PUBLIC SAFETY RADIO

COMMUNICATIONS PLAN

FOR

* REGION 47 *

THE COMMONWEALTH OF PUERTO RICO

December 27, 1993

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M. Street, N.W., Suite 222
Washington, DC 20554

Dear Ms. Searcy:

As chairperson of the Regional Planning Committee of Region 47, I submit for your consideration our Committee's Public Safety Radio Communications Plan for the Commonwealth of Puerto Rico formulated in accordance with FCC Dockets 87-112 and 87-359.

On September 10, 1992, the Region Convenor issued a Public Notice announcing the initial meeting of the Public Safety and Special Emergency Planning Committee for Region 47. Said meeting was held as announced on November 10, 1992 at 1:30 p.m. at the Puerto Rico Communication Corporation in San Juan, Puerto Rico (see Appendix A). In addition to this notice invitations were sent to the Commonwealth of Puerto Rico's Police Superintendent, Fire Department Superintendent, Secretary Department of Health, Secretary Transportation and Public Works, Director Highway and Roads Department, Courts Administrator, Director Electric Energy Department, Director Civil Defense, Secretary Department of Education, Director Acueducts Department, Secretary of Natural Resources Department, National Guard of Puerto Rico, Director Municipal Police of the Municipalities of Ponce, Guaynabo, Caguas, Mayagüez and San Juan, Director of Major Association and Major of San Juan.

In this initial meeting the Planning Committee was officially established and the Chairperson was elected with a quorum of 21 participants (see Appendix B). Participants in that meeting represented Public Safety Radio Services, Special Emergency Radio Services and Vendor Community. Vendors participation was encouraged, but they were not allowed to vote. As Chairperson of region 47, I compiled all the inputs from the Regional Planning Committee members and developed the final draft which was approved on the meeting of January 21, 1993.

Respectfully submitted.

Cordially yours,

Ferdinand Cedeño

1 SCOPE

1.1 Introduction

In December of 1983, the United States Congress directed the Federal Communications Commission (FCC) to establish a plan to ensure that the communications needs of state and local public safety authorities would be met. By their regular means of initiation, the FCC began the process of developing such a plan. Through their efforts, and the efforts of the National Public Safety Planning Advisory Committee (NPSPAC) the plan was begun.

The National Public Safety Planning Advisory Committee provided an opportunity for the public safety community and other interested members of the public to participate in an overall spectrum management approach by recommending policy guidelines, technical standards, and procedures to satisfy public safety needs for the foreseeable future. After consideration of NPSPAC's Final Report and comments filed in Docket No. 87-112, a Report and Order was released by the FCC in December 1987, which established a structure for the National Plan that consists of guidelines for the development of regional plans.

The National Plan provides guidelines for the development of regional plans. The particulars of this plan are found in FCC 87-359, which contains the required steps and contents for regional plan development. It is on this document that this plan is developed.

1.2 Purpose

Public safety communications has, for many years, been inadequate throughout the United States. This is as true for the Commonwealth of Puerto Rico as it is for any other state. Many, if not all, public safety radio users are constantly bombarded with outside interference, noise, and overcrowding. It is with these problems in mind that this plan was developed.

This regional plan was developed with the objective of assuring all levels of public safety/public service agencies that radio communications in the near and distant future will not suffer from the problems of the past. The allocation of frequencies was done in as equitable a way as possible. The goal was to supply a pool of frequencies for each zone and a pool for state agency use with adequate reserve allocations for future needs in all areas, and a method to appeal initial allocations based on need.

The National Plan, as developed by NPSPAC, was followed very closely in all considerations for frequency allocation, re-use, turn back, regional interoperability, spectrum requirements and adjacent region operations. This plan should provide the

flexibility to accommodate the growth and changes which are bound to occur in public safety and public service communications operations long into the future.

2 AUTHORITY

2.1 Regional Planning Committee

The development of the Public-Safety Radio Communications Plan for Region 47, the Commonwealth of Puerto Rico, has followed the requirements of the FCC's Report and Order as issued in the matter of General Docket 87-112.

In accordance with the FCC's Report and Order 87-112, the Associated Public-Safety Communications Officers Inc. (APCO) recommended to the Commission the appointment of a "Convenor" for Puerto Rico Region 47. The Convenor served as the coordinator for the assembly and formation of the planning committee.

Participants in the formation of the Regional Planning Committee represented interested parties from both the Public Safety and Special Emergency Radio Services and Vendor Community. A total of 22 individuals have participated in the development process. The list herein contains the names, organizational affiliations, mailing addresses and phone numbers of all participants in the Regional Planning committee.

The committee was selected by attendance at the planning meeting. Each member of the Committee representing an eligible licensee under the Public Safety Radio Services and the Special Emergency Radio Services was entitled to one vote in all Committee matters. If more than one member per agency was present only one vote per agency was permitted. Except as may be provided elsewhere in the Plan, the majority of those present at a scheduled meeting constituted a majority for all business.

2.2 Planning Committee Formation

The process of forming the Planning Committee was conducted in the following steps:

1. A presentation concerning the requirements for a regional planning committee was presented and discussed at state organization meeting.

2. Letters of announcement were mailed to each major state agency radio users, as well as to state organizations composed of local government level public safety/public service users.

3. A Public notice was placed in a newspaper with state wide distribution, for the first planning committee meeting. This first meeting was held at the Puerto Rico Communications Corp., a public facility on December 10, 1992. (See Appendix A).

4. Committee membership was left open to any person or agency which may not have been notified or decided to join the committee later.

5. Vendor's participation was encouraged, but vendors were not allowed a vote.

2.3 National Interrelationships

The Regional Plan is in conformity with the National Plan. If there is a conflict between the two plans, the National Plan will prevail. It is expected that Regional Plans for other areas of the country may differ from this plan due to the broad differences in circumstances, geography, and population density. By officially sanctioning this plan the Federal Communications Commission agrees to its conformity to the National Plan. Nothing in the Plan is to interfere with the proper functions and duties of the organizations appointed by the FCC for frequency coordination in the Private Land Mobile Radio Services, but rather it provides procedures that are the consensus of the Public Safety Radio Services and Special Emergency Radio Service user agencies in this Region. If there is a perceived conflict then the judgment of the FCC will prevail.

