



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

ORDER
JO 7110.308C

Effective Date:
January 26, 2018

SUBJ: Simultaneous Dependent Approaches to Closely Spaced Parallel Runways

- 1. Purpose of This Order.** This order provides the criteria to apply Federal Aviation Administration (FAA) Order JO 7110.65, Air Traffic Control, Paragraph 5-9-6, Simultaneous Dependent Approaches, to parallel runways separated by less than 2,500 feet, also referred to as Closely Spaced Parallel Runways (CSPR). Guidance for requesting a specific assessment for an airport CSPR pair that is not included in Appendices A or B is included in this order.
- 2. Audience.** This order applies to the Air Traffic Services facilities at airports listed in Appendix A and Appendix B.
- 3. Where Can I Find This Order?** This order is available on the MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices/.
- 4. What This Order Cancels.** FAA Order 7110.308B, Simultaneous Dependent Approaches to Closely Spaced Parallel Runways, dated July 25, 2017, is canceled.
- 5. Explanation of Changes.**
 - a.** Changed the minimum staggered separation for all authorized runway pairings listed in Appendix A to 1.0 NM.
 - b.** Clarification to notify aircraft that simultaneous approaches are in use.
 - c.** Added a note in Appendix A to clarify the requirement that approaches must meet Terminal Instrument Procedures (TERPS) criteria as well as the glide path restrictions necessary for wake mitigation and that the chart notes must include those restrictions prior to implementation.
 - d.** Added requirements for monitoring and analyzing safety related occurrences while applying the provisions of this order.
- 6. Action.** At airports authorized by Appendices A and B, all operational personnel must receive training on the use of the procedures contained in this order. Facility directives and letters of agreement must include procedures for the use of the reduced separation minimums. Air traffic managers desiring to add their airports and associated CSPR to this order must follow the process described in Paragraph 12, Request for a Specific Airport Analysis.
- 7. Monitoring.** Upon commencement of operations authorized by this order, facilities must submit a report, weekly, for the first eight weeks, a report at the six month mark, and a report at the conclusion of one year of operations. The one-year report must be submitted on the form listed in Appendix C of this order. All reports must include any Mandatory Occurrence Reports (MOR) involving losses of required staggered separation and documented wake encounters on the final approach segment resulting from the use of procedures contained herein. Submit reports to the Manager, Terminal Standards and

Distribution: Electronic

Initiated By: AJV-8
Mission Support, Terminal Procedures

Procedures (AJV-82) at 9-AJV-8-HQ-Correspondence@faa.gov. AJV-82 will collaborate with Air Traffic Services (AJT), NextGen (ANG) and Flight Standards Service (AFS) to analyze the data, including pertinent Aviation Safety Reporting System (ASRS) reports that identify any additional safety concerns, not recognized during the safety risk management process. This information will be evaluated to determine if updates to this order are required.

8. Distribution. This order is distributed to the following Air Traffic Organization Service Units: Air Traffic Services, System Operations Security, Mission Support Services, and Safety and Technical Training, as well as the William J. Hughes Technical Center, and the Mike Monroney Aeronautical Center.

9. Background. Increased airport capacity and reduced arrival delays under Instrument Meteorological Conditions (IMC) can be achieved by using the diagonal separation minima established in this order (1.0 NM diagonal separation for runway pairs listed in Appendix A and the dependent staggered separations listed in Appendix B) within successive pairs of arrivals to CSPR. As with all other simultaneous approach procedures that are designed to reduce the separation minima under IMC, visual separation is not authorized during the turn on to final approach. This type of dependent instrument approach can be conducted at airports authorized under this order, taking into account the specific centerline separations, threshold staggers and local winds. The lead aircraft of the dependent pair is restricted to being cleared for the lower approach, with the trailing aircraft assigned the higher approach. The geometry of the approach, as well as the lateral separation between the two approaches and prevailing local meteorological conditions, provide the wake turbulence avoidance necessary for reduced separation dependent approach operations. Additionally, depending on the local meteorological conditions, a small glidepath height difference may be necessary to ensure the trailing aircraft is at or above the height of the leading aircraft in the reduced separation pair. The required glidepath height can be achieved through displaced landing thresholds or small glidepath angle differences that are permitted within the constraints of precision approaches. WTMA-P permits Heavy and B757 aircraft, in addition to small and large aircraft, to lead in the dependent pair. Super aircraft are not permitted to lead in the reduced separation dependent pair. Specific aircraft pair separation is provided for each CSPR. This separation is dependent on local winds, runway geometry, including runway threshold offset, which provides vertical separation between the glidepaths and vertical separation from wake turbulence. This separation is also dependent on runway centerline separation, which allows safe mitigation from both severity and likelihood of a wake encounter for the trailing aircraft. WTMA-P may be used at either Recat or non-Recat airports.

