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A STUDY OF THE SAFETY/REGULATORY
FUNCTIONS OF THE AIR TRAFFIC CONTROL SYSTEM

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ABSTRACT

The purpose of this study is to identify those areas in which the Air Traffic Control System has safety and regulatory responsibility. The study will also suggest how such functions might be accommodated under the proposed separation of the Air Traffic Control System from the Federal Aviation Administration.

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EXECUTIVE SUMMARY

Concern has been expressed regarding the impact that separating the Operation of the Air Traffic Control System from the FAA regulatory/safety functions would have on the operations of the system. This report examines the various regulatory functions and authorities now delegated to the Associate Administrator (FAA) for Air Traffic.

Aviation Standards

The Associate Administrator for Aviation Standards has the primary responsibility for rulemaking actions related to the safety of flights. This includes the certification of the airman, aircraft, air carrier, air agency and the responsibility to insure the competence of the airman, air carrier and air agency. Aviation Standards is not responsible for operation of the Air Traffic Control System. Incidents regarding an airman's failure to operate properly in the Air Traffic System are referred by Air Traffic to Aviation Standards for appropriate action. There would be no change required under the Air Traffic/NAA concept in this procedure.

Office of Aviation Safety

The Office of Aviation Safety has no rulemaking authority; rather, it has an overview and analysis type of function regarding safety. It is also the primary FAA focal point in assisting the NTSB in accident incident investigations. The separation

of Air Traffic operations from the FAA would not have any impact on this office. The results of any analysis related to the Air Traffic System would be given to Air Traffic as it now is. Air Traffic now provides support to the NTSB and would continue to do so under the Air Traffic/NAA concept.

Air Traffic

The Associate Administrator for Air Traffic is responsible for the safe, efficient operation of the Air Traffic Control System. He has been delegated rulemaking authority for Federal Air Regulations 65 (Subpart B), 71, 73, 75, 91 (Subpart B), 93, 99, 101, 103 (in part), 105 (in part), 157 and 189. He has also been delegated determination authority under Part 77. An analysis of these FAR's has been made to determine their relationship and essentiality to operating the Air Traffic Control System. This analysis reveals that some of the FAR's are related to the operation of the Air Traffic Control System and have little relationship to the functions and role of Aviation Standards. Other FAR's under the jurisdiction of Air Traffic relate more to Aviation Standards than Air Traffic.

FAR's 71, 73, 75, 93 and 99

FAR 71 provides for airspace assignments and the regulatory designation of Federal Airways, control areas, control zones and terminal control areas. Part 75 provides similarly for jet routes and area high routes.

FAR 73 designates the dimensions of special use airspace, i.e., restricted areas and prohibited areas. Special use airspace

accommodates necessary military activities and protects other users from hazardous operations. Air Traffic has a prime interest in the preceding rulemaking authority. FAR's 71 and 75 determine what airspace will be within the Air Traffic Control system.

FAR 73 determines what airspace will be excluded from the system.

FAR 93 is an enabling rule that permits Air Traffic to define airspace and rules not standard to the Air Traffic Control System. These are needed because of special situations at certain airports. FAR 99 prescribes the rules for operating in and defines the airspace within an Air Defense Identification Zone. The requirements are determined by the DOD, and the FAA though Air Traffic Control processes the rules, airspace identification and communications requirements. The authority for the rule is not essential to the Air Traffic Control System but seems more appropriate to the Air Traffic/NAA function than Aviation Standards/FAA. FAR 71, 73, 75 and 93 are very important to the operation of the Air Traffic Control System as they determine what airspace is in the System, and authority for rulemaking under these parts should be delegated to Air Traffic/NAA.

FAR 77

Part 77 establishes standards for determining obstructions in the navigable airspace and sets forth requirements for notice to the Administrator of proposed construction or alteration. The rule permits the Agency to assess the impact of the proposed structure on aircraft operations and determines if it will

be a hazard. The primary authority for making this determination now rests with Air Traffic. There is, however, no unique Air Traffic expertise required to make these determinations. The transfer of the functions to Aviation Standards would not have an adverse impact on Air Traffic operations; in fact, it would relieve them of a burden.

FAR 101, 103, 105

Part 101 establishes regulations for the operation of Moored Balloons, Kites, Unmanned Rockets and Free Balloons. Part 103 relates to the operation of Ultralight Vehicles and Part 105 to Parachute Jumping. Although the authority for the preceding three rules is given to Air Traffic they are more closely related to the function of Aviation Standards. Retention of these rules by Aviation Standards/FAA would not impair the operation of the Air Traffic Control System.

FAR 91 Subpart B

This subpart prescribes the rules of flight governing operation of aircraft within the United States. Many of the components of this rule, (i.e., Right of Way, Acrobatic Flight, Aircraft Lights, Minimum Safe Altitudes, etc.) do not directly relate to operations within the Air Traffic Control System. Others do relate to operations in the System in that they establish the requirement as to when the pilot must obtain an Air Traffic Control clearance and the type of equipment that must be carried. Other sections such as flights between Mexico or Canada and

the United States are more administrative in nature. When reviewing this rule there is a question why this part is the responsibility of Air Traffic when so many elements seem to be the function of Aviation Standards. The theory behind this delegation of authority to Air Traffic was that Air Traffic would have authority over the airspace. Air Traffic, however, as a practical matter is responsible for operation of the Air Traffic Control System and is, therefore, only concerned with aircraft operating within the system.