2.4 Federal Interoperability

Interoperability between the Federal, State and Local Governments during both daily and disaster operations will primarily take place on the five common channels identified in the National Plan. Additionally, through the use of S-160 or equivalent agreements, a licensee may permit Federal use of a non-Federal communications system. Such use, on other than the five identified common channels, is to be in full compliance with FCC requirements for government use of non-government frequencies (Title 47 CFR, sec 2.103). It is permissible for a non-Federal government licensee to increase channel requirements to account for 2-10 percent increase in mobile units, dependent on the amount of Federal Government Agencies involvement in its area, provided that written documentation from Federal agencies supports at least that number of increased units.

2.5 Regional Review Committee

Upon approval of this Plan by the Federal Communications Commission, a Region Review Committee will be established for the review of applications which do not fall within the stated guidelines provided for in this plan, or for the settlement of disputes concerning this plan and/or its application.

This committee shall consist of the Local APCO Frequency Advisor for this region, a state agency representative, one representative from the Police, Fire and EMS services, and a minimum representation from other eligibles is also welcome. This committee and its composition will be assured by the Puerto Rico APCO chapter and other Public Safety organizations. Membership on this committee will be solicited on an annual basis. Since this committee will probably not have regular business, it will be up to the Local APCO Frequency Advisor to notify the committee of problems, conflicts, or when

it becomes apparent that spectrum demands will outpace available spectrum. Each member of the committee shall be furnished a copy of this plan upon their appointment or election to the committee.

Plan updates shall be accomplished by this committee. All changes or updates to the plan shall be first agreed upon by this committee and then submitted to the FCC for their review and consideration. When approved all changes shall be added to the plan with the appropriate documentation of approval.

This committee shall meet at least once annually to review the implementation of the plan. This review shall consist of examination of any and all license activity.

3 SPECTRUM UTILIZATION

This portion of the Plan provides a basis for proper spectrum utilization. Its purpose is to guide the Local APCO Frequency Advisor and/or the Regional Review Committee in their task of evaluating the implementation of this plan within this Region.

3.1 Region Defined

Region 47 is the Commonwealth of Puerto Rico. This region is the result of definition by the Federal Communications Commission as a result of recommendations made in the National Public Safety Planning Advisory Committee (NPSPAC) plan as submitted and approved and contained in Docket 87-112. For purposes of this plan the Commonwealth of Puerto Rico shall be defined as all the lands and waters contained within the boundaries of the Commonwealth of Puerto Rico.

3.2 Region Profile (Demographic Information)

The purpose of this section is to provide the basis for the assignment of frequencies, and their re-use. Since the frequency allocation formula used is based on population within a municipality, it is necessary to provide this information within a municipality, it is necessary to provide this information within this plan. Below is the data used in the determination of frequency allocations.

3.3 Commonwealth of Puerto Rico Population and Expected Growth Percentage. (See Exhibit A)

The population of the Commonwealth of Puerto Rico is broken down in 78 municipalities between urban and rural residence. The urban population is some 71.22 percent and the rural 28.78 percent.

3.4 Geographical Description

There are 78 municipalities in the Commonwealth of Puerto Rico with a total land mass of 3459 square miles. The largest municipality in land extension is Utuado, with a total of 115 square miles and in population San Juan with 437,745 inhabitants.

As is shown above, the population of the Commonwealth of Puerto Rico is 3,522,037 distributed across the land area contained in the commonwealth. This presents some problems in area coverage for radio systems in that the entire land area of any given jurisdiction must be covered. The population per square mile is somewhat sparse which generally indicates that the concentration of radio users for public safety activities is also sparse. All of these items were taken under consideration in the allocation plan.

3.5 Usage Guidelines

All systems operating within the Region having five or more channels will be required to be trunked. Those systems having four or less channels may be conventional or trunked.

The FCC, in its report and Order states, “Exceptions will be permitted only when a substantial showing is made that alternative technology would be at least as efficient as trunking or that trunking would not meet operational requirements. Exceptions will not be granted routinely, however, and strong evidence showing why trunking is unacceptable must be presented in support of any request for exception.”

Systems of four or less channels operating in the conventional mode who do not meet FCC loading standards will be required to share the frequency on a non-exclusive basis.

Public Safety communications at the state level, as it impacts the Region, will be reviewed by the Committee. State-wide public safety agencies will submit their communications plans for impact approval if they utilize communications systems within the Region and those portions of such systems must be compatible with the Regional Plan.

The next level of communication coverage will be a multiple municipality area. Those systems that are designed to provide area communication coverage must demonstrate their need to require such wide area coverage.

This would apply in a situation such as a city requesting coverage of an entire multiple municipality area. Communication coverage beyond the bounds of a jurisdictional area of concern cannot be tolerated unless it is critical to the protection of life and property. If the 800 MHz trunked radio technology is utilized, the system design must include as many multiple municipality government public safety and public service radio users as can be managed technically.

The multiple municipality agency(ies), depending upon systems loading and the need for multiple systems within an area, must provide intercommunications between area-wide systems. In a multi-agency environment, a lead agency using the 800 MHz spectrum, which is an agency or organization having primary response obligations in the geographic area, shall be responsible for coordinating the implementation the Common Channels in this band as mandated by the National Plan. Such implementation must be reviewed and approved by the Local APCO Frequency Advisor, and at his/her discretion, the Regional Review Committee.

Municipal terminology often differs. In order to provide a title for the next level of communications the term Region is used to define the level below state-wide. Region communications for public safety and public services purposes must provide only the communications needed within its boundaries.

However, if the total number of radios in service does not reach minimum loading criteria for a trunked system, that municipality must consider utilizing the next higher system level if 800 MHz trunked radio is available in the area. As those higher level systems reach capacity, the smaller system communicators in public safety and public service must then consider uniting their communications efforts to formulate one large system or forfeit use of the limited 800 MHz spectrum.

Where smaller conventional 800 MHz needs are requested, those frequencies to be utilized must not interfere with the region's trunked systems. The 800 MHz trunked radio system is to be considered the higher technology at this time and in greater compliance with FCC guidelines. The amount of interference that can be tolerated depends on the service affected. Personal life and property protection shall receive the highest priority and disruptive interference with communications involved in these services in an area shall not be tolerated. Any co-channel interference within an authorized area of coverage will be examined on a case by case basis by the Regional Review Committee.

3.6 Technical Design Requirements for Licensing

3.6.1 Definition of Coverage Area or Area of Jurisdiction

The coverage area shall be that area for which a system is intended to cover with a received signal strength of greater than 40 dBu. This area shall normally represent the boundaries of the Area or the incorporated municipality which is applying for license. In the case of regional or area-wide, multi-jurisdictional systems, the coverage shall be that area of all jurisdictions participating in the system combined.

