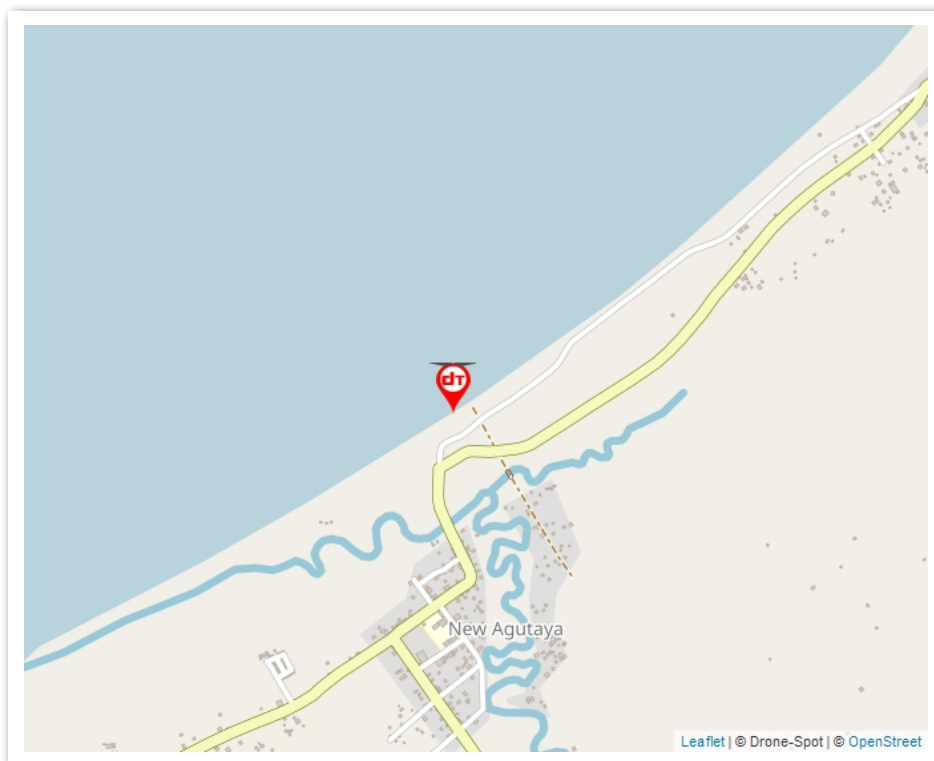


# FLIGHT CARD

Long Beach - San Vicente - Palawan - (PH)



GPS coordinates: Latitude : 10.5468609598026, Longitude : 119.280175727326

Date: 08/31/2019

Submitted by: Eddy

Flight ceiling: 120 m. max.

Type: Water

Accessibility: Access by foot < 1 000 m.

Notes: Magnifique plage déserte de plus de 8km de long...

Pas un chat ce jour là sur cette plage (Août 2019) mais il a quand même fallu s'affranchi du Beach Fee

## Check list

- Authorized area,
- Up-to-date firmwares (drone, remote, application, ...)
- Correct weather conditions,
- Visual inspection of the drone and propellers,
- Removal of protections (gimbal, camera, ...),
- SD card inserted, correct storage space,
- Correct state of the camera lens (cleaning if necessary, ...),
- Peripherals loaded and connected (remote control, smartphone, tablet, ...),
- Drone battery charged and correctly inserted,
- Correct calibration (compass, horizon, ...),
- Minimum altitude for return home (RTH),
- Maximum flight altitude,
- Number of locked satellites,
- Takeoff area clear,
- Home point correctly registered,
- ...



**Republic of the Philippines**

**CIVIL AVIATION REGULATIONS (CAR)**

**PART 11**

**AERIAL WORK AND OPERATING LIMITATIONS FOR  
NON-TYPE CERTIFICATED AIRCRAFT**

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Republic of the Philippines  
Department of Transportation and Communications

# **CIVIL AVIATION AUTHORITY OF THE PHILIPPINES**

1300 MIA Road, Pasay City, Metro Manila  
www.caap.gov.ph

## **BOARD RESOLUTION NO. 2011-025**

**WHEREAS**, the Civil Aviation Authority of the Philippines (CAAP) was created by virtue of Republic Act 9497 which took effect on 23 March 2008;

**WHEREAS**, under Section 23, paragraph (j) of the same law, the Board is empowered to promulgate rules and regulations as may be necessary in the interest of safety in air commerce pertaining to the issuance of the airman's certificate including the licensing of operating and mechanical personnel, type certificate for aircraft, aircraft engines, propellers and appliances, airworthiness certificates, air carrier operating certificates, air agency certificates, navigation facility and aerodrome certificates; air traffic routes; radio and aeronautical telecommunications and air navigation aids; aircraft accident inquiries; aerodromes, both public and private-owned; construction of obstructions to aerodromes; height of buildings, antennae and other edifices; registration of aircraft; search and rescue; facilitation of air transports; operations of aircraft, both for domestic and international, including scheduled and non-scheduled; meteorology in relation to civil aviation; rules of the air; air traffic services; rules for prevention of collision of aircraft, identification of aircraft; rules for safe altitudes of flight; and such other rules and regulations, standards, governing other practices, methods and/or procedures as the Director General may find necessary and appropriate to provide adequately for safety regularity and efficiency in air commerce and air navigation;

**WHEREAS**, in the October 2009 ICAO-USOAP and 2010 EASA Audits, it was noted that portion of the Philippine Civil Aviation Regulations (PCAR) of 2008 is outdated and requires amendments/revisions;

**WHEREAS**, the CAAP Board of Directors, in its 03 March 2011 Board Meeting, approved the request of the Director General to initiate amendments and or revision of the Philippine Civil Aviation Regulations of 2008, subject to public consultations/hearings;

**WHEREAS**, the proposed PCARs cover the following regulatory/oversight functions:

Part I	General Policies, Procedures, Definitions
Part II	Personnel Licensing
Part III	Approved Training Organizations
Part IV	Aircraft Registration and Markings

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OF THE PHILIPPINES  
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*[Signature]* 05-27-2011  
**AIDA S. ROMULO**  
Chief, Central Records  
and Archives Division

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OF THE PHILIPPINES  
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*05-27-2011*  
**AIDA S. ROMULO**  
Chief, Central Records  
and Archives Division

Part V	Airworthiness
Part VI	Approved Maintenance Organizations
Part VII	Instruments and Organization
Part VIII	Operations
Part IX	Air Operator Certification and Administration
Part X	Commercial Air Transport by Foreign Air Carriers within Republic of the Philippines
Part XI	Aerial Work and Non-certificated Aircraft: Operating Limitations

**WHEREAS**, the Board finds the 2011 Revised Philippine Civil Aviation Regulation (PCAR) sufficient in form and substance, and fully comply with the standards set forth by FAA/ICAO/EASA;

**WHEREFORE, RESOLVE**, as it is hereby **RESOLVED**, that the 2011 Revised Philippine Civil Aviation Regulations Parts I to XI be **APPROVED**, and shall be valid and effective upon completion of the requisite publication and a copy filed with the University of the Philippines Law Center-Office of the National Administrative Register (UP-ONAR);

**RESOLVED** further that the Director General shall fully implement the approved, 2011 Revised PCAR Parts I to XI with the accompanying information campaign to the Philippine civil aviation industry.

Adopted this 11<sup>th</sup> day of April 2011 at the Department of Transportation and Communications, Columbia Tower, Mandaluyong City.

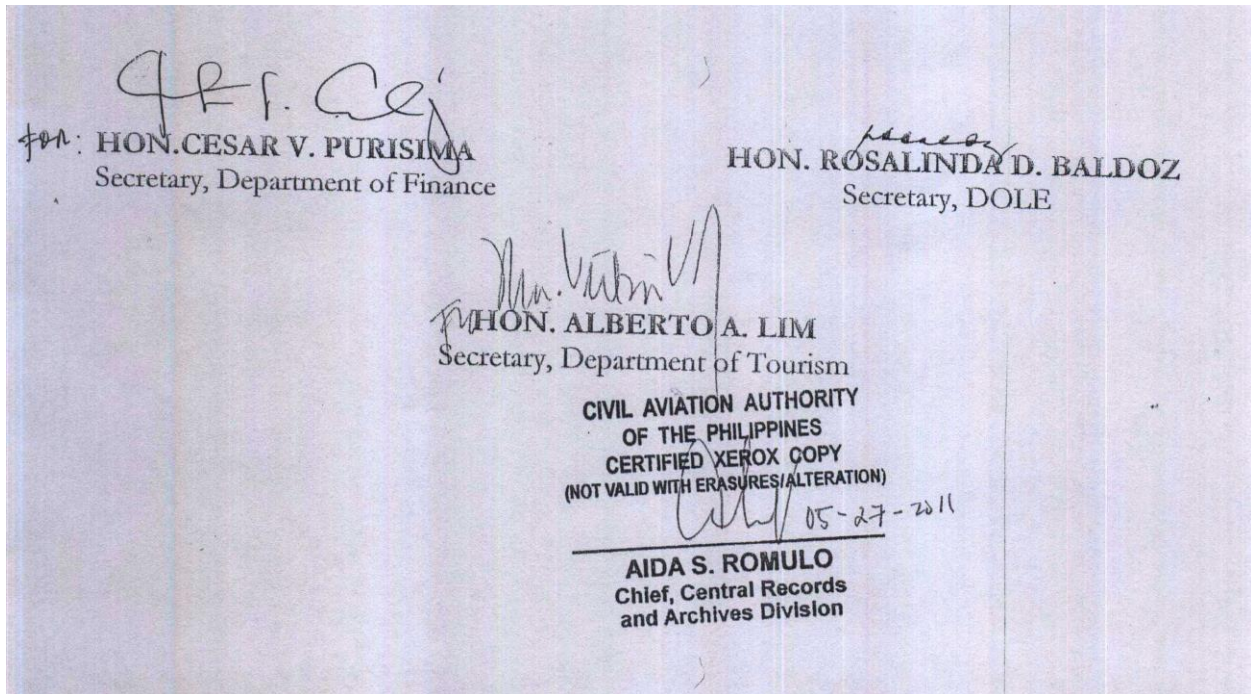
**HON. JOSE P. DE JESUS**  
Chairman/Secretary, DOTC