Aviation Standards has the responsibility for airman certification and performance. Most of this subpart deals with airman performance and should more appropriately be delegated to Aviation Standards.

FAR Part 11

This study would not be complete without mentioning Part 11. This part establishes the procedures by which Federal Aviation Rules are promulgated. It requires the rulemaker to notify and solicit the views of all interested parties. Any legislation separating the Air Traffic Control System from the FAA must insure the continuation of this process by both parties.

Conclusion

In general, this review points out that much of the regulatory authority presently delegated to Air Traffic more appropriately should be vested in Aviation Standards. From a practical standpoint Aviation Standards now develops many of the rules and Air Traffic acts as the publisher. Air Traffic is concerned with the operation

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of the Air Traffic Control System and should preferably be able to place their total energies and commitment to the safe, efficient operation of the System. Aviation Standards has the primary safety role regarding the aircraft, air carrier, air agency, airman and their performance including how they should perform. A reasonably clear division of authority and responsibility can be achieved under the FAA/NAA concept if Air Traffic/NAA retained the authority to determine what airspace is within the Air Traffic Control System and Aviation Standards/FAA retained all others. It is the conclusion of this study that the proposed establishment of a National Aviation Authority would not have an adverse impact on the operation of the Air Traffic Control System provided the regulatory authority for the airspace that makes up the system is retained by NAA and safeguards regarding coordination such as in FAR 11 are incorporated in the legislation.

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GLOSSARY

FAA	Federal Aviation Administration
NAA	National Aviation Authority (Title of proposed authority to operate the Air Traffic Control System)
Aviation Standards	Organization in present FAA responsible for Aircraft, Airman Certification and Performance
Air Traffic	Organization in the FAA responsible for operating the Air Traffic Control System
Aviation Standards/FAA	New FAA
Air Traffic/NAA	New operator of Air Traffic Control System
System	Air Traffic Control System
ATC	Air Traffic Control
FAR	Federal Air Regulations
NTSB	National Transportation Safety Board



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1.0 INTRODUCTION

1.1 Background

A proposal has been made to establish a National Aviation Authority (NAA) as an independent government corporation responsible for the operation of the Air Traffic Control System. In exercising its responsibility for the safe, efficient movement of traffic, the Air Traffic Service has also a regulatory responsibility. The Federal Aviation Act of 1958 places responsibility for management of the National Airspace System including issuing rules, regulations and orders as necessary to insure safe use of navigable airspace, under the current Federal Aviation Administration (FAA).

There is concern over the impact of separating the Air Traffic Control operation from the safety/regulatory functions now within FAA. Basically, the regulatory functions are divided between the Air Traffic Service and the Aviation Standards Service. In a broad sense, the Aviation Standards Service has responsibility for certification and performance of the airman, the aircraft and the operator or air carrier. The Air Traffic Service generally has the responsibility for the environment in which it operates "the airspace."

1.2 Outline of the Study

This study will identify the regulatory functions which are delegated to the Aviation Standards Service and the Air

Traffic Service. The study will then analyze each regulatory activity delegated to the Air Traffic Service and comment on the appropriateness of such delegation.

2. AVIATION STANDARDS

Aviation Standards is responsible for rulemaking actions related to the safety of flight, certification of airmen, air carriers, air agencies and aircraft. Enforcement action is the responsibility of this office, even though the violation may be against regulatory rules promulgated by Air Traffic. The functions of this service interact closely with rules introduced by the Air Traffic Service with respect to how the airman will operate in the airspace and the equipment required on board the aircraft.

3. AVIATION SAFETY

This office is responsible for conducting investigations of accidents and incidents. It is the primary FAA focal point in assisting the National Transportation Safety Board (NTSB) in its investigative efforts. Air Traffic provides support from its evaluation staff to this office and to the NTSB. There is no reason to anticipate any change in this relationship under the NAA concept.

4. AIR TRAFFIC

The Air Traffic Service is responsible for ensuring the safe and efficient use of the National Airspace, i.e., the operation of the Airways/Air Traffic Control System. Regulatory responsibilities are derived from the Administrator under Section

Center for Transportation 307(e) of the Federal Aviation Act which authorizes them to issue Notices of Proposed Rulemaking and to make, issue, amend and revoke rules, regulations and orders.

Specifically, Federal Air Regulations 65 (Subpart B), 71, 73, 75, 91 (Subpart B except section 91.116), 93, 99, 101, 103 (Subpart B except 103.9, 103.15), 105 (in part), 157 and 189 are the responsibility of Air Traffic.

5. F.A.R. 65 SUBPART B - Air Traffic Control Tower Operator

This subpart requires the certification and establishes the qualifications of a Control Tower Operator. At first glance you may wonder why this regulation is an F.A.R. when you consider that Center controllers are not included but are covered by internal FAA Orders. The reason is that there are non-federal tower operators while all center controllers are federal employees. The rule is related to the Air Traffic Control System and should be transferred to NAA. It could, however, remain with the FAA if the NAA was given the authority to do the certification.