3.6.2 System Coverage Limitations

System coverage shall be limited to the coverage area defined as listed above plus no more than five (5) additional miles in all directions extending from said boundaries of definition. This limitation shall assure maximum frequency reuse. The only exception to this rule shall be those applicants wishing to offer service or system use to areas outside of their jurisdictional boundaries. In these situations the applicant shall provide a proposal of said service to the Local APCO Frequency Advisor, who may request Regional Review Committee consideration, for approval.

Systems not located within the geographical center of the jurisdiction(s) for which they cover shall utilize either directional antennas or antenna/tower relationship techniques to achieve the coverage required by this plan.

3.6.3 Determination of Coverage

There are four variables used in determining the area of coverage of a proposed system. These variables are (1) the required strength of the received signal, (2) antenna height above average terrain (HAAT), (3) the effective radiated power (ERP) of the system, and (4) the type of environment.

Received Signal Strength:

For purposes of this plan, received signal strength shall be the determining factor which defines the actual boundary of a system. The minimum signal level which marks the outer boundary of a system shall be 40 dBu.

Antenna Height:

Shall be the height of the antenna above the average terrain surrounding the tower site.

Effective Radiated Power (ERP):

The ERP is the transmitter output power times the net gain of the antenna system. The actual formula is: ERP (w) equals Power (w) times Antilog (net gain in dB divided by 10).

Environment Type:

OKUMURA/HATA METHOD – The Okumura method uses four different classifications to describe the average terrain around a transmitter site or area. The classifications are:

1- URBAN; Which is built-up city-crowded with large buildings or closely interspersed with houses and thickley-grown trees. This would include the downtown area of a major city.

2- SUBURBAN; Which is a city of highway scattered with trees, houses and buildings. This would include the downtown area of a large city.

3- QUASI-OPEN; Is an area between suburban and open areas. This includes areas outside of city limits that have few buildings and houses.

4- OPEN; Is an area where there are no obstacles such as tall trees or buildings in the propagation path or a plot of land which is cleared of anything for 300 to 400 meters ahead. This would include farm land, open fields, etc.

The Okumura/Hata method is the method resident in the computer packing program to develop this plan. A minimum system shall be permitted without special consideration when it is limited to an HAAT of 100 feet and the transmitter is centrally located within the jurisdiction or jurisdictions participating in a system. In all jurisdictions, regardless of size, a maximum boundary radius of 8 miles shall be allowed provided adequate measures have been taken to assure that interference of existing co-channel and adjacent channel systems will not occur. Preparation of these requirements shall be the

responsibility of the applicant. The Federal Communications Commission provides, in part 90.309 (a) (4) of the Rules and Regulations, some additional guidance for these calculations.

3.6.4 Annexations and Other Expansions

It is well known that as cities grow, annexations occur. When an expansion of the present city limits of any city currently using an 800 megahertz system within the spectrum as herein specified occurs, it is understood that the existing system may have to be expanded and its range increased. This is a modification and may be permitted. The increased range of the system will have to be determined at the time of modification to assure non-interference with any other existing system. Where interference is likely, the use of alternate methods of expansion, such as satellite systems, may be necessary.

Should the annexation or expansion of a city effectively take in all or most of a Region, the allocation for that Region may be given to the city if required by said city and not in use or planned to be used by the Region. Where more spectrum is not available from the initial allocation, the rules for expansion of initial allocation, as contained in this plan, shall apply.

3.6.5 Coverage Area Description

All applicants shall provide with their applications a map showing the jurisdictional boundaries to be covered by the system, and the calculated system coverage. This map shall display the location of the system transmitter(s), including control stations. It is recommended that a U.S. Geological Survey (USGS) Quad topographical map be used for this purpose. If not available, a high quality locally produced map or a highway map may be substituted. Regardless of the type map used, the name of the applicant and the scale of the map shall be displayed on the map.

3.6.6 Give-Back Frequencies

All agencies participating in the use of the new 800 megahertz spectrum shall prepare and submit a plan for the abandonment of their currently licensed frequencies in the lower bands in accordance with proposed parameters of paragraph 61 of FCC Gen. Docket 87-112 adopted: November 24, 1987; released: December 18, 1987. The regional planning committee would have the freedom to consider below-800 MHz public safety bands in developing their regional plans, but the licensing of channels in these bands would continue to be conducted through existing frequency coordination procedures.

Frequencies which are to be abandoned by an agency shall not be handed down to another agency within the respective jurisdiction. It is recommended that any jurisdiction wishing to “hand down” frequencies to another agency submit the proper coordination and application forms with the document of release.

3.6.7 Unused Spectrum

Due to the fact that all of the frequency spectrum is not needed at this time, the excess channel pairs will be returned to a reserve pool. These channels may be used for conflict with adjacent Region allocations or may simply remain within this Region until needed. This does not imply that these frequencies are unavailable, only that before they can be utilized within the Region they must be coordinated via the regular APCO coordination process and within the guidelines set forth in this plan. Where possible, the channels designated for a jurisdiction in this plan shall be used.

3.6.8 Adjacent Region Coordination

Coordination with adjacent region shall be an on-going process until all region plans have been finalized. At present, the adjacent region that have been coordinated with and no conflicts have been identified is Region 48, the U.S. Virgin Islands.

As the use of the five National channels is not considered a day-to-day function, the "hard" coordination for the use of these channels is not considered to be necessary or advisable. The use of these channels will always be on a non-interference basis, with on-the-air coordination at the time of use when required. Any user found to be operating in any manner other than this shall be considered to be operating improperly and subject to the existing Federal Communications Commission rules for willful interference with the communications of other users.

3.7 Initial Spectrum Allocation

3.7.1 Frequency Sorting Methodology

The initial spectrum allocation for the Region was determined by a computerized frequency sorting process performed by APCO. The purpose of the computer program which assigns frequencies to specific eligibles and to pools for future assignments is two-fold:

A) The assignments must result in a high degree of spectrum efficiency, and

B) The assignments must result in a low probability of co-channel and adjacent channel interference.

Since the desired output is a geographic sorting of frequencies, a method of defining geography must be part of the input. A list of the number of channels to be assigned in each geographic area is also required, along with the name of the eligible or pool.

Acceptable interference probabilities are determined for the Region. Frequency assignments are then made using a computer program which satisfies the goals of spectrum efficiency and interference protection. The following narrative describes the factors and process used by the computer program.

3.7.2 Geographic Area

For the purpose of this frequency sort, a geographic area is defined as one or more circles of equal radius. To the degree practical, the circle(s) should include the entire area of the eligible's geopolitical boundary, but not exceed the boundary by more than three (3) miles. Thus, the procedure is to gather maps of sufficient detail, outline the areas to be defined, determine the coordinates and radius of the circles which define each area, and tabulate the data.

