runway 3L were issued west headings that took the aircraft in front of runways 4L and 4R.

On April 10, 2011, another incident occurred that further demonstrates the conflict described. There was an aircraft arriving on runway 3R and an aircraft departing off of runway 4R. The runway 4R departure aircraft was issued a heading of 55 degrees, turning toward runway 3R. The runway 3R arrival executed a missed approach and was unable to turn when instructed. This caused controllers to issue instructions to change the aircraft cleared for departure on runway 4R to a heading of 35 degrees, and then to a left turn heading of 360 degrees. There was no operational error or deviation pursued concerning Paragraph 5-8-5's 30-degree requirement. A CD with radar playback of the incidents is enclosed as Enclosure B.

Safety Risk in Published Missed Approach Procedures

Mr. Sugent and Mr. Gault explained the danger to public safety occasioned by the use of the published missed approach procedures, particularly in low visibility situations. When the aircraft are arriving on the outside runways, runways 4L and 3R, DTW's published missed approach procedures call for the arriving aircraft to fly runway heading (at DTW, runway heading is 35 degrees when operating to the north) until reaching a predetermined altitude, and then commencing a turn. An aircraft flying the published missed approach is expected to climb to approximately 650 feet above ground level before commencing a turn toward the preassigned holding fix. Departures are expected to commence turning at approximately 400 feet. If the aircraft on arrival does go around and flies the published missed approach, there would be an obvious conflict between the arrival executing the missed approach and the departure.

DTW/TRACON Letter of Agreement on Breakout Procedures

Further complicating the issue, according to Mr. Sugent and Mr. Gault, is the issuance of new procedures regarding “breakouts,” or aircraft executing a missed approach, when controllers are landing aircraft on two runways. Pursuant to a Letter of Agreement between the Tower at DTW and the Detroit Terminal Radar Approach Control that became effective in January 2011, controllers are instructed to issue aircraft executing a missed approach a 20-degree turn away from the aircraft on final approach to an adjacent runway, and deliver the aircraft to the departure controllers in the same manner as they would for a propeller aircraft on departure. This would mean that the breakout aircraft would diverge at least 15 degrees from the aircraft departing from the inner runway. At the same time, controllers in the Tower are expected to protect for a 30-degree missed approach course, in case the arriving aircraft executes a missed approach. Mr. Sugent and Mr. Gault asserted that this will become even more confusing and difficult to apply when DTW expands these breakout procedures to incorporate landings on three runways.

Inadequate Guidance for Controllers

Shortly after the December 25, 2009 incident, Mr. Sugent returned to work and observed a mandatory briefing item in the Read During Shift portion of the Read & Initial binder.⁴ The briefing item stated that FAA’s Air Traffic Organization, Safety Office recommended reviewing Paragraphs 5-8-5 and 5-8-4 from FAA Order 7110.65, due to a loss of separation. Mr. Sugent and Mr. Gault maintained that the briefing item gave no direction on how to apply the rules, did not highlight the pertinent provisions, and listed both paragraphs in connection with the “loss of separation.” Mr. Sugent reported that the operational error assigned to him as a result of the December 25, 2009 incident charges only a violation of FAA Order 7110.65, Paragraph 5-8-5. Moreover, Mr. Sugent and Mr. Gault reported that when a briefing item is issued, a face-to-face briefing would be appropriate, rather than the Read During Shift instructions. In an effort to clarify his understanding of the FAA’s assignment of the error, Mr. Sugent repeatedly requested a briefing from FAA concerning his operational error, but none occurred.

Mr. Sugent thereafter sought additional assistance by filing an Air Traffic Safety Action Program (ATSAP) safety event report on December 3, 2010. The ATSAP Event Review Committee requested that FAA provide an interpretation of FAA Order 7110.65, Paragraphs 5-8-4 and 5-8-5, particularly as they relate to Paragraph 5-5-7 and the runway configurations at DTW. In addition, Mr. Sugent requested that his managers at DTW request an interpretation from FAA regarding the same paragraphs. He asserted that there has been no response from DTW management on either the ATSAP report or the interpretation request.

⁴ The Read & Initial binder is a log book containing notices for controllers and a place for them to initial that they have read the notices.

