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July 26, 1994

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

VIA HAND DELIVERY

William F. Caton, Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Re: Notice of Written *Ex Parte* Presentation
GN Docket No. 93-252

Dear Mr. Caton:

On behalf of SunCom Mobile & Data, Inc. ("SunCom") and pursuant to Section 1.1206(a)(1) of the Commission's Rules, this is to transmit two copies of a written *ex parte* presentation, made this morning prior to the release of the Sunshine Agenda in connection with the Commission's meeting scheduled for August 2, 1994. The enclosed letter from undersigned counsel transmitting letters from MLJ and MTA/EMCI was transmitted to the Private Radio Bureau. Please associate these materials with the record in the above-referenced proceeding.

If you have any questions, please contact undersigned counsel directly.

Sincerely,

Thomas Gutierrez
David A. LaFuria
Counsel for SunCom Mobile & Data, Inc.

Enclosures

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VIA HAND DELIVERY

Martin D. Liebman
Ronald F. Netro
David Furth
Private Radio Bureau
Federal Communications Commission
2025 M Street, N.W., Room 5202
Washington, D.C. 20554

Re: SunCom Mobile & Data, Inc.
GN Docket No. 93-252

Messrs. Liebman, Netro and Furth:

On behalf of SunCom Mobile & Data, Inc., this is to submit two letters to be included in the record of the referenced proceeding from MTA/EMCI and Moffet Larson & Johnson, Inc. These companies have recently written to SunCom to express support for SunCom's proposal to create regional 220 MHz networks. We believe they provide insightful and thoughtful comment which would be valuable to the referenced proceeding.

We are submitting a copy of this letter and attachments to the file in connection with this proceeding to be included in the record.

Sincerely,

Thomas Gutierrez
David A. LaFuria
Counsel for SunCom Mobile & Data, Inc.

Enclosures

MTA
MALARKEY-TAYLOR ASSOCIATES
EMCI
COMMUNICATIONS CONSULTANTS

Supporting Innovation
In Communications

July 25, 1994

Mr. Warren Havens
President
SunCom Mobile & Data, Inc.
2509 Stuart Street
Berkeley, California 94705

Dear Mr. Havens:

We have been retained by SunCom Mobile & Data, Inc. ("SunCom") to conduct an independent review of SunCom's proposal to create a wide-area 220 MHz network. We feel that this proposal represents a viable and appropriate method of ensuring the development of these licenses into an effective competitor in the mobile radio marketplace. The following factors have led us to conclude that SunCom's proposal is a reasonable means of ensuring the development and operation of these licenses, for both traditional dispatch services and for a low-cost alternative to cellular and ESMR systems.

- ***The proposal provides a stronger competitor to other mobile radio services***

  In the past two years, several companies have made large-scale acquisitions of mobile radio licenses in order to provide digital mobile radio services. These networks are being constructed to enter the consumer market and to provide mobile telephone service to customers who comprise the traditional market for mobile radio services. While these companies are not abandoning the customers who constitute the traditional users of these services, it is apparent that the traditional user segment will not be the marketing focus of the digital SMR operators. A consolidated operation such as that contemplated by SunCom should be able to provide a low-cost, competitive alternative for traditional SMR customers. Individual licensees with five channels in a single market would not be in a position to compete with these other mobile operators. As discussed below, five channel license holders will have limited ability to generate revenues, inadequate marketing resources, limited access to regional services, and other disadvantages that might render these systems economically unviable.

- ***Low cost cellular or ESMR alternative***

  The use of macro-cells will allow the development of the system in each market at a low capital cost relative to ESMR and cellular service. Because of the propagation characteristics of these frequencies, transmitter sites can be located outside of downtown areas, leading to cost savings on transmitter site leases. The systems will also have larger coverage areas for each transmitter site. Consequently, service can be offered to potential customers at a lower cost as well. In addition to dispatch services, it is likely that SunCom can successfully market interconnected services to their commercial customers.

- ***Mobile radio service requires intra-market and regional consolidation of channels***

  Industry consolidation will be necessary for growth because of the limited capacity associated with a 5 KHz channel bandwidth and allocations of five channels. Five channel systems have inherent disadvantages when compared with competitive systems in their markets that typically have far greater numbers of channels. The limited capacity of these systems means limited revenue-generating capabilities. Despite limited ability to generate revenues, these systems will nonetheless bear fixed operating costs that may result in the systems being economically unviable.

  In addition, virtually all mobile services have consolidated to at least a regional level. Such consolidation is necessary to meet the demands of customers and potential customers for mobile services. MTA/EMCI market research has indicated that businesses and consumers' travel patterns do not respect the local coverage patterns of local mobile radio systems. In addition, we have learned that even in cases where the subscriber has only a limited need for service outside their local area, they place a high priority on this occasional use. Any mobile systems that are unable to provide at least regional coverage are at a serious competitive disadvantage.

- ***Consolidation helps attract the necessary capital***

  The key tasks facing all 220 MHz license holders include the construction of the network, obtaining financing, and obtaining low-cost subscriber equipment. The ability of operators to access the debt and equity markets is greatly enhanced through consolidation. Major lenders are the types of lenders most likely to have experience and expertise in the mobile radio industry. These lenders have typically established minimum amounts that they are willing to lend. Equity capital is also more likely to be attracted to an organization that is displaying serious intent to complete the project as well as providing a scale of operations that can provide appropriate rates of return. A phased implementation of the project over a period of five years would also be easier to finance by allowing financing to be obtained as needed.