*[Signature]*  
**HON. RAMON S. GUTIERREZ**  
Vice-Chairman/Director General, CAAP

**HON. LEILA M. DE LIMA**  
Secretary, Department of Justice

*[Signature]*  
**HON. ALBERT F. DEL ROSARIO**  
Secretary, Department of Foreign Affairs

**HON. JESSE M. ROBREDO**  
Secretary, DILG



## RECORD OF AMENDMENTS

Amendment No.	Date	Subject	Incorporated By
Initial Issue	23 June 2008		Ruben F. Ciron
First Amendment	21 March 2011		Ramon S. Gutierrez
Second Amendment	01 August 2013	Inclusion of vertical bars on the previous amendments.	LT GEN William K Hotchkiss III AFP (Ret)
Third Amendment	28 January 2014	1. 11.1.1.5 Repealed subsection 11.1.1.5 (c) 2. 11.1.1.8 Duration of a certificate of authorization (a) (1)	LT GEN William K Hotchkiss III AFP (Ret)
Fourth Amendment	19 July 2014	1. Definitions (5) Certified UAV Controller (7) Controller of a UAV (9) Large UAV (10) Micro UAV (12) Small UAV (13) UAV 2. New Regulations of 11.11 Unmanned Aircraft Vehicle	LT GEN William K Hotchkiss III AFP (Ret)
fifth Amendment	20 November 2014	1. Definitions (5) Certified UAV Controller (7) Controller of a UAV (9) Large UAV (10) Micro UAV (12) Small UAV (13) UAV 2. 11.11 Unmanned Aircraft Vehicle	LT GEN William K Hotchkiss III AFP (Ret)
Sixth Amendment	01 July 2016	11.1.1.2 Definitions 11.11 New regulations of Remotely Piloted Aircraft System (RPAS)	LT GEN William K Hotchkiss III AFP (Ret)

## LIST OF EFFECTIVE PAGES

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Part 11 Aerial Work and Operating Limitations for Non-Type Certificated Aircraft			
Cover Page	i	Amendment 01	21 March 2011
Board Resolution	ii – iv	Amendment 01	21 March 2011
Record of Amendments	v	Amendment 06	01 July 2016
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	11.1-2	Amendment 06	01 July 2016
	11.1-3	Amendment 03	28 January 2014
	11.1-4	Amendment 03	28 January 2014
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	11.6-3	Original Issue	23 June 2008
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**11.1 GENERAL****11.1.1.1 APPLICABILITY**

- (a) This Part contains the requirements for those operators and operations that are considered to be aerial work in Republic of the Philippines.
- (b) All persons who conduct aerial work in Republic of the Philippines must comply with certification requirements of this Part.
- (c) All persons who conduct aerial work in Republic of the Philippines must comply with the applicable airworthiness and operational requirements of this Part, except where this Part grants relief from those requirements or specifies additional requirements.

**11.1.1.2 DEFINITIONS**

- (a) For general definitions, see Part 1. For the purpose of Part 11, the following definitions shall apply:
  - (1) **Aerial work.** An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.
  - (2) **Aerobatic flight.** An intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight.
  - (3) **Agricultural aircraft operation.** The operation of an aircraft for the purpose of—
    - (i) Dispensing any economic poison,
    - (ii) Dispensing any other substance intended for plant nourishment, soil treatment, propagation of plant life, or pest control, or
    - (iii) Engaging in dispensing activities directly affecting agriculture, horticulture, or forest preservation, but not including the dispensing of live insects.
  - (4) **Banner.** An advertising medium supported by a temporary framework attached externally to the aircraft and towed behind the aircraft.
  - (5) **Beyond Visual Line Of Sight (BVLOS)** an operation in which the remote pilot or RPA observer maintains contact with the RPA other than using VLOS.
  - (6) **Congested area.** A city, town or settlement, or open air assembly of people.
  - (7) **Controlled Airspace** an airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.
  - (8) **Controller of an RPA** means a person who manipulates the flight controls of a Remotely Piloted Aircraft.
  - (9) **Detect and Avoid** the capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.
  - (10) **Economic poison.** Any substance or mixture of substances intended for—
    - (i) Preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, except viruses on or in living human beings or other animals, which the Republic of the Philippines may declare to be a pest, and
    - (ii) Use as a plant regulator, defoliant or desiccant.

- (11) **Large RPA** means RPA with a gross weight of 7kgs and above.
- (12) **Prohibited Airspace** an airspace of defined dimensions identified by an area on the surface of the earth in which flight of aircraft is prohibited. Such areas are established for security or other reasons associated with the national welfare.
- (13) **Remotely Piloted Aircraft (RPA)** an unmanned aircraft which is piloted from a remote pilot station.
- (14) **Remotely Piloted Aircraft System (RPAS)** a remotely piloted aircraft, its associated remote pilot stations, the required command and control links and any other components as specified in the type design.
- (15) **Rotorcraft load combinations.** Configurations for external loads carried by rotorcraft—
  - (i) Class A – external load fixed to the rotorcraft, cannot be jettisoned, and does not extend below the landing gear, used to transport cargo.
  - (ii) Class B – external load suspended from the rotorcraft, which can be jettisoned, and is transported free of land or water during rotorcraft operations.
  - (iii) Class C – external load suspended from the rotorcraft, which can be jettisoned, but remains in contact with land or water during rotorcraft operation.
  - (iv) Class D - external load suspended from the rotorcraft for the carriage of persons.
- (16) **Small RPA** means RPA with a gross weight of below 7kgs.
- (17) **Visual Line Of Sight (VLOS)** an operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft. (per Memorandum Circular no. 29-15, series of 2015)

#### 11.1.1.3 ABBREVIATIONS

- (a) The following abbreviations are used in Part 11:
  - (1) AGL - Above Ground Level
  - (2) PIC – Pilot-in-command
  - (3) IFR – Instrument Flight Rules.

#### 11.1.1.4 COMPLIANCE WITH A CERTIFICATE OF AUTHORIZATION

- (a) An operator shall not engage in aerial work operations unless in possession of a valid certificate of authorization issued by the Authority.
- (b) A certificate of authorization shall authorize the operator to conduct aerial work operations in accordance with the operations specifications.

*Note: Provisions for the content of the certificate of authorization is contained in IS: 9.1.1.7.*
- (c) Each holder of the certificate of authorization shall, at all times, continue in compliance with the authorization terms, conditions of issuance, and maintenance requirements in order to hold that certificate.

(d)

*Note: Failure to comply may result in the revocation or suspension of the certificate of authorization.*

#### **11.1.1.5 APPLICATION FOR A CERTIFICATE OF AUTHORIZATION**

- (a) An operator applying to the Authority for a certificate of authorization shall submit an application:
  - (1) In a form and manner prescribed by the Authority; and
  - (2) Containing any information the Authority requires the applicant to submit.
- (b) Each applicant shall make the application for an initial issue of a certificate of authorization at least 90 days before the date of intended operation.

#### **11.1.1.6 ISSUANCE OR DENIAL OF CERTIFICATE OF AUTHORIZATION**

- (a) The Authority may issue a certificate of authorization if, after investigation, the Authority finds that the applicant:
  - (1) Is a citizen of the Republic of the Philippines,
  - (2) Has its principle place of business and its registered office, if any, located in Republic of the Philippines;
  - (3) Meets the applicable regulations and standards for the holder of a certificate of authorization;
  - (4) Is properly and adequately equipped for safe operations in aerial work and maintenance of the aircraft; and
- (b) The Authority may deny application for a certificate of authorization if the Authority finds that:
  - (1) The applicant is not properly or adequately equipped or is not able to conduct safe aerial work operations;
  - (2) The applicant previously held a certificate of authorization which was revoked; or
  - (3) An individual that contributed to the circumstances causing the revocation process of a certificate of authorization obtains a substantial ownership or is employed in a position required by this regulation.
- (c) The issue of a certificate of authorization by the Authority shall be dependent upon the operator demonstrating an adequate organization, method of control and supervision of flight operations, training program as well as ground handling and maintenance arrangements consistent with the nature and extent of the operations specified.
- (d) The continued validity of a certificate of authorization shall depend upon the operator maintaining the requirements of paragraph (c) above under the supervision of the Authority.

#### **11.1.1.7 CONTENTS OF CERTIFICATE OF AUTHORIZATION**

- (a) The certificate of authorization will consist of two documents
  - (1) A one-page certificate for public display signed by the Authority, and

- (2) Operations specifications containing the terms and conditions applicable to the certificate of authorization.
- (b) The certificate of authorization shall contain at least the following information and shall follow the layout prescribed in IS: 9.1.1.7:
  - (1) The State of the Operator and issuing authority;
  - (2) The certificate of authorization number and expiration date;
  - (3) The operator name, trading name (if different) and address of the principal place of business;
  - (4) The date of issue and the name, signature and title of the authority representative; and
  - (5) The location, in a controlled document carried on board, where the contact details of operational management can be found.
- (c) The operations specifications associated with the certificate of authorization shall contain at least the information listed as under and shall follow the layout prescribed in IS: 9.1.1.7:
  - (1) For each aircraft model in the operator's fleet, identified by aircraft make, model and series;
  - (2) The following list of authorizations, conditions and limitations shall be included:
    - (i) Issuing authority contact details;
    - (ii) Operator's name and certificate of authorization number;
    - (iii) Date of issue and signature of the authority representative;
    - (iv) Aircraft model and type;
    - (v) The authorized area of operations; and
    - (vi) Special limitations and authorizations.

