

### U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

Air Traffic Organization Policy

ORDER JO 7210.632A

Effective date: 10/01/2020

### SUBJ: Air Traffic Organization Occurrence Reporting

The Air Traffic Organization (ATO) uses a systemic perspective of safety within the National Airspace System (NAS). This perspective places more value on discovering why adverse safety events happen and identifying risk in the system, rather than determining who was at fault. All ATO employees who are engaged in and support air traffic services or Technical Operations have a responsibility to report all suspected unsafe Air Traffic and Technical Operations occurrences. The sharing of reported information allows the ATO to effectively and safely manage operations within the NAS, and is integral to the successful execution of the ATO Safety Management System (SMS). This directive establishes reporting requirements that support the collection of safety data.

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### **Chapter 1. General Information**

**1. Purpose of This Order.** This order provides guidance for processing mandatory air traffic and technical operations occurrence reports. This guidance identifies what is to be reported and how to report. This order does not eliminate the requirements set forth in Federal Aviation Administration (FAA) Order JO 1030.3, *Initial Event Response*, which provides guidance for the immediate dissemination of information following significant Air Traffic Organization (ATO) safety events.

**2.** Audience. This order applies to all ATO personnel, FAA contract tower employees, and anyone using ATO directives.

**3.** Where Can I Find This Order? This order is available on the MyFAA employee website at <a href="https://employees.faa.gov/tools\_resources/orders\_notices/">https://employees.faa.gov/tools\_resources/orders\_notices/</a> and on the FAA website at <a href="http://www.faa.gov/regulations\_policies/orders\_notices/">https://www.faa.gov/tools\_resources/orders\_notices/</a> and on the FAA website at <a href="http://www.faa.gov/regulations\_policies/orders\_notices/">http://www.faa.gov/tools\_resources/orders\_notices/</a> and on the FAA website at <a href="http://www.faa.gov/regulations\_policies/orders\_notices/">http://www.faa.gov/regulations\_policies/orders\_notices/</a>.

4. Cancellation. This revision cancels FAA Order JO 7210.632.

**5.** Explanation of Policy Changes. This revision adds new definitions to Chapter 1, paragraph 7; incorporates updates provided in Change 1; documents the ability of Quality Assurance (QA) to submit Mandatory Occurrence Reports (MORs); adds further guidance for Oceanic occurrence reporting; incorporates Aviation Risk Identification and Assessment (ARIA) and risk based processes; eliminates Electronic Occurrence Reports (EORs), Operational Error Detection Program (OEDP), and the Traffic Analysis and Review Program (TARP); adds a requirement for notification of surface events and runway incursions; creates reserved sections for Technical Operations Services processes; and makes general organizational and editorial updates.

**6. Distribution.** This order is distributed to the following ATO service units: Air Traffic Services, Technical Operations Services, Mission Support Services, System Operations Services, and ATO Safety and Technical Training. In addition, this order is distributed to the following: Office of Accident Investigation and Prevention (AVP); Air Traffic Safety Oversight Service (AOV); Flight Standards Services (AFS); NextGen (ANG); the William J. Hughes Technical Center; the Mike Monroney Aeronautical Center; National Air Traffic Controllers Association; Professional Aviation Safety Specialists; National Association of Government Employees; and the interested aviation public.

#### 7. Definitions.

**a.** Aircraft Accident – As defined in FAA Order JO 8020.11, *Aircraft Accident and Incident Notification, Investigation, and Reporting*, an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and the time all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.

**b.** Aircraft Incident – As defined in FAA Order JO 8020.11, an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

**c.** Air Traffic Incident – An air traffic incident encompasses all problems not affecting the aircraft directly; for example, near-midair collisions (NMACs); pilot, vehicle, or pedestrian deviations; and Traffic Alert and Collision Avoidance System (TCAS) resolution advisory (RA) occurrences. An air traffic incident differs from an aircraft incident.

**d.** Aviation Risk Identification and Assessment (ARIA) – A computer system that automatically analyzes radar and other surveillance data. ARIA utilizes algorithms that examine the geometry between aircraft and incorporates factors such as speed, altitude, and trajectory. ARIA identifies air traffic operations that represent potential safety risks, even if operations are technically deemed compliant.

e. Comprehensive Electronic Data Analysis and Reporting (CEDAR) – A web-based, comprehensive data reporting, collection, and analysis tool used by both quality control and QA to record data associated with their respective organizational responsibilities.

**f.** Mandatory Occurrence Report (MOR) – An occurrence involving air traffic services or technical operations services for which the collection of associated safety-related data and conditions is mandatory. See Appendix A, Mandatory Occurrence Report Criteria, for a full listing of MORs.

**g.** Near Mid-Air Collision (NMAC) – As defined in FAA Order 8020.11, an incident associated with the operation of an aircraft in which a possibility of collision occurs as a result of proximity of less than 500 feet to another aircraft, or where a report is received from a pilot or other flight crewmember stating that a collision hazard existed between two or more aircraft.

h. Occurrence – Any observed or suspected event that meets the definition of an MOR.

**i. Preliminary ARIA Report (PAR)** – An initial report of an air traffic operation identified by ARIA for further review by QA personnel.

**j.** Quality Assurance Group (QAG) – The office in each service area responsible for conducting occurrence classification, identifying and categorizing air traffic incidents, identifying reports for barrier analysis, and conducting barrier analysis reviews in support of the ATO Top 5 and other safety processes. The mission of the QAGs may encompass other duties, including but not limited to, identifying significant safety risk trends, and identifying potential significant events.

**k.** Surface Event – An occurrence at an airport involving a pedestrian, vehicle, or aircraft on the defined airport movement area that involves either a runway excursion, or an incorrect presence, unauthorized movement, or occurrence that affects or could affect the safety of flight of an aircraft.

