ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

6050.22C

7/13/92

SUBJ: RADIO FREQUENCY INTERFERENCE INVESTIGATION AND REPORTING (RIS: 6050-16)

1. PURPOSE. This order prescribes procedures for investigating and reporting radio frequency interference affecting the National Airspace System (NAS).

2. DISTRIBUTION. This order is distributed to the division level within the Office of the Chief Counsel; to branch level within the Systems Maintenance Service, NAS Transition and Implementation Service, Office of Air Traffic System Management, Communications, Navigation and Landing, Surveillance, Weather and Flight Service Systems, Flight Standards Service, and the Office of Civil Aviation Security Operations in Washington headquarters; to branch level within the regional Airway Facilities, Air Traffic, Flight Standards, Civil Aviation Security divisions, and Chief Counsel; and to all Airway Facilities, Air Traffic, Flight Standards, and Civil Aviation Security field offices with a maximum distribution.

3. CANCELLATION. Order 6050.22B, Radio Frequency Interference Investigating and Reporting (RIS: AF 6050-16), dated September 26, 1980, is canceled.

4. BACKGROUND. In order to maintain a safe and efficient NAS, it is imperative to control air traffic in an environment that is free of harmful radio frequency interference (RFI). A national RFI team consisting of headquarters, regional, and operations personnel, with contractor support, has been established for investigating and resolving all reported RFI cases. The Systems Maintenance Service, Spectrum Engineering Division, ASM-500, serves as the focal point for the resolution of RFI affecting the NAS and for providing contractor support.

5. EXPLANATION OF CHANGES. The purpose of this revision is to include the addition of Appendix 1, FAA Form 6050-3, Frequency Interference Report; the addition of procedures to follow during deliberate RFI ("phantom controllers"), and the addition of Appendix 2, Interagency Task Force Agreement.

6. FORMS AND REPORTS. All interference cases shall be reported on FAA Form 6050-3 (RIS: 6050-16), Frequency Interference Report. The regional Spectrum Management Office (SMO) shall place appropriate comments on copy number four of FAA Form 6050-3 and forward it to ASM-500. In addition, all engineering data and reports involving the interference case must be forwarded to ASM-500. A sample of FAA Form 6050-3 (RIS: 6050-16) is shown in appendix 1. This form can be ordered from the FAA Logistics Center under NSN: 0052-00-837-1000.

Distribution: A-W(SM/NS/NC/NN/NR/NW/TM/GC/FS)-3; A-X(AF/AT/FS/CS)-3; A-FAF/FAT/FFS/FCS-0(MAX)

Initiated By: ASM-500

7. PROCEDURES. In accordance with the latest edition of Order 6050.32, Manual of Regulations and Procedures for FAA Spectrum Management, Airway Facilities (AF) sectors are encouraged to designate a sector spectrum coordinator. The following steps shall be taken to discharge spectrum management responsibilities involving RFI:

a. Repeated Unintentional RFI. Having received a report from Air Traffic (AT) of repeated interference, AF sector personnel shall immediately attempt to identify the RFI source and follow the steps below:

(1) If the source is identified and the AF sector personnel believe they can approach the involved person(s) without placing themselves in danger, they shall initiate such contact. The contact will be advised of the interference and requested to resolve the issue. Generally, this approach would be taken with other government entities.

(2) If the source is identified and the AF sector personnel believe they cannot approach the involved person(s), without placing themselves in danger, they shall notify the regional SMO immediately.

(3) If the source is not immediately identified, the AF sector office involved shall immediately notify the regional SMO. The regional SMO shall analyze each unresolved report and determine the action required to expedite resolution.

(4) In all instances, the AF sector shall report all cases of RFI (resolved and unresolved) to the regional SMO within 24 hours of the initial report.

(5) If the interference resulted in a facility outage, significantly degraded the facility operation, contributed to an air traffic operational error, or contributed to a near mid-air accident, the sector AF watch stander shall immediately notify the National Maintenance Coordination Center (NMCC) and the regional SMO. During non-regular work hours, the watch stander shall notify the regional SMO via the Regional Operations Center (ROC). The regional SMO shall immediately notify ASM-500.

