All Weather Operations (AWO)

AIRPORT

"G.B. PASTINE Ciampino ROMA "

(TRANSLATION PROVIDED FOR INFORMATION PURPOSES ONLY - IN CASE OF ANY CONFLICT, THE ITALIAN TEXT SHALL PREVAIL)

Phase	Date	ADR Spa	ENAV Spa
Approval	30/06/2015	Post Holder in Area of Movement Antonio Anticoli Borza	Director of the Board Ciampino Patrizio Girolimetti

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1 FIELD OF APPLICATION

These standards and procedures apply to operations performed at the airport starting from the Visibility condition 2 as defined in this document, and establish safety parameters of ground operations mainly to reduce risk of unauthorised runway incursions or collisions on the ground between aircraft and/or vehicles and/or infrastructure.

Bodies, companies and businesses destined to operate inside the movement area are required to teach personnel authorised to drive vehicles, even if employed by external operators, to have sufficient knowledge of the layout of that area and to comply with the standards and procedures listed herein that regulate circulation.

2 REFERENCE STANDARDS

The main reference standard frame for operations performed during reduced visibility conditions is:

ENAC STANDARDS

- Regolamento per la Costruzione e l'Esercizio degli Aeroporti, emanato dall'ENAC – Edizione 2 - emendamento 9 [Regulations for the Construction and Operation of Airports issued by ENAC – Edition 2 - amendament 9];
- Regolamento ENAC "Operazioni Ogni Tempo nello Spazio Aereo Nazionale" – Edizione del 30 giugno 2003 [ENAC Regulations "All Operations in National Air Space" – Edition of 30 June 2003];
- Regolamento ENAC Regole dell'Aria Edizione 2 – Emendamento 2 del 23 aprile 2012, [ENAC Regulation for Air Rules - Edition 2, Amendment 2 of 23 April 2012];
- ENAC Circular APT-05 of 20/01/2000 (procedure in case of malfunction or deterioration of low visibility airport installations - L.V.O.);

ICAO STANDARDS

- DOC 4444-ATM/501 "Procedures for Air Navigation Services ATM"
- DOC 9365-AN/910 "Manual of all Weather Operations";
- Eur DOC 013 "European Guidance Material on Aerodrome Operations under limited visibility conditions" Ed.4 - 4 SEPTEMBER 2012
- DOC 9476-AN7976 "Manual of Surface Movement Guidance and Control Systems"

ENAV STANDARDS

- AIP Italia GEN
- Manuale Operativo dei Servizi del Traffico Aereo (MO-ATS) [Operating Manual of Air Traffic Services];
- AWO-CAT I Edizione 3.0, Marzo 2010 (Linee guida per l'elaborazione delle procedure aeroportuali in caso di visibilità ridotta) [Guidelines for elaboration of airport procedures in case of reduced visibility].

3 DEFINITIONS / ACRONYMS

- **Critical Area:** an area of defined dimensions that extends inside the antennas of a precision instrument approach system, inside which the presence of vehicles or aircraft determines a disturbance that can jeopardise the reliability of radio guide signals.

- **All Weather Operations – AWO**: Operations for all weather (see below).

- **Area of movement:** the part of an airport designated for take-off, landing and ground movements of aircraft, including manoeuvring areas and aprons.

- **Manoeuvring Area:** the part of an airport designated for take-off, landing and ground movements of aircraft, excluding aprons.

- **ILS Sensitive Area:** an area, which extends beyond the Critical Area, where the parking or movement of aircraft or other flying craft could disturb the radio guide signal for aircraft enough to make it unreliable.

- **Commercial air transport operations:** operations performed to transport people or things for a fee. Therefore, these include airline transport by carriers, charters and air taxi.

- **Non commercial or general aviation air transport operations:** operations different from commercial air transport; these include substantially the air club activities, flight schools, small private aircraft and air labour services.

- **All Weather Operations (AWO):** operations of taxiing, take-off, approach and landing in the conditions of which visual reference is limited by weather conditions.

- **Precision approach and landing operations:** instrumental approach and landing operations that use precision guidance systems for the direction and guideslope with respect to minima correlated to the category of operations. Categories are defined as follows:

- **Category I Operations (CAT I):** Instrumental precision approach and landing with:
  a) Decision Height (DH) not inferior to 60 metres (200 ft), and
  b) Runway Visual Range (RVR) not inferior to 550 metres.

- **Low visibility take-off (LVTO):** take-off operations from a runway with RVR inferior to 400 metres.