**I.** Voluntary Safety Reporting Program (VSRP) – A voluntary program that provides a confidential, non-punitive mechanism for employees to report safety events and problems. VSRPs use employee input to identify leading indicators and significant safety concerns and issues, operational deficiencies, non-compliance with regulations, deviations from policies and procedures, and potential risk in the system. Qualitative data received through this program helps identify indicators of potential hazards and areas of risk in the National Airspace System (NAS).

#### 8. Related Publications.

- a. FAA Order JO 7110.65, Air Traffic Control
- **b.** FAA Order JO 7210.633, *Air Traffic Organization Quality Assurance Program (QAP)*
- c. FAA Order JO 7210.634, Air Traffic Organization Quality Control (QC)
- d. FAA Order JO 7200.20, Voluntary Safety Reporting Programs
- e. FAA Order JO 1030.3, Initial Event Response

**f.** FAA Order JO 8020.16, Air Traffic Organization Aircraft Accident and Aircraft Incident Notification, Investigation, and Reporting

**g.** FAA Order JO 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting

- h. FAA Order JO 1350.14, Records and Information Management (RIM)
- i. FAA Order JO 7200.25, Joint Air Traffic Operations Command (JATOC)
- j. FAA Order JO 3120.4, Air Traffic Technical Training
- k. FAA Order JO 7350.9, Location Identifiers
- I. FAA Order JO 6000.15, General Maintenance Handbook for NAS Facilities
- m. FAA Order JO 6000.5, Facility Service and Equipment Profile (FSEP)
- n. FAA Order JO 1000.37, Air Traffic Organization Safety Management System

**9.** How to Suggest Recommendations to Change this Order. Submit recommendations to change this order through email to the QAG via <u>9-AJI-HQ-QualityAssurance@faa.gov</u>. ATO Safety and Technical Training (AJI) must review suggestions periodically.

#### **Chapter 2. Reporting Requirements**

**1. Introduction.** This chapter describes occurrences that must be reported and the methods used to report them. Under the following procedures, it is possible that one occurrence will generate multiple reports, which is preferable to a missed report. AJI is responsible for reconciling all duplicate reports.

#### 2. Safety Culture Expectations.

**a.** The requirements for reporting the occurrences described by this directive are intended primarily to ensure that safety data that may benefit the NAS are collected. The simple act of reporting an occurrence should not automatically trigger quality control functions; e.g., corrective action plans or service reviews, as referenced in FAA Order JO 7210.634.

**b.** References to specific reported occurrences must not be entered into an employee's training records. Managers must only enter assigned training following guidance in FAA Order JO 3120.4 and FAA Order JO 7200.20, without any reference to the incident.

**c.** In support of a strong reporting culture, the respective service area QA office during the review of occurrences may discover a reportable event. If such an event is discovered, the QA office will create an MOR and notify the associated facility.

#### 3. Responsibilities.

#### a. ATO Organizational Responsibilities.

(1) AJI is responsible for all policies and procedures related to air traffic and Technical Operations occurrence reporting and data collection, according to this directive and FAA Order JO 7210.633. Only AJI may approve extensions of timeframes, exemptions from specific requirements, and other specific waivers to the provisions of this directive.

(2) The ATO Litigation Group (AJI-17) is responsible for all ATO policies and procedures related to aircraft accidents, aircraft incidents, and litigation support for enforcement and accidents.

(3) Applicable service units are responsible for ensuring that its employees report all occurrences and support the data collection and analysis processes required by this directive or requested by AJI.

#### b. Employee Responsibilities.

(1) Employees must ensure that all occurrences of which they are aware, through either direct involvement or observation, are reported. All personnel with knowledge of an occurrence are encouraged to report, even if this results in multiple submissions of the same occurrence.

(2) Non-management employees eligible to participate in a VSRP may satisfy the reporting requirements of this directive by reporting occurrences through those programs, except as specified in FAA Order JO 7200.20 and in this order.

(3) Management employees must report occurrences according to this directive. In addition, if eligible to participate, they may also file a VSRP report.

(4) For Air Traffic, after initial facility entry in CEDAR, Inquiry or Oceanic MORs are first routed in CEDAR to their respective facility points of contact (POCs) for possible inclusion of additional data before submission to QA. All Inquiry or Oceanic MORs must be reviewed and submitted to QA in CEDAR within <u>five</u> administrative days from the date of the initial Inquiry or Oceanic MOR entry.

**NOTE** – All upset, pitch, or roll-wake attributed inquiry MORs are routed directly to the respective QA office upon initial submission.

**4.** What to Report. All observed or suspected occurrences which meet the MOR criteria as defined in appendix A.

5. How to Report for Air Traffic. As soon as practical, without impacting operations:

**a.** Non-management personnel must report the occurrence:

(1) To on-duty management/controller-in-charge (CIC) as soon as practical, but no later than the end of duty shift.

(2) According to the applicable VSRP requirements as prescribed in FAA Order JO 7200.20.

**b.** Management personnel/CICs:

(1) Must ensure that all reported or observed occurrences are entered into CEDAR as the appropriate MOR before the end of the current duty shift, or in accordance with the applicable VSRP requirements as prescribed in FAA Order JO 7200.20.

(2) Must update the original MOR to note all new pertinent information when more than one report of the same occurrence is received.

(3) Must assign each MOR a unique identification number. Upon request, management must provide employees with a copy of the MOR.

(4) For an employee-reported occurrence that does not meet any MOR criteria, must remind the employee about their VSRP. Management must still address any valid safety concerns identified by the employee.

c. At locations without CEDAR (including nonfunctioning CEDAR):

(1) Non-management personnel must report the occurrence:

(a) To on-duty management as soon as practical, but no later than the end of duty shift; or,

(b) According to FAA Order JO 7200.20.