(6) ASM-500 will determine whether headquarters support will be provided.

(7) All interference cases requiring international coordination shall be referred to ASM-500.

(8) Coordination with the Federal Communications Commission (FCC) field engineering offices and monitoring stations shall be through the regional SMO.

(9) Regional SMO's may request aircraft support from the flight inspection field offices directly. Aircraft support from the FAA Technical Center, Communications/Navigation/Surveillance Division, ACN-200, may be requested through ASM-500.

(10) For new facilities with RFI problems, the regional AF Establishment Engineering Branch, XXX-450, shall notify the regional SMO which will be responsible for the action required to resolve the RFI problem.

b. Deliberate or Intentional RFI ("Phantom Controller"). Phantom controller-type RFI is defined as unauthorized, deliberate, or intentional transmissions by an individual directed to aircraft or air traffic controllers, with the intent of redirecting or giving clearance to an aircraft, or disrupting in any way the normal flow of air traffic control duties. Due to the differences in each situation, every deliberate RFI incident will need to be handled individually. The following personnel/offices shall perform the duties listed below when a phantom controller incident occurs, and these duties also clarify the procedures described in appendix 2:

(1) FAA Supervisory Air Traffic Control Specialist shall:

(a) Correct false information and advise target aircraft of bogus controller situation.

(b) Broadcast an alert to all aircraft within threatened area.

Example: "Attention all aircraft. Bogus air traffic control instructions have been heard at Long Beach airport by arriving aircraft. False instructions have been heard on the local control frequency 118.5. All aircraft exercise extreme caution on all frequencies and verify all instructions."

(c) Collect pertinent information regarding the incident.

(d) Notify the ROC of the phantom controller situation and request a conference call with the AF sector manager (or his/her designee), the regional SMO, the regional AT division manager, and the regional Civil Aviation Security (CAS) division manager.

(e) Report all relevant information pertaining to the incident at the telephone conference.

(f) Ensure the air traffic control tower (ATCT) or air route traffic control center (ARTCC) tape in use is safeguarded and removed from normal rotation. The tape shall not be immediately changed or pulled. The information on the tape could be invaluable in identifying the phantom controller and also during criminal prosecution.

(2) FAA Regional Operations Center shall set up conference call with the following persons or their designees:

(a) AF sector manager.

(b) Regional SMO.

(c) Regional AT division manager.

(d) Regional CAS specialist.

(3) The AF sector manager or his/her designee (task force coordinator) shall:

(a) Chair the conference call initiated by the ROC, take action to verify if the reported interference is a valid phantom controller incident (with input from the conferees), and summarize the decision made as to what measures shall be taken at that time.

(b) Notify the NMCC, FTS 267-6622, of phantom controller situation and activate the task force if appropriate; e.g., if it is determined to be dangerous to air traffic, is continuing, or has established a periodic pattern.

(c) Designate a time and place for the task force to meet (if the task force has been activated).

(d) Continue to be the central coordinator and focal point throughout the investigation.

(e) Notify and coordinate with local FCC personnel if the regional SMO is not available.

(4) FAA regional SMO shall:.

(a) Assist the task force coordinator in the confirmation of the phantom controller incident.

(b) Chair the conference call and activate the task force when the task force coordinator is not available.

(c) Notify and coordinate with the appropriate FCC district office, field engineering office, and monitoring stations during the phantom controller incident.

(d) Notify ASM-500.

(e) Participate with the FCC in the on-site investigation providing direction-finding capabilities.

(5) Local AF sector personnel shall:

(a) Provide assistance at airports during investigation.

(b) Coordinate communications between the direction finding teams (FAA, FCC, etc.) and AT controllers.

(6) CAS division managers shall:

(a) Ensure there is a regional security specialist available to assist when phantom controller incidents occur.

(b) Ensure the ROC has a current telephone listing of those personnel.

(c) Notify headquarters personnel of incident and when support is needed.

(7) Local regional security specialist shall:

(a) Assist the task force coordinator in the confirmation of the incident as the representative of the CAS division manager.