6. F.A.R. Part 71 - Designation of Federal Airways Area Low Routes, Controlled Airspace, and Reporting Points

F.A.R. Part 75 - Establishment of Jet Routes and Area High Routes

Part 71 provides for airspace assignments and the regulatory designation of Federal airways, control areas, control area extensions, the continental control area, control zones, transition areas, positive control areas, reporting points, area low routes and terminal control areas. The regulation defines the dimensions

of these airspace assignments/designations. Part 75 provides similarly for jet routes and area high routes.

The Administrator derives his authority for Part 71 and Part 75 essentially from Sections 307(a), 313(a) and 1110 of the Federal Aviation Act of 1958, and Executive Order 10854.

Processing guidelines pursuant to Parts 71 and 75 are spelled out in FAA Handbook 7400.2C, Parts 5 and 6.

Air Traffic has a prime interest in these airspace designations, since it is within the bounds of these airspace assignments, preponderantly, that Air Traffic provides its control/advisory services to the users, i.e., separation, expediting, traffic/weather advisories, etc. On this basis, Air Traffic was delegated its lead role in Part 71 and Part 75 processing. This role involves primarily industry and national FAA coordination (written/oral), consensus decision-making; and administrative processing through the FAA legal department.

Air Traffic does not have to continue in the lead role. Under the NAA, Air Traffic would continue to offer a supportive role - and provided meaningful coordination with Air Traffic was established by the FAA, and Air Traffic concurrence obtained before final rule/decision, there should be no substantive derogation of the Part 71 or Part 75 rulemaking process. However, as Air Traffic has the prime interest, it would be more practical to transfer this authority to the NAA.

7. F.A.R. PART 73 - Special Use Airspace

Part 73 designates the dimensions of, and prescribes the requirements for, the use of special use airspace, i.e., restricted

areas and prohibited areas. Special use programs accommodate necessary military activity, identify for other airspace users where this activity occurs, and protect other users from hazardous operations. Special use airspace assignment/designation shall be the minimum (dimensions and time) necessary to contain the proposed user activities, including safety zones. Upon review, these parameters are subject, under Part 73, to modification/review.

The Administrator derives his authority for Part 73, essentially from Sections 307(a), 313(a) and 1110 of the Federal Aviation Act of 1958 and Executive Order 10854. Guidance and procedures for the Air Traffic role under Part 73 are contained in FAA Handbook 7400.2C, Part 7.

Air Traffic handles the establishment/modification through the normal rulemaking process including coordination with all interested parties, circularization, informal airspace meetings, notice of proposed rulemaking, etc. Where joint use of special use airspace is feasible, i.e., a sharing with other users is possible when the designated airspace or part of it, is not in use, then an Air Traffic facility normally becomes the authorizing facility for these "other" users. The requisite annual utilization report by the (military) sponsor of the special use airspace is reviewed by Air Traffic, with the intent to modify the special use airspace (dimensions/hours), as warranted.

Air Traffic has a strong interest in special use airspace since any airspace designation for a limited purpose inhibits

the flow of other aircraft. It requires more circuitous routings/altitude changes for other users - and makes the controller's job more burdensome.

The real-time, day-to-day, operational interface between the military "using facility" and an FAA/NAA air traffic "controlling facility," would remain unchanged under the NAA concept. There would be no impact there. However, on the processing side, Air Traffic would assume a coordinative role, reviewing the annual military-user submissions and making recommendations thereon to the FAA's (new) lead-role service. Similarly, Air Traffic would comment on any other special use airspace proposals. Provided proper coordination was effected with Air Traffic, and its concurrence obtained prior to final rule, no substantive derogation to Part 73 would occur under the NAA.

There are other types of areas related to Prohibited and Restricted Areas, but which do not require rulemaking, nor do they appear in the F.A.R. Some brief comments might be appropriate.

- (1) A Warning Area is similar to a Restricted Area but exists over international waters. Warning Areas can be joint use. Executive Order 10854 extended application of the Federal Aviation Act of 1958 to the airspace overlying those international waters where by arrangement - the U.S. has control jurisdiction. However, E.O. 10854 gives DOD and DOS preemptive authority over the FAA, in such airspace.

Under NAA, Warning Areas, including joint use, could receive non-rulemaking processing under FAA leadership but with Air Traffic coordination and concurrence, albeit recognizing the preemptive authority of DOD/DOS.

- (2) Military Operating Areas (MOAs) are established to contain the military's continuing requirement for non-hazardous training activities, in airspace as free as practicable from non-participating aircraft. VFR aircraft are not prohibited access to MOAs, and IFR aircraft may be routed through with standard separation from MOA aircraft.

Under NAA, concurrence from Air Traffic by the FAA would ensure no substantive derogation of current procedures.

- (3) Alert Areas are established to inform pilots of a specific area wherein a high volume of pilot training or an unusual type of aeronautical activity is conducted. An alert area imposes no flight restrictions or communications requirements.

Aviation Standards would appear equally, or perhaps better, qualified than Air Traffic to decide whether an Alert Area establishment is warranted.