10. Definitions. For the purpose of this order, the following definitions are provided.

a. Lead Aircraft – The lead aircraft in the pair of reduced separation aircraft authorized by this order. At airports listed in Appendix A, the lead aircraft is restricted to a Small or Large weight class aircraft (except the B757) or the corresponding wake category for Small or Large aircraft (except the B757), as defined in FAA Order JO 7360.1, Aircraft Type Designators, or FAA Order JO 7110.659, Wake Turbulence Recategorization or FAA Order 7110.123, Wake Turbulence Recategorization – Phase II. At airports listed in Appendix B, the lead aircraft may be any aircraft excluding Supers.

REFERENCE -

FAA Order JO 7360.1, Aircraft Type Designators

FAA Order JO 7110.659, Wake Turbulence Recategorization

FAA Order JO 7110.123, Wake Turbulence Recategorization – Phase II

b. Lead Approach – The approach assigned to the lead aircraft in a reduced separation pair. For each CSPR pair identified in Appendix A of this order, the lead approach is listed first and is the lower approach.

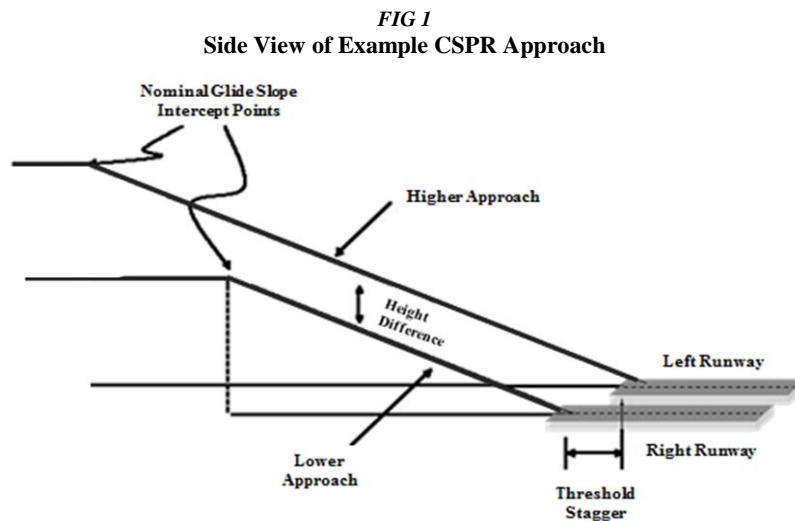
c. Trailing Aircraft – The trailing aircraft in the pair of reduced separation aircraft authorized by this order, and is not restricted by weight class or wake category.

d. Trailing Approach – The approach assigned to the trailing aircraft in a reduced separation pair. For each CSPR pair identified, the trailing approach is listed second and is the higher approach.