The Agency's Findings

The November 30, 2011 agency report found that, depending on the specific circumstances under which their use is attempted, FAA Order 7110.65, Paragraphs 5-8-3 and 5-8-5 cannot be simultaneously followed at DTW. According to AOV experts, the Order's separation rules are conditional and cannot always be used simultaneously. In DTW's case, both Paragraphs 5-8-3 and 5-8-5 can be adhered to if arrivals and departures are managed in a manner that does not result in simultaneous operations on all four parallel runways at the same time. According to the report: "If, however, two aircraft depart DTW while two other aircraft are simultaneously on final approach and, depending upon the specific circumstances of the event, e.g., timing and distance between flights, the controller will need to rely on other rules to permit the operation." Moreover, given DTW's airspace and the "specific geometry of the instrument flight procedures established there, along with the speed and turning capabilities of aircraft," it may not be possible for controllers to issue headings to departures that will allow for the required 30-degree divergence for the arrival's missed approach course.

It should be noted here that the November 30, 2011 report characterized Mr. Sugent and Mr. Gault's allegations by reference to the published missed approach procedures.⁵ The report states: "According to the whistleblowers, the published missed approach procedures for aircraft arriving to Runways 4L and 3R (used during the North Flow) create a conflict between those arriving aircraft and aircraft departing Runways 4R and 3L." Mr. Sugent and Mr. Gault alleged that, "the requirements to a) maintain a divergence of 15 degrees between departure headings, and b) simultaneously protect for a missed approach by maintaining at least a 30-degree divergence between the missed approach course of the arriving aircraft, and the departure course of the aircraft departing on the parallel runway, are in conflict and cannot be achieved in the circumstances described at DTW."

Mr. Sugent and Mr. Gault drew a distinction between the conflict created by the published missed approach *procedures*, and the missed approach *course*. This is an important distinction because FAA Order 7110.65, Paragraph 5-8-5 authorizes simultaneous operations between an aircraft departing on a runway and an aircraft on final approach to another parallel runway *if the departure course diverges immediately by at least 30 degrees from the missed approach course* until separation is applied. The missed approach course may not always be the same course as that provided by the published missed approach procedure, if the circumstances necessitate the controller giving alternate instructions to the aircraft. The report does not address this distinction.

The agency report concluded that at DTW, both Paragraphs 5-8-3 and 5-8-5 can be adhered to if arrivals and departures are managed in a manner that does not result in simultaneous operations on all four parallel runways at the same time. If DTW air traffic control

⁵ Missed approach procedures are published, flight-checked instructions that take missed approach aircraft away from other aircraft and ground obstacles to an area where the aircraft can safely conduct a holding pattern until further instruction.

staff staggered arrivals or departures, the controller could meet both conditions. It should be noted that the agency report apparently only addressed the circumstances presented when DTW is running a North Flow operation (aircraft arrive in a northerly direction on the outer parallel north-south runways (4L and 3R) and depart in a northerly direction from the inner parallel north-south runways (4R and 3L), which the report states is used “approximately 10-20% of the time at DTW.” Mr. Sugent and Mr. Gault did not confine their allegations to the North Flow, but stated that, “the use of simultaneous operations occur at DTW primarily when aircraft are arriving either on runway 4L/runway 22R and departing on runway 4R/runway 22L or arriving runway 3R/runway 21L and departing runway 3L/runway 21R.”

As examples of the conflict in these rules, Mr. Sugent and Mr. Gault referenced three events occurring on December 25, 2009, November 13, 2010, and April 10, 2011. The agency report addressed only the December 25, 2009 event, which resulted in an operational error attributed to the controller, Mr. Sugent. The November 13, 2010 and April 10, 2011 events, although nearly identical, did not result in the assignment of operational errors, but were not distinguished in the report.

According to the agency report, FAA officials investigated the December 25, 2009 event and determined that a loss of separation occurred because Mr. Sugent did not provide the 30-degree divergence required under FAA Order 7110.65, Paragraph 5-8-5. FAA officials concluded that because Mr. Sugent did not provide immediate divergence between the departure’s course and the possible missed approach, and issued the departure a 330-degree heading across the extended centerline of Runway 4L, there was a loss of separation. Mr. Sugent and Mr. Gault maintained that this incident demonstrates the difficulty faced by the controller in maintaining both the 30-degree divergence while also maintaining the 15-degree divergence required between aircraft on parallel runways. The agency report suggests that by issuing the 330-degree heading to the Runway 4R departure while the Runway 4L arrival was still on final approach, Mr. Sugent failed to provide the 30-degree divergence required under Paragraph 5-8-5. Mr. Sugent and Mr. Gault maintain that the issuance of a 330-degree heading to departures when operating simultaneous arrivals and departures on parallel runways is standard procedure. Indeed, the agency report concludes:

Notwithstanding the FAA investigators’ analysis of the December 25, 2009 operational error, the event demonstrates the difficulties controllers at DTW face while conducting simultaneous arrivals and departures during the North Flow. As explained in allegation 2 below, the difficulties are compounded by a lack of common knowledge and understanding – as evidenced by the statements of the DTW controllers and managers we interviewed – concerning the proper divergences required for simultaneous operations and when, precisely, the controllers must apply them.