- **LVP - Low Visibility Procedures** Specific procedures applied by the airport for the purpose of ensuring safe operations during approach and landing in Cat II and Cat III and Low Visibility Take-offs (LVTO)

Note: *Independently from the definition above, in its "Regulations for the Construction and Operation of Airports, ENAC establishes that LVP be activated with RVR the same or lower than 550m.*

Ø **Runway Visual Range (RVR):** The maximum d
the axis of the runway, can distinguish horizontal signals of runway lights that define the borders or trace the axis.

Ø **SAR: Personnel of the ADR Operative Security team authorised to circulate inside an area of movement**

Ø **Visibility conditions in the manoeuvring area:** three visibility conditions are identified for movements of aircraft and vehicles in the airport manoeuvring area.

VISIBILITY CONDITION 1: Visibility is sufficient for pilots to taxi and avoid collisions with other aircraft/vehicles on the taxiways and intersections through direct visual observation and for personnel of controlling Bodies to visually supervise the aforementioned traffic.

VISIBILITY CONDITION 2: Visibility is sufficient for pilots to taxi and avoid collisions with other aircraft/vehicles on the taxiways and intersections through direct visual observation, but insufficient for personnel of controlling Bodies to visually supervise the aforementioned traffic.

VISIBILITY CONDITION 3: Visibility lower than 400 metres RVR.

4 OPERATIONS ALLOWED.

At the airport, the following are allowed for runway 15.

- ILS CAT I approaches and landings,
- Take-offs with RVR not inferior to 400 m detected on any of the transmissometers available.

Starting with RVR readings that are equal or inferior to 1200 meters, on any of the transmissometers available and under type 2 visibility conditions, flight operations are allowed only for runway 15.

5 AVAILABLE INFRASTRUCTURE AND INSTALLATIONS

- ILS CAT I RWY 15
- Detection systems of RVR on three points;
- Luminous Visual Aids: ref. AIP AD2 LIRA 1-7
- Reserve power for runway lights.
- Monitoring of circuit function. In case of RVR ≤550 m, tactical monitoring of the AVL is done with methods specified in MOV03.

6 RESPONSIBILITIES

For the purposes of adopting the most appropriate actions and the relative diffusion by NOTAM:

- the ENAV TWR is responsible for communicating to ADR about the operative deterioration of radio aid systems and weather detection systems;
- ADR is responsible for communicating to ENAV TWR the deterioration of operability of luminous aid systems;

For the respective systems that ENAV and ADR are responsible for, they must request the issue of the appropriate NOTAM communications, and also communicate the operative deterioration in question to ENAC D.A..

7 Management of Malfunctions and Deterioration of Airport Installations

The effects that the malfunction or deterioration in funct
the operating minima of aircraft or on the type of operations that the airport can conduct are regulated by ENAC circular APT-05 as regards what has not been already established by the Regulation for Construction and Operation of Airports.

If and when malfunctions occur of apparatus used for the absolute continuous function of runway lighting systems that do not allow operators to comply with pre-set intervention times, take-offs with a visibility inferior to 800 meters are not permitted.

8 Protection of ILS Critical Area

During ILS Operations, the access and circulation of people and vehicles to the ILS Critical Area is always prohibited.

The critical area is physically delimited by a red and white fence (h. 1.00m). The prohibition of access is made clear by the specific signage: "*area critica del sistema ILS – DIVIETO DI ACCESSO" [ILS system critcal area – NO ACCESS PERMITTED]*

Persons assigned to airport services (personnel assigned to maintenance of runways, taxiways, connections, or electrical systems; cutting grass; snow removal; etc.) which – for reasons connected with their work – must have access to the area described in the previous paragraph, as well as personnel from the company entrusted with the control and maintenance of auxiliary equipment for air navigation, must ask the Control Tower directly to authorise them to enter the area in question. After having obtained authorisation, they must maintain constant radio contact with the tower.

9 Persons and vehicles authorised to circulate in the movement area with reduced visibility conditions

During AWO, vehicle circulation in the movement area must be limited to an absolute minimum, and only authorised vehicles are allowed, to guarantee continuing service of airport operations which have the necessary requisites.

Airport bodies must use said vehicles so that their operative services are done safely and coherently with the visibility at the time.

10 *Access to the manoeuvring area*

Starting from Visibility condition 2, TWR will designate, in collaboration with ADR, the removal of all vehicles and personnel present in the manoeuvring area who are involved in construction and/or maintenance work or other non essential activities. Furthermore, access to the aforementioned area:

- is limited to the bare minimum;
- is allowed only for authorised vehicles necessary for guaranteeing continuity of operations;
- is always subject to authorisation issued specifically each time by TWR, after coordinating the specific radio frequency;
- is always subject to maintaining continuous bilateral radio contact with the TWR.