- (4) Controlled Firing Areas (CFAs) are established to contain activities which, if not conducted in a controlled environment, would be hazardous to non-participating

aircraft, e.g., missile firing, artillery, rockets (military and civil), ordinance and chemical disposal, blasting.

Aviation Standards would seem equally or perhaps better qualified than Air Traffic to approve/disapprove a CFA proposal including, when required, issuance of a Waiver to F.A.R. Part 101.

- (5) Laser Demonstrations. The Bureau of Radiological Health (BRH) requires laser manufacturers to notify FAA, before BRH will issue a permit for an outdoor show/test, etc. Since laser beams projected or reflected into space have the potential for permanent eye damage to aircraft pilots and passengers, Air Traffic conducts an aeronautical study of all proposals for outdoor laser demonstrations. Primarily, this study involves air traffic flows, quantities, etc. -- as pertinent -- and results in a statement of objection or non-objection. Copy of this determination goes to BRH.

Air Traffic could continue its role, unchanged, under NAA. It would continue to have direct access to Airway Facilities for any engineering expertise requirement.

Although, as the foregoing comments would indicate, retention of authority under this Part by the FAA is workable, it is really more practical to transfer it to the NAA since Air Traffic has the primary concern.

Center for Transportation 8. F.A.R. Part 77 - Objects Affecting Navigable Airspace

Part 77 establishes standards for determining obstructions in the navigable airspace and sets forth requirements for notice to the Administrator of proposed construction or alteration. It provides for aeronautical studies and public hearings to determine the effects of such proposals on the navigable airspace.

The purpose of the notice requirement is to give the Agency the opportunity to assess the impact of the proposed structure on VFR traffic, IFR traffic and instrument approach procedures. Would the structure require raising of minimum enroute altitudes; raising approach or departure minimums so as to delay or preclude flight completions, etc.? Even more critical, due to its location and/or height would the structure be a hazard to flight?

Currently, the FAA Administrator derives his authority to administer Part 77, essentially from the FAA Act of 1958 (Pub. Law 85-726), Section 307. He has, in large measure, redelegateed this authority to the Associate Administrator for Air Traffic (AAT-1). Guidance and procedures for the administration of Part 77 are spelled out in Part 2 of FAA Handbook 7400.2C, Procedures for Handling Airspace Matters.

The bulk of processing notices of proposed construction is performed by the appropriate regional Air Traffic Division. This processing includes aeronautical study, coordination with parties at interest, informal airspace meetings, negotiation for modification, hazard/non-hazard determination including time-limit extensions, etc. Determinations contrary to agency

policy require approval of both the Regional Director and AAT-1. Sensitive cases calling for a policy determination, may be referred to Washington by the Regional Director, with his recommendation. These cases require briefing by AAT-1 of the FAA Administrator - and decision by the Administrator to the Regional Director.

The primary Washington FAA review office is ATO-200. After appropriate coordination, it recommends to AAT-1 whether - and in what form - a discretionary review should be granted (written materials, public hearings, etc.). AAT-1 has the authority to affirm, revise, or reverse a determination; and to approve-disapprove deviations from marking and lighting standards.

There is no unique Air Traffic expertise requirement to make these determinations. At the regional level, where the bulk of the work is done, the specialist's basic needs are some elementary trigonometry, an ability to read maps/charts, for coordinational purposes - familiarity with his own and associated organizations-at-interest, and common sense. The retention of this function by the FAA would not have an adverse effect on Air Traffic operations, in fact it would relieve them of a burden. Air Traffic would assume a supporting role - and its responsibilities would be protected through the mandatory consultative, coordinative process.

9. F.A.R. 91 SUBPART B - Flight Rules

This subpart of F.A.R. 91 prescribes the rules of flight governing operation of aircraft within the United States.

The rules fall into several categories or relationships regarding operation of the Air Traffic Control System. One category relates to the general rules of safe flight such as right of way rules and are not directly related to operations within the ATC system. Another group is related to the System (except 91.85C) in that they establish the requirement as to when the pilot must obtain an ATC clearance and the type of equipment that must be on board the aircraft. A third category might be considered administrative in nature but requiring incorporation into a F.A.R. Some examples are flights between the U.S.A., Mexico or Canada, operations to Cuba and flight plan information. The final group relates to rules that are vital to the operation of the System and are only two in number. In order to help the reader refer to the subject of the various parts of F.A.R. 91 (subpart B), they have been grouped by the preceding four categories rather than in numerical order.