Corrective Actions Planned to Address the Conflict between the Requirements to Protect for the Missed Approach and to Maintain Radar Separation Between Aircraft

The report stated that FAA Director of Audit and Evaluation H. Clayton Foushee reviewed OIG's findings and concurred with them. Attached to but not otherwise referenced in the report was a Memorandum dated November 18, 2011 from Mr. Foushee to OIG, providing a response to the whistleblowers' allegations and summarizing the changes planned to "improve air traffic operations at DTW, and reduce any safety hazards described in the OIG report." With regard to the finding discussed above, the FAA response stated that the allegation stems from "apparent misunderstanding among some DTW air traffic controllers as a result of complex, overlapping national policies pertaining to the use of simultaneous approaches to parallel runways." The FAA response identifies confusion among controllers, despite the findings in the agency report that managers, including Frontline Managers and the Operations Manager, were confused about the application of the rules.

The confusion, attributed by FAA to the controllers alone, is the result of "distinctions about when to apply (or not apply) certain aspects of national policy." In response, corrective actions include a review of the published arrival and missed approach procedures, and a review of the application of national air traffic policies (i.e., FAA Order 7110.65, Paragraphs 5-8-3, 5-8-4, and 5-8-5) "specifically at DTW and related to the complainant's disclosure, to ensure that FAA policies are understandable and do not conflict with other policies necessary for safe operations at DTW." In addition, the FAA pledged to review training materials related to simultaneous operations at DTW.

The November 30, 2011 agency report also addressed the allegation that controllers at DTW have received inadequate guidance concerning the application of the rules for protecting airspace in the event of a missed approach and maintaining radar separation during simultaneous arrivals and departures on parallel runways. The report reflects that five controllers, three Frontline Managers, the Operations Manager, the Support Manager for the Air Traffic Control Tower, and the Air Traffic Manager were interviewed. All five controllers, including the whistleblowers, expressed confusion concerning the application of the 30-degree divergence required under FAA Order 7110.65, Paragraph 5-8-5. What was apparent based on these interviews was that the 30-degree requirement was neither understood, nor uniformly applied, in at least the last several years.

The agency report states that not only were controllers unclear about the requirements, but that Frontline Managers, and the Operations Manager were also unclear. Two Frontline Managers believed that a 20-degree divergence would be appropriate, and one Frontline Manager and the Operations Manager would have applied a 15-degree divergence. None recalled any training regarding the 30-degree requirement, and some stated that their training was to treat an aircraft executing a missed approach as a departure, and apply either a 15 or 20-degree divergence. One Frontline Manager said that DTW has treated missed approaches as departures, applying a 15-degree divergence, for approximately 21 years.

Following the December 25, 2009 event, the Event Investigation Manager recommended that the facility conduct a mandatory briefing item on the requirements of Paragraph 5-8-5. The report found that an “unsigned and unattributed piece of paper appeared in the ‘Read & Initial’ binder in the DTW air traffic control tower sometime in late December 2009,” stating that, “[t]he ATO Safety Team has recommended a review of paragraphs 5-8-4 and 5-8-5 in regards to a recent loss of separation between a departure and go-around. Please review the pertinent information included in the [mandatory briefing item].” The pertinent information consisted of a copy of the two Paragraphs from FAA Order 7110.65.

Additionally, the report noted that the whistleblower, Mr. Sugent, was not briefed after the determination to assign him an operational error in connection with the December 25, 2009 event. The Frontline Manager explained that she did not brief the whistleblower because she had not received a briefing from DTW management officials explaining why the event was an operational error.

The agency report concluded that DTW management officials have not provided additional clarification to controllers concerning the application of divergence requirements for missed approaches. The report also noted that DTW management officials have not altered the facilities training and operations since the December 25, 2009 event. Managers maintain that they have not “changed the airport’s simultaneous arrival and departure operations because no FAA official outside the facility has advised them that DTW is not operating in compliance with FAA Order 7110.65.”

