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ADVISORY CIRCULAR

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**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

**SUBJECT: CIVIL AIR PATROL AND STATE AND REGIONAL DEFENSE AIRLIFT
RELATIONSHIPS**

- PURPOSE.** This circular is issued to advise all interested persons and State officials responsible for emergency planning activities of a Memorandum of Understanding between the Civil Air Patrol and the Federal Aviation Administration relative to Civil Air Patrol/State and Regional Defense Airlift relationships. It transmits a copy of the memorandum (Appendix 1) and provides additional guidance that may be useful to further improve the use of non-air carrier aircraft in time of national emergency.
- ACKNOWLEDGMENT.** The Federal Aviation Administration is deeply grateful for the cooperation and assistance provided by the National Headquarters, Civil Air Patrol, The National Association of State Aviation Officials, and the Office of Civil Defense in developing the material in this advisory circular.
- BACKGROUND.** The Civil Air Patrol (CAP) is an existing organization of trained volunteers capable of conducting emergency operations during peacetime and in time of national emergency. It has performed numerous services to minimize the effects of natural disasters and has conducted thousands of search and rescue missions to aid persons in distress. In time of national emergency, in addition to the tasks requested by USAF, the CAP can be employed to support Civil Defense and other activities designed to lessen the effects of enemy attack.

State and Regional Defense Airlift (SARDA) plans have been developed to mobilize the remaining non-air carrier resources into emergency service in time of national emergency. These plans are incorporated in each State's "Emergency Resource Management" plan sponsored by the Office of Emergency Preparedness in accordance with guidance provided by the FAA.

Unlike the Civil Air Patrol the State and Regional Defense Airlift is not an existing organization. It is a published plan to be used by the individual States to activate and organize all non-air carrier resources only

in time of national emergency. Both the SARDA and the CAP have the same mission in time of national emergency.

4. **OBJECTIVE.** To incorporate, wherever necessary, the principles recommended in the Memorandum of Understanding to improve the CAP and SARDA responses to local and State requests for emergency airlift in time of national emergency.
5. **INCORPORATING THE CIVIL AIR PATROL INTO STATE AND REGIONAL DEFENSE AIRLIFT (SARDA) PLANS.** States will provide airlift services, during time of national emergency, to support civil defense and other essential State functions in accordance with published State and Regional Defense Airlift plans. When activated, these plans will mobilize all aircraft and supporting resources within the State that are not assigned to Federal operations (Civil Reserve Air Fleet - CRAF, and War Service Programs - WASP).

Included as aviation resources upon activation of SARDA are the aircraft, airman, and supporting equipment associated with the Civil Air Patrol. However, not all SARDA plans have considered the CAP as an organizational element. Only about half of the plans incorporate the CAP in the SARDA organization. While in the remainder, the CAP is either not mentioned, or only coordination is suggested.

To assure the most efficient use of all non-air carrier resources in time of national emergency, the CAP organization should be incorporated as an integral part of the SARDA organization. However, the CAP should retain its identity as an organizational unit from the State level down thru the local level. Moreover, overall direction and support of CAP activities, thru the Wing Commander, by the State SARDA Director is essential if all State aviation resources are to be used as a coordinated whole.

Therefore, wherever possible, the CAP Wing Commander and his Headquarters organization should become a Staff element reporting to the State SARDA Director. The Wing Commander, however, should retain overall supervision over CAP subordinate units. This arrangement will provide the SARDA Director with CAP staff experience without disrupting the CAP organization.

Another consideration to assure the maximum use of non-air carrier aviation is the application of command and control relationships between the local airport SARDA manager and a collocated CAP unit. As suggested above, the CAP should retain its organizational identity with the Wing Commander having line authority over subordinate units. But some modification or adjustment to this concept is necessary if the local SARDA manager is to have flexibility in the use of aviation resources to respond to local requests for airlift support. Equally important, civil defense and local officials should not have to determine what element of civil aviation can best respond to their needs. Local plans should provide for the simple procedure of identifying one civil aviation contact to receive all airlift requests.

The modification or adjustment most suitable to accomplish this local requirement is to include a provision in local plans for the SARDA manager to exercise operational control over the aircraft of collocated CAP units during a national emergency or exercises in preparation for a national emergency. For this purpose Operational Control is: "Authoritative direction necessary to accomplish the mission. In airlift operations it includes authority to initiate, continue, reroute, divert to terminate an airlift mission to accomplish the mission or in the interest of flight safety." Operational control does not imply ownership, administration, or other activities associated with the management of the unit. In this case, operational control should be limited to the assignment of tasks and missions for which the unit is organized and trained to accomplish whenever the unit is not responding to a mission assignment from the CAP Wing or USAF.