*Note: If authorizations and limitations are identical for two or more models, these models may be grouped in a single list.*
- (d) Air operator certificates and their associated operations specifications first issued from 20 November 2008 shall follow the layouts prescribed in IS: 9.1.1.7.

#### **11.1.1.8 DURATION OF A CERTIFICATE OF AUTHORIZATION**

- (a) A certificate of authorization, issued by the Authority is effective until:
  - (1) Its validity for a period of three (3) years.
  - (2) The Authority amends, suspends, revokes or otherwise terminates the certificate;
  - (3) The operator surrenders it to the Authority; or
  - (4) The operator suspends operations for more than 60 days.
  - (5) An operator shall make application for renewal of a certificate of authorization at least 30 days before the end of the existing period of validity.

#### **11.1.1.9 AMENDMENT OF A CERTIFICATE OF AUTHORIZATION**

- (a) A certificate of authorization may be amended—

- (1) On the Authority's own initiative, under applicable laws and regulations; or
- (2) Upon application by the holder of that certificate of authorization.
- (b) A holder of that certificate of authorization shall submit any application to amend an certificate of authorization on a form and in a manner prescribed by the Authority. The applicant shall file the application at least 15 days before the date that it proposes the amendment become effective.
- (c) The Authority will grant a request to amend a certificate if it determines that safety in aerial work and the public interest so allow.
- (d) Within 30 days after receiving a refusal to amend, the holder may petition the Authority to reconsider the refusal.
- (e) No person may perform an aerial work operation for which a certificate of authorization amendment is required, unless it has received notice of the approval from the Authority.

#### 11.1.1.10 ACCESS FOR INSPECTION

- (a) To determine continued compliance with the applicable regulations, the operator shall:
  - (1) Grant the Authority access to and co-operation with any of its organizations, facilities and aircraft;
  - (2) Ensure that the Authority is granted access to and co-operation with any organization or facilities that it has contracted for services associated with aerial work operations and maintenance for services; and
  - (3) Grant the Authority free and uninterrupted access to the flight deck of the aircraft during flight operations.
- (b) Each operator shall provide to the Authority a forward observer's seat on each of the aircraft from which the flight crew's actions and conversations may be easily observed.

*Note: The suitability of the seat location and the ability to monitor crewmember actions, conversations and radio communications is determined by the Authority.*

#### 11.1.1.11 CONDUCTING TESTS AND INSPECTIONS

- (a) The Authority will conduct on-going validation of the operator's continued eligibility to hold its certificate of authorization and associated approvals.
- (b) The operator shall allow the Authority to conduct tests and inspections, at any time or place, to determine whether an operator is complying with the applicable laws, regulations and certificate of authorization terms and conditions.
- (c) The operator shall make available at its principal base of operations:
  - (1) All portions of its current certificate of authorization;
  - (2) All portions of its Operations and Maintenance Manuals; and
  - (3) A current listing that includes the location and individual positions responsible for each record, document and report required to be kept by the holder of certificate of authorization under the applicable aviation law, regulations or standards.
- (d) Failure by any operator to make available to the Authority upon request, all portions of the certificate of authorization, Operations and Maintenance Manuals and any

required record, document or report is grounds for suspension of all or part of the certificate of authorization.

**11.2 AGRICULTURAL AIRCRAFT OPERATIONS****11.2.1 GENERAL****11.2.1.1 APPLICABILITY**

- (a) Part 11 prescribes rules governing—
  - (1) Agricultural aircraft operations within Republic of the Philippines; and
  - (2) The issue of commercial and private agricultural aircraft operator certificates for those operations.
- (b) In a public emergency, a person conducting agricultural aircraft operations under Part 11 may, to the extent necessary, deviate from the operating rules of Part 11 for relief and welfare activities approved by an agency of Republic of the Philippines or a local government.
- (c) Each person who, under the authority of this section, deviates from a rule of Part 11 shall, within 10 days after the deviation send to the Authority a complete report of the aircraft operation involved, including a description of the operation and the reasons for it.

**11.2.2 CERTIFICATION RULES****11.2.2.1 CERTIFICATE REQUIRED**

- (a) Except as provided in paragraphs (c) and (d) of this section, no person may conduct agricultural aircraft operations without, or in violation of, an agricultural aircraft operator certificate issued under Part 11.
- (b) An operator may, if it complies with this Subpart, conduct agricultural aircraft operations with a rotorcraft with external dispensing equipment in place without a rotorcraft external-load operator certificate.
- (c) A local or national government conducting agricultural aircraft operations with public aircraft need not comply with this Subpart.
- (d) The holder of a rotorcraft external-load operator certificate under Part 11 may conduct an agricultural aircraft operation, involving only the dispensing of water on forest fires by rotorcraft external-load means.

**11.2.2.2 APPLICATION FOR CERTIFICATE**

*Refer to Subpart 11.1.1.5.*

**11.2.2.3 AMENDMENT OF CERTIFICATE**

*Refer to Subpart 11.1.1.9.*

**11.2.2.4 CERTIFICATION REQUIREMENTS**

- (a) General. Except as provided by paragraph (a)(3) of this section—
  - (1) The Authority will issue a private agricultural aircraft operator certificate to an applicant who meets the requirements of this Subpart for that certificate.
  - (2) The Authority will issue a commercial agricultural aircraft operator certificate to an applicant who meets the requirements of this Subpart for that certificate.

- (3) An applicant who applies for an agricultural aircraft operator certificate containing a prohibition against the dispensing of economic poisons is not required to demonstrate knowledge specific to economic poisons.
- (b) Pilots.
  - (1) A private operator-pilot applicant shall hold a current Republic of the Philippines private, commercial, or airline transport pilot certificate and be properly rated for the aircraft to be used.
  - (2) A commercial operator-pilot applicant shall hold, or have available the services of at least one pilot who holds a current commercial or airline transport pilot certificate issued by the Authority and who is properly rated for the aircraft to be used.
- (c) Aircraft. The applicant shall have at least one certified and airworthy aircraft, equipped for agricultural operation.
- (d) Knowledge and skill tests. The applicant shall show that it has satisfactory knowledge and skill of the following agricultural aircraft operations.
  - (1) Knowledge:
    - (i) Steps to be taken before starting operations, including a survey of the area to be worked.
    - (ii) Safe handling of economic poisons and the proper disposal of used containers for those poisons.
    - (iii) The general effects of economic poisons and agricultural chemicals on plants, animals, and persons, and the precautions to be observed in using poisons and chemicals.
    - (iv) Primary symptoms of poisoning of persons from economic poisons, the appropriate emergency measures to be taken, and the location of poison control centers.
    - (v) Performance capabilities and operating limitations of the aircraft to be used.
    - (vi) Safe flight and application procedures.
  - (2) Skill in the following maneuvers, demonstrated at the aircraft's maximum certified take-off weight, or the maximum weight established for the special purpose load, whichever is greater:
    - (i) Short-field and soft-field takeoffs (airplanes and gyroplanes only).
    - (ii) Approaches to the working area.
    - (iii) Flare-outs.
    - (iv) Swath runs.
    - (v) Pull-ups and turnarounds.
    - (vi) Rapid deceleration (quick stops) in helicopters only.

#### 11.2.2.5 DURATION OF CERTIFICATE

*Refer to Subpart 11.1.1.8.*

**11.2.3 OPERATING RULES****11.2.3.1 GENERAL**

- (a) Except as provided in paragraph (c) of this section, this section prescribes rules that apply to persons and aircraft used in agricultural aircraft operations conducted under Part 11.
- (b) The holder of an agricultural aircraft operator certificate may deviate from the provisions of Part 9 without a certificate of waiver when conducting aerial work operations related to agriculture, horticulture, or forest preservation in accordance with the operating rules of this section.
- (c) The operating rules of this Subpart apply to Rotorcraft External load certificate holders conducting agricultural aircraft operations involving only the dispensing of water on forest fires by rotorcraft external- load means.

**11.2.3.2 CARRYING OF CERTIFICATE**

- (a) No person may operate an aircraft unless a facsimile of the agricultural aircraft operator certificate is carried on that aircraft.
- (b) The registration and airworthiness certificates issued for the aircraft need not be carried in the aircraft provided that those certificates not carried in the aircraft shall be kept available for inspection at the base from which the dispensing operation is conducted.

**11.2.3.3 LIMITATIONS ON PRIVATE AGRICULTURAL AIRCRAFT OPERATOR**

- (a) No person may conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate—
  - (1) For compensation or hire;
  - (2) Over a congested area; or
  - (3) Over any property unless he or she is the owner or lessee of the property, or has ownership or other property interest in the crop located on that property.

**11.2.3.4 MANNER OF DISPENSING**

- (a) No persons may dispense, or cause to be dispensed, any material or substance in a manner that creates a hazard to persons or property on the surface.