On February 4, 2011, DTW management officials sought guidance on the proper application of the relevant paragraphs of FAA Order 7110.65, by requesting an interpretation from the Director of Terminal Operations for the Central Service Area. Notably, the request sought to “verify” that the 30-degree requirement could be reduced to a 15-degree requirement once the missed approach aircraft crosses or is perpendicular to the threshold of the arrival runway. The response from FAA’s Acting Director for Terminal Safety and Operations Support, dated July 15, 2011, did not verify this, but rather stated that it was incorrect. The response also stated, however, that “a missed approach aircraft is considered a departing aircraft once it crosses the landing threshold.” DTW sought further clarification from FAA in an interpretation request dated August 23, 2011. FAA responded that the information in its July 15, 2011 memorandum remained unchanged. DTW sought a third interpretation from FAA on November 8, 2011, which had not been received as of the November 30, 2011 agency report. OSC was informed by the whistleblowers that the July 15, 2011 interpretation was rescinded, and sought supplemental information from DOT concerning the current status of the guidance on these rules. As discussed more specifically below, the supplemental information confirmed that FAA rescinded the July 15, 2011 interpretation.

The November 30, 2011 agency report also found that the confusion surrounding the application of the relevant paragraphs of FAA Order 7110.65 resulted in operational errors. The agency report characterized these as “unintentional” errors rather than “unreported” errors. The report did not state whether any such unintentional errors were or were not reported, or whether

any audit or review was conducted to assess the frequency or severity of the errors. The report stated that although it is likely that operational errors resulting from violations of radar separation rules have occurred at DTW, the staff's failure to follow these rules resulted from their lack of understanding of the rules. The report concluded that "operational errors in violation of radar separation rules are likely to continue to occur until the air traffic control staff receives clear guidance and training concerning the correct application of the rules, especially Paragraphs 5-8-3, 5-8-4, and 5-8-5."

Corrective Actions Planned to Address the Findings of Confusion, Poor Guidance and Training, and the Continuing Occurrence of Operational Errors

The November 18, 2011 Memorandum from Mr. Foushee sets out FAA's corrective action plan for addressing the findings of confusion, poor guidance and training, and the continuing occurrence of operational errors. According to this Memorandum, the OIG findings "highlight a potential lack of understanding among some air traffic controllers with regard to policies intended to ensure the safe conduct of simultaneous operations to/from multiple runways, and that training deficiencies/shortfalls require the agency's immediate attention." The Memorandum sets out a timeline for the development of training scenarios and the retraining of local control qualified personnel. Notwithstanding that this training is to occur "no later than ten working days following receipt of this memo at DTW," the Memorandum also states that once training materials are prepared and approved, the Central Terminal Service Area will review and approve the scheduled implementation for DTW prior to training commencement. Additionally, ATO Safety and Technical Training will ensure that the training for simultaneous operations at all FAA facilities is consistent and reflects the latest policy changes, to include "follow-on training at all major facilities conducting simultaneous operations." Finally, DTW will offer to complete an in-depth briefing to Mr. Sugent regarding the event on December 25, 2009.

According to the November 18, 2011 Memorandum, FAA also "concur[s] that the OIG investigation substantiates the possibility that potential misunderstandings and inconsistent application of national air traffic policies at DTW may have contributed to undiscovered and unreported losses of separation." FAA proposed to: ensure additional managerial oversight of arrivals and departures during peak-hour periods when simultaneous operations are conducted in instrument meteorological conditions; provide timely feedback to controllers; assign an observer from the Central Service Center Quality Control Group to monitor simultaneous operations and provide feedback to the DTW management team, and; commence audits of the simultaneous operations and ensure feedback following audits. The Central Service Center Quality Control Group is also expected to prepare a written report and brief the Central Service Area Director of Operations and the Director of Terminal Safety & Operations Support on DTW's training and compliance progress. The activities described in the November 18, 2011 Memorandum were expected to take a minimum of 90-days.

OSC requested a supplemental report from DOT with an update on the status of the corrective actions outlined in the November 18, 2011 Memorandum. OSC sought clarification of the time-line of the corrective actions, in view of the fact that a review of the application of

national policies was also contemplated to be completed. Given the short time frame for training, it was not clear from the report that the review of national policies would be completed prior to the scheduled training.

