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Federal Communications Commission
Office of the Secretary

CONTEL

May 15, 1990

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Domestic Facilities Division
Satellite Radio Branch

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room L-18
Washington, D.C. 20554

Re: American Satellite Company
d/b/a Contel ASC
Authorization for ASC-2
File No. 1801-DSS-MP/ML-89

34-DSS-MP-90

Attn: Cecily Holiday
2025 M Street, N.W.
Suite 6324

Dear Ms. Searcy:

American Satellite Company, d/b/a Contel ASC ("Contel ASC"), by its attorney, hereby seeks authority to make a minor modification to the design of the satellite known as ASC-2. Contel ASC proposes herein to modify the C-band coverage pattern of the satellite so that service can be provided to Hawaii on both polarizations. As shown below, grant of this request is appropriate and would serve the best interests of Contel ASC's customers and the public.

Contel ASC was originally authorized to construct, launch and operate ASC-2 in 1983.¹ The spacecraft is a hybrid satellite that is equipped with six wideband Ku-band transponders, 12 narrowband C-band transponders, and six wideband C-band transponders. Construction of the satellite as originally authorized was completed in 1986. The satellite is presently being refurbished in preparation for launch aboard a Delta II launch vehicle in spring, 1991.²

1. See American Satellite Company, 94 F.C.C. 2d 39 (1983).

2. The polarization sense as well as two of the Ku-band transponders on the satellite are being modified at the
(Footnote Continued)

ASC-2 as presently designed is capable of providing service into Hawaii at C-band only on one polarization. Until recently, this fact was not of significant concern to Contel ASC because of the orbital location to which the satellite was assigned, i.e. 83° W.L. Acceptable quality service cannot be provided into Hawaii at C-band from this orbital location. However, on March 2, 1990, the Commission reassigned ASC-2 to 101° W.L. From this location, ASC-2 can provide quality C-band services into all 50 states.

In light of ASC-2's new orbital assignment, Contel ASC believes it would be appropriate to modify the design of the satellite so that C-band services can be provided to Hawaii locations on both polarizations. As discussed in Appendix A, the modification as proposed is a relatively simple one that will cost approximately \$600,000 and can be accomplished without impact to the satellite's launch schedule. As further discussed in the Appendix, the proposed modification will not result in any undue interference into the operations of adjacent satellites, since (1) C-band service into Hawaii from this spacecraft is already authorized on one polarization, and (2) the same types of services will be provided on both polarization senses.

Yet modification of the satellite as proposed will yield real benefits for Contel ASC's customers and for the public. Once ASC-2 is on station at 101°, Contel ASC will transition the traffic it presently carries on Westar IV at 99° to its new satellite. As Contel ASC has previously advised the Commission, Contel ASC has a considerable amount of traffic on Westar IV, ³ which satellite is scheduled to reach end of life in late 1991. Having the ability to provide Hawaii service on additional ASC-2 transponders will greatly facilitate the transition of service from Westar IV to ASC-2 and thus should mean less likelihood of service disruptions for Contel ASC's Westar IV customers.

The proposed modification will also serve the greater public interest by permitting the more efficient use of the orbital location to which ASC-2 has been assigned. Unlike other orbital locations further east in the arc, the 101° orbital location enables a satellite to provide quality

(Footnote Continued)

same time in accordance with Commission's Order and Authorization released March 2, 1990 in the file number captioned above (DA90-280).

3. Contel ASC owns nine transponders on Westar IV, and owns or provides services to more than 21,000 earth stations that operate with Contel ASC's capacity on this spacecraft. See Application of American Satellite Company d/b/a Contel ASC in the file number captioned above.

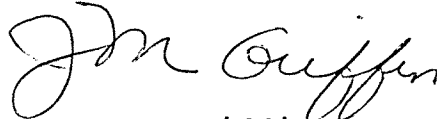
C-band services to Hawaii. The proposed modification will recognize and promote the full utilization of this significant capability, maximizing the cost effectiveness of the ASC-2 satellite without affecting its launch schedule.

For these reasons, Contel ASC believes that grant of this request to modify the design of ASC-2 will serve the public interest. Contel ASC asks that the Commission grant this request as quickly as possible, but no later than August 1, 1990. As discussed in Appendix A, the modifications proposed must be completed before reassembly of the satellite begins on or about October 1, 1990. Reassembly must commence at that time if the launch of ASC-2 is to remain on schedule.

Please direct all questions and correspondence regarding this request the undersigned (direct dial: 383-8704).