3.7.3 Define the Environment

The environment of each system is defined according to the Okumura/Hata method of classifications.

3.7.4 Blocked Channels

In the Region there are five mutual aid channels which must be blocked out to prevent the computer from making assignments on these channels. (Since the mutual aid channels are spaced at 0.5 MHz intervals, other Region-wide systems are spaced at 0.5 Hz and placed adjacent to the mutual aid channels.) This procedure reduces the impact of blocked adjacent channels by virtue of the fact that the channel plan already has protection spacing on each side of the mutual aid channels.)

These Region-wide blocked channels are identified by FCC channel number, tabulated and they become input to the computer program.

3.7.5 Transmitter Combining

The computer program is designed to provide a minimum frequency separation between any two channels assigned to the same eligible at the same site. This separation is provided in order to enable more efficient combining of multiple transmitters to a single antenna. These separated blocks of frequencies also have a maximum size. That is, if the eligible has more frequencies than the maximum size of the combining block, then a second compatible block is created, and so on. Each of these parameters is adjustable in the program on a global basis. The default parameters chosen are 0.25 MHz minimum spacing and five channel blocks.

3.7.6 Special Considerations

There are licensees in the 806-821/852-866 MHz spectrum who plan to expand existing systems into the 821-824/866-869 MHz bands. Some of the existing radio units are unable to operate on 12.5 KHz separated carrier frequencies. The result is that these radios can only operate on "even" FCC numbered channels in the 821-824/866-869 MHz band. The computer program is able to take this into account when making assignments.

3.7.7 Protection Ratios

There are two interference protection ratios built into the computer program. One is for the co-channel case, the other is for the adjacent channel case. The ratios provide 35 dB [Desired/Undesired] signal ratio for co-channel assignments, and 15 dB [Desired/Undesired] ratio for the adjacent channel case. These ratios provide an acceptable probability of interference for Public Safety Services.

3.7.8 Adjacent Region Considerations

The computer program requires a listing of channels to be blocked along the borderline with other regions which have pre-existing plans. If the adjacent region plan was developed using the APCO packing program, this information exists in the database. If the adjacent region plan was developed by another method, then the data must be obtained from the adjacent region's plan in order to build the exclusion list.

4 COMMUNICATIONS REQUIREMENTS

4.1 Common Channel Implementation

The implementation of the International Common Channels must follow the guidelines as set forth by the Federal Communications Commission by the approval of the National Plan. These five common channels are accessible by all levels of government and shall be used in accordance with the provisions of the National Plan. All mobile and portable equipment must be equipped to operate in the "talkaround mode" when required on the International Channels.

The International calling channel (821/866.0125 MHz) shall be implemented as a full mobile relay. Wide area coverage transmitters will be installed where applicable within a system. Large system users (5 channels or more) of 800 MHz shall be required to monitor this channel at all times. The area of coverage for this channel shall be equal to the area covered by the licensed system. This may or may not require the use of satellite receivers within the area to meet this requirement.

The four International Tactical (ITAC) Channels will be assigned State-wide, for use as needed by all eligible licensees. These channels are to be used in accordance with the National Plan and in compliance with the regulations as set forth by the Federal Communications Commission. These channels require no special licensing, only that the users be eligible for licensing on the other Public Safety 800 MHz channels as specified in section 90.617 (a) of the FCC Rules and Regulations.

4.1.1 Areas of Operation

The common channels shall be available for use throughout the Region. No specific assignments were deemed necessary within the Region.

4.1.2 Operation on the Common Channels

Normally, the five interoperable channels are to be used only for activities requiring inter-communications between agencies not sharing any other compatible communications system. Interoperable channels are not to be used by any level agency for routine, daily operations. In major emergency situations, one or more ITAC channels may be assigned by the primary Public Safety Agency within that area of operation. The primary Public Safety agency in each county, if not defined elsewhere in the plan, shall be the County Sheriff's Department or Public Safety Department or the lead agency, which may be any agency licensed to operate in this spectrum, or "on-scene" commander. The primary Public Safety agency shall be the city level Public Safety Department in situations which occur within the corporate limits of said city. These primary agencies will assign one or more of the ITAC channels for use according to need during each special situation requiring the use of these channels.

Participants in the interoperable channels include Federal, State, and Local Disaster Management agencies. Police, Fire, and providers of Basic and Advanced Life support services will be the primary using agencies. If radio channels are available, other services provided in the Public Safety Radio Services and the Special Emergency Radio Services may also participate to the extent required to insure the safety of the public. These agencies include the Highway Department, Motor Vehicle Comptroller, Forestry, Wildlife and other special service agencies not normally involved in day-to-day public safety operations.

4.1.2.1 Operation Procedures

On all Common Channels, plain English and /or Spanish will be used at all times, and the use of unfamiliar terms, phrases, or codes will not be allowed.

4.1.3 International Calling Channel (ICALL):

The ICALL channel shall be used to establish contact with other users in a particular Region that can render assistance at an incident. This channel shall not be utilized as an ongoing working channel. Once contact has been established between agencies, an agreed upon ITAC or mutual aid channel shall be used for continued communications.

4.1.4 International Tactical Channels (ITAC-1 – ITAC-4):

These frequencies are reserved for use by those agencies involved in inter-agency communications. Incidents requiring multi-agency participation will utilize these frequencies as directed by the control agency assuming responsibility for an incident or area of concern. These frequencies may be subdivided according to function in an

incident or by geographical location in response to an incident. It is recommended that the following assignments for ITAC-1 through ITAC-4 be used when possible.

ITAC-1 . . . . . Law Enforcement
ITAC-2 . . . . . Fire Services
ITAC-3 . . . . . Emergency Medical Services
ITAC-4 . . . . . Command and Control

4.1.5 Coded Squelch

All equipment capable of operating on the five (5) common channels shall be equipped with the National Common Tone Squelch of 156.7 Hz. Mobile relays on these channels, if authorized, may use additional tone or digital squelch codes for the purpose of selecting individual mobile relay stations, provided the National Common Tone Squelch Code is used on the output. If such an arrangement is utilized, provision must also be made for certain centralized, high level sites to be activated by the 156.7 tone to ensure emergency access by transient units.