(2) Management personnel/CIC must meet all the requirements of Chapter 2, paragraph 5.b. by:

(a) Emailing the appropriate and completed hard copy MOR form to AJI before the end of their current duty shift (see Appendix B for an example). AJI must provide the MOR tracking number to the facility POC.

(b) Copy the designated air traffic facility POC on the email.

#### 6. How to Report for Technical Operations Services- RESERVED.

**NOTE** – The Technical Operations Services MOR criteria, Safety Database tool, processes, and training have not yet been developed. The requirement for Technical Operations to enter all reported or observed occurrences, electronically or manually, will be implemented once a tool, process, and training are developed, agreed upon, and fielded. In the interim, Technical Operations will log Deviation (Code 89) Interrupt Reports (LIR) in the Remote Monitoring and Logging System (RMLS). MORs will be automatically created in CEDAR using an automated data exchange with RMLS based upon Code 89 Deviation LIRs.

**7. Relieving and/or Restricting Operational Personnel.** The decision to relieve air traffic personnel from operational positions is based upon management's determination that safety or the employee's wellbeing may be impacted. A review of an occurrence should not routinely trigger relieving and/or restricting an employee from an operational position. Relief from an operational position does not restrict an employee from operational duties.

**8. Reporting Compliance.** As a result of failure to report, actions will be taken according to the FAA Personnel Management System and applicable collective bargaining agreements.

### **Chapter 3. Notifications**

#### 1. Flight Crew Notification of Suspected Pilot Deviations (PDs).

**a.** When the employee providing air traffic services determines that pilot actions affected the safety of operations, the employee must report through the MOR process and notify the flight crew, workload permitting, in accordance with FAA Order JO 7110.65, paragraph 2-1-27, Pilot Deviation Notification.

**b.** The employee reporting the occurrence must notify the CIC, Operations Supervisor, or Operations Manager, as appropriate, of the circumstances involved so that they may be communicated to the pilot upon contacting the facility.

**2.** Surface Events and Runway Incursions. The Air Traffic Manager must notify airport management of all known surface events, regardless of type, by the close of business the next administrative day. If previously reported surface events are determined to be runway incursions, inform airport management of the status change. If a Technical Operations employee or contractor was involved in the surface event, notify Technical Operations management.

#### **Chapter 4. Data Retention**

**1. Data Retention.** FAA Order 1350.14, *Records and Information Management*, provides general requirements for data and record retention. FAA Order JO 8020.16 provides retention requirements for aircraft accidents, aircraft incidents, litigation, and enforcement support. The following are the retention requirements for occurrences covered under this order:

**a.** AJI must retain all data collected through the MOR and ARIA processes, in accordance with FAA Order JO 7210.633.

**b.** NMAC, Vehicle or Pedestrian Deviation (V/PD), and PD reports will be identified from surveillance data and MORs and categorized following FAA Order JO 7210.633 and associated AJI standard operating procedures. Upon notification by QA that an occurrence is an NMAC, V/PD, or PD, facility management must ensure that supporting data are provided and retained according to FAA Order JO 8020.16.

**c.** In cases in which multiple retention requirements are applicable, data and record retention must adhere to the requirement stipulating the longest amount of time.

#### Appendix A. Mandatory Occurrence Report Criteria

#### **1. Introduction.**

**a.** All employees must ensure that the following occurrences, of which they are aware through either direct involvement or observation, are reported. These occurrences or conditions must be reported using the process described in this directive or in FAA Order JO 7200.20, *Voluntary Safety Reporting Programs*. Submission of a VSRP report satisfies non-management employees' requirement to report according to this directive except when the employee providing air traffic services determines that pilot actions affected the safety of operations. When such a determination is made, pilot actions must also be reported as a MOR in accordance with Appendix A, paragraphs 2–9.

**b.** Submission of a VSRP does not exempt employees from making appropriate notifications when the employee providing air traffic services determines that an occurrence involved national security or the immediate safety of flight (for example, in-flight emergencies, overdue aircraft, no radio (NORDO)/no radio acknowledgement (NORAC) aircraft, aircraft accidents).

#### 2. Airborne Loss of Separation.

**a.** Any suspected loss of radar separation involving instrument flight rules (IFR) aircraft, except as the result of compression on final approach.

**NOTE** – Loss of separation on final approach will be closely monitored using electronic detection and assessed for risk and corrective action identified through the Quality Assurance and Quality Control processes.

**b.** Any suspected loss of separation involving visual flight rules (VFR) aircraft in Class B and Class C airspace, Terminal Radar Service Area (TRSA), or practice VFR approaches.

c. Any suspected loss of separation involving formation flights.

**d.** Any suspected loss of separation involving non-radar standards.

**NOTE** – A suspected loss of separation involving non-radar standards that occurs in oceanic airspace is covered in Appendix A, paragraph 8, Oceanic Environment.

**3.** Unmanned Aircraft System (UAS). Any instance where a pilot reports or air traffic control (ATC) becomes aware of unauthorized UAS activity or authorized UAS activity that is conducted in an unsafe or hazardous manner. For authorized UAS activities conducted in an unsafe manner, please note in the MOR the Certificate of Authorization (COA) number, when available, and the violation that occurred.

#### 4. Airport Surface Loss of Separation.

**a.** Any ground surveillance alert (Airport Surface Detection Equipment (ASDE) or Airport Movement Area Safety System (AMASS)) between two aircraft.

**b.** Any ground surveillance alert (ASDE or AMASS) between an aircraft and a vehicle.

- c. Any suspected loss of runway/airport surface separation between two aircraft.
- d. Any suspected loss of runway/airport surface separation between an aircraft and a vehicle.

e. Any suspected loss of runway/airport surface separation between an aircraft and a pedestrian.

#### 5. Terrain/Obstruction.

**a.** Any suspected loss of separation between an IFR aircraft and terrain or obstacles; for example, operations below minimum vectoring altitude (MVA) or minimum IFR altitude (MIA).