Respectfully Submitted,

American Satellite Company
d/b/a Contel ASC



By: Joan M. Griffin
Assistant Secretary-
Contel ASC

JMG/smd

APPENDIX-A

Technical Note on the proposed ASC-2 Modification to Increase Coverage to Hawaii

The modification to the spacecraft consists of a change to the horizontal polarization combiner and the vertical polarization divider, both of which are connected to their respective feedhorns. The divider needs to be changed from a 2:5 to a 2:6 divider to downlink to Hawaii. In both cases, the feedhorns are already place, since the spacecraft serves Hawaii on the vertical uplink and the horizontal downlink. In addition, the modification requires the replacement of an existing component and does not require the addition of any major component or any major modification to the spacecraft assembly. The cost of this modification will be \$638,000.

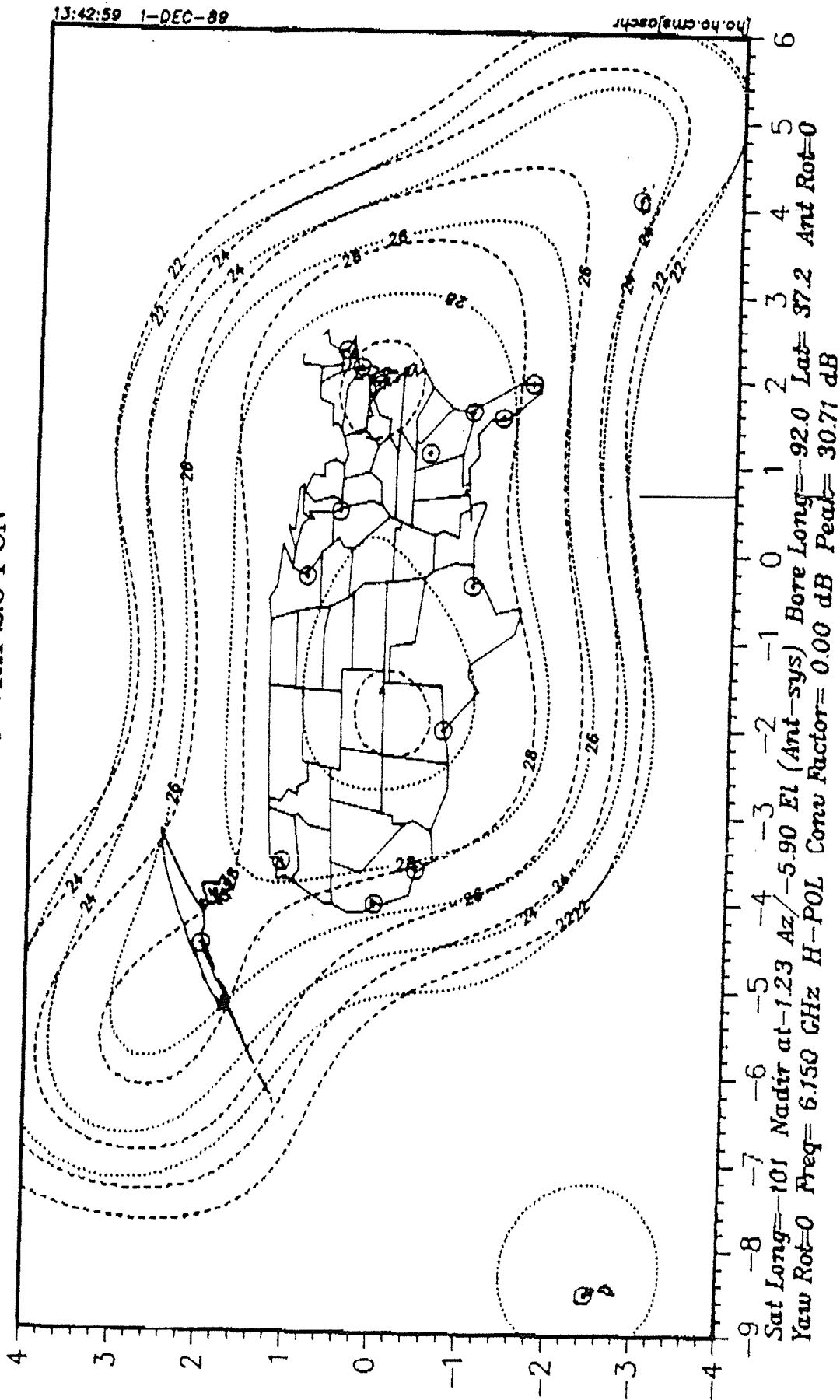
The modification needs to be completed before the spacecraft is completely reassembled. The reassembly is scheduled to commence in October, 1990.

Attachments 1 and 2 compare the coverage patters of the ASC-2 vertical downlink and the horizontal uplink computed before and after the proposed modification is made. As can be seen, this modification would do nothing to increase the expected level of adjacent satellite interference for services that are in CONUS. In fact, the peak EIRP of the transponders will be reduced by .5 dB since some of the power will be diverted to the Hawaii port. The types of

services to be offered on this pole will be identical to the services already authorized by the Commission on ASC-2, so that the operating levels of the signals transmitted from and to Hawaii on this polarization will be identical to those used on the opposite polarization and should serve as no interference threat to adjacent satellite operators.