4.2 Network Operating Method

Communications systems on ITAC-1 thru ITAC-4 will be implemented by agencies who volunteer on a distributed coordinated basis. Every primary geographic section of the Region is intended to be covered by at least one of the ITAC channels. In many areas the common channels will be utilized on a mobile to mobile talk-around basis. Mobile relays on ITAC-1 thru ITAC-4 will be on a limited coverage design to permit reuse of the channel several times within the Region and in adjacent regions. Since Region 47 will probably not have a large number of stationary ITAC Channel stations, the implementation of mobile relay or separate is strongly encouraged. This will fill an “on-scene” requirement for most multi-agency response situations. Adjacent region coordination will be via existing mutual aid coordination procedures with the requesting region establishing the tactical frequency assignment.

4.3 Requirements for Trunking

All systems operating in the Region having five or more channels will be required to be trunked. Those systems having four or less channels may be conventional. It is strongly suggested that any entity licensing three or more repeaters use trunking.

The FCC in its Report and Order states: “Exceptions will be permitted only when a substantial showing is made that alternative technology would be at least as efficient as trunking or that trunking would not meet operational requirements. Exceptions will not be granted routinely. Strong showing as to why trunking is unacceptable must be presented in support of any request for exception.”

Systems that do not meet FCC loading standards can be required to share such frequencies on a non-exclusive basis. Those agencies requesting Data channels only can be required to share channels with adjacent agencies wherever feasible or limit

coverage to their geographic area. Exceptions will be considered on a case-by-case basis by the Regional Review Committee.

Depending on systems loading and the need for multiple systems within an area, operators of wide area systems (including, but not limited to, designated “Monitoring Agencies”) must provide for coordination between area-wide systems and “Monitoring Agencies”. Single municipalities or agencies must restrict design and implementation of their system(s) to provide only the communications needed within its geopolitical boundaries. The use of trunked systems is encouraged. However, if the total number of radios in service does not reach minimum loading criteria for a trunked system, that user must consider utilizing the next higher system level if 800 MHz trunked radio is available in the area. As systems reach capacity, the smaller system users must consider consolidating their communications systems to formulate one large trunked system.

A requesting applicant for radio communications in the 800 MHz public safety services in the Regional will be required to conform to the FCC loading criteria for its proposed system. The provisions of this regional plan must be used as a guide for establishing any new systems. Strict adherence for limiting the area of coverage to the boundaries of the applicant agency’s jurisdiction must be observed. Overlap or extend coverage must be minimized, even where systems utilizing 800 MHz trunked radio systems are proposing to intermix systems for cooperative and/or mutual aid purposes.

Antenna heights are to be limited to provide only the necessary coverage for a system. When antenna locations are restricted to only the “high-ground”, transmitter outputs and special antenna patterns must be employed to produce only the necessary coverage with the proper amount of ERP. All necessary precautions are to be taken to gain maximum reuse of the limited 800 MHz spectrum.

4.4 Channel Loading Requirements

An agency/jurisdiction requesting a single frequency to replace a frequency currently in use that will be turned back for reassignment will not be required to meet loading requirements in order to obtain the new frequency. However, if the single frequency is not loaded to more than 50 units within three years after the license is granted, the frequency will be available for assignment to other agencies on a shared basis in the event that other frequencies meeting the criteria for assignment are exhausted. Shared use of a frequency is not interference free.

4.4.1 User of single frequency systems

Users of single frequency systems may be required to provide the Regional Review Committee “confirmation of loading” for mobiles and portables as a method of validating system loading. This exception shall apply to agencies having only one system and a single frequency. Agencies/jurisdictions requesting multiple frequencies or employing trunking technology shall comply with the loading standards as outlined below or provide a “Traffic Loading Study” that meets the criteria as outlined below.

4.4.2 Loading Tables

EMERGENCY		NON EMERGENCY	
CHANNELS	UNITS/CHANNEL	CHANNELS	UNITS/CHANNEL
1 – 5	70	1 – 5	80
6 – 10	75	6 – 10	90
11 – 15	80	11 – 15	105
16 – 20	85	16 – 20	120

Agencies requesting additional frequencies must show loading of 100 percent or greater on their existing system. Should a demand for frequencies exist after assignable frequencies become exhausted, any system having frequencies assigned under this plan four or more years previously and not loaded to at least 70 percent will lose operating authority on a sufficient number of frequencies to bring the system into compliance with the 70 percent loading standard. Frequencies lost in this manner will be reallocated to other agencies to help satisfy the demand for additional frequencies.

4.4.3 Traffic Loading Study

Justification for adding frequencies, or retaining existing frequencies, can be provided by a traffic loading study in lieu of loading by number of transmitters per channel. It will be the responsibility of the requesting agency to provide a verifiable study showing sufficient airtime usage to merit additional frequencies. A showing of airtime usage, excluding telephone interconnect air time, during the peak busy hour greater than 70 percent per channel on three consecutive days will be required to satisfy loading criteria.

4.4.4 Slow Growth

All systems in the 821-824/866-869 MHz bands under this will be slow growth in accordance with Section 90.629 of the Commission's rules.

4.5 Use of Long Range Communications

During incidents of major proportions, where Public Safety requirements might include the need for long-range communications in and out of a disaster area, alternate radio communications plans are to be addressed by Primary Public Safety agencies within this sub-region. These agencies should integrate the appropriate interface to the long distance communications providers. Such long distance radio communications might be amateur radio operations, satellite communications and/or long range emergency preparedness communications systems, any of or all of which should be incorporated

as part of the communications plans of those lead agencies. They then could provide the means to communicate outside the area for themselves and the smaller agencies who might need assistance. Instances as addressed in the National Public Safety Planning Advisory Committee's Plan, such as earthquakes, hurricanes, floods, widespread forest fires, or nuclear reactor problems could be a cause for such long-range communications needs.

4.6 Expansion of Existing Systems

Existing systems that are to be expanded to include the frequency bands of 821-824/866-869 MHz will have the mobile radios "grandfathered", provided that they are modified in conformance with the Memorandum Opinion and Order, FCC Docket 87-112. Primarily this involves reducing the modulation to +/- 4 KHz. Existing base stations in the frequency bands 806-821/851-866 MHz may not be used in the frequency bands 821-824/866-869 MHz.

5 IMPLEMENTATION AND PROCEDURES

5.1 Notifications

An advertisement was placed in a State-wide newspaper several weeks prior to the initial meeting. All APCO Chapter members and a large number of other interested parties who had requested notification were sent letters of invitation. (SEE APPENDIX A)

During the initial meeting, names, addresses and telephone numbers of those individuals present who wished to either participate in the planning process, or who wanted to be kept informed on the progress of the planning effort were taken. These individuals or agencies were sent all announcements for meetings and bulletins of progress.