NOTE: it is fundamental that drivers of authorised vehicles repeat the communications that they receive and obtain confirmation of correct reception from the Control Tower.

That said, the only vehicles authorised to operate inside the Manoeuvring area are the following:

- SAR ADR
- Centrale Elettrica AMI personnel
- ADR maintenance vehicles
  Also, if emergency vehicles are necessary:
  - ADR First Aid
  - VVF Firefighting vehicles
  - AMI Health

11 Vehicle circulation on the Apron

Vehicle circulation on Aprons must be limited to the bare minimum and allow only for the vehicles necessary for guaranteeing regular airport operations. Prefer the use of service roads instead of roads that are aircraft used to taxi.

12 Procedures in the movement area during conditions of reduced visibility

12.1 High-priority traffic

If military or official state traffic is present, it must be considered as high priority traffic with regard to other military or civil aircraft:

- Emergency/ambulance flights
- BAT missions
- OAT missions

12.2 Movement of aircraft in Visibility conditions 1

Aircraft will move normally without additional procedures.

12.3 Movement of aircraft in Visibility conditions 2

12.3.1 Application

Procedures associated with visibility conditions 2 are applied:

- every time all or part of the manoeuvring area is not visible from the TWR due to weather conditions;
- With RVR in any of the transmissometers < 1200 mt ;

TWR detects the existence of Visibility condition 2, and notifies the interested Bodies:

Ø **VVF Fire fighters**

Ø **ADR Flight control** who will alert:

- ENAC Sistema aeroporti Lazio – Ufficio di Ciampino
- BOC 31° Stormo
- ADR chief executive
- ADR Operative Security
- ADR First Aid Station
- ADR Maintenance
- STATE POLICE

- Carabinieri Operations Centre
- Guardia di Finanza Operations Centre

12.3.2 Associated Procedures:

a. All vehicles and personnel present in the manoeuvring area involved in construction, maintenance or non-essential activities must be recalled.

b. Monitoring and distancing birds with BCU technology will be suspended, unless ENAV makes specific requests.

12.3.3 Modalities of moving aircraft/vehicles in the movement area

Only one movement at a time will be undertaken, or rather:

- A departing aircraft can be authorised to move from the parking area towards the waiting position only when the approaching aircraft has landed and has confirmed to have reached the parking area, or when the airplane before it in the departure sequence has reported to have effectively taken-off. Pushback can always be approved.

- An aircraft can be authorised to land only when the previous aircraft approaching the runway has landed and confirmed to have reached the parking area or the departing aircraft has confirmed to have taken off.

A vehicle **in the manoeuvring area** must be considered as if it were an aircraft (Except for the Follow Me vehicle while it is guiding aircraft)

Apron

Even though control of aircraft on the ground in the aprons is not a responsibility of Airport Control, the TWR will provide instructions in order to maintain an orderly flow of air traffic in the aforesaid area, supplying accurate information on current traffic and applying the predetermined paths.

12.3.4 ARR/DEP Taxiways

Taxiways published in the AIP AD2 " Aircraft Movement Chart " are applied.

Follow-me assistance is available for arriving and departing aircraft who request the service.

12.4 Movement of aircraft in Visibility conditions 3

Not applicable

13 APPLICATION OF LOW VISIBILITY PROCEDURES (LVP)

Low Visibility Procedures are applied in four distinct phases:

a) Implementation phase
b) Activation phase
c) Deactivation phase
e) Cancellation phase

RVR values and cloud base hight for LVP phases

	IMPLEMENTATION	ACTIVATION	DEACTIVATION	CANCELLATION
LVP	RVR* ≤ 1200 m and/or Cloud base = 200 ft *On any one of the transmissometers	RVR TDZ ≤ 550 m and/or Cloud base > 200 ft	RVR TDZ > 550 m and Cloud base ≥ 200 ft	RVR* > 1200 m and Cloud base > 200 ft *On any one of the transmissometers

13.1 *Implementation Phase*

In order to allow aircraft to complete, without solutions of continuity for take-off operations with values of RVR < 550m, the activation of Low Visibility Procedures, in correspondence with the pre-established parameters, a series of airport system implementation operations must take place.

Implementation of LVP must be done, in presence of worsening weather conditions, when:

- the RVR value (or the visibility value if there is no RVR data) is equal or inferior to 1200 m on any of the three transmissometers; or
- the cloud base measured in the approaching weather sector is equal to 200ft

If weather conditions worsen quickly, on the basis of previous experience, it will be possible to implement the LVP also with higher RVR/Visibility values.