**11.2.3.5 ECONOMIC POISON DISPENSING**

- (a) Except as provided in paragraph (b) of this section, no person may dispense or cause to be dispensed, any economic poison that is registered with Republic of the Philippines—
  - (1) For a use other than that for which it is registered;
  - (2) Contrary to any safety instructions or use limitations on its label; or
  - (3) In violation of any law or regulation of Republic of the Philippines.
- (b) This section does not apply to any person dispensing economic poisons for experimental purposes under—

- (1) The supervision of a Republic of the Philippines agency authorized by law to conduct research in the field of economic poisons; or
- (2) A permit from Republic of the Philippines.

#### **11.2.3.6 PERSONNEL**

- (a) *Information.* The holder of an agricultural aircraft operator certificate shall insure that each person used in the holder's agricultural aircraft operation is informed of that person's duties and responsibilities.
- (b) *Supervisors.* No person may supervise an agricultural aircraft operation unless he or she has met the knowledge and skill requirements of this Subpart.
- (c) *Pilot in command.* No person may act as pilot in command of an aircraft operated under this Subpart unless that pilot—
  - (1) Holds a pilot certificate and rating prescribed by this Subpart as appropriate to the type of operation conducted; or
  - (2) Has demonstrated to the holder of the Agricultural Aircraft Operator Certificate conducting the operation, or to a supervisor designated by that certificate holder, that he or she possesses the knowledge and skill requirements of this Subpart.

#### **11.2.3.7 OPERATIONS IN CONTROLLED AIRSPACE DESIGNATED FOR AN AIRPORT**

- (a) Except for flights to and from a dispensing area, no person may operate an aircraft within the lateral boundaries of the surface area of Class D airspace designated for an airport unless authorization for that operation has been obtained from the ATC facility having jurisdiction over that area.
- (b) No person may operate an aircraft in weather conditions below VFR minimums within the lateral boundaries of a Class E airspace area that extends upward from the surface unless authorization for that operation has been obtained from the ATC facility having jurisdiction over that area.
- (c) A certificate holder may operate an aircraft under special VFR weather minimums without meeting the requirements prescribed in Part 9.

#### **11.2.3.8 OPERATION OVER CONGESTED AREAS: GENERAL**

- (a) A certificate holder may operate or cause the operation of an aircraft over a congested area at altitudes required if the operation is conducted with—
  - (1) The maximum safety to persons and property on the surface, consistent with the operation; and
  - (2) A plan for each operation, submitted and have approved by the Authority, which includes—
    - (i) Obstructions to flight;
    - (ii) Emergency landing capabilities of the aircraft to be used; and
    - (iii) Any necessary co-ordination with air traffic control.
- (b) Each certificate holder shall ensure that all single-engine aircraft while in a congested area operate:

- (1) Except for helicopters, during take-offs and turnarounds, with no load.
  - (2) Not below the altitudes prescribed in Part 8 except during the actual dispensing operation, including the approaches and departures necessary for that operation.
  - (3) During the actual dispensing operation, including the approaches and departures for that operation, not below the altitudes prescribed in Part 8 unless it is in an area and at such an altitude that the aircraft can make an emergency landing without endangering persons or property on the surface.
- (c) Each certificate holder shall ensure that all multiengine aircraft while in a congested area operate:
- (1) During take off, under conditions that will allow the airplane to be brought to a safe stop within the effective length of the runway from any point on takeoff up to the time of attaining, with all engines operating at normal takeoff power, 105 percent of the minimum control speed with the critical engine inoperative in the takeoff configuration or 115 percent of the power-off stall speed in the take-off configuration, whichever is greater.  
  
*Note: Assume still-air conditions, and no correction for any uphill gradient of 1 percent or less when the percentage is measured as the difference between elevations at the end points of the runway divided by the total length. For uphill gradients greater than 1 percent, the effective takeoff length of the runway is reduced 20 percent for each 1 percent grade.*
  - (2) At a weight greater than the weight that, with the critical engine inoperative, would permit a rate of climb of at least 50 feet per minute at an altitude of at least 1,000 feet above the elevation of the highest ground or obstruction within the area to be worked or at an altitude of 5,000 feet, whichever is higher. Assume that the propeller of the inoperative engine is in the minimum drag position; that the wing flaps and landing gear are in the most favorable positions; and that the remaining engine or engines are operating at the maximum continuous power available.
  - (3) Below the altitudes prescribed in Part 8 except during the actual dispensing operation, including the approaches, departures, and turnarounds necessary for that operation.
- (d) Each certificate holder shall issue notice of the intended operation to the public as may be specified by the Authority.

#### **11.2.3.9 OPERATION OVER CONGESTED AREAS: PILOTS AND AIRCRAFT**

- (a) Pilots. Each pilot in command must have at least—
- (1) 25 hours of pilot-in-command flight time in the make and basic model of the aircraft, including at least 10 hours within the preceding 12 calendar months; and
  - (2) 100 hours of flight experience as pilot in command in dispensing agricultural materials or chemicals.
- (b) Aircraft.
- (1) Except for helicopters, each aircraft shall be capable of jettisoning at least one-half of the aircraft's maximum authorized load of agricultural material within 45 seconds. If the aircraft is equipped to release the tank or hopper as a unit, there shall be a means to prevent inadvertent release by the pilot or other crew member.

**11.2.3.10 AVAILABILITY OF CERTIFICATE**

- (a) Each holder of an agricultural aircraft operator certificate shall keep that certificate at its home base and shall present it for inspection on the request of the Authority or any government law enforcement officer.

**11.2.4 RECORDS AND REPORTS****11.2.4.1 RECORDS: AGRICULTURAL AIRCRAFT OPERATOR**

- (a) Each holder of an agricultural aircraft operator certificate shall maintain and keep current, at the home base designated in its application, the following records—
  - (1) The name and address of each person for whom agricultural aircraft services were provided;
  - (2) The date of the service;
  - (3) The name and quantity of the material dispensed for each operation conducted; and
  - (4) The name, address, and license number of each pilot used in agricultural aircraft operations and the date that pilot met the knowledge and skill requirements of this Subpart.
- (b) The records required by this section must be kept for at least 12 months.

**11.2.4.2 CHANGE OF ADDRESS**

- (a) Each holder of an agricultural aircraft operator certificate shall notify the Authority in writing in advance of any change in the address of its home base of operations.

**11.2.4.3 TERMINATION OF OPERATIONS**

- (a) Whenever a certificate holder ceases operations under Part 11, it shall surrender that certificate to the designated office of the Authority.

**11.3 ROTORCRAFT EXTERNAL LOADS****11.3.1.1 APPLICABILITY**

- (a) This Subpart prescribes—
- (1) Airworthiness certification rules for rotorcraft used in external-load operations; and
  - (2) Operating and certification rules governing the conduct of rotorcraft external-load operations in Republic of the Philippines.
- (b) The certification rules of Part 11 do not apply to—
- (1) Rotorcraft manufacturers when developing external-load attaching means;
  - (2) Operations conducted by a person demonstrating compliance for the issuance of a certificate or authorization under Part 11;
  - (3) Training flights conducted in preparation for the demonstration of compliance with Part 11; or
  - (4) A local or national government conducting operations with public aircraft.
- (c) For the purpose of Part 11, a person other than a crewmember or a person who is essential and directly connected with the external-load operation may be carried only in approved Class D rotorcraft-load combinations.

**11.3.2 CERTIFICATION RULES****11.3.2.1 CERTIFICATE REQUIRED**

- (a) No person subject to Part 11 may conduct rotorcraft external-load operations without, or in violation of the terms of, a Rotorcraft External-Load Operator Certificate or equivalent authorization issued by the Authority.

**11.3.2.2 LIMITATIONS ON PRIVATE AGRICULTURAL AIRCRAFT OPERATOR**

- (a) No person may conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate—
- (1) For compensation or hire;
  - (2) Over a congested area; or
  - (3) Over any property unless he or she is the owner or lessee of the property, or has ownership or other property interest in the crop located on that property.

**11.3.2.3 DURATION OF CERTIFICATE**

*Refer to Subpart 11.1.1.8.*

**11.3.2.4 APPLICATION FOR CERTIFICATE ISSUANCE OR RENEWAL**

*Refer to Subpart 11.1.1.5.*

**11.3.2.5 REQUIREMENTS FOR ISSUANCE OF A ROTORCRAFT EXTERNAL-LOAD OPERATOR CERTIFICATE**

- (a) If an applicant shows that it complies with this Subpart, the Authority will issue a Rotorcraft External-Load Operator Certificate to it.
- (b) The Authority will issue authorization to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable provisions of this Subpart.

**11.3.2.6 ROTORCRAFT**

- (a) An applicant must have the exclusive use of at least one rotorcraft that—
  - (1) Was type certified under, and meets the requirements of, the several parts of these regulations which prescribe requirements for rotorcraft external-load operations;
  - (2) Complies with the certification provisions in this Subpart that apply to the rotorcraft-load combinations for which authorization is requested; and
  - (3) Has a valid standard or restricted category airworthiness certificate.

**11.3.2.7 PERSONNEL**

- (a) An applicant shall hold, or have available the services of at least one person who holds a current commercial or airline transport pilot certificate issued by the Authority with a rating appropriate for the rotorcraft to be used.
- (b) An applicant shall designate one pilot, who may be the applicant, as chief pilot for rotorcraft external-load operations.
- (c) An applicant may designate qualified pilots as assistant chief pilots to perform the functions of the chief pilot when the chief pilot is not readily available.
- (d) The chief pilot and assistant chief pilots must be acceptable to the Authority and each must hold a current Commercial or Airline Transport Pilot Certificate, with a rating appropriate for the rotorcraft to be used.
- (e) The holder of a Rotorcraft External-Load Operator Certificate shall report any change in designation of chief pilot or assistant chief pilot immediately to the Authority.
- (f) A newly designated chief pilot shall comply with the knowledge and skill requirements of this Subpart within 30 days or the operator may not conduct further operations under the Rotorcraft External-Load Operator Certificate, unless otherwise authorized by the Authority.