When the work on the plan was completed, a Planning Committee meeting was called. This meeting was held at the Puerto Rico Communications Corp. on December 21, 1992. A copy of the Plan had been previously sent to each member of the Planning Committee. The Plan was thoroughly discussed. Some clarifying questions raised in this meeting were subsequently answered in writing before the final meeting.

A final meeting was scheduled for January 21, 1993 for the approval of the Plan. A ballot was given to each member of the Committee with the right to vote. Every agency has the right to only one vote. Vendors participation was encouraged, but they were not allowed to vote. The balloting was held and nine (9) participants with the right to vote unanimously approved the Plan.

5.2 Frequency Allocation Process

The method used for "packing" Region 47 was the APCO computerized method. The approximate geographical location for the center of each municipality, in latitude and

longitude, were provided along with the environmental type of the municipality and the approximate radius to cover the municipality lines.

This allocation is the minimum and only applies to municipalities with a population of 20,000 or less. One additional channel is allocated for each additional 20,000 of population. The Commonwealth of Puerto Rico has reserved 15 channels State-wide. This leaves a reserve pool of channels for future assignment.

5.3 Frequency Allocations

Below is the data, or packing plan generated by APCO via the computerized packing program. The first section is region by region information provide, followed by the packing plan. The plan took adjacent regions into consideration, in addition, a letter of concurrence was sent to the only adjacent region. (APPENDIX C)

5.4 State maps (Appendix D)

5.5 Channel Assignments

Puerto Rico EMS		602	622	640	660	678	
Puerto Rico Fire		603	623	641	794	814	
Region 10	604	624	642	662	680	700	718
	738	756	776	795	797	815	817
Region 05	605	662	680	700	718	738	756
	776	796	816				
Region 09	606	626	644	664	682	702	720
	740	758	778				
Region 02	608	610	628	646	666	684	704
	722	742	760	780	799	801	819
	821						
Region 01	611	613	630	632	648	650	668

	670 744 804	686 746 822	688 762 824	706 764	708 782	724 784	726 802
Region 03	615 675 788	617 691 806	635 693 808	637 711 826	653 729 828	655 749	673 767
Region 04	618 733 829	638 751	656 769	676 771	694 789	713 791	731 809
Region 07	620 811	658 813	696	734	736	772	792
Region 06	625 723	629 743	643 761	647 781	667	685	705
Region 08	634 766	652	672	690	710	728	748
Puerto Rico Police	698	716	736	754	774		

5.6

Channel No.	Base Frequency (MHz)	Receive Frequency (MHz)	
1	851.0125	806.0125	PRPD - WQJX789
2	851.0375	806.0375	
3	851.0500	806.0500	PRPD - WQFG484
4	851.0625	806.0625	PRPD - WQJX789
5	851.0750	806.0750	
6	851.0875	806.0875	

7	851.1000	806.1000	PRPD - WQFG484	PRPD - WQJX789
8	851.1125	806.1125	PRPD - WQER853	
9	851.1250	806.1250	PRPD - WQFG484	
10	851.1375	806.1375		
11	851.1500	806.1500	Tren Urbano - WPPX592	
12	851.1625	806.1625	PRPD - WQEY620	
13	851.1750	806.1750	Tren Urbano - WPPX592	
14	851.1875	806.1875	PRPD - WQFG484	
15	851.2000	806.2000	Bayamon Mun. - WPHZ368	
16	851.2125	806.2125	PRPD - WQFU672	
17	851.2250	806.2250	Toa Baja Mun. - WPTQ267	
18	851.2375	806.2375		
19	851.2500	806.2500		
20	851.2625	806.2625	PRPD - WQEY620	
21	851.2750	806.2750	PRPD - WQEY620	
22	851.2875	806.2875		
23	851.3000	806.3000	PRPD - WQEY620	PRPD - WQJX789
24	851.3125	806.3125	PRPD - WQFU672	
25	851.3250	806.3250	PRPD - WQEY620	
26	851.3375	806.3375		
27	851.3500	806.3500	PRPD - WQEY620	PRPD - WQJX789
28	851.3625	806.3625	PRPD - WQFU672	
29	851.3750	806.3750	PRPD - WQFU672	
30	851.3875	806.3875	PRPD - WQJX789	
31	851.4000	806.4000	PRPD - WQER853	
32	851.4125	806.4125		
33	851.4250	806.4250	PRPD - WQFG484	
34	851.4375	806.4375		
35	851.4500	806.4500	Toa Baja Mun. - WPTQ267	
36	851.4625	806.4625	PRPD - WQFG484	PRPD - WQJX789
37	851.4750	806.4750	Toa Baja Mun. - WPTQ267	
38	851.4875	806.4875		
39	851.5125	806.5125	PRPD - WQFG484	
40	851.5375	806.5375		
41	851.5500	806.5500	PRPD - WQFG484	
42	851.5625	806.5625	Court Adm - WPZY223	
43	851.5750	806.5750	PRPD - WQFU672	
44	851.5875	806.5875	PRPD - WQFG484	
45	851.6000	806.6000	PRPD - WQFU672	
46	851.6125	806.6125	PRPD - WQFU672	
47	851.6250	806.6250	PRPD - WQEY620	

48	851.6375	806.6375	PRPD - WQFU672	
49	851.6500	806.6500	PRPD - WQJX789	
50	851.6625	806.6625	Tren Urbano - WPPX592	
51	851.6750	806.6750	PRPD - WQER853	
52	851.6875	806.6875		
53	851.7000	806.7000	Bayamon Mun. - WPHZ368	
54	851.7125	806.7125	PRPD - WQER853	
55	851.7250	806.7250	Tren Urbano - WPPX592	
56	851.7375	806.7375	PRPD - WQEY620	
57	851.7500	806.7500	Guaynabo Mun - WPKZ539	PRPD - WQFG484
58	851.7625	806.7625	PRPD - WQER853	
59	851.7750	806.7750	PRPD - WQFG484	PRPD - WQJX789
60	851.7875	806.7875		
61	851.8000	806.8000	PRPD - WQEY620	PRPD - WQJX789
62	851.8125	806.8125	Court Adm - WPZY223	
63	851.8250	806.8250	PRPD - WQEY620	PRPD - WQFG484
64	851.8375	806.8375		
65	851.8500	806.8500	PRPD - WQFU672	
66	851.8625	806.8625	PRPD - WQFU672	
67	851.8750	806.8750		
68	851.8875	806.8875		
69	851.9000	806.9000	PRPD - WQFG484	
70	851.9125	806.9125	PRPD - WQJX789	
71	851.9250	806.9250	PRPD - WQEY620	
72	851.9375	806.9375		
73	851.9500	806.9500	Toa Baja Mun. - WPTQ267	
74	851.9625	806.9625	PRPD - WQJX789	
75	851.9750	806.9750	Toa Baja Mun. - WPTQ267	
76	851.9875	806.9875		
77	852.0125	807.0125		
78	852.0375	807.0375		
79	852.0500	807.0500	PRPD - WQFG484	
80	852.0625	807.0625		
81	852.0750	807.0750	PRPD - WQFU672	
82	852.0875	807.0875	PRPD - WQFG484	
83	852.1000	807.1000	PRPD - WQER853	
84	852.1125	807.1125		
85	852.1250	807.1250	PRPD - WQFU672	
86	852.1375	807.1375	Guaynabo Mun - WQBY333	
87	852.1500	807.1500	PRPD - WQFU672	
88	852.1625	807.1625	Guaynabo Mun - WQBY333	