TWR requests implementation of LVP by notifying involved Bodies:

TWR notifies the implementation phase to involved Bodies:

Ø **VVF**
Ø **Centrale Elettrica AMI**
Ø **ADR Flight control** who will alert:
- ENAC Sistema aeroporti Lazio – Ufficio di Ciampino
- BOC 31° Stormo AMI
- ADR chief executive
- ADR Operative Security
- ADR FIRST AID STATION
- ADR Maintenance
- STATE POLICE
- Carabinieri Operations Centre
- Guardia di Finanza Operations Centre

Once confirmation has been received from all involved Bodies, ADR Flight Control will inform the TWR that it can – without any other requests for acquisition - activate the LVP with the predetermined values are reached.

After implementation of LVP:

a) TWR sets forth, in coordination with ADR Flight Control, the recall from the manoeuvring area, of vehicles and personnel involved in construction, maintenance and other non-essential activities;

b) The runway in use will be RWY15;

c) Movement will be completed in compliance with provisions in § 12.3.3,;
if the implementation is due to the height of the cloud base, movement applied in the manoeuvring area will consider the effective ability of the TWR to exercise visual control of the entire manoeuvring area (Visibility conditions 1)

13.2 Activation Phase

Activation of the LVP for take-off must be done when:

- the RVR value at TDZ (or the visibility value if there is no RVR data) is equal or inferior to 550 m.; or
- the cloud base measured in the approaching weather sector is equal to 200ft

TWR notifies the activation phase to involved Bodies:

Ø **VVF Fire fighters**
Ø **Centrale Elettrica AMI**
Ø **ADR Flight control** who will alert:
- ENAC Sistema Aeroporti Lazio – Ufficio di Ciampino
- BOC 31° Stormo AMI
- ADR chief executive
- ADR Operative Security
- ADR First Aid Station
- ADR Maintenance
- STATE POLICE
- Carabinieri Operations Centre
- Guardia di Finanza Operations Centre

If when the values determined for activation of the LVP are reached, the Bodies involved in the airport system have not yet confirmed the positive activation of those LVP, flight operations must be suspended.

After activation of LVP:

a. The runway used will be RWY 15.

b. Movement will be completed in compliance with provisions in § 12.3.3,;
if the activation is due to the height of the cloud base, movement applied in the manoeuvring area will consider the effective ability of the TWR to exercise visual control of the entire manoeuvring area (Visibility conditions 1)

c. Aircraft that has landed or aircraft in phase of aborted take-off from runway 15 will leave the runway exclusively by connection taxiway “AF”.

13.3 Deactivation/cancellation phase.

If weather conditions are improving, when the RVR and/or cloud base surpasses the values set for activating LVP, the procedures can be deactivated through consideration of all coordination of the case.

The TWR will activate the LVP deactivation and/or cancellation procedure by notifying the involved Bodies:

- Ø **VVF Fire fighters**
- Ø **Centrale Elettrica AMI**
- Ø **ADR Flight control** who will alert:
  - · ENAC DA
  - · BOC 31° Stormo AMI
  - · ADR chief executive
  - · ADR Operative Security
  - · ADR First Aid Station
  - · ADR Maintenance
  - · STATE POLICE
  - · Carabinieri Operations Centre
  - · Guardia di Finanza Operations Centre

Deactivation of LVP does not involve cancelling the implementation of those measures until the RVR/cloud base values are not above those predetermined by the activation phase for a time of at least 20'.
A time less than 20' can be considered if weather conditions are improving rapidly on the basis of experience witnessed in the airport and after contacting the local weather station.

14 USE OF THE FOLLOW-ME (SAR)

In case of request, the follow me will guide the aircraft to/from Aprons along the predetermined paths:

Specifically:

DEPARTURES:
The follow-me will be positioned in from of the a/m of the Stand in case of Stand Self Manoeuvring or Start Point in case of Push Back and, after authorisation from TWR on T/T frequencies, will guide the aircraft to the waiting point CAT I AA for RWY 15 .

The follow-me will return to the Apron on the first taxiway or vehicle path available, and report to the TWR to have vacated the manoeuvring area.

NOTE 1: The aircraft must be authorised to line up on the runway only after the follow-me has reported to have reached the Apron.