11. Procedures.

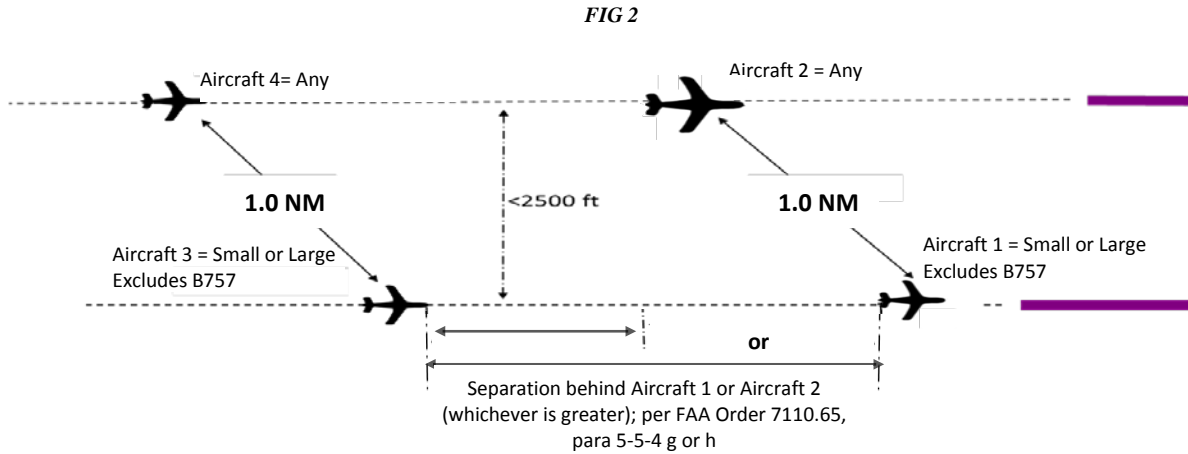
a. Airport Criteria Allowing Conduct of Simultaneous Dependent Approaches on CSPR.

Appendix A, Authorized Runway Pairings, and Appendix B, Airport/Runway Geometries Approved for Wake Turbulence Mitigation for Arrivals - Procedure (WTMA-P), lists the airports, runway configurations, and aircraft pairing for which reduced separation is permitted under this order. Glidepath height differences are achieved by using a common reference point from the runway thresholds, threshold staggers, or small glidepath angle differences between the lead and trail aircraft, yielding a higher and lower approach. The lateral separation and glidepath height differences provide wake encounter mitigation for the procedure at each airport. (See FIG 1.)

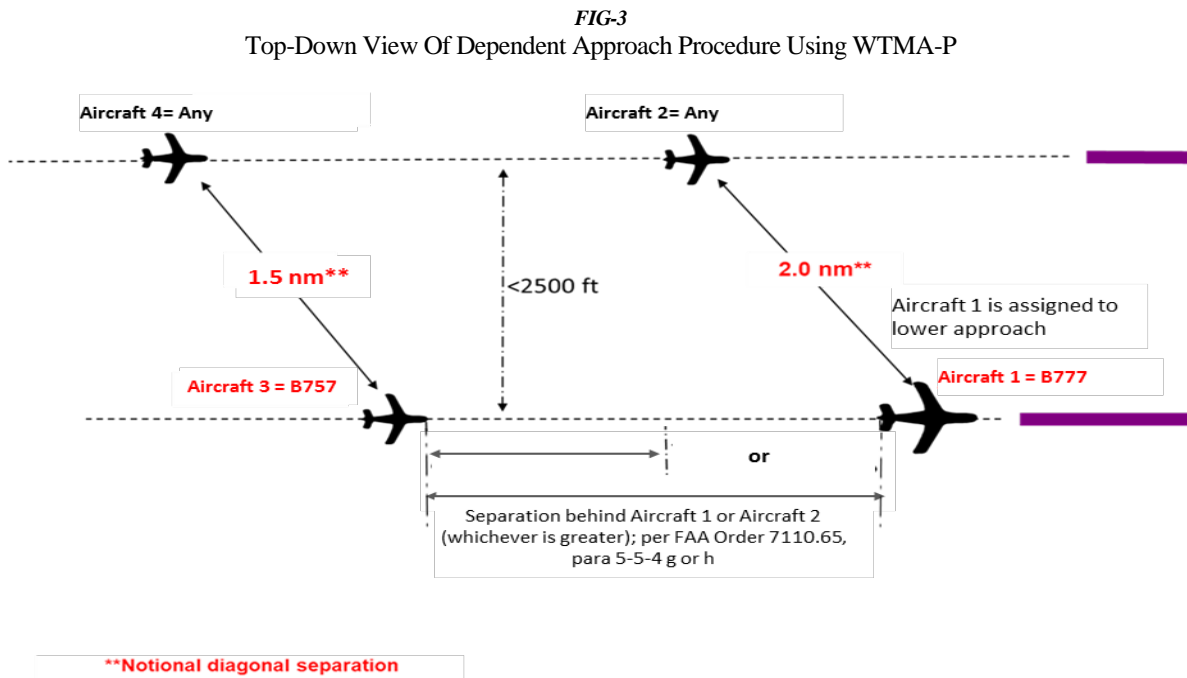


b. Procedures for Dependent Approaches to CSPRs.