Variations to the suggested handling of SARDA/CAP organizational relationships may be necessary to accommodate local or State requirements, or to be compatible with other agreements and plans having an influence on the CAP or SARDA. In either event, an effort should be made, where needed, to clarify this relationship so that personnel of both organizations can operate efficiently, and officials of government and civil defense agencies can employ simple procedures when requesting emergency airlift.

The arrangements suggested in this paragraph should be temporary so as to provide optimum airlift during the most critical time of national emergency, and discontinued as soon as possible when the situation permits. This normally should occur when the requirement for specialized emergency airlift can be handled exclusively by the Civil Air Patrol.

There may be circumstances where it is necessary to incorporate any of these additional or expanded CAP/SARDA relationships in State airlift plans, but is impractical to rewrite existing documents. In these circumstances, an agreement between the State CAP and SARDA official responsible for emergency planning, covering the necessary information, should suffice.

CIVIL AIR PATROL COMMITMENT TO USAF. The Civil Air Patrol presents a unique opportunity for the USAF to assign specific missions and tasks to a segment of non-air carrier aviation in support of its war plans. In so doing, the USAF should be assured of a priority response on those missions it considers vital to the defense of the nation.

Whenever possible, these plans or the identification of the units involved, should be made available to State officials so they may be considered when SARDA is activated. In cases where this is not feasible, State plans should contemplate USAF request for CAP assistance in support of war plans. Accordingly, upon receipt of such requests State officials should respond by providing all possible assistance and according these missions the necessary precedence.

State support of CAP units conducting missions for the USAF will be essential. The units involved remain a civil resource even though the CAP is an auxiliary of the USAF and their tasks may be military in nature. Their aircraft will require civil fuel, operate from civil airports, and will need maintenance from civil repair agencies. Accordingly, resource managers should plan to allocate State resources for all CAP operations, both civil and military, from the same sources that will sustain SARDA.

7. SPECIALIZED TRAINING CONDUCTED BY CAP. The States have available the technical and managerial skills necessary for a vibrant civil aviation economy and plans are well developed to marshal these skills into an emergency organization to be used in time of national emergency. However, additional special skills will be needed to successfully conduct emergency operations. These additional skills must be acquired in the specialties of mission coordinators, clearance officers, ground operation officers, and communication officers, for example, if the SARDA is to be successful.

These special skills are available to the States in CAP units, but not in sufficient numbers to accommodate an expanded emergency airlift, or without the possibility of jeopardizing the effectiveness of the CAP. Although some cross utilization of the CAP skills with SARDA may be practical in some instances, many voids will still remain.

To overcome this deficiency, it is recommended that State Aviation (SARDA) officials arrange for the training of key SARDA personnel through the CAP.

William B. Schump
Acting Director,
Flight Standards Service

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D.C. 20590



OFFICE OF
THE ADMINISTRATOR

MEMORANDUM OF UNDERSTANDING
BETWEEN
FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION
AND CIVIL AIR PATROL
PERTAINING TO RELATIONSHIP OF CIVIL AIR PATROL WINGS
AND STATE AND REGIONAL DEFENSE AIRLIFT ORGANIZATIONS

WHEREAS, the Administrator of the Federal Aviation Administration has heretofore prepared national emergency plans and has developed preparedness programs;

WHEREAS, the Civil Air Patrol, as the volunteer civilian auxiliary of the United States Air Force, is an air organization trained and equipped to assist in national and local emergencies;

NOW, THEREFORE:

To enhance the maximum effective use of non-air carrier aircraft during time of national emergency, the Administrator of the Federal Aviation Administration and the National Commander of the Civil Air Patrol, have mutually determined to recommend to State level CAP/SARDA officials that they include the following CAP/SARDA relationship and concepts in their planning wherever necessary:

(1) Incorporating Civil Air Patrol into State and Regional Defense Airlift Organizations. Existing plans for use of Civil Air Patrol during a national emergency should be revised, if necessary, to include the Civil Air Patrol Wing as a state level organizational unit of SARDA. In so doing, the Civil Air Patrol Wing should retain its organizational identity receiving overall direction from the State SARDA Director.

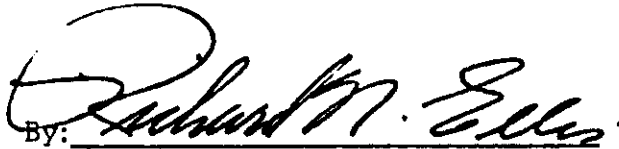
(2) Civil Air Patrol Commitment to USAF. State SARDA officials and emergency resource planners should take cognizance of priority USAF mission assignments to selected CAP units in support of USAF war plans. Such missions will be in the national interest and state officials should provide all necessary assistance including additional state resources when available.

(3) Specialized Training Conducted by CAP. CAP units are encouraged to train non-CAP personnel to perform SARDA emergency service tasks such as; mission coordinators, clearance officers, ground operations officers, and communications officers. The names of individuals who successfully complete emergency service training should be forwarded to the designated SARDA Director.