**11.3.2.8 AMENDMENT OF CERTIFICATE**

*Refer to Subpart 11.1.1.9.*

**11.3.2.9 AVAILABILITY, TRANSFER, AND SURRENDER OF CERTIFICATE**

- (a) Each person conducting a rotorcraft external-load operation shall carry a facsimile of the Rotorcraft External-Load Operator Certificate in each rotorcraft used in the operation.
- (b) A certificate holder shall return its certificate to the Authority—

- (1) If the Authority suspends or revokes its Rotorcraft External-Load Operator Certificate; or
- (2) If the certificate holder discontinues operations and does not resume operations within two years.

### 11.3.3 OPERATING RULES AND RELATED REQUIREMENTS

#### 11.3.3.1 OPERATING RULES

- (a) No person may conduct a rotorcraft external load operation without, or contrary to, the Rotorcraft/Load Combination Flight Manual prescribed in Subpart 11.3.4.4.
- (b) No person may conduct a rotorcraft external load operation unless -
  - (1) The rotorcraft complies with Subpart 11.3.2.6; and
  - (2) The rotorcraft and rotorcraft/load combination is authorized under the Rotorcraft External Load Operator Certificate.
- (c) Before a person may operate a rotorcraft with an external load configuration that differs substantially from any that person has previously carried with that type of rotorcraft (whether or not the rotorcraft/load combination is of the same class), that person shall conduct, in a manner that will not endanger persons or property on the surface, such of the following flight operational checks as the Authority determines are appropriate to the rotorcraft/load combination:
  - (1) A determination that the weight of the rotorcraft/load combination and the location of its centre of gravity are within approved limits, that the external load is securely fastened, and that the external load does not interfere with devices provided for its emergency release.
  - (2) Make an initial liftoff and verify that controllability is satisfactory.
  - (3) While hovering, verify that directional control is adequate.
  - (4) Accelerate into forward flight to verify that no attitude (whether of the rotorcraft or of the external load) is encountered in which the rotorcraft is uncontrollable or which is otherwise hazardous.
  - (5) In forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot, other crewmembers or ground personnel may make this check and signal the pilot.
  - (6) Increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.
- (d) Notwithstanding the provisions of Part 8, the holder of a Rotorcraft External Load Operator Certificate may conduct rotorcraft external load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with the following:
  - (1) The operator shall develop a plan for each complete operation and obtain approval for the operation from the Authority.

*Note: The plan must include an agreement with the appropriate political subdivision that local officials will exclude unauthorized persons from the area in which the operation will be conducted, coordination with air traffic control, if necessary, and a detailed chart depicting the flight routes and altitudes.*
  - (2) Each flight shall be conducted at an altitude, and on a route, that will allow a jettisonable external load to be released, and the rotorcraft landed, in an

emergency without hazard to persons or property on the surface.

- (e) Notwithstanding the provisions of Part 8, and except as provided in Subpart 11.3.4.3(a)(4), the holder of a Rotorcraft External Load Operator Certificate may conduct external load operations, including approaches, departures, and load positioning maneuvers necessary for the operation, below 500 feet above the surface and closer than 500 feet to persons, vessels, vehicles, and structures, if the operations are conducted without creating a hazard to persons or property on the surface.
- (f) No person may conduct rotorcraft external load operations under IFR unless specifically approved by the Authority.

### **11.3.3.2 CARRIAGE OF PERSONS**

- (a) No AOC holder may allow a person to be carried during rotorcraft external load operations unless that person—
  - (1) Is a flight crew member;
  - (2) Is a flight crewmember trainee;
  - (3) Performs an essential function in connection with the external load operation; or
  - (4) Is necessary to accomplish the work activity directly associated with that operation.
- (b) The PIC shall ensure that all persons are briefed before takeoff on all pertinent procedures to be followed (including normal, abnormal, and emergency procedures) and equipment to be used during the external load operation.

### **11.3.3.3 CREWMEMBER TRAINING, CURRENCY, AND TESTING REQUIREMENTS**

- (a) No certificate holder may use, nor may any person serve, as a pilot in rotorcraft external load operations unless that person—
  - (1) Has successfully demonstrated to the Authority the knowledge and skill with respect to the rotorcraft/load combination; and
  - (2) Has in his or her personal possession a letter of competency or an appropriate logbook entry indicating compliance with paragraph (a)(1) of this section.
- (b) No AOC holder may use, nor may any person serve as, a crewmember or other operations personnel in Class D operations unless, within the preceding 12 calendar months, that person has successfully completed either an approved initial or a recurrent training program.
- (c) Notwithstanding the provisions of paragraph (b) of this section, a person who has performed a rotorcraft external load operation of the same class and in an aircraft of the same type within the past 12 calendar months need not undergo recurrent training.

### **11.3.4 AIRWORTHINESS REQUIREMENTS**

#### **11.3.4.1 FLIGHT CHARACTERISTICS REQUIREMENTS**

- (a) The applicant must demonstrate to the Authority, by performing the following operational flight checks, that the rotorcraft-load combination has satisfactory flight

characteristics, unless these operational flight checks have been demonstrated previously and the rotorcraft-load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external-load weight (including the external-load attaching means) is the maximum weight for which authorization is requested.

- (b) *Class A rotorcraft-load combinations*: The operational flight check must consist of at least the following maneuvers:
  - (1) Take-off and landing.
  - (2) Demonstration of adequate directional control while hovering.
  - (3) Acceleration from a hover.
  - (4) Horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested.
- (c) *Class B and D rotorcraft-load combinations*: The operational flight check must consist of at least the following maneuvers:
  - (1) Pickup of the external load.
  - (2) Demonstration of adequate directional control while hovering.
  - (3) Acceleration from a hover.
  - (4) Horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested.
  - (5) Demonstrating appropriate lifting device operation.
  - (6) Maneuvering of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick-release controls installed on the rotorcraft.
- (d) *Class C rotorcraft-load combinations*: For Class C rotorcraft-load combinations used in wire-stringing, cable-laying, or similar operations, the operational flight check must consist of the maneuvers, as applicable, prescribed in paragraph (c) of this section.

#### 11.3.4.2 STRUCTURES AND DESIGN

- (a) External-load attaching means. Each external-load attaching means shall be approved by the Authority.
- (b) Quick release devices. Each quick release device means shall be approved by the Authority.
- (c) Weight and centre of gravity:
  - (1) Weight. The total weight of the rotorcraft-load combination must not exceed the total weight approved for the rotorcraft during its type certification.
  - (2) Centre of gravity. The location of the centre of gravity must, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft-load combinations, the magnitude and direction of the loading force must be established at those values for which the effective location of the centre of gravity remains within its established range.

#### 11.3.4.3 OPERATING LIMITATIONS

- (a) In addition to the operating limitations set forth in the approved Rotorcraft Flight

Manual, and to any other limitations the Authority may prescribe, the operator shall establish at least the following limitations and set them forth in the Rotorcraft-Load Combination Flight Manual for rotorcraft-load combination operations:

- (1) The rotorcraft-load combination may be operated only within the weight and centre of gravity limitations established in accordance with this Subpart.
- (2) The rotorcraft-load combination may not be operated with an external load weight exceeding that used in showing compliance with this Subpart.
- (3) The rotorcraft-load combination may not be operated at airspeeds greater than those established in accordance with this Subpart.
- (4) No person may conduct an external-load operation under Part 11 with a rotorcraft type certified in the restricted category over a densely populated area, in a congested airway, or near a busy airport where passenger transport operations are conducted.
- (5) The rotorcraft-load combination of Class D may be conducted only in accordance with the following:
  - (i) The rotorcraft to be used must have been type certified under transport Category A for the operating weight and provide hover capability with one engine inoperative at that operating weight and altitude.
  - (ii) The rotorcraft must be equipped to allow direct radio intercommunication among required crewmembers.
  - (iii) The personnel lifting device must be approved by the Authority.
  - (iv) The lifting device must have an emergency release requiring two distinct actions.

#### **11.3.4.4 ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL**

- (a) The applicant must prepare a Rotorcraft-Load Combination Flight Manual and submit it for approval by the Authority. The limiting height-speed envelope data need not be listed as operating limitations. The manual shall set forth—
  - (1) Operating limitations, procedures (normal and emergency), performance, and other information established under this Subpart;
  - (2) The class of rotorcraft-load combinations for which the airworthiness of the rotorcraft has been demonstrated in accordance with this Subpart; and
  - (3) In the information section of the Rotorcraft-Load Combination Flight Manual—
    - (i) Information on any peculiarities discovered when operating particular rotorcraft-load combinations;
    - (ii) Precautionary advice regarding static electricity discharges for Class B, Class C, and Class D rotorcraft-load combinations; and
    - (iii) Any other information essential for safe operation with external loads.

#### **11.3.4.5 MARKINGS AND PLACARDS**

- (a) The following markings and placards must be displayed conspicuously and must be such that they cannot be easily erased, disfigured, or obscured:
  - (1) A placard (displayed in the cockpit or cabin) stating the class of rotorcraft-load combination and the occupancy limitation for which the rotorcraft has been

approved.

- (2) A placard, marking, or instruction (displayed next to the external-load attaching means) stating the maximum external load approved.

#### **11.3.4.6 AIRWORTHINESS CERTIFICATION**

- (a) A Rotorcraft External-Load Operator Certificate is a current and valid airworthiness certificate for each rotorcraft type and listed by registration number on a list attached to the certificate, when the rotorcraft is being used in operations conducted under Part 11.