(1) Figure 2 provides a depiction of the procedures contained in this order for airports listed in Appendix A. Aircraft 1 is the lead aircraft and is assigned to the lower approach. Aircraft 2 is the trailing aircraft. Aircraft 3 is the lead aircraft in the next pair of reduced separation aircraft.



(2) Figure 3 provides a depiction for the use of WTMA-P for airports listed in Appendix B.



c. Conditions for Use. Simultaneous dependent approaches can be conducted under the following conditions:

(1) Provide a minimum of 1,000 feet vertical or the appropriate radar separation until both aircraft are established on the localizer for ILS approaches, or established on the approach procedure for RNAV approaches, and cleared for the approach. Visual separation is not authorized until both aircraft are established on the localizer for ILS approaches or established on the approach procedure for RNAV approaches.

Note -

Visual separation may be applied on final approach when the aircraft are in VMC and there are no other obscurations to visibility.

(2) The lead aircraft (Aircraft 1) of the dependent separation pair must be assigned the lead approach.

(a) At airports listed in Appendix A, the lead aircraft must be

[1] A Small or Large weight class aircraft (except the B757) at non-RECAT facilities.

[2] A wake category D (except the B757), E or F aircraft at RECAT 1.5 facilities.

[3] A wake category D (except the B757), E or F aircraft at RECAT II Appendix A facilities.

[4] A wake category C (except the B757), D, E or F aircraft at RECAT II Appendix B facilities.

(b) At airports listed in Appendix B, the lead aircraft may be any aircraft excluding Super aircraft (A388 and A225), and must intercept the glideslope at an altitude no higher than 3,000 feet AGL.

(3) Any aircraft type may participate as the trailing aircraft in the dependent separation pair and must be assigned the trailing approach.

(a) At airports listed in Appendix A, separation may be reduced to 1.0 NM.

(b) At airports listed in Appendix B, the authorized separations are contained in the appropriate table for the airport and runway pair.

(4) Provide the appropriate radar separation between the trailing aircraft of one pair and the lead aircraft of the next pair in accordance with FAA Order JO 7110.65, Paragraph 5-5-4, Minima, Subparagraphs g or h.

NOTE -

At facilities authorized to conduct operations in accordance with FAA Order JO 7110.659B, Wake Turbulence Recategorization, or FAA Order JO 7110.123, Wake Turbulence Recategorization – Phase II, the applicable paragraphs of FAA Order JO 7110.65 are superseded by the corresponding paragraphs contained within these orders and/or appendices.

(5) Reduced separation is not permitted if either of the aircraft in a reduced separation pair is conducting an instrument approach without vertical guidance.

(6) If the lead aircraft executes a missed approach or is issued go-around instructions, and is a larger weight class or wake category than the trailing aircraft in the pair, or, is a Heavy aircraft, the trailing aircraft must be instructed to execute a missed approach or issued go-around instructions.

REFERENCE -

P/CG Term – Go-Around

P/CG Term – Missed Approach.

d. Navigational Aids. For ILS approaches, the localizer and glideslope must be in service to both runways. For RNAV approaches, LNAV and VNAV must both be available.

e. Radar Surveillance. Terminal Airport Surveillance Radar must be in service.

f. Weather Minimums. The reduced separation approaches authorized by this order may be conducted down to and including Category I minimums. For airports listed in Appendix B, Category II operations are authorized if the approaches are available for both runways.

g. Charting. Charting for approaches with modified glideslope angles will be published after the approach has been flight checked and before the implementation of the procedures authorized by this order.

h. Notification of Simultaneous Approaches. Ensure aircraft are informed that approaches to both runways are in use. This information may be provided through the Automatic Terminal Information Service (ATIS).

EXAMPLE-

“Simultaneous approaches ILS runway four right and RNAV runway four left in use.”