(b) Chair the conference call and activate the task force when the task force coordinator and the regional SMO are not available.

(c) Assume responsibility for the potential criminal investigation of the phantom controller incident, coordinating with the local FBI and conducting or participating in the conduct of the resultant criminal investigation.

(d) Establish coordination with state and local law enforcement.

(e) Advise appropriate parties regarding the proper handling of sensitive information; e.g., proper handling and preservation of evidence.

(8) ASM-500 shall:

(a) Notify FCC Headquarters Enforcement Division.

(b) Ensure proper action is being taken to locate the phantom controller.

(c) Provide additional guidance and resources to the task force when necessary.

Arnold Aquilano
Associate Administrator for
Airway Facilities

APPENDIX 1. FREQUENCY INTERFERENCE REPORT

RIS: AF 6050-16

THRU: [Responsible LOCAL AF Office]	DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FREQUENCY INTERFERENCE REPORT		
TO: [Routing Symbol] FMO	FROM:	SIGNATURE OF ORIGINATOR	DATE

1. GENERAL

THIS BLOCK TO BE COMPLETED WHEN REPORTING ANY TYPE RADIO FREQUENCY INTERFERENCE

a. NAME OF AFFECTED FACILITY	b. DURATION [Date/Time] STARTED / CLEARED /
c. NOTAM ISSUED ☐ YES ☐ NO	d. FACILITY OPERATION ☐ USABLE ☐ USABLE WITH DIFFICULTY ☐ UNUSABLE
e. INTERFERENCE DESCRIPTION	(1) SOURCE
	(2) TYPE
	(3) INTENSITY

2. RADAR

THIS BLOCK TO BE COMPLETED WHEN REPORTING INTERFERENCE TO RADAR

a. INTERFERENCE AZIMUTH °	b. RADAR CHANNEL IN USE WHEN INTERFERENCE STARTED.	CHANNEL	CHANNEL CHANGE MADE ☐ NO ☐ YES →	ANY IMPROVEMENT ☐ YES ☐ NO
	c. OPERATING FREQUENCY	CHANNEL A	MHz	CHANNEL B MHz

3. OTHER

THIS BLOCK TO BE COMPLETED WHEN REPORTING INTERFERENCE TO COMMUNICATION OR NAVIGATION AIDS

a. AFFECTED FREQUENCY	b. TYPE STATION [If airborne, show identification, location, and altitude of aircraft] ☐ GROUND ☐ AIRBORNE →	c. TYPE EQUIPMENT INVOLVED [See Instructions]

4. CORRECTIVE ACTION —

☐ TAKEN, ☐ PLANNED, ☐ SUGGESTED BY LOCAL AIRWAY FACILITIES OFFICE

Signature of Responsible Local AF Official

Prepare attachment if additional space is required

FAA Form 6050-3 (7-73) Supersedes all local forms

Frequency Management Officer — 1

APPENDIX 2. INTERAGENCY TASK FORCE AGREEMENT

INTERAGENCY TASK FORCE AGREEMENT

BETWEEN

THE DEPARTMENT OF TRANSPORTATION/FEDERAL AVIATION ADMINISTRATION
(FAA)

AND

THE DEPARTMENT OF JUSTICE/FEDERAL BUREAU OF INVESTIGATION
(FBI)

AND

THE FEDERAL COMMUNICATIONS COMMISSION
(FCC)

AUGUST 1989

I. PURPOSE:

The purpose of this interagency agreement is to establish a procedure whereby the above-mentioned agencies (FAA, FBI, and FCC) may effectively interact in an attempt to locate, identify, and resolve any deliberate radio frequency interference (RFI) commonly referred to as "Phantom Controller" or jamming activities. This type of RFI results when an unauthorized user attempts to interfere with air navigation and/or communications in violation of applicable Federal codes, statutes, and regulations. This interagency agreement formalizes the informal cooperation that already exists as noted below.

II. BACKGROUND:

It is not known when the first unauthorized transmissions of the type described above were made. However, there has been an increased awareness of this problem since September 1986. Since the unauthorized user usually attempts to give conflicting or erroneous air traffic control information, the phrase "Phantom Controller" has been associated with this type of activity.