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**11.4 GLIDER TOWING****11.4.1.1 APPLICABILITY**

- (a) This Subpart applies to those operations involving towing gliders by aircraft.

**11.4.1.2 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority will require each person conducting glider towing operations covered by this Subpart to hold a certificate of authorization as prescribed in Subpart 11.1.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of Subparts 11.1 and 11.4.

**11.4.1.3 AIRCRAFT REQUIREMENTS**

- (a) No person may operate an aircraft that is towing a glider:
- (1) Unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness; and
  - (2) The towline used has a breaking strength not less than 80 percent of maximum certificated operating weight of the glider.
- (b) However, the towline used may have a breaking strength more than twice the maximum certificated operating weight of the glider if a safety link is installed at the point of attachment of the towline to:
- (1) the glider with breaking strength not less than 80 percent of maximum certificated operating weight of the glider and not greater than twice this operating weight; or
  - (2) the towing aircraft with a breaking strength greater, but not more than 25 percent greater, than that of the safety link at the towed glider end of the towline and not greater than twice the maximum certificated operating weight of the glider.

**11.4.1.4 EXPERIENCE AND TRAINING REQUIREMENTS**

- (a) No person may act as a tow pilot for a glider unless that person has:
- (1) At least a private pilot license with a category rating for the tow aircraft;
  - (2) Logged at least 100 hours of pilot-in-command time in same aircraft category, class, and type, if applicable, as the tow aircraft;
  - (3) Received training in and instructor endorsement for:
    - (i) The techniques and procedures essential to the safe towing of gliders, including airspeed limitations;
    - (ii) Emergency procedures;
    - (iii) Signals used; and
    - (iv) Maximum angles of bank.
  - (4) Except as provided in paragraph (b) of this section, has completed and had endorsed at least three flights as the sole manipulator of the controls of an aircraft towing a glider or simulating glider-towing flight procedures while accompanied by a pilot who meets the requirements of this section; and
  - (5) Within the preceding 12 months has:

- (i) Made at least three actual glider tows; or
- (ii) Made at least three flights as pilot-in-command of a glider towed by an aircraft.

**11.4.1.5 OPERATING RULES**

- (a) No pilot may conduct any towing operation in controlled airspace until the pilot has received the appropriate clearance from the air traffic control service.
- (b) No pilot may conduct any towing operation in uncontrolled airspace until the pilot has notified the appropriate Authority for such activity to be entered into the NOTAM service of Republic of the Philippines.
- (c) No pilots shall engage in towing operations, either as the pilot of the towing aircraft or as the pilot of the towed glider, until all pilots have agreed upon a general course of action, including take-off and release signals, airspeeds and emergency procedures for each pilot.
- (d) No pilot of a civil aircraft may intentionally release a towline, after release of a glider, in a manner that endangers the life or property of another.

**11.5 BANNER TOWING****11.5.1.1 APPLICABILITY**

- (a) This Subpart applies to those operations involving towing by aircraft banners or other signs, lit or unlit.

**11.5.1.2 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate of authorization as prescribed in Subpart 11.1.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of Subparts 11.1 and 11.5.
- (c) A helicopter operating under the provision of Subpart 11.3 may tow a banner using an external-load attaching means without a certificate only if the operator has at least a Class B authorization on the operating certificate.

**11.5.1.3 AIRCRAFT REQUIREMENTS**

- (a) No person may operate an aircraft that is towing a banner unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.
- (b) No person may operate a helicopter that is towing a banner unless the helicopter has a means to prevent the banner from becoming entangled in the helicopter's tail rotor during all phases of flight, including auto-rotations.

*Note: The only way to prevent the banner from tangling in the tail rotor during auto-rotation may be to jettison the banner.*

**11.5.1.4 EXPERIENCE AND TRAINING REQUIREMENTS**

- (a) For non-revenue flights, the pilot of the tow aircraft shall hold at least a valid private pilot certificate and have a minimum of 200 hours PIC time.
- (b) When banner tow operations are conducted for compensation or hire, the pilot shall have at least a commercial pilot certificate (instrument rating not required) and at least a valid second class medical certificate.
- (c) All pilots engaged in banner towing operations shall demonstrate competence to the Authority by performing at least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder.

*Note: This demonstration should be observed from the ground to allow the inspector to evaluate the competence of any essential ground personnel as well as the flight operation.*

**11.5.1.5 OPERATING RULES**

- (a) All banner tow operations shall be conducted only:
  - (1) In VFR weather conditions; and
  - (2) Between the hours of official sunrise and official sunset.
- (b) No person may conduct banner towing operations:

- (1) Over congested areas or open air assemblies of persons lower than 1,000 feet; and
- (2) Elsewhere lower than the minimum safe altitude requirements of Part 8.

*Note: Helicopters may be operated at less than the minimums prescribed in paragraph (b) if the operation is conducted without hazard to persons or property on the surface.*

- (c) The certificate holder shall obtain the airport manager's approval to conduct banner tow operations.
- (d) If banner towing operations take place at an airport with a control tower, the certificate holder shall inform that control tower of the time of the banner tow operation.
- (e) The certificate holder shall notify the appropriate airport officials in advance when banner tow operations will be in close proximity to an uncontrolled airport.
- (f) Only essential crewmembers shall be carried when conducting banner tow operations.
- (g) When banner tow operations are conducted around congested areas, the pilot shall exercise due care so that, in the event of emergency release of the banner and/or towrope, it will not cause undue hazard to persons or property on the surface.
- (h) Each pilot shall drop the towrope in a predesignated area at least 500 feet from persons, buildings, parked automobiles, and aircraft.

*Note: If the tow plane lands with the rope attached, due care will be exercised to avoid trailing the rope and endangering other aircraft in the air, or persons, property or aircraft on the surface.*

- (i) Each pilot conducting banner towing operations shall carry onboard the aircraft a current copy of the following certificate of Waiver or Authorization allowing banner towing operations.

**11.6 TV AND MOVIE OPERATIONS****11.6.1.1 APPLICABILITY**

- (a) This Subpart applies to those operations involving movie filming, appearance in flight in movies, and airborne direction or production of such filming when those operations are conducted as part of a business enterprise or for compensation or hire.
- (b) For purposes of this Subpart, "movie" shall include film, videos, and live broadcast in any format, and the preparation and rehearsal for those operations.

**11.6.1.2 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority shall require each person conducting operations covered by this Subpart to hold a certificate of authorization as prescribed in Subpart 11.1.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of Subparts 11.1 and 11.6.

**11.6.1.3 AIRCRAFT REQUIREMENT**

- (a) In order to be used in motion picture and television filming operations, aircraft in the experimental category shall have an airworthiness certificate issued for the purpose of exhibition.

**11.6.1.4 EXPERIENCE AND TRAINING REQUIREMENTS**

- (a) No pilot may conduct television and movie operations unless he or she has:
  - (1) A commercial license with ratings appropriate to the category and class aircraft to be used under the terms of the waiver.
  - (2) At least 500 hours as PIC.
  - (3) A minimum of 100 hours in the category and class of aircraft to be used.
  - (4) A minimum of five hours in the make and model aircraft to be used under the waiver.
  - (5) If the pilot intends to perform aerobatics below 1,500 AGL, a Statement of Aerobatics Competency for the operations to be performed.

**11.6.1.5 OPERATING RULES AND WAIVER REQUIREMENTS**

- (a) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.
- (b) Each operator shall obtain a waiver from the Authority if filming sequences require an aircraft to be flown:
  - (1) In aerobatic flight below 1,500 AGL;
  - (2) Over a congested area;
  - (3) In controlled airspace; or
  - (4) In other instances where a departure from the requirements in Part 8 is needed.
- (c) The holder of the waiver shall provide a schedule of events that lists the:
  - (1) Identification of the aircraft; and

- (2) Performers in the sequence of their appearance.
- (d) Any maneuvers added or time changes to the schedule of events shall be approved by the Authority.
- (e) The waiver holder shall develop, have approved by the Authority, and adhere to a Motion Picture and Television Flight Operations Manual.
- (f) The waiver holder shall develop, have approved by the Authority, and adhere to a Motion Picture and Television Flight Operations Manual.
- (g) When conducting any filming operation requiring a waiver, the certificate holder shall ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorized persons or vehicles enter the airspace where maneuvers are being performed during the filming production event, efforts must be made to remove them.

#### **11.6.1.6 CONTENTS OF A MOTION PICTURE AND TELEVISION FLIGHT OPERATIONS MANUAL**

- (a) Each Motion Picture and Television Flight Operations Manual shall contain at least the following:
  - (1) Company Organization:
    - (i) Business name, address, and telephone number of applicant.
    - (ii) List of pilots to be used during the filming, including their pilot license numbers, grade, and class and date of medical.
    - (iii) List of aircraft by make and model.
  - (2) Distribution and Revision: Procedures for revising the manual to ensure that all manuals are kept current.
  - (3) Persons Authorized: Procedures to ensure that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 500 feet of the filming production area.
  - (4) Area of Operations: The area that will be used during the term of the waiver.
  - (5) Plan of Activities: Procedures for the submission, within three days of scheduled filming, a written plan of activities to the Authority containing at least the following:
    - (i) Dates and times for all flights.
    - (ii) Name and phone number of person responsible for the filming production event.
    - (iii) Make and model of aircraft to be used and type of airworthiness certificate, including category
    - (iv) Name of pilots involved in the filming production event.
    - (v) A statement that permission has been obtained from property owners and/or local officials to conduct the filming production event.
    - (vi) Signature of waiver holder or a designated representative.
    - (vii) A general outline, or summary, of the production schedule, to include maps or diagrams of the specific filming location, if necessary.
  - (6) Permission to Operate: Requirements and procedures that the waiver holder will use to obtain permission from property owners and/or local officials (e.g., police,

fire departments, etc.) as appropriate for the conduct of all filming operations when using the waiver.