12. Request for a Specific Airport Analysis. Written requests for analysis of specific airport geometries must be made to the Air Traffic Procedures Directorate (AJV-8) at 9-AJV-8-HQ-Correspondence@faa.gov, through the requesting facility’s managing service area. The following process must be used:

a. The facility will provide a written request to the managing service area for an analysis to be conducted. The request will include:

1. The runway pair and types of instrument approaches to be considered.
2. The centerline separation between the runway pair.
3. The latitude and longitude of the landing threshold of each runway.
4. Charted missed approach procedures for lost communications for the approach to each runway (new or existing runways).

b. The Service Area will evaluate the request, validate it, and forward it to the Air Traffic Procedures Directorate.

c. AJV-8 will request a wake encounter risk assessment from the NextGen office.

d. The NextGen office will conduct the wake encounter risk assessment, coordinate with the field facility as necessary, and forward the appropriate safety documentation to AJV-8.

e. AJV-8 will coordinate the approval of the revised Order with ATO Safety and Technical Training (AJI) and the Air Traffic Safety Oversight Service (AOV). AJV-8 and Advanced Concepts and Technology Development Directorate (ANG-C) will respond jointly to any questions from AOV or AJI pertaining to the revised Order or the safety documentation.

Original signed by Natking Estevez for Sharon Kurywchak

1/26/2018

Sharon Kurywchak
Director (A), Air Traffic Procedures, AJV-8

Date Signed

Appendix A. Authorized Runway Pairings

Specific Airports/Runway Geometries Approved for Dependent Approaches to CSPRs

Airport	Runway Pair Lead / Trail	Staggered Separation Minima	Centerline Separation (feet)	Navigation Type Lead / Trail	Glideslope Angle Lead / Trail	Glidepath Height Difference 7 NM From Lead Threshold
BOS	4R / 4L	1.0 NM	1500	ILS / ILS	3.0 / 3.1	128 ft
	4R / 4L	1.0 NM	1500	ILS / RNAV	3.0 / 3.1	128 ft
CLE	6L / 6R	1.0 NM	1241	ILS / ILS	3.0 / 3.1	193 ft
	24L / 24R	1.0 NM	1241	ILS / ILS	3.0 / 3.0	63 ft
EWR	4L / 4R	1.0 NM	950	ILS / ILS	2.95 / 3.1	74 ft
	22L / 22R	1.0 NM	950	ILS / ILS	3.0 / 3.1	74 ft
MEM	18C / 18L	1.0 NM	927	ILS / ILS	3.0 / 3.1	185 ft
	36R / 36C	1.0 NM	927	ILS / ILS	3.0 / 3.1	74 ft
PHL	9R / 9L	1.0 NM	1400	ILS / ILS	3.0 / 3.0	316 ft
	27R / 27L	1.0 NM	1400	ILS / ILS	3.0 / 3.0	263 ft
SEA	34C / 34L	1.0 NM	1700	ILS / ILS	3.0 / 3.0	49 ft
	16C / 16R	1.0 NM	1700	ILS / ILS	3.0 / 3.0	0 ft
	16L / 16C	1.0 NM	800	ILS / ILS	3.0 / 3.0	0 ft
	34R / 34C	1.0 NM	800	ILS / ILS	2.75 / 3.0	130 ft
SFO	28L / 28R	1.0 NM	750	ILS / ILS	2.85 / 3.0	111 ft
	19L / 19R	1.0 NM	750	ILS / RNAV	3.0 / 3.15	153 ft
STL	30R / 30L	1.0 NM	1300	ILS / ILS	3.0 / 3.0	89 ft
	12R / 12L	1.0 NM	1300	ILS / ILS	3.0 / 3.0	159 ft

NOTE-

1. For those runway pairs which require a glideslope change, this procedure is not to be conducted until the approach is established.
2. SFO RWY 19R RNAV Approach is not authorized at temperatures less than 52 degrees F.
3. SEA RWY 34R currently has a 2.75 degree glideslope. The risk analysis was conducted using a 3 degree glideslope and the procedure is authorized at 2.75 degrees up to 3.0 degrees glideslope.
4. Approaches must meet TERPS criteria as well as the glide path restriction necessary for wake mitigation and the chart notes must include those restrictions prior to implementation.