The FAA, FBI, and FCC in the Miami, Florida, area have developed local procedures to insure proper notification and facilitate an organized response to "Phantom Controller" reports. The basis for these procedures is a Task Force concept where specific reporting and notification procedures are used by individuals in all three agencies.

In April 1988, a meeting of FAA, FBI, and FCC personnel took place in Washington, D.C. to begin formulating an interagency agreement to deal with the "Phantom Controller" or other deliberate interference problems. During the meeting it was decided that a Task Force concept similar to that used in Miami should be the basis for a plan that could be used throughout the country.

III. AGENCY RESPONSIBILITIES:

Each agency or participant in the Task Force shall perform services and exchange information for their areas of responsibility within their own budget constraints. No exchange of accounting or billing information is needed. Each agency will participate in the Task Force as noted below.

A. FEDERAL AVIATION ADMINISTRATION

The FAA has primary responsibility for air safety and is usually first to have knowledge of any deliberate interference with air navigation and communications frequencies. Therefore, the FAA has been designated to initiate the notification and coordination procedure to resolve such cases.

In order to effectively carry out the FAA responsibility, the FAA shall establish a policy committee which consists of the following members:

1. Associate Administrator for Airway Facilities, AAF-1/2
2. Associate Administrator for Air Traffic, AAT-1/2
3. Associate Administrator for Regulation and Certification, AVR-1/2
4. Associate Administrator for Aviation Standards, AVS-1/2
5. Office of the Chief Counsel, AGC-1/2
6. Office of Civil Aviation Security, ACS-1/2
7. Office of Airport Standards, AAS-1/2
8. Office of Systems Maintenance Service, ASM-1

When a task force is activated to work on deliberate interference cases, the FAA shall assume the role and responsibilities of the Task Force Coordinator as set forth in this agreement.

Under the direction of the FAA Policy Committee, the FAA Spectrum Engineering Division (ASM-500), the FAA Civil Aviation Security Office (ACS-300), and the Air Traffic Procedures Division (ATO-300) shall be responsible for developing additional procedures and policies on matters relating to deliberate interference cases within the context of this agreement. This effort shall be coordinated with the appropriate FBI and FCC headquarters offices and may result in revisions or additions to this Interagency Agreement.

Within the FAA, the Office of Civil Aviation Security (ACS-300) has responsibility for performing criminal investigations and initiating and participating in joint investigative efforts with other Federal and local law enforcement entities.

B. FEDERAL BUREAU OF INVESTIGATION

The Federal Bureau of Investigation, upon receipt of a complaint from the Task Force Coordinator to a local FBI field office, will review that information with the appropriate United States Attorney for a prosecutive opinion as to whether Title 18, U.S. Code, Sections 32 or other applicable criminal statutes have been violated.

If such a violation appears to exist, an appropriate investigation will be conducted under FBI procedures to identify and prosecute the perpetrator of such acts. To the maximum extent allowed by the applicable law and agency procedures, the results of this investigation will be coordinated with the other agencies comprising the Interagency Task Force.

The FBI shall also provide technical assistance to the interagency task force in cases where FBI jurisdiction has been established. This technical assistance may include the use of electronic surveillance and/or direction-finding capabilities, including the use of FBI aircraft in RFI investigations on a case-by-case basis if required.

C. FEDERAL COMMUNICATIONS COMMISSION

The Federal Communications Commission will provide a 24-hour a day response to requests for assistance from the Task Force Coordinator and do the following:

1. Provide Direction-Finding (DF) capability, both mobile and fixed.

2. Provide liaison with the task force in investigating deliberate interference cases.

3. Provide to the FAA and FBI the results of their electronic surveillance for determination of violations of Federal criminal statutes.

4. In cases where the FBI does not have responsibility, the FCC will prepare and submit evidence to the U.S. Attorney and testify in criminal prosecution of suspected perpetrators as required.

5. Provide additional technical assistance, such as signal signature analysis and development of improved direction-finding capabilities.