ARRIVALS
The a/m will be instructed by the TWR to report and maintain position on the exit connection used while waiting for the follow-me

CANCELLED TAKE-OFF:
If the aircraft lined up on the runway or, at the AA waiting point for RWY 15, decides to cancel take-off, or in case of interrupted take-off, requests the help of the follow-me to

return to the parking area, it will be instructed to re
follow-me arrives.

15 REDUCTION OF AIRPORT CAPACITY

Starting from Visibility Condition 2 or with RVR detected on all three points as < 1200 m, the global capacity will be coordinated by TWR with FMP of Rome ACC at 6 movements /H.

16 CONTINGENCIES

The procedures listed below are applied independently from the current weather conditions.

16.1 Malfunction in RVR detection systems

There are various levels of malfunction:

a. **Unavailability of the RVR value at TDZ** can be replaced temporarily by the value RVR at MID; this value is also used to determine the category of approach and landing operations, (Ref. ENR 1.3-5).

The pilot must be informed of the temporary lack of the RVR data in the TDZ.
e.g. Touchdown RVR not available

b. **Without an instrumental detection of RVR** or a temporarily inefficient reading, for only **CAT I approaches,** the visibility value can be used (Reg. Enac Chap.10 Par.4.7);

c. **In case of unavailability of the visibility value and the RVR value** or in case of total malfunction of the RVR system with visibility reported to be lower than what is required for take-off, the Commander will begin **take-off** only if able to autonomously establish that the RVR/visibility along the runway is equal to or above the minimum required, and will report to TWR. *(EU-OPS pilot assessment*).

16.2 Aircraft or vehicle lost in the manoeuvring area

If an aircraft or vehicle reports that it is lost inside the manoeuvring area and the Controller is not able to determine its position with the means that he has available:

- all operations must be immediately suspended;
- incoming traffic will be immediately instructed to complete a go-around procedure (aborted landing).
- The Controller will start a search for a *follow-me* to whom will be provided all of the available information, including the last position reported by the vehicle/aircraft that got lost.

16.3 Lack of radio contact with an aircraft after authorisation to take off.

After having authorised an aircraft for take-off and after 30 seconds from the moment in which the pilot reported the start of the take-off run and then failed to report to be in flight and is not in radio/radar contact with Roma ACC, the TWR will call SAR ADR to inspect the runway and the manoeuvring area.

If the TWR receives communication of an air accident, it will immediately activate the Airport Emergency Plan.

If an aircraft of the 31° Stormo is having a radio malfunction in the manoeuvring area, it must hold its position until the Follow-me arrives to guide it to the parking area.

16.4 Radio malfunction in the manoeuvring area

Each time an aircraft or vehicle operating in the manoeuvring area is found in a situation of radio malfunction, it must follow these instructions:

- Aircraft in departure mode:
- it will continue on its assigned course, being very careful to avoid any deviations, until it reaches the position corresponding to its clearance limit, where it will remain to wait for the follow-me to return to the parking area.
- Aircraft in arrival mode:
- the aircraft will vacate the runway from taxiway AF and remain there to wait for the follow-me to guide it to the parking area (See Art. 7 Para 7.5).
- Vehicle:
- the driver of the vehicle is required to immediately and as cautiously as possible reach the closest position outside the paths destined for aircraft and, if alternative means of communication are available, to inform the Tower. In other cases, hold its position and wait for the follow-me.

17 Derogations of LVTO operations:

- **For 31° Stormo aircraft**

  In agreement with ENAC and AM, in order to protect military flight activities, LVTO operations are allowed with RVR valued on one of the three points under 400 mt only for aircraft of the 31° Stormo of the Aeronautica Militare (Italian Air Force) with the following modalities:

  a) LVP must be activated in compliance with point 13.2;

  b) When the RVR value of any one of the three detection points falls below 400 m, the TWR will ask:

  - § the vehicle LUCE AMI to inspect the manoeuvring area to verify that lighting systems are efficient;
  - § the vehicle SAR ADR to inspect the manoeuvring area to verify that it is free from people and vehicles;
  - § the vehicle SAR ADR to inspect the manoeuvring area before each take-off if the previous one happened over 15 minutes before, or if in the meantime other people or vehicles have entered the runway area;

- **for civil aircraft that operate as national aircraft pursuant to art. 744, para. 4 of the Navigation Code:**

  In agreement with provisions from ENAC, in order to protect flight activities that fall into the category mentioned, LVTO operations are allowed with RVR values on one of the three points under 400 mt with the same modalities mentioned in points a) and b) above.

In both cases, only one movement at a time will be completed, in compliance with point 12.3.3 above and with the aid of the Follow-me. Take-off can be authorised when the follow-me has reported to have left the manoeuvring area.