89	852.1750	807.1750		
90	852.1875	807.1875		
91	852.2000	807.2000	Bayamon Mun. - WPHZ368	
92	852.2125	807.2125	PRPD - WQFG484	
93	852.2250	807.2250	Tren Urbano - WPPX592	PRPD - WQEY620
94	852.2375	807.2375		
95	852.2500	807.2500		
96	852.2625	807.2625	PRPD - WQEY620	
97	852.2750	807.2750	PRPD - WQJX789	
98	852.2875	807.2875	PRPD - WQEY620	
99	852.3000	807.3000	PRPD - WQEY620	PRPD - WQJX789
100	852.3125	807.3125		
101	852.3250	807.3250	PRPD - WQER853	
102	852.3375	807.3375	PRPD - WQFG484	
103	852.3500	807.3500	PRPD - WQFG484	
104	852.3625	807.3625	PRPD - WQER853	
105	852.3750	807.3750	PRPD - WQEY620	
106	852.3875	807.3875	Tren Urbano - WPPX592	
107	852.4000	807.4000	PRPD - WQFG484	PRPD - WQJX789
108	852.4125	807.4125	PRPD - WQJX789	
109	852.4250	807.4250	PRPD - WQER853	
110	852.4375	807.4375		
111	852.4500	807.4500	PRPD - WQER853	
112	852.4625	807.4625	PRPD - WQFG484	
113	852.4750	807.4750		
114	852.4875	807.4875	PRPD - WQER853	
115	852.5125	807.5125		
116	852.5375	807.5375		
117	852.5500	807.5500		
118	852.5625	807.5625	PRPD - WQFU672	PRPD - WQFU672
119	852.5750	807.5750	PRPD - WQJX789	
120	852.5875	807.5875	PRPD - WQFG484	
121	852.6000	807.6000		
122	852.6125	807.6125		
123	852.6250	807.6250	PRPD - WQEY620	
124	852.6375	807.6375		
125	852.6500	807.6500	PRPD - WQER853	
126	852.6625	807.6625	Tren Urbano - WPPX592	
127	852.6750	807.6750	PRPD - WQFG484	
128	852.6875	807.6875		
129	852.7000	807.7000	Bayamon Mun. -	PRPD -

			WPHZ368	WQER853
130	852.7125	807.7125	PRPD - WQFG484	PRPD - WQJX789
131	852.7250	807.7250		
132	852.7375	807.7375		
133	852.7500	807.7500		
134	852.7625	807.7625	PRPD - WQER853	
135	852.7750	807.7750	PRPD - WQFG484	
136	852.7875	807.7875		
137	852.8000	807.8000	PRPD - WQER853	
138	852.8125	807.8125	PRPD - WQFU672	
139	852.8250	807.8250		
140	852.8375	807.8375	PRPD - WQFG484	
141	852.8500	807.8500	PRPD - WQEY620	
142	852.8625	807.8625	PRPD - WQER853	
143	852.8750	807.8750		
144	852.8875	807.8875	Tren Urbano - WPPX592	
145	852.9000	807.9000		
146	852.9125	807.9125		
147	852.9250	807.9250	PRPD - WQEY620	
148	852.9375	807.9375		
149	852.9500	807.9500	PRPD - WQER853	
150	852.9625	807.9625		
151	852.9750	807.9750		
152	852.9875	807.9875	PRPD - WQFG484	
153	853.0125	808.0125	PRPD - WQJX789	
154	853.0375	808.0375		
155	853.0500	808.0500	PRPD - WQER853	
156	853.0625	808.0625	PRPD - WQEY620	PRPD - WQJX789
157	853.0750	808.0750	PRPD - WQFG484	
158	853.0875	808.0875	PRPD - WQFG484	
159	853.1000	808.1000	PRPD - WQER853	
160	853.1125	808.1125		
161	853.1250	808.1250		
162	853.1375	808.1375	Tren Urbano - WPPX592	
163	853.1500	808.1500		
164	853.1625	808.1625	Guaynabo Mun - WQBY333	
165	853.1750	808.1750		
166	853.1875	808.1875		
167	853.2000	808.2000	Bayamon Mun. - WPHZ368	
168	853.2125	808.2125		
169	853.2250	808.2250		
170	853.2375	808.2375		

171	853.2500	808.2500		
172	853.2625	808.2625		
173	853.2750	808.2750	PRPD - WQER853	
174	853.2875	808.2875	PRPD - WQFG484	
175	853.3000	808.3000	PRPD - WQEY620	PRPD - WQJX789
176	853.3125	808.3125		
177	853.3250	808.3250	PRPD - WQJX789	
178	853.3375	808.3375	PRPD - WQFG484	
179	853.3500	808.3500		
180	853.3625	808.3625		
181	853.3750	808.3750		
182	853.3875	808.3875	PRPD - WQJX789	
183	853.4000	808.4000		
184	853.4125	808.4125	Tren Urbano - WPPX592	
185	853.4250	808.4250	PRPD - WQEY620	
186	853.4375	808.4375		
187	853.4500	808.4500		
188	853.4625	808.4625		
189	853.4750	808.4750		
190	853.4875	808.4875		
191	853.5000	808.5000		
192	853.5125	808.5125		
193	853.5250	808.5250		
194	853.5375	808.5375	PRPD - WQEY620	
195	853.5500	808.5500	PRPD - WQJX789	
196	853.5625	808.5625	PRPD - WQEY620	
197	853.5750	808.5750		
198	853.5875	808.5875		
199	853.6000	808.6000		
200	853.6125	808.6125		
201	853.6250	808.6250		
202	853.6375	808.6375	Tren Urbano - WPPX592	
203	853.6500	808.6500	PRPD - WQFG484	
204	853.6625	808.6625		
205	853.6750	808.6750		
206	853.6875	808.6875		
207	853.7000	808.7000		
208	853.7125	808.7125		
209	853.7250	808.7250		
210	853.7375	808.7375		
211	853.7500	808.7500		
212	853.7625	808.7625		
213	853.7750	808.7750		