IV. NOTIFICATION PROCEDURE:

The initial reporting of suspected deliberate interference will normally begin when an air traffic controller first becomes aware of this incident, either by pilot reports or by the interference being received by FAA ground-based A/G communication equipment. If the deliberate interference involves air-ground communications, it is usually obvious that the interference is not accidental. The conversation is usually directed toward the pilots. The controller will notify his or her appropriate supervisor who will in turn notify the Airway Facilities Sector Manager/Task Force Coordinator.

The Task Force Coordinator shall notify the Regional Spectrum Management Officer (SMO) of all incidents of interference and take action to verify if the interference being reported is a valid "Phantom Controller" incident. If the determination is made that the report is due to deliberate interference, the Task Force Coordinator shall activate the Task Force and notify the Regional Office of Civil Aviation Security and other members of the Task Force group. This process is illustrated in Figure 1.

The Regional SMO should insure that his Regional Communications Center is provided with a list of contacts in the event an incident occurs after normal working hours.

The Task Force Coordinator is authorized to communicate directly with FCC, FBI, and other agencies in subsequent investigation activities. The Regional SMO and Regional Civil Aviation Security Division in support of the Task Force Coordinator shall also have the authority to activate the Task Force, make direct FBI and FCC contact, and contact other members of the Task Force if the Task Force Coordinator is not available.

V. THE TASK FORCE CONCEPT

A. RESPONSIBILITY

The Task Force shall perform those activities necessary to locate, identify, and resolve deliberate interference problems which are in violation of applicable Federal codes, statutes, and regulations.

B. STRUCTURE

The task force will typically consist of eight members representing the following organizations:

1. FAA Airway Facilities Sector Office
2. FAA local Air Traffic Office
3. FAA Regional and local Civilian Aviation Security Offices
4. FAA Regional Spectrum Management Office
5. FAA Regional Flight Standards Office
6. FAA Regional Counsel
7. Federal Communications Commission Field Office
8. Federal Bureau of Investigation Field Office

Other members may be added to the task force on a case-by-case basis.