- (7) Security: Method of security that will be used to exclude all persons not directly involved with the operation from the location.

*Note: This should also include the provision that will be used to stop activities when unauthorized persons, vehicles, or aircraft enter the operations area, or for any other reason, in the interest of safety.*

- (8) Briefing of Pilot/Production Personnel: Procedures to brief personnel of the risks involved, emergency procedures, and safeguards to be followed during the filming production event.

- (9) Certification/Airworthiness: Procedures to ensure that required inspections will be conducted.

- (10) Communications: Procedures to provide communications capability with all participants during the actual operation and filming.

*Note: The applicant can use oral, visual, or radio communications as long as it keeps the participants continuously apprised of the current status of the operation.*

- (11) Accident Notification: Procedures for notification and reporting of accidents.

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**11.7 SIGHT-SEEING FLIGHTS****11.7.1.1 APPLICABILITY**

- (a) This Subpart applies to those operations involving the carriage of persons for viewing natural formations or manmade objects on the ground when those operations are conducted as part of a business enterprise or for compensation or hire;
- (b) The flight is unquestionably advertised as “sight-seeing”;
- (c) The flight returns to the airport of departure without having landed at any other airport;
- (d) The flight is conducted within 25 statute mile radius of the departure airport; and
- (e) The certificated passenger capacity of the aircraft does not exceed 9 passengers.

*Note: Any other passenger carrying flight for remuneration, hire or valuable consideration must be conducted under an Air Operator Certificate (AOC) as contained in Part 9.*

**11.7.1.2 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate of authorization as prescribed in Subpart 11.1.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of Subparts 11.1 and 11.7.

**11.7.1.3 EXPERIENCE AND TRAINING REQUIREMENTS**

- (a) No pilot may conduct sightseeing operations unless he or she has:
  - (1) At least a commercial license with ratings appropriate to the category and class aircraft to be used under the terms of the waiver.
  - (2) At least 500 hours as PIC.
  - (3) A minimum of 100 hours in the category and class of aircraft to be used.

**11.7.1.4 OPERATING RULES**

- (a) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.
- (b) All sightseeing operations shall be conducted only:
  - (1) In VFR weather conditions; and
  - (2) Between the hours of official sunrise and official sunset.
- (c) No person may conduct sightseeing operations:
  - (1) Over congested areas or open air assemblies of persons lower than 1,000 feet; and
  - (2) Elsewhere lower than the minimum safe altitude requirements of Part 8.
- (d) The requirements of Part 8 apply to sightseeing operations described by this Subpart.

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**11.8 FISH SPOTTING****11.8.1.1 APPLICABILITY**

- (a) This Subpart applies to those operations involving location, tracking, and reporting on the location of fish and fish schools, when those operations are conducted as part of a business enterprise or for compensation or hire.

**11.8.1.2 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate of authorization as prescribed in Subpart 11.1.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of Subparts 11.1 and 11.8.

**11.8.1.3 OPERATING RULES**

- (a) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.
- (b) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an authorization under this Subpart.

**11.8.1.4 EXPERIENCE AND TRAINING REQUIREMENTS**

- (a) No pilot may conduct fish spotting operations unless he or she has:
  - (1) At least a commercial pilot license with ratings appropriate to the category and class aircraft to be used under the terms of the waiver.
  - (2) At least 500 hours as PIC.
  - (3) A minimum of 100 hours in the category and class of aircraft to be used.

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**11.9 NEWS MEDIA AND TRAFFIC REPORTING****11.9.1.1 APPLICABILITY**

- (a) This Subpart applies to those operations involving the observation of, and reporting on, news media events and/or vehicular traffic conditions on the highways and streets when conducted by aircraft or airmen, or both, not designated as solely public use.

**11.9.1.2 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate of authorization as prescribed in Subpart 11.1.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of Subparts 11.1 and 11.9.

**11.9.1.3 OPERATING RULES**

- (a) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.
- (b) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an authorization under this Subpart.

**11.9.1.4 EXPERIENCE AND TRAINING REQUIREMENTS**

- (a) No pilot may conduct news media or traffic reporting operations unless he or she has:
  - (1) At least a commercial pilot license with ratings appropriate to the category and class aircraft to be used under the terms of the waiver.
  - (2) At least 500 hours as PIC.
  - (3) A minimum of 100 hours in the category and class of aircraft to be used.

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**11.10 NON-TYPE CERTIFICATED AIRCRAFT: OPERATING LIMITATIONS****11.10.1.1 APPLICABILITY**

- (a) This Subpart applies to non-type certificated aircraft.
- (b) Definition: Non-type certificated aircraft is an aircraft that does not possess an aircraft type certificate issued by any country/state. It is, of simple design and construction, either a homebuilt or a kit built variety and for recreational and sport use, day VFR condition only.
- (c) A class of non-type certificated aircraft is applicable to all classifications, including powered parachutes, gyrocopter, fixed wing aircraft and helicopters.

**11.10.1.2 OPERATING LIMITATIONS**

Each person operating a non-type certificated aircraft shall operate within the following prescribed limitations:

- (a) Amateur builders can select their own aircraft design and is not subject to the Authority approval.
- (b) For registration and nationality marks refer to CAR Part 4.
- (c) Aircraft airworthiness certificate will not be issued to non-type certificated aircraft.
- (d) License to pilot these non-type certificated aircraft will not be issued by the Authority.
- (e) Its place of operation will be evaluated and approved by the Authority.
- (f) Operators will be responsible in maintaining these non-type certificated aircraft in safe condition so as not to be hazard to life and property.
- (g) Operators will be responsible to any damages to either life or property that maybe incurred during the operation of these non-type certificated aircraft.
- (h) Except with the approval of the Authority, a non-type certificated aircraft shall not be flown:
  - (1) Outside the designated area of operation.
  - (2) Without an operational two-way radio.
  - (3) At a height in excess of 800 ft. above ground level within the designated area of operation and outside of the approved lateral area.
  - (4) Within 5 nautical miles (8 km) from an airport with an operational control tower, unless two-way radio communication is established and prior approval is obtained to enter controlled airspace/designated flight training areas.
  - (5) Over congested area or over open-air assemblies of people.
  - (6) In clouds.
  - (7) Between the period of sunset and sunrise.
  - (8) In other than VFR conditions.
  - (9) In aerobatics conditions.
  - (10) In commercial conditions.
  - (11) Without clearance from the control tower if operating within radio contact of a controlled aerodrome.
- (i) Where it is proposed to fly a non-type certificated aircraft other than those specified

in paragraph (h) above,

- (j) the person operating these aircraft or his agent shall submit a written application specifying the details of the proposed operation to the Authority not less than fifteen (15) days prior to a proposed flight.

**11.11 REMOTELY PILOTED AIRCRAFT SYSTEM****11.11.1 APPLICABILITY**

- (a) This Subpart applies to both commercial and non-commercial operations of a Remotely Piloted Aircraft.

**11.11.2 GENERAL RPA OPERATIONS**

- (a) A person must not operate a RPA over a populous area at a height less than the height from which, if any of its components fails, it would be able to clear the area.
- (b) Subject to sub-regulations (c) and (d), a person operating a powered RPA must ensure that, while the RPA is in flight, or is landing or taking off, it stays at least 30 meters away from anyone not directly associated with the operation of the RPA.
- (c) Sub-regulation (b) is not contravened if a person stands behind the RPA while it is taking off.
- (d) Sub-regulation (b) is also not contravened if, as part of a RPA flying competition, a RPA is flown within 30 meters of a person who is judging a RPA flying competition.

**11.11.3 RPA RESTRICTED AREAS OF OPERATION**

- (a) No person may operate RPA within the following envelope unless prior approval has been granted by the Authority:
- (1) 400ft Above Ground Level (AGL);
  - (2) 10 km radius from the Aerodrome Reference Point (ARP);
- (b) The RPA shall stay clear of populated area unless prior approval has been granted by the Authority.
- (1) In considering whether to give an approval under this paragraph (b), the Authority may take into account:
    - (i) the degree of redundancy in the RPAs critical systems;
    - (ii) any fail-safe design characteristics of the RPA; and
    - (iii) the security of its communications and navigation systems.
  - (2) Before giving an approval under paragraph (b), the Authority must be satisfied that the person who intends to operate the RPA will take proper precautions to prevent the proposed flight from being dangerous to people and property.
- (c) No person may operate an RPA in a controlled or prohibited airspace unless authorized by the Authority.

**11.11.4 RPA CONTROLLER CERTIFICATE**

- (a) No person may use an RPA in commercial operation unless he or she has obtained an RPA Controller Certificate as prescribed in PCAR Part 2; 2.13.
- (b) No person may use Large RPAs in non-commercial operation unless he or she has obtained an RPA Controller Certificate as prescribed in PCAR Part 2; 2.13.

**11.11.5 REQUIREMENT FOR CERTIFICATE OF REGISTRATION AND SPECIAL CERTIFICATE OF AIRWORTHINESS**

- (a) All RPAs used for commercial operations are required to be registered with the Authority regardless of weight.
- (b) Non-commercial Large RPA shall be duly registered with the Authority.
- (c) RPAs with a gross weight of 150kgs and above are required to obtain a Special Certificate of Airworthiness (SCA) or an Experimental Certificate (EC) in accordance with PCAR Part 5.

