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In the Matter of Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite Service Use	)	IB Docket No. 98-172 RM - 9005 RM - 9118

COMMENTS OF BP COMMUNICATIONS ALASKA, INC

BP Communications Alaska, Inc. ("BP"), by its attorneys, responds to the Notice of Proposed Rulemaking ("NPRM"), DA 98-2231, released September 18, 1998, concerning the Federal Communications Commission ("Commission") proposal to redesignate the 17.7-19.7 GHz frequency band, implement blanket licensing of satellite earth stations in the 17.7-20.2 GHz, and allocate additional spectrum in the 17.3-17.8 GHz frequency bands for broadcast satellite service use.

Introduction

BP is in the business of oil production. The company uses its assigned 18 GHz channels in Alaska for terrestrial microwave systems to provide a vital communication link between 19 oil well pads that are used by BP in the

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production of oil in the Prudhoe Bay area. This area is divided into two sectors. The Western Operating Area is controlled by BP, and the Eastern Operating Area is controlled by ARCO. If the Federal Communications Commission ("Commission") implements this proposal to accommodate satellite services, it will effectively make unusable part of the 18 GHz spectrum from the Fixed Services ("FS") sector because BP will not be able to operate its FS systems as a co-channel licensee with satellite systems. The electromagnetic interference from the new co-channel licensees will severely disrupt BP's communication system, significantly degrading BP's ability to command and control communications between the well pads. This loss of reliable communications will thus prevent BP from effectively responding to hazardous situations, and may increase the risk of an environmental disaster.

BP understands that a growing demand for spectrum continues to challenge the Commission, and the entire telecommunications industry. However, it is inappropriate for the Commission to redesignate channels within the 18 GHz spectrum that BP currently relies on to satisfy its demanding communications requirements for the exploration and development of oil reserves in the Prudhoe Bay area, an activity vital to national interests. Accordingly, BP believes that emerging services within the Fixed Satellite

Service ("FSS") category should be required to share spectrum with other FSS services that are currently available.

BP is primarily concerned that the Commission does not completely understand the fact that the 18 GHz band has become a critical asset to the oil industry, and other users of fixed communications. The band is used by licensees for campus and local service links, interconnection, backbone, and video distribution. The 18 GHz band has also been a growth and relocation zone for cellular and private users who have been displaced by the reallocation of spectrum to the "emerging technologies" band. BP believes that the proposal set forth in the NPRM will prevent further access to spectrum needed by FS licensees for future growth.

Analysis of the Proposal

The Commission, through this NPRM, proposes to reduce the total spectrum available to FS licensees by over 50 percent, by eliminating the co-primary status the FS community currently enjoys. This reduction of available spectrum would require FS point-to-point licensees to share bandwidth with point-to-multipoint video distribution services licensees. There is currently no requirement that these two incompatible types of operations share the same spectrum. As a result, the frequencies available to FS point-to-point licensees would be significantly reduced,

because coordination with video distribution licenses is practically impossible in populated areas. Point-to-multipoint video operations use multidirectional or omnidirectional antennas in order to reach the maximum number of subscribers with the fewest "hub" stations. Use of such antennas severely reduces the ability of FS users to operate anywhere in the vicinity of a video distribution service. In contrast, FS point-to-point licensees generally use high directional antennas, allowing the co-existence of several licensees in close proximity to each other.

Additionally, since video distribution services only require one-way frequencies, the frequencies paired with the one-way frequencies would not be available to FS point-to-point services. The result would be that several frequencies would become unusable in areas where video distribution services are provided. Because these bands become unusable, the ultimate outcome of this proposal would be a net loss of frequencies available for FS point-to-point operations.

BP has related concerns about the Commission's proposal to make terrestrial operations in the 18.92-19.16 GHz FS spectrum secondary to satellite operations. The Commission's reasoning behind this change is to eliminate sharing with ubiquitous satellite earth stations. However, this change would cause a constructive loss of many of the

available return channels for FS operations. Although FS licensees will still be assigned these channels, they will not be able to utilize the channels in the 18.55-18.8 GHz band like they normally would as a co-primary user, due to the uncertainty of continued use of the frequencies caused by their secondary status. The 18.55-18.8 GHz band is the return portion of paired channels, and the reallocation of the upper part of the pair to secondary status results in the effective loss of the lower band as well.

Likewise, needed spectrum would become unusable if the 19.26-19.3 GHz frequency range is assigned secondary status, because use of the paired band of 17.7-17.74 GHz is hindered. This spectrum is effectively made unusable because ubiquitously deployed Broadcast Satellite Service ("BSS") earth stations cannot share frequencies with FS licensees. The possibility of using these channels for paired frequencies would be eliminated, given the financial disincentive against purchasing expensive radios that may be subjected to interference and forced to cease operating without recourse.

BP takes come comfort in the NPRM proposal to grandfather existing FS systems. However, BP is concerned that certain antennas of such grandfathered systems would most likely be subject to continual interference from satellite systems, causing a degradation in the performance

of these systems. There is a likelihood that FS receivers will lose synchronization due to this interference. The potential for this type of interference can be significantly increased by the design of BP's well pads, especially since simulations have shown that metal and glass buildings typical of such operations act as reflectors of RF energy. BP cannot afford continuous and abrupt system outages, because it relies on its 18 GHz communications system to control operations, and monitor the safety of its employees in the Prudhoe Bay area.

Moreover, future systems will be assigned secondary status, and the grandfathering proposal will only protect current FS systems. This will prevent necessary modifications to any of these systems, and prevent future growth in BP's vital oil operations.

Conclusion

If the Commission implements this proposal, it will have an immediate negative effect on the manner in which BP operates its communications system in the Prudhoe Bay area. BP estimates that a substantial portion of the frequencies it uses to link its well pads will be adversely effected. FS licensees like BP that have come to rely on these 18 GHz channels, should not be forced to concede vast amounts of spectrum, and invest additional large amounts of capital simply because other technologies come along. These other technologies should be assigned spectrum that corresponds to the type of service they offer, without displacing vital existing operations. BP, therefore, believes that these new FSS services should be assigned frequencies used by other FSS services.

Respectfully submitted,

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