**b.** Any operation of a VFR aircraft in proximity to terrain or obstructions that the employee providing air traffic services determines affected the safety of flight. These occurrences normally result in ATC issuing a safety alert or control action.

REFERENCE - FAA Order JO 7110.65, paragraph 2-1-6, Safety Alert

# 6. Airborne Air Traffic Control Anomaly (Airspace/Altitude/Route/Speed) Not Involving a Loss of Separation.

**a.** Any instance in which an aircraft enters airspace on anything other than the expected or intended altitude, routing, or airspeed, or without a point-out or hand-off.

**b.** Any instance where an aircraft operates at an altitude, routing, or airspeed that the employee providing air traffic services determines affected the safety of flight or operations. These occurrences normally result in ATC issuing a safety alert or control action. All non-loss TCAS-RAs and/or spillouts must be reported under this MOR.

**c.** Any occurrence where an aircraft enters special use airspace (for example, a warning area, military operations area, or ATC-assigned airspace) without coordination and/or authorization.

**NOTE** – A suspected anomaly not involving loss of separation that occurs in oceanic airspace is covered in Appendix A, paragraph 8, Oceanic Environment.

#### 7. Airport Environment.

**a.** The presence of an aircraft, vehicle, or pedestrian on any movement area or runway safety area not expected/intended by ATC.

**b.** Any instance in which an aircraft unexpectedly lands or departs, or attempts to land or depart, a runway or surface. All ASDE Taxiway Arrival Prediction (ATAP) alerts are captured under this MOR.

**c.** Any instance in which an aircraft lands or departs on, or flies an unrestricted low approach to, a closed runway (or portion thereof).

**d.** Any go-around initiated by either a flight crew or ATC involving turbojet aircraft within a half mile of the arrival threshold not involving practice approaches.

**e.** Any instance in which any part of the aircraft has crossed over the runway hold-short line and the controller cancels the takeoff or the flight crew aborts the takeoff.

f. Any instance in which an aircraft unintentionally maneuvers off the runway/taxiway.

**g.** Any improper/unexpected presence of a vehicle or aircraft inside the instrument landing system (ILS) critical area.

**8.** Oceanic Environment. Any instance where aircraft operating in oceanic airspace are suspected of:

- a. Losing separation.
- **b.** Operating at a time, altitude, routing, or reporting point other than what was expected/cleared.

**c.** Not maintaining communication (to include timely position or other reports) as required or expected/intended resulting in additional notifications/queries, or alternative actions by ATC or a flight crew.

**9.** Communication. Except for occurrences in oceanic airspace (which are reported in Appendix A, paragraph 8), any instance in which communication with an aircraft was not established or not maintained as expected/intended and results in alternative control actions or additional notifications by ATC or a flight crew or in a landing without a clearance.

**NOTE** – Examples of "additional notifications" would include notifications required according to FAA Order JO 1030.3 or to the Domestic Events Network for NORDO aircraft.

**10. Emergency or In-Flight Hazard.** The following are provided as examples and are not intended to be all-inclusive.

**NOTE** – Emergency or in-flight hazards may be declared by ATC, flight crew, facility personnel, or officials responsible for the operation of the aircraft.

- **a.** Medical emergency
- **b.** Inflight equipment malfunction requiring special handling
- c. Passenger/flight crew injury due to turbulence other than wake
- **d.** Fuel quantity
- e. Pilot disorientation
- f. VFR pilot in or trapped on top of clouds
- **g.** Laser light illumination
- h. Hijack

- i. Bomb threat
- **j.** Bird strike
- **k.** Other

**11. Inquiry.** Any expression of concern or inquiry by any external entity, to include a flight crew, to a management official/CIC or to ATC on the radio concerning:

**a.** The proximity or operation of an aircraft, either airborne or on the surface, including NMAC notifications from a flight crew.

**b.** An upset, pitch, or roll attributed to wake turbulence from another aircraft.

**NOTE** – The AIM instructs pilots, when notifying ATC of a wake event, to be as descriptive as possible (e.g., bank angle, altitude deviations, intensity, duration of event).

**REFERENCE** – Aeronautical Information Manual (AIM), Section 7-3, Wake Turbulence, paragraph 7-3-8g, Pilot Responsibility

12. Technical Operations Services MORs – RESERVED.

### Appendix B: FAA Form 7210-13 Air Traffic Mandatory Occurrence Report

Submission using CEDAR is <u>preferred</u>. If CEDAR is <u>unavailable</u>, please submit the completed FAA Form 7210-13 via email to the applicable Service Area office: 9-AJI-WSA-QualityAssurance@faa.gov, 9-AJO-ESA-QualityAssurance@faa.gov, 9-AJO-CSA-QualityAssurance@faa.gov. This order is available on the MyFAA employee website at <u>https://employees.faa.gov/tools\_resources/forms/index.cfm/go/document.information/documentID/10</u> 19788.