214	853.7875	808.7875	PRPD - WQEY620
215	853.8000	808.8000	
216	853.8125	808.8125	PRPD - WQEY620
217	853.8250	808.8250	PRPD - WQJX789
218	853.8375	808.8375	
219	853.8500	808.8500	
220	853.8625	808.8625	
221	853.8750	808.8750	
222	853.8875	808.8875	Guaynabo Mun - WQBY333
223	853.9000	808.9000	
224	853.9125	808.9125	Tren Urbano - WPPX592
225	853.9250	808.9250	
226	853.9375	808.9375	Tren Urbano - WPPX592
227	853.9500	808.9500	PRPD - WQFG484
228	853.9625	808.9625	
229	853.9750	808.9750	PRPD - WQEY620
230	853.9875	808.9875	

5.7 Assignment Statistics

Maximum field strength for co-channel operation is 5 Dbu

Maximum field strength for adjacent channel operation is 25 Dbu

Total number of channels assigned 150

Total number of unassigned channels 75

5.8 Expansion of Initial Allocation

In the event that the allocation for any Region becomes depleted, the Region Review Committee shall meet to make further allocations to said Region. Should this occur, the applying agency or entity shall submit the proper license and coordination applications with all applicable fees, as in any other licensing request. Allocations will be made based on the initial frequency allocation plan as mentioned above, taking into consideration the channels which were returned to the reserve pool.

5.9 Prioritization of Applicants

A very simple method of prioritization has been chosen for use in this Region. As there is no unmet spectrum requirement, there appears to be no great need for prioritization. In order to facilitate future problems which may arise, the following rating system shall be used.

Prioritization shall be done according to a final score, based on a applicant criteria. The highest score, in points, shall be given priority in a situation where spectrum is insufficient to fulfill the needs of all.

Public Safety Agencies . . . . . .2 points

Public Services Agencies . . . . . .1 Point
Multi-agency systems . . . . . .2 Points
Single Agency/Jurisdiction Systems. . . . . .1 Point

5.10 Appeal Process

At any time, any applicant may appeal an allocation, rejection, or any limits placed on a particular application for any reason. The appeal process has two levels' the Region Review committee, and the FCC. An applicant who decides to appeal a rejection should initiate that appeal immediately upon notification of rejection. In the event that an appeal reaches the FCC, their decision will be final and binding upon all parties.

5.11 The Region Planning Committee

CHAIRPERSON:

NAME:	Ferdinand Cedeño Rivera
AGENCY AFFILIATION:	Highway and Transportation Authority
ADDRESS:	Roberto Sánchez Vilella Building De Diego Avenue Santurce, Puerto Rico
PHONE NUMBER:	(787) 729-1532

REGION 47 PUBLIC SAFETY
COMMUNICATIONS PLAN
CHECK LIST

1- COVER PAGE – IDENTIFIES REGION

2- CHAIRPERSON – NAME, ADDRESS, PHONE NUMBER AND SIGNATURE. [PAGE 34].

3- COMMITTEE MEMBERS – NAMES, ORGANIZATIONAL AFFILIATION, ADDRESS, PHONE NUMBERS. [PAGE 34]

4- SUMMARY OF MAJOR ELEMENTS OF THE PLAN. [SEE TABLE OF CONTENTS]

5- GENERAL DESCRIPTION OF HOW SPECTRUM IS ALLOTED AMONG USERS. [PAGE 6]

6- EXPLANATION OF HOW THE REQUIREMENTS OF ALL ELIGIBLES ARE CONSIDERED AND MET. [PAGE 3]

7- EXPLANATION OF HOW ELIGIBLES FARE PRIOTIZED IN AREAS WHERE NOT ALL ELIGIBLES MAY RECEIVE LICENSES. [PAGE 33]

8- EXPLANATION OF HOW THE PLAN HAS BEEN COORDINATED WITH ADJACENT REGIONS. [PAGE 11]

9- DESCRIPTION OF HOW THE PLAN PUT SPECTRUM TO BEST POSSIBLE USE BY;

   I. REQUIRING SYSTEM DESIGN WITH MINUM COVERAGE AREAS. [PAGE 8]

   II. ASSIGNING FREQUENCIES SO THAT MAXIMUM FREQUENCY REUSE AND OFFSET CHANNEL USE MAY BE MADE. [PAGE 11]

   III. MAKING USE OF TRUNKING. [PAGE 16]

   IV. REQUIRING SMALL ENTITIES WITH MINIMAL REQUIREMENTS TO JOIN TOGETHER ON A SINGLE SYSTEM WERE POSSIBLE. [PAGE 16]

10- EXPLANATION OF HOW INTEROPERABILITY CHANNELS ARE MANAGED. [PAGE 14]

11- “SLOW GROWTH” LANGUAGE. [PAGE 18]

12- DOES THE PLAN REFER TO **GIVE – BACK** FREQUENCIES? **YES**, SEE PAGE NUMBER 10.

13- USE OF APCO SORTING PROGRAM. [PAGE 20]

14- APPEAL PROCESS. [PAGE 33]

15- DOES THE PLAN PROVIDES FOR REGIONAL MUTUAL AID CHANNELS, IN ADDITION TO THE FIVE (5) COMMON CHANNELS. **NO**.

16- SIMILAR TO THE GENERIC PLAN DESCRIBE THE FORMATION OF THE COMMITTEE;

I. ADVERTISING – COPY SHOULD BE ATTACHED TO LEGAL NOTICE, LETTERS TO THE INDUSTRY, ETC. [SEE APPENDIX A]

II. WHO COULD VOTE? AND WHAT PROCEDURE WAS USED AFTER FIRST MEETING? [PAGE 20]

III. HOW WAS THE FINAL PLAN ADOPTED. WAS IT BY MEMBERS ATTENDING A MEETING OR MAIL BALLOT? ANSWER: BY MEMBERS ATTENDING THE MEETING. [SEE PAGE 20] COPY OF ATTENDANCE TO EVERY MEETING ENCLOSED. [SEE APPENDIX A]