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SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Report and Order*, ET Docket No. 02-98, FCC 03-105, adopted April 29, 2003, and released May 14, 2003. The full text of this document is available on the Commission's Internet site at <http://www.fcc.gov>. It is also available for inspection and copying during regular business hours in the FCC Reference Center (Room CY-A257), 445 12th Street, SW., Washington, DC 20554. The full text of this document also may be purchased from the Commission's duplication contractor, Qualex International, Portals II, 445 12th St., SW., Room CY-B402, Washington, DC 20554; telephone (202) 863-2893; fax (202) 863-2898; e-mail qualexint@aol.com.

Summary of the Report and Order

1. The amateur radio service, governed by part 97 of the Commission's rules, provides spectrum for amateur radio service licensees to participate in a voluntary noncommercial communications service which provides emergency communications and allows experimentation with various radio techniques and technologies to further the understanding of radio use and the development of new technologies. In the *Report and Order* ("R&O"), we are providing access to 5 channels in or near the 5250-5400 kHz band on a secondary basis for the amateur service, and upgrading the existing secondary amateur service allocation to primary status in the 2400-2402 MHz band.

2. On May 2, 2002, the Commission adopted a *Notice of Proposed Rulemaking* ("NPRM") in response to three *Petitions for Rulemaking* submitted by the National Association for Amateur Radio ("ARRL"). The first of these petitions requested that a secondary allocation to the amateur service be made in the 135.7-137.8 kHz and 160-190 kHz bands to permit experimentation in the Low Frequency ("LF") range. The second petition requested a secondary amateur allocation in the 5250-5400 kHz band to enhance amateur emergency communications and experimentation when propagation conditions are not favorable in the 3500 kHz and 7000 kHz bands. The third petition requested an upgrade to primary status for the existing secondary amateur allocation and a new primary allocation for the amateur-satellite service in the 2400-2402 MHz band to protect existing amateur operations from future

commercial systems which may utilize the band.

135.7-137.8 kHz and 160-190 kHz Bands (RM-9404)

3. While we agree that amateur experimentation in the 135.7-137.8 kHz and 160-190 kHz portions of the LF spectrum could serve to increase the pool of individuals having knowledge of LF transmissions, we conclude that such operations would pose the potential for harmful interference to systems protecting and controlling the national power grid. Therefore, we find that a new amateur allocation in the LF range of the radio spectrum is not justified when balanced against the greater public interest of an interference-free power grid. Further, we find that the opportunity to experiment with LF operations provided to amateur radio operators under our part 15 rules and through our experimental licensing process, while less attractive to amateur operators than their own proposal, provides the appropriate means for such use in light of the compelling uses in the band.

4. We disagree with ARRL's and the amateur operators' assertions concerning the consideration we should accord incumbent part 15 use in these bands in deciding whether to provide an allocation for amateur services. Our decision must be based upon the facts at hand and our evaluation of any potential changes to the spectral environment due to our decision. In evaluating whether new operations should be added to a band, licensed or not, we must consider the potential for interference conflicts between the operations. While unlicensed Power Line Carrier ("PLC") operations have no protection status, they provide a vital public service. Therefore, we disagree with amateur comments that we should not consider the impact on unlicensed operations when making spectrum allocation decisions.

5. We note the significant potential for interference between the proposed amateur operations and the incumbent PLCs. ARRL concedes that amateur operations and power lines with attached PLCs would have to be separated in order to prevent interference. We find that separation distances on the order of 950 meters would be necessary to protect the PLCs from interference. We also find that this distance, coupled with the larger-than-expected number of PLCs potentially impacted by this proposed allocation, increases the likelihood that a PLC-equipped powerline will be close enough to an amateur station to receive interference. We will not jeopardize the

reliability of electrical service to the public.

6. We believe that the utility companies have raised a valid concern that an allocation to the amateur service could result in the need for PLCs to modify or cease their operations to avoid causing interference to amateurs. Amateur operators have expressed concern that there may be interference to their operations from the power lines and from PLC devices. While it appears that other techniques could be used to control the power grid, we find that the utility companies have come to rely on PLC systems for monitoring and control of the power grid, and that the alternatives suggested may not be as effective, and would be costly. We are persuaded that the costs of replacing PLC systems would be significant, would be disruptive to the public, and are not justified merely to open this band to amateur use on a secondary basis.

7. We decline to make an allocation to the amateur service in the LF spectrum at this time. We do believe there is potential for some limited operation in these bands under individual experimental licenses. Operations at LF under our experimental license program will allow amateur use to be coordinated with utility companies on a case-by-case basis, and allow empirical data to be developed on the sharing possibilities in this band for future consideration. In addition, amateurs may still make use of the 160-190 kHz band under our part 15 rules, which are much more restrictive, and therefore more protective of PLCs, than the limits proposed in the *NPRM*.

5250-5400 kHz Band (RM-10209)

8. We believe that frequencies in the 5250-5400 kHz range may be useful for completing disaster communications links at times when the 3 and 7 MHz bands are not available due to ionospheric conditions, and appreciate the desire of the amateur radio community to assist with disaster communications. At the same time, since the majority of the affected users are Federal government licensees with homeland security responsibilities, we give considerable weight to the concerns NTIA has expressed about the potential for interference to these users. Thus, we conclude that it is not reasonable to grant ARRL's original request for the whole of the 5250-5400 kHz band. NTIA has reviewed its assignments and has found that five channels are lightly used and could be used on a secondary basis by amateur stations. While we recognize that these five channels will not give the amateur service the 150