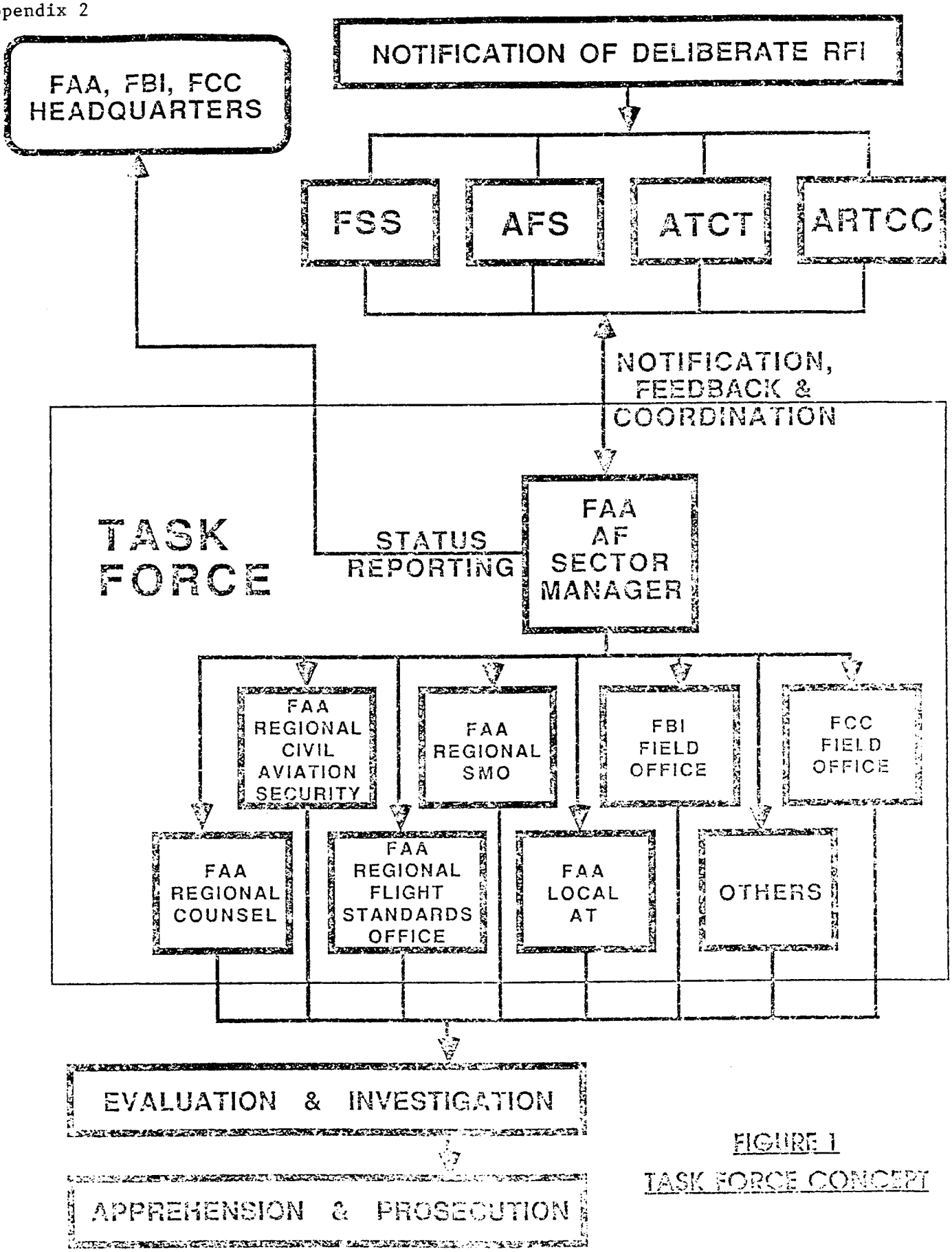

FIGURE 1

TASK FORCE CONCEPT

C. TASK FORCE COORDINATOR

The Task Force Coordinator shall be the FAA Airway Facilities Sector Manager or Assistant Sector Manager and shall have the following specific responsibilities:

Specific responsibilities of the task force coordinator shall be as follows:

1. Serves as the focal point for collection and dissemination of information on deliberate RFI cases.

2. Establishes lines of communication between:

   a. Members of the task force.

   b. The task force and headquarters organizations.

   c. The task force and local law enforcement agencies.

3. Prepares and distributes final summary reports of each Task Force incident investigated.

VI. POINTS OF CONTACT:

The following Washington Headquarters offices shall be the focal point for all matters regarding this Interagency Agreement:

1. Manager, Spectrum Engineering Division
   ASM-500
   Federal Aviation Administration
   800 Independence Ave. S.W.
   Washington, DC 20591
   Telephone: (202) 267-9710

2. Manager, Investigation and Security Division
   ACS-300
   Federal Aviation Administration
   800 Independence Ave., S.W.
   Washington, DC 20591
   Telephone: (202) 267-3954

3. Chief, Interstate Theft Unit
   Federal Bureau of Investigation
   10th and Pennsylvania Ave. N.W.
   Washington, DC 20535
   Telephone: (202) 324-4192

4. Enforcement Division
   Federal Communications Commission
   Room 744
   1919 M. Street N.W.
   Washington, DC 20554
   Telephone: (202) 632-7014

VII. RELATED ACTIVITIES

This Interagency Agreement was written in general terms to avoid the need for frequent or annual modifications such as when personnel change. The estimated life of the agreement is perpetual unless basic conditions change. Changes can be made, if needed, by contacting the above Washington headquarters offices. The names of current specific Task Force points of contact can be obtained by contacting the FAA headquarters personnel listed above or the FAA regional Spectrum Management Officers.

APPROVED:

Federal Communications Commission

By: Richard M. Smith
Chief, Field Operations Bureau

Date: DEC 07 1989

Federal Aviation Administration,
Department of Transportation

By: Em Kelly
for Arnold Aquilano
Associate Administrator

Date: 12/1/89

Federal Bureau of Investigation
Department of Justice

By: for
William M. Baker
Assistant Director, Criminal
Investigative Division

Date: 1·26·90