#### **11.11.6 REMOTELY PILOTED AIRCRAFT FOR COMMERCIAL OPERATION**

##### **11.11.6.1 APPLICABILITY**

This Subpart applies to the commercial operation of a Remotely Piloted Aircraft.

##### **11.11.6.2 RPAS OPERATOR CERTIFICATE**

##### **11.11.6.3 PRE-APPLICATION REQUIREMENTS**

- (a) An applicant for an RPAS Operator Certificate shall submit the following documents with the Authority:
  - (1) A Letter of Intent.
  - (2) Duly accomplished Pre-application Statement of Intent (PASI) Form for RPA operator certificate which shall include:
    - (i) details of:
      - (A) the applicant's structure and organization;
      - (B) its staff and their qualifications and experiences (including, in particular, the names, qualifications, experiences, duties and functions of the persons who are to be the applicant's chief RPA controller and maintenance controller);
      - (C) its facilities and equipment;
      - (D) its practices and procedures; and
    - (ii) a general description of the proposed operations, including the type or types of RPA to be used.
  - (3) The application shall be accompanied by a copy of each of the applicant's manuals relevant to the operation of RPA s.
  - (4) If the Authority reasonably needs more information about the applicant, or a document, to arrive at a decision whether to certify the applicant as a RPA operator, it may ask the applicant in writing for the information or a copy of the document.
- (b) The Authority may refuse to consider, or cease considering, the application until the applicant furnishes the information or copy of the document.

##### **11.11.6.4 APPLICATION REQUIREMENTS**

- (a) No person may operate an RPA for commercial operations unless the person holds an RPAS Operator Certificate.
- (b) The applicant for RPAS Operator Certificate must hold the following documents:
  - (1) User's Manual issued by the Manufacturer;

- (2) RPA Insurance/Third Party Liability (TPL);
- (3) Special Certificate of Airworthiness (if applicable); and
- (4) RPA Certificate of Registration issued by the Authority.

#### **11.11.6.5 ELIGIBILITY FOR ISSUANCE OF AN RPAS OPERATOR CERTIFICATE**

- (a) No person is eligible to be a RPA Operator Certificate Holder unless:
  - (1) the person has an organization and structure that is appropriate for safe operation of RPAs;
  - (2) the person has enough qualified and experienced personnel to undertake the proposed operations safely;
  - (3) the person has facilities and equipment appropriate to carry out the proposed operations using RPAs of the type to be used;
  - (4) the person has suitable practices and procedures to conduct operation; and
  - (5) the person has nominated suitable persons as chief RPA controller and maintenance controller.
- (b) Two or more persons cannot be certified jointly as a RPA operator.

#### **11.11.6.6 CONDITIONS ON RPAS OPERATOR CERTIFICATE**

- (a) It is a condition of the certification of a person as a RPA operator that he/she:
  - (1) maintains within its organization a position of chief RPA controller having at least the functions and duties of a chief controller.
  - (2) employs as its chief RPA controller a person who is certified as a RPA controller and who is competent to carry out those duties and perform those functions; or
  - (3) has an arrangement with another qualified and competent person to carry out those functions and duties; and
- (b) If the RPA operator operates more than 1 RPA, the chief RPA controller must carry out the duties and functions as such on a full-time basis.

#### **11.11.6.7 LIMITATIONS ON RPAS OPERATOR CERTIFICATE**

- (a) The Authority may impose limitations on the certification of a person as a RPA operator in the interest of air navigation safety, to include but not limited to the following:
  - (1) Allow the person to operate only a specific kind/s or type of RPAs; or
  - (2) Allow the person to operate RPAs only for specified purposes; or
  - (3) Limit the areas where the person may operate RPA s; or
  - (4) Allow the person to operate RPAs only in VMC;
  - (5) Requiring the RPA to stay within a specified area or visual line of sight (VLOS) unless authorized to conduct Beyond Visual Line of Sight (BVLOS);
    - (i) BVLOS operations may be allowed by the Authority provided the RPA is equipped with the following accessories:
      - (A) Detect and avoid system capability;

- (B) Global Positioning System (GPS) device; and
- (C) Homing device
- (6) Limiting the extent of operation of the RPA at night or in conditions other than VMC, by requiring, but not limited to, the installation of anti-collision light and navigation and position light; and
- (b) If the person is certificated as a commercial operator, the proposed operation would not contravene any condition of the certification, the Authority may approve the proposed operation, but may impose limitations as above-mentioned.

#### **11.11.6.8 RPAS OPERATOR CERTIFICATE AND OPERATIONS SPECIFICATION: CONTENTS**

- (a) The RPAS Operator Certificate shall contain the following:
  - (1) Name of operator
  - (2) Name of accountable person
  - (3) Operator address
  - (4) Operator contact details
  - (5) Validity of certificate
  - (6) Certificate control number
- (b) The RPAS Operator Certificate shall be accompanied by an Operations Specifications containing the following:
  - (1) Name of operator
  - (2) Operator contact information
  - (3) RPA model
  - (4) RPA registry number
  - (5) Type of operation
  - (6) Area of operation
  - (7) Special authorization

#### **11.11.6.9 VALIDITY OF RPAS OPERATOR CERTIFICATE**

- (a) An RPAS Operator Certificate issued by the Authority is effective for a period of three (3) years from date of issuance and remains valid until:
  - (1) The Authority amends, suspends, revokes or otherwise terminates the certificate;
  - (2) The operator surrenders it to the Authority.

#### **11.11.6.10 RPAS OPERATOR CERTIFICATE NOT TRANSFERABLE**

- (a) RPAS Operator Certificate is not transferable.

**11.11.6.11 SHOW CAUSE NOTICE TO RPAS OPERATOR CERTIFICATE HOLDER**

- (a) The Authority may give a show cause notice to an RPA Operator Certificate Holder if there are reasonable grounds for believing that there are facts or circumstances that would justify the cancellation of the approval under Subpart 11.11.6.12.
- (b) A show cause notice must:
  - (1) tell the holder of the facts and circumstances that, in the Authority's opinion, would justify the cancellation of the RPAS Operator Certificate under Subpart 11.11.6.12; and
  - (2) invite the operator to show in writing, within a reasonable time stated in the notice, why the RPAS Operator Certificate should not be cancelled.
- (c) A show cause notice may state that the RPAS Operator Certificate is suspended if the Authority reasonably considers that there may be a serious risk to the safety of air navigation if the approval were not suspended.
- (d) If a show cause notice states that the RPAS Operator Certificate is suspended, the certification is suspended from when the notice is given to the holder.
- (e) The Authority may at any time revoke the suspension.
- (f) If the approval is suspended and the Authority has not dealt with it under Subpart 11.11.6.12 within 90 days after the day it is suspended, the suspension lapses at the end of that period.

**11.11.6.12 CANCELLATION OF RPAS OPERATOR CERTIFICATE**

- (a) The Authority may cancel RPAS operator certificate by written notice to the operator, if:
  - (1) The Authority has given to the operator a show cause notice under Subpart 11.11.6.11 in relation to it; and
  - (2) The Authority has taken into account any representations made, within the period stated in the notice, by or on behalf of the operator; and
  - (3) there are reasonable grounds for believing that:
    - (i) the operator has operated a RPA in contravention of these Regulations or of a condition of the authorization; or
    - (ii) an employee of the operator has operated a RPA negligently or carelessly; or
    - (iii) an employee of the operator, in operating a RPA, has recklessly endangered human life or property.
- (b) If the Authority has given a show cause notice under PCAR Part 11, Subpart 11.11.6.11 to RPAS Operator Certificate Holder, and it decides not to cancel the approval, the Authority shall:
  - (1) inform the operator in writing of the decision; and
  - (2) revoke the suspension, if the RPAS Operator Certificate is suspended.

**11.11.6.13 CANCELLATION AT REQUEST OF HOLDER**

- (a) The Authority may cancel RPAS Operator Certificate if asked to do so in writing by the operator.

- (b) The cancellation takes effect upon issuance by the Authority of such order cancelling the RPAS Operator Certificate.

#### **11.11.7 REMOTELY PILOTED AIRCRAFT FOR NON-COMMERCIAL OPERATIONS**

##### **11.11.7.1 APPLICABILITY**

- (a) This Subpart applies to the Remotely Piloted Aircrafts operated for sport and recreational purposes.

##### **11.11.7.2 VISIBILITY FOR OPERATION OF RPA**

- (a) An RPA Controller doing non-commercial operations may operate an RPA only within VLOS.

##### **11.11.7.3 OPERATING AN RPA AT NIGHT**

- (a) All RPA Controllers doing non-commercial operations are prohibited to operate an RPA at night unless authorized by the Authority.

##### **11.11.7.4 RPAs FLYING DISPLAY/AIR SHOW**

- (a) No person or entity may conduct an RPA Flying Display or Air Show unless duly authorized by the Authority and complies with the following:
- (1) Pre-approved area of operations
  - (2) At least sixty (60) calendar days before the display somebody is nominated as the organizer of the display;
  - (3) At least sixty (60) calendar days before the display the organizer shall provide the Authority with the following information:
    - (i) his name, address and telephone number;
    - (ii) the proposed program of flying
    - (iii) where the display will be held, and how big the intended flying field is;
    - (iv) how many spectators are expected, and where they will be
  - (4) that said organizer ensures:
    - (i) having regards to the events making up the display, proper precautions are taken for the safety of the participants and spectators; and
    - (ii) the RPA controllers participating in the display are competent to carry out each manoeuvre safely.
- (b) CAAP may impose conditions on the conduct of RPA flying display or air show if in the circumstances the condition is reasonably necessary in the interest of aviation safety. (per Memorandum Circular no. 29-15, series of 2015)