ASC C-Band Antenna Directivity Contours (dBi)

H-POL Uplink Beam
Dashed: with 2:5 PCN
Dotted: with 2:6 PCN

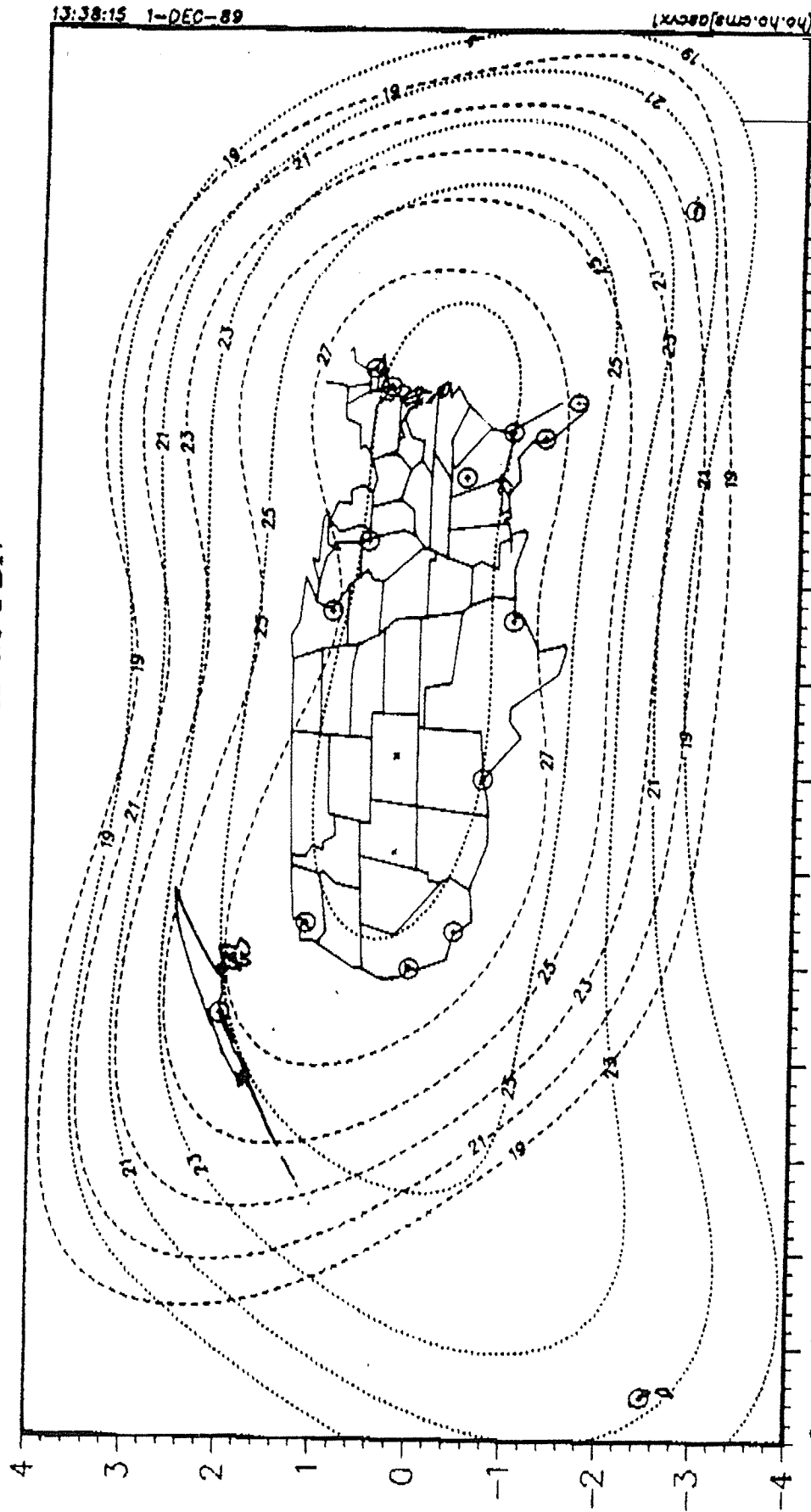


ASC C-Band Antenna Directivity Contours (dBi)

V-POL Downlink Mode-1 Beam

Dashed: with 2.5 PDN

Dotted: with 2.6 PDN



Sat Long = -101 Nadir at -1.23 Az / -5.90 El (Ant-sys) Bore Long = -92.0 Lat = 37.2 Ant Rot = 0
 Yaw Rot = 0 Freq = 3.950 GHz V-POL Conv Factor = 0.00 dB Peak = 27.69 dB