The Agency's Supplemental Report

OSC received a supplemental report from DOT dated April 18, 2012. The supplemental report included a Memorandum dated April 16, 2012, providing FAA's status update and responses to OSC's specific requests. In addition, the Memorandum included copies of the revised missed approach procedures at DTW, Notices to Airmen regarding these changed procedures, training materials for DTW staff, and a prior update provided by FAA to DOT OIG, regarding the corrective actions.⁶

Published Missed Approach Procedures Revised

According to the April 16, 2012 Memorandum, FAA reviewed 21 different published instrument approach procedures at DTW to ensure that the missed approach instructions on each one complemented the air traffic policies. On review, FAA determined that increased separation between the aircraft on a missed approach and the departing aircraft was necessary. Recommendations for changes were made in 18 of the 21 instructions. Because review and approval by FAA's Aeronautical Products office is not anticipated before May 31, 2012, FAA chose to implement the missed approach procedures prior to the formal publications process by issuing Notices to Airmen. Beginning April 3, 2012, DTW controllers and pilots flying the published approaches were authorized to use the 18 revised missed approach procedures.

The supplemental report also noted that DTW routinely provides radar vectors to each missed approach aircraft. This means that the local controller must actively review the evolving situation and is expected to take action. It is not clear from the report how the conflict between the need to comply with Paragraph 5-8-5 (provide the required 30-degree divergence for the arrival's missed approach course) and the departure headings routinely assigned to departing aircraft, necessary to comply with Paragraph 5-8-3 (ensure that successive departures from the same runway, or radar departures from parallel runways, diverge by at least 15-degrees within one mile from the end of the runway), will be resolved if the aircraft's missed approach course does not follow the course identified in the published missed approach procedure. Mr. Sugent and Mr. Gault, as discussed below, raised this concern with the agency and have not received a satisfactory response.

Attached to the supplemental report is a Memorandum dated March 11, 2012 from the DTW Air Traffic Manager, John Whitehurst, to all DTW Air Traffic Control Tower Personnel, entitled "Corrective Action Plan Training." This Memorandum states that when visual separation is not being applied, controllers should initially assign all departures a heading within

⁶ Notices to Airmen provide timely information on unanticipated or temporary changes to the components of or hazards in the National Airspace System.

the confines of the “jet departure airspace,” including departures to satellite airspace until they can provide another form of separation, such as standard radar separation. The Memorandum further states: “By following this guideline and the changes to the published missed approaches, you should always be able to comply with FAAO 7110.65 pars 5-8-3, 5-8-4 and 5-8-5 as required under the specific requirements of the current operation and configuration in use at DTW.” A note under this statement gives an example for which controllers would be required to exercise their best judgment to maintain separation between aircraft.

A missed approach to Rwy 4L that goes around beyond the missed approach point, part way down the runway due to wind shear, and an aircraft departing Rwy 4R on a 360 heading. Even though FAAO 7110.65 par 5-8-5b.1. (sic) would allow the simultaneous operation, it is imperative that controllers remain cognitive to the situation at hand and act in accordance with FAAO 7110.65 par 2-1-1 which states, in part, “*The primary purpose of the ATC system is to prevent a collision between aircraft operating in the system.*” Additionally, act in accordance with FAAO 7110.65 par 2-1-2, Duty Priority, which states, “*Because there are many variables involved, it is virtually impossible to develop a standard list of duty priorities that would apply uniformly to every conceivable situation. Each set of circumstances must be evaluated on its own merit, and when more than one action is required, controllers shall exercise their best judgment based on the facts and circumstances known to them. That action which is most critical from a safety standpoint is performed first.*” When an aircraft executes a missed approach/go-around, as in the above example, controllers must exercise their best judgment to maintain the safety of the NAS and apply prescribed requirements from FAAO 7110.65 including par 2-1-21, Traffic Advisories, which states, in part, “*Issue traffic advisories to all aircraft (IFR or VFR) on your frequency when, in your judgment, their proximity may diminish to less than the applicable separation minima.*” (Italics in original.)

The example provided above is nearly identical to the situation experienced by Mr. Sugent on December 25, 2009, which prompted him to bring this conflict to the attention of his supervisors and then OSC. The guidance provided in this example, according to Mr. Sugent and Mr. Gault, does not resolve the conflict if, as in the example discussed, the aircraft flying a missed approach is unable to, or does not, fly the published missed approach procedure. Controllers are aware of their responsibility to evaluate the circumstances and exercise their best judgment, but are left in an untenable situation if they are at risk of being assigned an operational error for safely separating aircraft when they have provided routine departure headings as directed and condoned by management, and an aircraft either does not or cannot comply with traffic advisories or instructions when it appears that their proximity may diminish to less than the applicable separation minima.