Category I

91.65	Operating near another aircraft, formation flight
91.67	Right of way (land)
91.69	Right of way (water)
91.70	Aircraft speed
91.71	Acrobatic flight
91.73	Aircraft lights
91.79	Minimum safe altitudes
91.81	Altimeter setting
91.89	Operations at airports without a control tower
91.91	Temporary flight restrictions
91.93	Flight test areas
91.95	Restricted areas
91.105	Visual flight rules
91.107	Special VFR weather minimums
91.109	VFR cruising altitudes

91.116	Takeoff and landing under IFR
91.119	Minimum Altitudes for IFR operations
91.121	IFR cruising altitude or flight level
91.123	Course to be flown

Category II

91.75	Compliance with ATC clearance
91.85	Operations in the vicinity of an airport
91.87	Operations at an airport with control tower
91.88	Operations within an airport radar service areas
91.90	Terminal control area rules of operations
91.97	Position control areas and route segments
91.115	ATC clearance and flight plan
91.125	IFR radio communications

Category III

91.83	Flight plan information required
91.84	Flight Mexico or Canada and the U.S.A.
91.101	Operations to Cuba
91.102	Flight near space flight operations
91.103	Operation of aircraft of Cuban registry
91.104	Flight restrictions near President or others

Category IV

91.77	ATC light signals
91.100	Emergency air traffic rules

(1) Category I

Aviation Standards has the safety role and technical expertise regarding the airman, his qualifications, limitations, how he should fly and how he is capable of performing. The determination on the ability of pilots to "see and avoid" is well within Aviation Standards technical capability and function. This places Aviation Standards in the best position to make judgments and rules related to 91.65, 91.67, 91.70, 91.71, 91.73, 91.79,

91.81, 91.89, 91.91, 91.93, 91.95, 91.102, 91.105, 91.107, 91.109, 91.116, 91.119, 91.121 and 91.123. These all relate to the capability of the pilot and equipment to perform under variable conditions.

(2) Category II

The technical expertise to operate the Air Traffic Control System rests with those having the requisite background, training and experience to safely and expeditiously control traffic. F.A.R. 91.75, 91.77, 91.85, 91.87, 91.88, 91.90, 91.97, 91.100, 91.115 and 91.125 relate to the Air Traffic Control System and (1) require the pilot to obtain an ATC clearance to operate in the system, (2) specify the requisite avionics equipment and (3) the conditions under which he must operate in the system.

(3) Category III

F.A.R. 91.83, 91.84, 91.101, 91.102, 91.103 and 91.104 do require rulemaking but are mostly procedural in nature and relate to requirements placed on both the aircraft operator and the system. The rulemaking authority seems more consistent with the ATC role but not vital to it.

(4) Category IV

This category has only two subparts. Subpart 91.77 on light signals is of obvious concern to Air Traffic. The other subpart, 91.100, is inherent to the operation of the Air Traffic Control System. The determination of the System's ability to operate under a variety of conditions rests only with people operating the System.

In order to consider the placement of authority for rulemaking under F.A.R. 91, subpart B, a change in airspace rationale must be considered. Today, in theory, Air Traffic has the prime authority to issue rules pertaining to pilot performance in the airspace. Air Traffic, however, is responsible for operation of the Air Traffic Control System and therefore is only concerned with aircraft operating within the system. Aviation Standards has the responsibility for airman certification, how the pilot will perform in the airspace and enforcement of those rules related to performance and general operation in the airspace. It would seem appropriate then to place responsibility with Air Traffic for those rules related to operating in the System, i.e., Category II, III and IV, and with Aviation Standards for those rules related to basic flight operation, i.e., Category I.

This does leave what may be considered a gray area in respect to when an operator must operate in the System (i.e., IFR conditions certain designated airspace). This determination is a safety issue related to when "see and avoid" is no longer feasible. The primary technical capability for making this determination seems to be within the capability of Aviation Standards as far as weather conditions under which "see and avoid" is practical. It might also be feasible for Aviation Standards with considerable support from Air Traffic to make a determination in which airspace regardless of weather "see and avoid" is not feasible. Should authority to make this determination be vested in Aviation Standards, it would be necessary that any new legislation stipulate

that Air Traffic concurrence is necessary. A more practical approach, however, might be to place this authority with Air Traffic, since the prime technical inputs on airspace design will come from Air Traffic.

10. F.A.R. 93 - Special ATC Rules and Airport Traffic Patterns

This part prescribes special airport traffic patterns and airport traffic areas. It also establishes special rules for operating aircraft in those areas. The primary use of this rule has been to describe airspace or traffic patterns at ten locations where standard patterns or traffic areas are not suitable. It has also been used to advise the public that special VFR operations will not be approved at 33 airports. In addition, it has been used to identify high density airports and limit the number of hourly operations at the airport.

The rule is an enabling vehicle to define airspace and rules not standard to the Air Traffic Control System and place them within it. To some degree it has also been used as a catch-all for other ATC requirements unique to individual airports.

This F.A.R. clearly relates to operations within the Air Traffic Control System and authority to issue regulations under its provisions should be transferred to the NAA.

11. PART 99 - Security Control of Air Traffic

Part 99 prescribes the rules for operating civil aircraft in a Defense Area, or into, within, or out of the U.S. through an Air Defense Identification Zone (ADIZ). Part 99 also identifies and describes the limits of these Zones/Areas. ADIZs are airspace

areas in which the ready identification, location and control of civil aircraft is required in the interest of national security.

Unless designated as an ADIZ, a Defense Area is any airspace of the U.S., in which the control of aircraft is required for reasons of national security.

The Administrator derives his authority for Part 99 essentially from Sections 307, 313(a), 601, 1110 and 1202 of the Federal Aviation Act. The Administrator is required, in consultation with DOD, to establish "such zones or areas," as necessary in the interest of national defense, and to impose appropriate limitations on transiting civil airspace.