Appendix B. Airport/Runway Geometries Approved for WTMA-P

TBL B-1

WTMA-P Separations for PHL Runway 9R ILS Lead and Runway 9L ILS Trail

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	3.0 NM	3.0 NM	3.5 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

TBL B-2

WTMA-P Separations for PHL Runway 9R ILS Lead and Runway 9L ILS Trail (RECAT 1.5)

Leader	Follower				
	B	C	D	E	F
B	1.5 NM	1.5 NM	3.0 NM	3.0 NM	3.0 NM
C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.0 NM
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM

TBL B-3

WTMA-P Separations for PHL Runway 27R ILS Lead and Runway 27L ILS Trail

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	2.0 NM	2.0 NM	3.0 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

TBL B-4

WTMA-P Separations for PHL Runway 27R ILS Lead and Runway 27L ILS Trail (RECAT 1.5)

Leader	Follower				
	B	C	D	E	F
B	1.5 NM	1.5 NM	1.5 NM	2.5 NM	2.5 NM
C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM

Appendix B. Airport/Runway Geometries Approved for WTMA-P

TBL B-5

WTMA-P Separations for DTW Runway 3R ILS Lead and Runway 3L RNAV Trail

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	1.5 NM	1.5 NM	3.5 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

TBL B-6

WTMA-P Separations for DTW Runway 3R ILS Lead and Runway 3L RNAV Trail (RECAT 1.5)

Leader	Follower				
	B	C	D	E	F
B	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.5 NM
C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.0 NM
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM

TBL B-7

WTMA-P Separations for DTW Runway 21R RNAV Lead Runway 21L ILS Trail (59° or Lower)

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	1.5 NM	1.5 NM	1.5 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

TBL B-8

WTMA-P Separations for DTW Runway 21R RNAV Lead Runway 21L ILS (59° F or Lower) (RECAT 1.5)

Leader	Follower				
	B	C	D	E	F
B	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM

Appendix C.

Monitoring Report for Operations Conducted Under FAA Order JO 7110.308

This checklist is designed to assist the air traffic facilities identified in this order complete their one year monitoring report. This checklist (and the information provided) will assist the Air Traffic Procedures Directorate in meeting the monitoring requirements associated with the governing SRMD. A fillable version of this report can be downloaded and filled out at this form [link](#) hosted at this [publications page](#). Please forward this report by email to: 9-AJV-8-HQ-Correspondence@faa.gov. If you have difficulties downloading the form, you may request the form from the same address.

Section 1: Background Information	
Facility	Facility name
Runway Configuration(s)	Runway pairing
	Runway pairing
How often are CSPR operations, as defined in this order, utilized at your facility?	<input type="checkbox"/> Daily or almost daily (more than 3 times a week)
	<input type="checkbox"/> Often (several times a month)
	<input type="checkbox"/> Seldom (a few times a month)
	<input type="checkbox"/> Rarely (a few times a year)
What is the biggest determining factor for the utilization of this procedure at your facility?	<input type="checkbox"/> Weather or other seasonal factors
	<input type="checkbox"/> Runway availability
	<input type="checkbox"/> Noise or other environmental factors
	<input type="checkbox"/> Other
Section 2: Monitoring Activities Associated with Relevant Hazards	
When compared to other arrival flows (the SMS term is system state), has your facility experienced an increase in reported wake encounters on the final approach segment as a result of the utilization of CSPR?	<input type="checkbox"/> No
	<input type="checkbox"/> Yes (please provide an assessment in section 3, of the degree to which your facility noted this increase in reported wake encounters and the causal factors to which you attribute that increase)
When compared to other arrival flows, has your facility experienced an increase in the number of go-arounds on the final approach segment?	<input type="checkbox"/> No
	<input type="checkbox"/> Yes (please provide an assessment in section 3, of the degree to which your facility noted this increase in go-arounds and the causal factors to which you attribute that increase)

<p>Mandatory Occurrence Reports (MORs) How many MORs associated with the loss of one mile diagonal separation did your facility have during the course of this past year?</p>	<p>Enter MORs data here</p>
<p style="text-align: center;">Section 3: Facility Observations, Opportunities for Improvement, and Sharing of Lessons Learned</p>	
<p>The SMS is the framework that the ATO uses to measure and help ensure the safety of its operations. In an evolving NAS, it is necessary to continuously seek improvement in ATO processes and policies that support ATO safety efforts and, by extension, support the SMS. Please share with us any information that you deem helpful regarding the implementation and operation of CSPR as defined in this order.</p>	
<p style="text-align: center;">Additional comments.</p>	