1. Reporting FAC ID 2. Date UT	C (dd/mm/yyyy)	3. Time UTC	4. Significant (	Occurrence?
			<b>O</b> 1	(es O No
5. MOR reported by (select one O Controller providing services O CIC O External Facility Referral	· _	-	cility Review poten this e	l equipment outage tially contribute to event? (es <b>O</b> No
Brasher warning given? <b>O</b> Yes	O No Training in progres	s? 🔿 Yes 🔵 No	Nearest Airport:	Alert #:
		NE SEPARATION MOR	Rs	
	aircraft (in class B or practice		Formation flights	O Non-radar
B2. Aircraft #1 information: Aircraft ID	Aircraft Type/Suffix	IFR/VFR	Formation Flight	
			O N/A O Non-stand	ard Trailing A/C beacon
Facility communicating with A/C	Position communicating wi	th A/C	Frequency	
B2. Aircraft #2 information:				
Aircraft ID	Aircraft Type/Suffix		Formation Flight O N/A O Non-stand O Standard	ard Trailing A/C beacon
Facility communicating with A/C	Position communicating wi	th A/C	Frequency	
B3. Required separation:	B4. Observed se		B5. Airspace class:	B6. TCAS RA: O Yes
		eparation If provided by the		O No
		I/OBSTRUCTION MOR		
C1. MOR type - improper/unexp MVA O MIA MRA	MEA O MO	-	on involving (select one O Other (describe in	
C2. Aircraft information: Aircraft ID Aircraft	Type/Suffix IFR/VFR O IFR O VFR	Facility communicating with A/C	Position communicating with A/C	Frequency
C3. Occurrence location:		quired altitude:	C5. Observed	J altitude:

		SURFACE	SEPARATION N	IORs	
D1. MOR type - sus	spected surface loss inv	olving (select on	e):	D2. Occurrence lo	ocation:
O Two aircraft	Ground surv	eillance alert betw	een two aircraft		
O Aircraft and veh	nicle 🚺 Ground surv	eillance alert betw	een		
O Aircraft and peo	aircraft/vehic	le			
D3. Aircraft #1 info				Describe where on the air	port surface the occurrence occurred
Aircraft ID		Easility communi	acting with A/C	Dosition communicy	ting Erectional
AIrcraft ID	Aircraft Type/Suffix	Facility communi	cating with A/C	Position communica with A/C	ating Frequency
D4. Other involved	aircraft/vehicle/pedestr	ian information (	only complete or	ne sub-sections ap	plicable):
D4a. Aircraft:					
Aircraft ID	Aircraft Type/Suffix	Facility communi		Position communica	ating Frequency
				with A/C	
D4b. Vehicle:		10	- 114 -	Desilier	
Vehicle type O Airport operator	Vehicle	con	ility: nmunicating	with vehicle	icating Frequency
	-	with	n vehicle		
O FAA O	A/C not for flight				
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O Tug with aircraf	ft				
D4c. Pedestrian:					
Pedestrian name (if	known)				
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		AIRSPACE/ALTI	TUDE/ROUTE/SE	PEED MORs	
E1. Aircraft informa	ation	, and , to can be	100211001201	EED monto	
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			ith A/C		
		O VFR			
E2. MOR type (only	complete one sub-sect	tion as applicable	e):		•
	ed airspace other than e		•	ctions were taken	by ATC
or the flight c	rew:			· · · · ·	
Airspace entered:	Desilies		Foreign facility d		Action taken by:
Facility	Position Fr	equency	0	Yes	ATC
			O	No	Flight crew
			•	•	
Unexpected/uninten	ded:		TCAS RA:	Spillout:	
Altitude Assi	igned: Observe	ed:	O Yes	0	Yes O No
Speed Assi	igned: Observe	ed:			
Route			O No	SUA Name:	
			1		

					COM	MUN	ICATION	I MORs				
F1. MOR type	- aircraft	commi	unicati	ions not:						F2. R	lesulti	ing actions:
O Establishe					-				ons required		Alterna by fligh Additio by ATC	ate action by ATC ative action nt crew mal notification C g without clearanc
F3. Aircraft inf	formation	:										_
Aircraft ID		Aircrat	ft type/	suffix		con	ility municatir A/C	ng	Position cor with A/C	mmunica	ating	Frequency
						INQU	JIRY MO	Rs				•
or operation of	n of conce	rn or ir ft, eithe	nquiry, er airbo	rne or on t	he surface	that i	s made by	y email,	telephone, ra	<u> </u>	·	cerning the proximi
G2. Airborne occurrence: O Yes No			G3. Re	eporting s	ource:					G4. Co	ntact	number:
G5a. Reportin			-									-
Aircraft ID	Aircraft ty	/pe/suf	fix	Facility co	mmunicating	g with	n A/C	Positio	n communica	ating with	h A/C	Frequency
G5b. Wake So	urce Airc	raft:										
Aircraft ID	Aircraft ty	/pe/suf	fix	Facility co	mmunicating	g with	A/C	Positio	n communica	ating with	h A/C	Frequency
Required sepa		nm			Observed Vertical			_nm		Airs	space	Class:
A/C Location (	(F/R/D):				A/C Altitud	le:	Numbe	r Injured	1:	Cor	ntrol Is	ssue Experiences
Injuries Suffer	red											

Air Traffic Mandatory Occurr	ence Report
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					EMERC	GENCY	MORs				
	in-flight emerg								0		150
O Medical em		-		ipment	malfuncti				-	VFR in/on t	
O Fuel quanti		O Bird	strike			0	Passe	nger/Flight (	Crew I	njury <b>O</b> C	Iner
H1a. Aircraft in Aircraft ID			R/VF		Enaility		ection	Desition of		inatina	English
Aircrait ID	Aircraft type/suff		0		Facility of with A/C		caung	Position co with A/C	mmun	licaung	Frequence
			ŏ								
			<u> </u>						ни	d. Medical a	eeietance a
H1b. Malfunctio component:	oning equipmer	nt	H10	:. Pass	enger or	crew co	ndition	:		u, metrical a	ssistance a
										<b>O</b> 1	(es
										0	lo
										<b>0</b> u	Jnknown
Only complete for me	chanical MORs		Only	complete	for medical I	MORs					
H2. Injuries Sut											
H2b. Type of Tu	urbulence:		H2c	. Altitu	ide:			oute inforn			<b>D:</b> ( ) (
							Depart	ea	Dest	nation	Diverted to
H2e. A/C Locat	ion (fix/radial		H2f	. Numb	ber Injure	d:	1				
distance);											
		UAS	: Haza	ardous	and/or U	nauthor	rized UA	AS Activity	MORs		
1. Aircraft infor									_		
Aircraft ID	Aircraft type/suffix	IFR/VFR:		Facilit with A	ty commur	nicating		Position c with A/C	ommu	nicating	Frequer
	A Research A	O IFI		I							
		O VF	R								
Registration #:	UAS Type:	Facility		-	ation *			UAS Posit	tion		Frequer
				O CI	-						
				O SI	warm O	N/A					
					Addition	al Infor	mation:				
Airspace Class	TCAS Resolution	on Advisory	?*	A/C Lo	ocation (F	/R/D):		Law Enfor	cemer	nt Contact Inf	io:
	O Yes										
	<b>O</b> No							Certificate	of Au	thorization: _	
A/C Altitude:	A/C Heading:	Relative 0	Clock F	Position	1:	Closes		UASw	eight e	exceeds 55 lk	os
						Proxim		UAS Colo	-		
										s (feet):	
UAS was fixed v	ving or	Risk asso	riated	with L	AS	LIAS D	onition //	Decimal forr		Pilot reporte	d oo NMAC
rotorcraft? *	2	Activity? *	•						nat)		u as NMAC?
Fixed Wing				ardous			e:			O Yes	
	rotors		S Una	uthoriz		-	ide:			O No	
O Rotorcraft: _					METAR						