Air Traffic participates in the appropriate rulemaking for establishment/modification/rescission of such areas, and the rules for flight through these areas. (Changes are normally initiated by DOD, but the existent ADIZs are relatively stable, requiring very little rulemaking.) On a "real time," day-to-day basis, Air Traffic provides aircraft identification/flight data to the appropriate military facility. Air Traffic also arranges for publication on maps, charts and in the AIM.

Under NAA, so long as the FAA effects appropriate coordination with Air Traffic, there should be no impact on Part 99 rulemaking. There would be no change in the publication procedures, nor any change in the day-to-day operational relationship for providing flight data to military offices.

12. PART 101 - Moored Balloons, Kites, Unmanned Rockets and Unmanned Free Balloons

Part 101 prescribes the operating rules for moored balloons larger than 6 feet in diameter or more than 115 cubic feet gas capacity; for kites heavier than 5 pounds; for unmanned rockets with exceptions for some fireworks displays and some model rockets; and for unmanned free balloons exceeding specified weight/size ratios.

The Administrator derives his authority for Part 101, essentially from Sections 307, 313(a) and 902 of the Federal Aviation Act of 1958.

Most of the coordination and notice requirements under this part are carried on between the operator and the FAA Air Traffic facility nearest to the place of intended operation. If a waiver of Part 101 is required, this can be accomplished at the Regional Air Traffic Division.

Under NAA, day-to-day operation would remain virtually unchanged. Waivers could be issued by the Regional Aviation Standards Division after coordination with the appropriate Air Traffic field facility(s).

13. F.A.R. 103 SUBPART B - Ultralight Vehicles

Part A of this FAR describes what an Ultralight vehicle is and requirements for operating such vehicle. Subpart B is somewhat similar to subpart B of FAR 91 except only one section applies to operations in the ATC system. The rule is well within the Flight Standards area of responsibility.

14. F.A.R. 105 - Parachute Jumping

As the title implies, this rule governs parachute jumps made in the United States. This part covers three major concerns:

(1) jumps over or within congested areas, cities, towns, etc.; (2) jumps in controlled airspace; and (3) parachute equipment requirements. In addition, certain basic operating rules are prescribed. Two of the areas described are the primary concern of Aviation Standards - the third is obviously of concern to Air Traffic. In keeping with a general philosophy of letting Air Traffic determine what airspace is in the System and Aviation Standards determine when aircraft must operate within the System, this rule should be retained by the FAA.

15. F.A.R. PART 157 - Notice of Construction, Alteration, Activation and Deactivation of Airports
F.A.R. PART 152 - Airport Improvement Program
F.A.R. PART 151 - Federal Aid to Airports

The Administrator's authority concerning airports is derived from Sections 307(a), 308(b), 309, 312(a) and 313(a) of the FAA Act of 1958. Pursuant to appropriate sections (above), Part 157 was adopted to require notice to the Administrator by persons proposing to construct, alter, activate or deactivate a civil or joint-use (civil/military) airport for which Federal Funds have not been requested. Such notice is required so that a study can be made and the proponent can be advised of the proposal's effect on the use of the navigable airspace by aircraft.

Part 152 requires airport improvement projects eligible for Federal aid, including airport-layout-plans, be submitted

in accordance with the Airport Improvement Program (AIP) provisions of Part 152. The consequent airport study results in agency approval/disapproval of the project.

Part 151 (Federal Aid Airport Program - FAAP) and Airport Development Aid Program - ADAP) projects are processed in the same manner as Part 152 proposals.

The FAA Act of 1958, Section 308(b) requires reasonable prior notice to the FAA by DOD/NASA before acquisition, establishment and construction of any military airport, missile or rocket site; or before substantial alteration of any runway layout. This allows the FAA to advise other interested persons as to the effects of such projects upon the use of airspace by aircraft.

Guidance and procedures for the Air Traffic role in the FAA airspace analyses/studies pursuant to these Parts, is spelled out in FAA Handbook 7400.2C, Part 3.

In these processes, the lead role has been delegated to the Associate Administrator for Airports. The authority for conducting the airports program has been delegated to Regional Offices. There, airports personnel administer the program with the coordinated assistance of Air Traffic, Airway Facilities and Aviation Standards personnel. Air Traffic input to Airports is an evaluation from the standpoint of insuring safe and efficient use of airspace - and identifying potential noise problems.

Although Airports has the lead role in the airports program, the FAA Handbook not only calls for specific coordination

requirements with Air Traffic, but is also replete with general statements emphasizing coordination with Air Traffic, etc.

"... Air Traffic must have an opportunity to review and comment on the proposal"; "... Air Traffic shall assist in the (on-site) evaluation as determined necessary by the situation..."; "The official FAA determination shall be a composite of the comments and findings received from these FAA offices. Should there be a disagreement in the airspace findings, the disagreement shall be resolved before formulation of the official FAA determination."

Some military airport proposals are submitted to Regional Air Traffic Offices through the Regional Military Representatives. Air Traffic is then responsible for coordination and issuance of the Regional determination. There is no meaningful reason why these proposals should not be submitted to the Regional Airports Office by the Military Representative and processed accordingly.