No Changes to National Policy; DTW Training Materials Revised

The supplemental report confirmed that FAA’s review did not result in any corrections or improvements to FAA Order 7110.65, Paragraphs 5-8-3, 5-8-4, and 5-8-5. In addition, according to the April 16, 2012 Memorandum, current information indicates that DTW will not

be required to operate with any restrictions or site-specific differences to the national policy that applies to simultaneous operations on parallel or non-intersecting runways. FAA plans to distribute a training briefing to other airports in the National Airspace System that will help ensure common understanding of the policies found in Paragraphs 5-8-3 and 5-8-5. National initiatives are ongoing, and FAA intends to supply a future status update to DOT OIG when training is complete. For facilities authorized to conduct simultaneous operations, FAA determined that “a proactive restatement of the correct application of air traffic policy was more efficient than completing an inquiry to each facility.” The formal restatement of the air traffic policy for Paragraphs 5-8-3 and 5-8-5 is intended to be transmitted to the field facilities, and confirmation of training is expected during the next 60 days. The supplemental report and attachments did not include a copy of the formal restatement.

Upon request by OSC for more information on the formal restatement, DOT responded that the restatement is a mandatory briefing item, restating the correct application of air traffic policy regarding FAA Order 7110.65, Paragraphs 5-8-3 and 5-8-5. FAA further explained that a delay in the issuance of the mandatory briefing item occurred due to necessary coordination and approval processing. The ATO estimates that the mandatory briefing item will be issued by April 30, 2012.

Local Controller training materials have been totally revised at DTW, and revisions were complete on February 29, 2012. Training materials have been reviewed by the FAA, ATO’s Central Service Area, Safety & Technical Training, and Terminal Services, and training commenced at DTW on March 11, 2012. DTW has purchased a Tower Simulator System to assist in training; however, temporary space constraints have prevented its installation. In the interim, while training materials were being prepared to incorporate the changes to the 18 missed approach procedures, controllers were instructed to provide radar vectors that met or exceeded the criteria of Paragraph 5-8-5 for all missed approaches that might occur during the conduct of simultaneous operations.

Operational Errors Not Observed

Throughout the corrective action period since November 2011, Frontline Managers at DTW supervised the operations in the air traffic control tower and provided feedback to all controllers working simultaneous operations. The Central Service Area Quality Control Group has conducted tower observations of DTW’s simultaneous operations since December 2011, and has provided periodic reports to facility management and the Central Terminal Service Area Director of Operations. In addition, the Quality Control Group reviewed radar and voice data for instrument meteorological conditions periods when they were unable to personally observe operations. During this time, no violations of air traffic policy were noted and no losses of separation have been associated with simultaneous operations at DTW. Audits by the Quality Control Group for the period coinciding with retraining have begun and will be incorporated into a final audit report.

The supplemental report also stated that, “DTW realized their understanding of the criteria contained in Paragraphs 5-8-3 and 5-8-5 was inadequate and that an improved training package was warranted to ensure the safe compliance during simultaneous operations to parallel or non-intersecting diverging runways.” Notwithstanding the evidence cited in the initial agency report that DTW managers had different understandings of the application of the paragraphs at issue here, the supplemental report stated that DTW management recognized their inadequate understanding of the criteria and the need for improved training only once the corrective action plan was initiated. The supplemental report further stated that “...it is conclusive evidence that failure to comply with the national policies contained in paragraphs 5-8-3 and 5-8-5 is/was unacceptable and should be reported.” Notwithstanding this finding, there is no explanation provided for the agency’s failure to address whether a violation of national policy occurred in connection with the November 2010 and April 2011 events detailed in the OSC referral.

Mr. Sugent Offered an In-Depth Briefing on the December 25, 2009 Event

The supplemental report stated that the DTW Air Traffic Manager offered Mr. Sugent an opportunity to review the December 25, 2009 event on April 18-20, 2012, but that “the complainant respectfully declined the opportunity to meet with DTW management, and countered with a request to meet with an ATO executive when the OSC can attend.” As discussed below, Mr. Sugent did request that the agency component responsible for determining that the December 25, 2009 event resulted in an operational error provide the promised in-depth briefing. To date, DTW management has not responded to his request, nor is the agency response addressed in the supplemental report.