(4) Coordination of CAP/SARDA Activities. State SARDA and CAP officials are encouraged to enter into formal arrangements to enhance the effective use of state aviation resources in time of national emergency. Such arrangements may include, assignments of the CAP wing and subordinate CAP organizations to; (a) serve as a primary emergency operational staff for the State Director of Aviation and other SARDA officials at satellite airports, (b) provide emergency services training for non-CAP personnel, and (c) specific emergency services, including those in support of USAF war plans. Arrangements or agreements between Civil Defense agencies and the Civil Air Patrol should also be reviewed, where necessary, to provide the means for rapid response to Civil Defense needs.

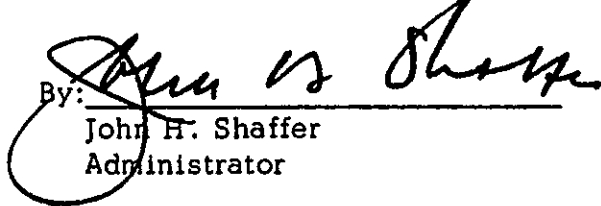
APPROVED:

Civil Air Patrol



Richard N. Ellis
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John H. Shaffer
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Date: 15 June 1970

By: 

F. Ward Reilly
Brigadier General, CAP
Chairman, National Board

Date: 15 June 1970

- b. Wind Conditions (The effects may be shown analytically.) - Surface downwind component of 10 knots. Wind shear of 4 knots per 100 feet altitude applied along the runway or across the runway individually, commencing at an altitude of 500 feet.
 - c. Localizer Performance -
 - (1) The airplane should be stabilized on the localizer for the purpose of demonstration before the outer marker is intercepted on a normal inbound approach.
 - (2) From the outer marker to an altitude of 300 feet above runway elevation on the approach path, the automatic pilot/coupler should cause the airplane to track automatically to within ± 35 microamperes (95% probability) of the indicated localizer course. The performance should be free of sustained oscillations.
 - (3) From an altitude 300 feet above runway elevation on the approach path to the decision altitude (100 feet), the automatic pilot/coupler should cause the airplane to track automatically to within ± 25 microamperes (95% probability) of the indicated course. The performance should be free of sustained oscillations.
 - d. Glide Slope Performance -
 - (1) For the purposes of the demonstration, the airplane should be stabilized on the glide slope before an altitude of 700 feet above the field level is reached.
 - (2) From 700 feet altitude to the decision altitude the autopilot/coupler should cause the airplane to track the center of the indicated glide slope to within ± 35 microamperes or ± 12 feet, whichever is the larger, without sustained oscillations.
4. FLIGHT DIRECTOR SYSTEMS. When a flight director system is used as part of a Category II installation it should provide for the following performance under the test condition stated:
- a. Airplane Speed - Maximum and Minimum design approach speeds.
 - b. Wind Conditions (The effects may be shown analytically) - Surface crosswind component of 15 knots. Surface downwind component of 10 knots. Wind shear of 4 knots per 100 feet altitude applied along the runway or across the runway individually, commencing at an altitude of 500 feet.
 - c. Mode selection and Indication
 - (1) Manual selection should be positive, and the selection should be clearly identified.

- (2) When the mode of operation is not shown by the manual mode selector and by the command display behavior, means should be employed to clearly annunciate the existing mode.

d. Localizer Performance -

- (1) The airplane should be stabilized on the localizer for the purpose of demonstration before the outer marker is intercepted on a normal inbound approach.
- (2) From the outer marker to an altitude of 300 feet above runway elevation on the approach path, the flight director should cause the airplane to track within ± 35 microamperes (95% probability) of the indicated localizer course. The performance should be free of sustained oscillations.
- (3) From an altitude 300 feet above runway elevation on the approach path to the decision altitude (100 feet), the flight director should cause the airplane to track to within ± 25 microamperes (95% probability) of the indicated course. The performance should be free of sustained oscillations.

e. Glide Slope Performance -

- (1) For the purposes of the demonstration, the airplane should be stabilized on the glide slope before an altitude of 700 feet above the field level is reached.
- (2) From 700 feet altitude to the decision altitude (100 feet) the flight director should cause the airplane to track the center of the indicated glide slope to within ± 35 microamperes or ± 12 feet, whichever is the larger, without sustained oscillations.

5. AUTOMATIC THROTTLE SYSTEM

- a. An automatic throttle system, if used, should provide safe operation under conditions which can reasonably be expected in normal service including wind shear, gusts, and sideslips. The system should:
 - (1) Automatically adjust throttles to maintain airplane speed to within ± 5 knots of stabilized programmed airspeed, but not less than computed threshold airspeed under all intended flight conditions. Proper operating points such as reference speed or angle-of-attack may be set manually or automatically.
 - (2) Provide throttle application at a rate consistent with the recommendations of the appropriate engine and airframe manufacturers.