As to the Regional Air Traffic Office circulating airport proposals or convening informal airspace meetings thereon, in accordance with non-rulemaking procedures, there is no valid reason why the Airports Office could not take over these functions. As desired, it could call on Air Traffic to attend the meetings and/or assist in evaluation of comments.

The NASA projects and the annual Military Construction Program submitted to FAA Headquarters could be forwarded to the appropriate Washington Airports Office for processing rather than - as currently - to Airspace-Rules and Aero. Information

Center for Transportation Division (ATO-200). The Airports Office would coordinate, as required, at the Washington level and then forward the proposals to the Regional Airports Division for processing.

The National Flight Data Center (ATO-250) would continue with its current role.

With the minor transfers of military and NASA projects leadership responsibilities to Airports Offices (as described above), and with religious observation of the coordination requirement with Air Traffic, there would be no impact on Parts 151, 152 and 157 under the proposed NAA.

N.B. It should be noted that if the Airports Service is included in the NAA, these regulations would require impact reexamination from an Airports Service viewpoint.

16. F.A.R. PART 189 - Use of Federal Aviation Administration Communications System

Part 189 prescribes the kind of messages that may be transmitted by FAA communications stations and prescribes the charges therefor.

The Administrator derives his authority for Part 189 essentially from Sections 305, 307(b) and 313(a) of the Federal Aviation Act of 1958.

The bulk of the messages involved concern international or overseas aircraft operations, and are handled largely by FAA International-Flight Service Stations or FAA Flight Service Stations located outside of the 48 contiguous states. The IFSS or FSS relays the message via teletype circuits. The messages to be charged are identified at the FAA National

Communication Center, Kansas City and the information passed on to the Central Region Accounting Office which bills the user.

Establishment of NAA would require this authority be transferred to the NAA.

17. TERPS

An issue has been raised concerning the interrelationship between the U.S. Standard for Terminal Instrument Procedures (TERPS) and the proposed National Aviation Authority. Substantively, there would be no impact on TERPS, and administrative or procedural modifications would be minimal to nil.

Handbook 8260.3B (TERPS) FOREWARD reads ".... an annual review of this publication by the signatory agencies, in coordination with other interested parties, will be conducted at the call of the FAA, Office of Flight Operations." One-time notification that the NAA is an "interested party" would suffice to ensure appropriate coordination.

TERPS #150(c) reads "Prior to establishing or revising terminal instrument procedures for a military or civil airport, the initiating office shall coordinate with the appropriate FAA Air Traffic office to insure compatibility with air traffic flow and to assess the impact of the proposed procedure on current or future air traffic programs." Wherever, in TERPS, "FAA" is used as a prefix/modifier for Air Traffic, we would request substitution of "NAA."

Center for Transportation
18. F.A.R. PART 11 - General Rulemaking Procedures

This part of the F.A.R. describes the process of federal rulemaking. Most importantly, it requires that all interested parties be notified about a proposed rule and that their views receive serious consideration. It also provides a vehicle for parties other than the FAA or federal government to propose a rule. Subpart D delegates to Air Traffic rulemaking authority for use of the national airspace (i.e., airways, control zones, restricted areas, etc.). In effect it gives Air Traffic authority to determine (with input from interested parties) what airspace is controlled airspace.

It is desirable that the Air Traffic authority in this Part be transferred to the NAA. The ability to operate the system effectively is substantially influenced by the airspace makeup of the system. The procedural requirements contained in Part 11 for inputs from other parties will permit the FAA to make its views considered. On the other hand, although not desirable, the authority for such rules could remain in the FAA with NAA instituting airspace change through the interested parties provision of Part 11.

19. CONCLUSION

This study has identified those areas in which Air Traffic has regulatory authority. The rules and regulations promulgated by this authority govern the operation of the aircraft and operator in the national airspace. The rules also establish and identify airspace use, i.e., controlled airspace, uncon-

trolled airspace, restricted areas, etc. A review of many of the rules governing flight operations in the national airspace reveal that they are not directly related to operation of the Air Traffic Control System (Part 91, Subpart B). Some of the determinations made under Part 77 do not affect operations in the System, i.e., VFR operations outside of controlled airspace. Other rules, i.e., what airspace is in the system, aircraft equipment requirement and when to operate in the System have a direct impact on the operations of the Air Traffic Control System. Several approaches can be considered in determining where the Air Traffic regulatory authority should be placed if the operation of the Air Traffic System is separated from the FAA.

19.1 All Authority is Retained by Air Traffic

This approach is workable although many of the rules are promulgated by Aviation Standards with Air Traffic primarily performing a processing function. It would be necessary to specify in the new legislation the coordination or concurrence role of the NAA and FAA. The working relationships and processing would basically remain as they are now. The disadvantage, in addition to enacting rules that more appropriately belong to Aviation Standards, would be a possible encroachment by Air Traffic on the fundamental responsibility of Aviation Standards for flight safety.

19.2 Place all Authority with Aviation Standards, FAA

This approach is also workable and in fact has a definite attraction for NAA. It would get them out of the regulatory

responsibility and permit them to fully concentrate on the operation of the System. This is a purist approach, desirable but not completely attainable. Air Traffic has a vital interest in what airspace is in the control system and aircraft equipment required to operate in the system. The approach is workable but the new legislation would have to insure that NAA concurrence be required regarding some actions.