Previous Guidance on FAA Order 7110.65, Paragraphs 5-8-3 and 5-8-5 Rescinded

The supplemental report also contained a Memorandum dated February 28, 2012 from AAE to DOT OIG, providing a status update on the corrective action progress. This Memorandum noted that FAA determined that the policy interpretation requested during 2011 by DTW will no longer be necessary for simultaneous runway 4L and 4R operations. Prior to receipt of the supplemental reports, OSC received, as part of Mr. Sugent’s comments, a Memorandum dated January 25, 2012 from Tony Mello, Acting Director, Terminal Safety and Operations Support, to Paul J. Sheridan, Director, Central Terminal Operations, rescinding the July 15, 2011 interpretation response, without additional explanation. It was not clear whether the policy interpretation referenced in the February 28, 2012 Memorandum is the same as that referenced in the January 25, 2012 Memorandum, or why the January 25, 2012 Memorandum was not included in the agency’s reports, as it bears directly on the allegations of inadequate guidance.

In response to OSC’s request for clarification regarding the policy interpretation, FAA confirmed that the July 15, 2011 interpretation was rescinded. FAA determined that the 2011 policy interpretation was no longer necessary for simultaneous runway 4L and 4R operations, following analysis of all published missed approaches and planned retraining of operational personnel at DTW.

The Whistleblowers' Comments

Pursuant to 5 U.S.C. § 1213(e)(1), Mr. Sugent and Mr. Gault provided comments on the agency reports. Mr. Sugent's initial comments stated that although the three allegations were substantiated, nothing has changed. He noted that the statement in the report that DTW managers have not changed the airport's operations because "no FAA official outside the facility has advised them that DTW is not operating in compliance with FAA Order 7110.65," is not possible, because he himself was charged with an operational error for incorrectly applying the rule, by an entity outside of the facility. Mr. Sugent also stated that from December 2009 until late 2010 he was told that an interpretation request had been submitted and the facility was awaiting a response. In January 2011, he was told that no interpretation request had been sent. Finally, in early 2011 the facility submitted an interpretation request that reflected the confusion among DTW management. In it, the DTW Support Manager Ron Bazman stated, "I suspect we have been operating on the assumption that the 20 degrees satisfies the passing or diverging paragraph..." Although FAA responded to the request by Memorandum dated July 15, 2011, that response was rescinded as of January 25, 2012.

Mr. Sugent asserted that the confusion persists, despite corrective actions, in part because the agency began corrective actions, including observations and revised training, prior to the agency resolving the misunderstandings surrounding the application of the rules. He also pointed out an error in the observations made by the individuals sent in to audit the tower operations during the corrective actions period following the issuance of the agency report, which calls into question the audit results. Finally, he stated that Quality Assurance personnel observed controllers departing aircraft in poor weather conditions with landing aircraft on or inside of a 2-mile final approach. He asserted that this violates Paragraph 5-8-5 but, to his knowledge, no operational errors have been reported. He asserted that this is a systemic issue awaiting resolution, and that clear, national procedures are needed to address missed approach traffic and competing separation requirements.

Mr. Sugent also commented on the supplemental report. He referenced the statement, repeated several times throughout the supplemental report, that "DTW was instructed to provide radar vectors that met/exceeded the criteria of Paragraph 5-8-5 for all missed approaches that might occur during the conduct of simultaneous operations and training preparation." He asserted that controllers have not been so instructed; in fact, controllers were told emphatically not to do anything differently than they were already doing. No briefing guide or any verbal guidance referencing the above was provided, according to Mr. Sugent. Moreover, Mr. Sugent asserted that although the supplemental report states that Frontline Managers have supervised the tower-cab operations throughout the corrective action period and provided feedback to all controllers working simultaneous operations, this has not occurred. Again, he insists that "we have been told to keep doing what we are doing." Regarding the supplemental report's finding that during the audit period, no violations of air traffic policy were noted and no losses of separation have been associated with simultaneous operations, Mr. Sugent asserted that there were errors, but they went unrecognized by auditors.

Mr. Sugent commented that even though the published missed approach procedures were changed, controllers still lack guidance and are expected to reconcile the irreconcilable. Turning an aircraft toward the arrival runway is fine, if the arrival lands. If not, and depending on where each aircraft is in its phase of flight, there could be a problem. Mr. Sugent questioned how it is possible that controllers can turn toward the 30 degrees they are supposed to protect. He maintained that the agency's current instructions and the revised missed approach procedures do not resolve the conflict.