		AIRE	PORT ENVIRONM	MENT MOR	ls			
11. MOR type - airpo	ort environment MO	Rs involving a	ircraft on the air	port surfac	:e:	I1a. Occu	rrence locati	on:
O Aircraft on more	vement area/runway	safety area othe	er than expected/i	intended				
- Other aircraft	t within one-mile of la	nding threshold	? O Yes O I	No				
O Canceled take	off clearance or flight	crew aborted t	akeoff after crossi	ing hold-sh	ort line			
O Aircraft uninter	ntionally maneuvered	off runway or t	axiway					
O Aircraft within	ILS protected area ot	her than expect	ted/intended					
- Other aircraft	t on final approach - Il	D	Type/S	uffix		Describe whe occurrence of	ere on the airport	surface
11b. Aircraft informa	ation:							
Aircraft ID	Aircraft type/suffix	Facility cor A/C	mmunicating with	Position of A/C	communica	ating with	Frequency	
12 NOD tons sime		De invehiere ei				124 044		
12. MOR type - airpo approach:	ort environment MOI	ks involving a	ircraft landing/de	eparung/or	I IOW-	iza. Occu	rrence locati	on:
O Aircraft landed/d expected/intend	departed or attempted	I to land/depart	runways/surface	other than				
	departed or executed	low approach t	o closed runway					
(or closed portio		arrival threadal	d (non flight traini				ere on the airport	urface
11b. Aircraft informa	und within 1/2 mile of	arrival urreshoi	d (non-night traini	ng)		occurrence o	ccurred	
	-							
Aircraft ID	Aircraft type/suffix	Facility cor	mmunicating with	Position of	communica	ating with	Frequency	
Aircraft ID	Aircraft type/suffix	Facility cor A/C	mmunicating with	Position of A/C	communica	ating with	Frequency	
		A/C	-	A/C		-		
	Aircraft type/suffix	A/C	-	A/C		ating with		
13. MOR type - airpo surface:	ort environment MOP	A/C	ehicles on the ai	A/C rport		-		
13. MOR type - airpo surface:		A/C	ehicles on the ai	A/C rport		-		
I3. MOR type - airpo surface: O Vehicle on mo	ort environment MOP	A/C Rs involving ve safety area oth	ehicles on the ai	A/C rport		-		
I3. MOR type - airpo surface: O Vehicle on mo - Aircraft within	ort environment MOF	A/C Rs involving version of the state of the	ehicles on the ai er than expected/ Yes <b>O</b> No	A/C rport		-		
I3. MOR type - airpo surface: O Vehicle on mo - Aircraft within O Vehicle within	ort environment MOF wement area/runway n one-mile of landing ILS protected area of	A/C Rs involving vi safety area oth threshold?	ehicles on the ai er than expected/ ) Yes <b>O</b> No ted/intended	A/C rport		-		
I3. MOR type - airpo surface: O Vehicle on mo - Aircraft within O Vehicle within	ort environment MOP	A/C Rs involving vi safety area oth threshold?	ehicles on the ai er than expected/ ) Yes <b>O</b> No ted/intended	A/C rport	Describ	ccurrence		e occu
I3. MOR type - airpo surface: O Vehicle on mo - Aircraft within O Vehicle within - Aircraft on fin	ort environment MOF wement area/runway n one-mile of landing ILS protected area of nal approach - ID	A/C Rs involving vi safety area oth threshold?	ehicles on the ai er than expected/ ) Yes <b>O</b> No ted/intended	A/C rport	13a. O	ccurrence	location:	e occu
I3. MOR type - airpo surface:     Vehicle on mo - Aircraft within Vehicle within - Aircraft on fin I3b. Vehicle information	ort environment MOF wement area/runway n one-mile of landing f ILS protected area of nal approach - ID	A/C Rs involving vi safety area oth threshold?	ehicles on the ai er than expected/ ) Yes <b>O</b> No ted/intended Type/Suffix	A/C rport intended	Descrit	ccurrence	location:	
I3. MOR type - airpo surface: O Vehicle on mo - Aircraft within O Vehicle within - Aircraft on fin	ort environment MOF wement area/runway n one-mile of landing f ILS protected area of nal approach - ID ation:	A/C Rs involving vo safety area oth threshold?	ehicles on the ai er than expected/ ) Yes <b>O</b> No ted/intended	A/C rport intended	Descrit	ccurrence	location:	
I3. MOR type - airpo surface:     Vehicle on mo - Aircraft within Vehicle within - Aircraft on fin - Aircraft on fin I3b. Vehicle information Vehicle type: Airport Operator	ort environment MOF wement area/runway n one-mile of landing f ILS protected area of nal approach - ID ation:	A/C Rs involving vo safety area oth threshold?	ehicles on the ai er than expected/ ) Yes O No ted/intended Type/Suffix Facility commu	A/C rport intended	Descrit	ccurrence	location:	
<ul> <li>I3. MOR type - airporsurface:</li> <li>Vehicle on mo <ul> <li>Aircraft within</li> <li>Vehicle within</li> <li>Aircraft on fin</li> </ul> </li> <li>I3b. Vehicle informative type: <ul> <li>Airport Operator</li> <li>FAA</li> <li>A A</li> </ul> </li> </ul>	ort environment MOF wement area/runway n one-mile of landing f ILS protected area of nal approach - ID ation: r O Contractor	A/C Rs involving vo safety area oth threshold?	ehicles on the ai er than expected/ ) Yes O No ted/intended Type/Suffix Facility commu	A/C rport intended	Descrit	ccurrence	location:	
I3. MOR type - airpor surface:     Vehicle on mo     Aircraft within     Vehicle within     Aircraft on fin     I3b. Vehicle informat     Vehicle type:     Airport Operator     FAA O A     Tug O T	ort environment MOF evement area/runway in one-mile of landing in ILS protected area of nal approach - ID ation: Ver ation: Ver VC not for flight Fug with aircraft	A/C Rs involving vo safety area oth threshold?	ehicles on the ai er than expected/ ) Yes O No ted/intended Type/Suffix Facility commu	A/C rport intended	Descrit	ccurrence	location:	
I3. MOR type - airpor surface:     Vehicle on mo - Aircraft within Vehicle within - Aircraft on fin I3b. Vehicle informat Vehicle type: Airport Operator FAA O A Tug O T Other (summary	ort environment MOF evement area/runway in one-mile of landing in ILS protected area of nal approach - ID ation: Ver ation: Ver VC not for flight Fug with aircraft	A/C Rs involving vi safety area oth threshold? O ther than expect	ehicles on the ai er than expected/ Yes O No ted/intended Type/Suffix Facility commu with vehicle	A/C rport intended nicating	Describ occurre	ccurrence	location: airport surface th	
I3. MOR type - airpo surface: Vehicle on mo - Aircraft within Vehicle within - Aircraft on fin I3b. Vehicle informat Vehicle type: Airport Operator FAA O A Tug O T Other (summary I4. MOR type - airpo surface:	ort environment MOF vement area/runway in one-mile of landing in ILS protected area of nal approach - ID ation: Veh vC not for flight VyC not for flight () ort environment MOF	A/C Rs involving v safety area oth threshold? O ther than expect hicle ID	ehicles on the ai er than expected/ Yes O No ted/intended Type/Suffix Facility commu with vehicle edestrian on the	A/C rport intended nicating P airport	Describ occurre Position con	e where on the	location: airport surface th	
I3. MOR type - airpo surface:     Vehicle on mo - Aircraft within Vehicle within - Aircraft on fin I3b. Vehicle informat Vehicle type: Airport Operator FAA O A O Tug O T O Other (summary I4. MOR type - airpo surface: O Pedestrian on	ort environment MOF evement area/runway in one-mile of landing to ILS protected area of nal approach - ID ation: Ver vC not for flight fug with aircraft v)	A/C Rs involving vi safety area oth threshold?	ehicles on the ai er than expected/ Yes O No ted/intended Type/Suffix Facility commu with vehicle edestrian on the	A/C rport intended nicating airport ted/intended	Describ Describ Position con	ccurrence be where on the mmunicating ccurrence	location: airport surface th	Free