19.3 Place Regulatory Authority with both NAA and FAA

In this study we have discussed the role of both Air Traffic and Aviation Standards in the rulemaking authority delegated to Air Traffic. Primary interest varies from rule to rule. A reasonable method would be to assign the authority to the party of prime interest, Air Traffic or Aviation Standards. Air Traffic would retain responsibility for those rules primarily related to operations within the Air Traffic Control System and identification of what airspace is within the system. Aviation Standards would have responsibility for all others.

An even better approach to this redelegation of authority would be for Air Traffic to retain the authority to define what airspace is in the Air Traffic Control System and Aviation Standards all others. This would be more in keeping with Aviation Standards overall safety role in defining how the airman and aircraft will operate and Air Traffic in operating the System. This approach would more clearly define who (Air Traffic/Aviation Standards) has responsibility for what. It would eliminate much of the confusion that exists today as to which organization is responsible for the various aviation

rules.

19.4 Coordination and Concurrence

Neither Aviation Standards/FAA or Air Traffic/NAA can operate in a vacuum from the other. Legislation creating the NAA must address coordination and concurrence requirements. Procedures for promulgating rules are spelled out in Part 11 of the F.A.R. This part requires that input from all interested parties be obtained before rulemaking action and permits any interested parties to propose rules. Incorporation of this doctrine into the legislation would insure that all interested parties have input to regulations affecting the Air Traffic Control System.

20. Air Traffic Control Procedures

Probably one of the most important documents related to Air Traffic Control is DOT Handbook/Order 7110.65B. This handbook is in effect the bible of Air Traffic Control. It contains the guidelines, rules and procedures, by which controllers perform their function. It specifies the separation standards that will be applied between aircraft operating within the system and the conditions for application. The handbook establishes in detail (230 pages plus appendices) the national operating standards for controllers. This handbook is an internal document and does not require external coordination. However, since much of the material in the handbook has a direct effect on the users of the Air Traffic System, most changes are coordinated with System users. Authority for the contents of this handbook

is now fully vested with the Associate Administrator for Air Traffic and should be transferred to Air Traffic/NAA.

21. Field Operations

Consideration must be given to the impact on the field facilities (Towers, Centers, Flight Service Stations) should there be a change in the regulatory authority of Air Traffic. From a practical standpoint, there is little if any participation by field facilities (other than requests for airway or terminal control airspace designation) in the rulemaking function. The relationship between Field Operating Facilities and the safety function of Aviation Standards is practically nil, other than support of Aviation Standards in accident/incident investigation. No impact or change is foreseen on field relationships if Air Traffic/NAA is established.

Examples of Accommodation

If a separate authority the "NAA" is established, some examples of how a few currently proposed rules would be handled are:

(1) A requirement for aircraft to carry airborne anti-collision devices. This does not define what the Air Traffic Control System is and therefore would be handled by Aviation Standards (FAA).

(2) Expansion of current Terminal Control Areas - establishing new TCA's and requiring operation of a Mode C transponder within 30 miles of a commercial airport. This proposal has two parts, one the definition of TCA airspace within the Air Traffic Control System Air Traffic System and would come under the jurisdiction of Air Traffic (NAA). The other part applies to an equipment requirement in order to operate in the airspace and would be an Aviation Standards (FAA) rule.

(3) Establishment of an airway. This defines what is in the system, thus requiring Air Traffic (NAA) action.

(4) Establishment of an instrument approach. This is primarily a flight procedure and is established by Aviation Standards.

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Mr. Belanger has thirty-five years of aviation experience, three years as a military pilot. He holds a commercial pilot's license with IFR rating. His principal background is thirty-two years of Air Traffic Control experience including eight years as Chief of the Chicago Air Traffic Control Center. After serving as Deputy Director of the Air Traffic Service, he was appointed Director of the Air Traffic Service, a position in which he served for five and one half years. He is one of only two people serving in a career position who has received the Department of Transportation Outstanding Achievement Award (Gold Medal). He has also received the Department of Transportation Meritorious Award (Silver Medal), the FAA Superior Achievement Award (Bronze Medal) and the Secretary of Defense Meritorious Civilian Career Service Medal. He also has been awarded the Distinguished Flying Cross and the Air Medal with five oak leaf clusters.

The logo for the Eno Center for Transportation, featuring the word "Eno" in a large, blue, sans-serif font.

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Charles H. Newpol was issued his private pilot certificate in 1941. He has since been continuously associated with aviation. He worked for the Federal Aviation Administration - and predecessor agencies - for 39 years, primarily in the Air Traffic Control field but has also held assignments in Research and Development, Appraisal, Facilities Installation and Airway Facilities. He has worked at field facilities, the FAA Academy, the Eastern (N.Y.) Regional Office and the Washington (D.C.) Headquarters. At retirement, December 1980, as Chief (Air Traffic Service) System Programs Division, he also was a member of the Senior Executive Service.

Subsequent to retirement, he has served as a consultant to the FAA, ICAO, Boeing, Lockheed, Martin-Marietta, Gould, Office of the Auditor-General (Canada) and Engineering and Economics Research.

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