Mr. Gault also provided comments on three main issues in the report. First, he reiterated his belief that the separation standards set forth in FAA Order 7110.65 are antiquated, and inadequate for any facility that attempts to utilize four or more parallel runways simultaneously in low visibility/zero visibility conditions. He believes that the problem is not unique to Detroit. Second, he asserted that the agency report broadened the scope of his complaint by introducing a question concerning the interpretation of Paragraph 5-8-4. He believes that additional investigation and analysis of DTW simultaneous operations while applying Paragraph 5-8-4 is required, as it implicates operations at DTW while on a South Flow. Controllers at DTW handle the application of Paragraph 5-8-4 while on the South Flow in different ways, and facilities need direction from the agency to clarify how to correctly apply the rules within FAA Order 7110.65. He observed that Quality Control personnel monitoring simultaneous operations at DTW are only observing the operations on the North Flow, and only documenting missed approach/go-arounds. This is insufficient to provide accurate and complete feedback.

With regard to his first concern, Mr. Gault asserted that the agency's handling of the clarification requests from the facility has been contradictory and unclear. He stated that there has been no direction from anyone outside the facility concerning the correct application of the paragraphs and policies in question. In fact, prior guidance has been removed. He remarked that controllers are given very clear guidance within FAA Order 7110.65 about other things where ambiguities may potentially exist, such as in Paragraph 1-2-5, defining phraseology. A controller never has uncertainty about what words are required when making a radio transmission because the Order guides the controllers' word choice by providing examples. No such guidance is given for any figures contained within the Order, and controllers are left to make assumptions and to guess whether the figures provided in the Order are part of the text, or are meant as examples. The diagrams included in Paragraph 5-8-5 show only one aircraft per side of a runway centerline.

Mr. Gault explained that during on-the-job training, controllers are taught that if they depart aircraft on parallel runways in a same direction turn utilizing Paragraph 5-8-3 as the basis for separation, an Operational Error has occurred. The controllers are trained in techniques that modify the standard pre-coordinated departure procedures to prevent that situation from occurring. Regardless of the method used, none of the DTW on the job training teaches that a departure turning toward an arrival is a violation of Paragraph 5-8-5, while all of them would universally agree that having two departures in a same direction turn would constitute an Operational Error in violation of Paragraph 5-8-3. He asserted that a facility interprets rules and procedures to suit its own needs, and that this is a national issue that requires national policy. He

poses the question: May two aircraft, less than three miles apart, be in a same direction turn while utilizing radar separation in a tower environment?

Finally, Mr. Gault asserted that the agency has taken inadequate action. He believes that the agency has removed what minimal guidance was available by rescinding the July 15, 2011 interpretation request. He is frustrated that the Secretary, in presenting the corrective action plan in the report, has now ordered FAA officials to provide the same input and feedback that DTW requested in February 2011. It has been well over two years since the December 25, 2009 event, and there is no progress in evaluating and modifying the operation at DTW. He observed that there appears to be disagreement among agency officials regarding this issue and questioned whether DTW will receive meaningful input from "FAA officials." He remarked that he would hope that agency leadership would want to resolve known safety issues quickly and competently, but the lack of progress does not inspire confidence that agency officials are truly dedicated to ensuring public safety.

In his supplemental comments, Mr. Gault asserted that the changes to the published missed approach procedures will require that the aircraft executing a missed approach make a hard, climbing turn inside the projected course of a departing aircraft. Thus, two aircraft would be turning in the same direction simultaneously. The FAA, therefore, implicitly determined that the diagram associated with Paragraph 5-8-5 is not controlling but illustrative. Mr. Gault asserted that there is still obvious confusion concerning the separation rules, given his explanation of the on-the-job controller training. Finally, he commented on the agency's finding that no additional operational errors occurred. He stated that the operational error occurs as soon as the controller issues a takeoff clearance with less than 30 degrees divergence from the missed approach course and the departing aircraft begins a takeoff roll. "The smoke and mirrors assertion that no additional errors have occurred is nothing short of an outright fabrication of the truth."

The Special Counsel's Comments

I have reviewed the original disclosure, the agency's reports, and Mr. Sugent and Mr. Gault's comments. This issue is far from resolved, and for that reason, I am unable to conclude that the findings of the agency head are reasonable. At a minimum, the agency has been on notice since December 25, 2009 – more than two years – that the facility's simultaneous operations on parallel runways may violate FAA Order 7110.65. It is unacceptable that a controller raising a serious safety issue after an incident in which airplanes came dangerously close together must persist in raising the alarm both inside and outside the agency over a years-long period in order to ensure that an appropriate review of the matter is initiated. I intend to request an update from the agency every three months until corrective actions are completed.