Brasher Warning Given			1	
Brasher given by:	Position:		Frequency:	
Pilot Information Availa	able?* O Yes O No			
Pilot Name:		ldress:		Cert #:
	abor statement informatio	n haina airear t		
Reason for no photora	sher statement informatio	n being given: "		
	$\mathbf{C}$			
		Oceanic MORs		
MOR type - Oceanic En	vironment			
Type of Oceanic MOR:				
-				
Cusposted loss of a	maration			
O Suspected loss of se				
O Operating at a time,	altitude, routing or reporting	point other than expected/inter	nded	
	altitude, routing or reporting	point other than expected/inte	nded	
O Operating at a time,	altitude, routing or reporting	point other than expected/inter	nded	
O Operating at a time, O Not maintaining com	altitude, routing or reporting		nded Facility	
O Operating at a time, O Not maintaining com Aircraft #1 information:	altitude, routing or reporting	x IFR/VFR		
O Operating at a time, O Not maintaining com Aircraft #1 information:	altitude, routing or reporting			
O Operating at a time, O Not maintaining com Aircraft #1 information:	altitude, routing or reporting	x IFR/VFR		
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID	Altitude, routing or reporting munications	x IFR/VFR O IFR O VFR	Facility	
O Operating at a time, O Not maintaining com Aircraft #1 information:	altitude, routing or reporting			
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID	Altitude, routing or reporting munications	x IFR/VFR O IFR O VFR	Facility	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID	Altitude, routing or reporting munications	x IFR/VFR O IFR O VFR	Facility	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID	Altitude, routing or reporting munications Aircraft Type/Suffix Frequency	x IFR/VFR O IFR O VFR	Facility	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID Position Aircraft #2 information:	Altitude, routing or reporting mmunications Aircraft Type/Suffix Frequency	x IFR/VFR O IFR O VFR Workstation	Facility Channel In Use	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID Position	Altitude, routing or reporting munications Aircraft Type/Suffix Frequency	x IFR/VFR O IFR O VFR Workstation	Facility	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID Position Aircraft #2 information:	Altitude, routing or reporting mmunications Aircraft Type/Suffix Frequency	x IFR/VFR O IFR O VFR Workstation	Facility Channel In Use	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID Position Aircraft #2 information:	Altitude, routing or reporting mmunications Aircraft Type/Suffix Frequency	x IFR/VFR O IFR O VFR Workstation	Facility Channel In Use	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID Position Aircraft #2 information:	Altitude, routing or reporting mmunications Aircraft Type/Suffix Frequency	x IFR/VFR O IFR O VFR Workstation	Facility Channel In Use	
Operating at a time, Not maintaining com Aircraft #1 information: Aircraft ID Position Aircraft #2 information:	Altitude, routing or reporting mmunications Aircraft Type/Suffix Frequency	x IFR/VFR O IFR O VFR Workstation	Facility Channel In Use	

	Oc	eanic Detai	ls		
Cause of Deviation *					
O ATC Coordination	O Conditional	Clearance		O Emergeno	y .
O Enter OCA Wrong FL	C Enter OCA V	Vrong FL		O No Cleara	ince
O Performance	O TCAS RA	-		O Waypoint	insertion Error
<b>O</b> wx	O Not-specified	1		-	
Type of Operation *					
O U.S. Air Carrier	O U.S. Military			O U.S. Gene	eral Aviation
O Foreign Air Carrier	O Foreign Milit			O Foreign G	eneral Aviation
Aircraft Equipment *		·			
CPDLC Status *	Deviated from PBCS T	ack *	MNPS/NAT	HLA Approved *	OTS/RAN *
O Operational O Not Equipped			O Yes		O OTS
O Non-operational	O No				O RAN
Flight Direction *		Airspace	•		
Coordinated with* Also	o with	Clearance	e Deliver vi	-	
	<u>л п л</u>		UHF		F
C		O VHF/ O Othe	UHF r Agency	-	E
Enter from adjacent unit *		O VHF/ O Othe	UHF r Agency rolved:	O ACARS O SATVOIC	E
Enter from adjacent unit *	Other Fa Adjacent unit * O Yes O No	O VHF/ O Othe	UHF r Agency olved: l at uncoord	O ACARS O SATVOIC	E
	Adjacent unit *	O VHF/ O Othe acilities Inv Entered	UHF r Agency olved: l at uncoord	O ACARS O SATVOIC	E
O Yes O No Flight Plan Route	Adjacent unit * O Yes O No	O VHF/ O Othe acilities Inv Entered O Yes	UHF r Agency olved: at uncoord	O ACARS O SATVOIC	
O Yes O No Flight Plan Route Cleared Track	Adjacent unit * O Yes O No	O VHF/ O Othe acilities Inv Entered O Yes	UHF r Agency olved: l at uncoord O	O ACARS O SATVOIC	
O Yes O No Flight Plan Route Cleared Track Route Reported Flown Durat	Adjacent unit * O Yes O No tion Duration at unc	O VHF/ O Othe acilities Inv Entered O Yes	UHF r Agency olved: at uncoord O	O ACARS O SATVOIC	
O Yes O No Flight Plan Route Cleared Track Route Reported Flown Durat Contingency Procedures *	Adjacent unit * O Yes O No tion Duration at unc	O VHF/ O Othe accilities Inv Entered O Yes	UHF r Agency olved: at uncoord O	O ACARS O SATVOIC Inated FL * No Duration at unclea	

			Tra	ck Dev	iation Data:		
Cleared Deviatio	'n	Left/right	of track ate action by ATC	Clea	red Deviation		ight of track ternate action by ATC
Error Starting W	aypoint *			E	rror Ending Waypoin	t*	
Error Starting La	ititude/Lo	ngtitude *		E	rror Ending Latitude/	Longtitud	e *
			Si	enaratio	on Details:		
Planned: Vertical(ft)	Longit	udinal(mi)	Longitudinal(min		Longitudinal(MNT	)	Lateral(mi)
Actual: Vertical(ft)	Longit	udinal(mi)	Longitudinal(min	n)	Longitudinal(MNT	)	Lateral(mi)
			Pilot &	Contro	ller Comments:		
Was the operato	r notified	?*			Did the operator r	espond? '	t
O Yes	(	O No	<u>\                                    </u>		O Yes	_ (	ΟΝο
Operator Comm	ents *						
Additional event	t details o	r remarks					
QC Comments *							
QC Comments *	;						
QC Comments *							

J1. Summary - provide a understand what occurre are reporting.		UMMARY		
	brief summary for all MORs in this s ed. Include information about items t	section that will p that require addit	rovide enough i ional informatio	information for QA to n in the specific MOR
		PARATION		
Was this a loss of separa			<b>a</b>	
O Yes O No	Applicable Separation Rule:		Separation Use	d:
LoSS Information	$\bigcirc \square \square \square$			
	RIS			
Was this a Risk Analysi		K ANALYSIS		
Was this a Risk Analysi	is Event?	K ANALTSIS		
Was this a Risk Analysi		K ANALTSIS		
	is Event? RAE Score:			
	is Event? RAE Score:  PILO			
O Yes O No	is Event? RAE Score:  PILO	T DEVIATION	Phase of Flight:	
Yes No Was this a possible pilo	is Event? RAE Score: PILO Ot deviation?		Phase of Flight:	Office Number:
Ves No Was this a possible pilo Ves No Airspace Class:	is Event? RAE Score: PILO Ot deviation? Preliminary Number:	ORG Choices:		
Ves No Was this a possible pilo Ves No	is Event? RAE Score: PILO Ot deviation? Preliminary Number:	T DEVIATION		
Ves No Was this a possible pilo Ves No Airspace Class:	is Event? RAE Score: PILO Ot deviation? Preliminary Number:	ORG Choices:		

### Appendix C: Technical Operations Services Mandatory Occurrence Report Worksheet – RESERVED