- ***Comparable construction regulation is essential to competitive viability***

  A consolidated network operating in multiple regions such as that being proposed by SunCom will be significantly less risky to build under a phased multi-year implementation plan. The reduction of this risk may be a necessary condition for obtaining funding for the project. The large scale of the proposed system requires making substantial capital expenditures as well as supporting early operating losses. If capital expenditures can be made over a longer period of time, during which revenues can be expected to increase, it will reduce the initial capital requirements and operating losses and allow construction to proceed at a pace consistent with growth in demand for the network's services. A construction period that is similar to other mobile radio services will help allow SunCom's proposed

network to be developed at a similar rate to other large, consolidated mobile radio networks currently being constructed.

- ***Capital efficiencies will be available to the consolidated systems***

The industry will need to ensure access to competitively-priced transmission and subscriber equipment to compete in the market for mobile services. Small, individual operators of these systems will not be able to avail themselves of the discounts typically granted to larger operators who have negotiating clout with equipment manufacturers. The ability to have such leverage is critical because of the very limited number of type accepted manufacturers of 220 MHz equipment.

SunCom's proposal will also help ensure that manufacturers have an adequate number of orders to profitably manufacture the equipment. If equipment manufacturers do not receive a sufficient number of orders for this equipment, they may discontinue production of 220 MHz equipment.

In addition, the construction cost of these systems is reduced through coordination of network construction and operation of multiple groups of five channel allocations. Capital efficiencies will also extend to subscriber equipment. The success of the 220 MHz systems in competing with other mobile radio operators will depend, in part, on being able to provide subscribers with equipment that is priced similarly to competitive systems.

- ***Operating efficiencies will be available to the consolidated systems***

The proposal will allow SunCom to avail itself of operational efficiencies that will result in lower operating costs needed to provide service to subscribers. These efficiencies extend to the three principal areas of operating costs: technical, sales and marketing, and general and administrative. Operating cost efficiencies can include such technical costs as transmitter site rental, technical salaries, and utilities; sales and marketing costs such as sales salaries and advertising; and general and administrative costs such as salaries, billing, office rental, customer service, and other costs. The larger scale of the SunCom organization would also allow the creation of centralized support functions for purchasing, training, management information systems, and other important functional areas. Operators of individual five channel allocations would either not be able to properly develop and staff these functions or would have access to these functions only through a management company.

- ***A stronger marketing organization and presence***

SunCom's proposal will allow the creation of a centralized marketing organization. Marketing considerations will be a critical factor in determining if 220 MHz service is able to compete in the future wireless marketplace. Centralization of this function will allow the company to develop an effective marketing program. In particular, the centralization of marketing functions will allow SunCom to identify and target sales to companies likely to

use these services in many different markets. Centralized marketing will also allow SunCom to hire experienced marketing personnel to support the company's goals, develop improved sales techniques, produce higher-quality promotional materials, advertise more and utilize a broader variety of advertising media.

- ***Similar forces drove the consolidation of other mobile services***

  It is only logical that the same factors that are driving consolidation in the cellular, paging, and SMR industries would also impact the 220 MHz industry. Most of the factors discussed above were important drivers of the consolidation that has taken place in the other mobile radio industries. Non-wireline cellular operators, for example, have found that regional footprints, centralized management functions, and capital and operating cost efficiencies have been needed to allow them to compete against the wireline operators. In this case, however, consolidation may be a necessary precedent for developing and providing the service.

An additional impact on the industry that the proposal helps alleviate is avoiding the possibility that 220 MHz systems will not be constructed. If large numbers of individual licensees are unable to construct their systems, it is unlikely that the returned licenses would have substantial value if they are subsequently auctioned. If the systems were not constructed when the licenses were issued in a lottery, investors will not be willing to pay any significant amounts for a set of frequencies that has already failed to develop. Conversely, the success of SunCom or other 220 MHz operators would support the potential future value of these frequency allocations.

We have therefore concluded that SunCom's proposal represents a logical and viable means of developing mobile radio systems in the 220 MHz frequency band. If you have any questions about our analysis, please feel free to call us.

Sincerely,
MALARKEY-TAYLOR/EMCI

Andrew D. Roscoe
Chief Executive Officer

Andrew R. Gefen
Vice President, Financial Services

ADR/ban
cc: Tom Gutierrez, David LaFuria

MLJ

MOFFET, LARSON & JOHNSON, INC.
CONSULTING TELECOMMUNICATIONS ENGINEERS

July 22, 1994

Mr. Warren Havens, President
SunCom Mobil & Data, Inc.
2509 Stuart Street
Berkeley, CA 94705

Dear Mr. Havens:

re: SunCom Mobile & Data, Inc.'s
FCC Petitions incorporated
in Docket 93-252

Pursuant to your request this letter is a technical assessment of part of the rule waiver request by SunCom Mobile & Data, Inc. ("SunCom") in the above-referenced proceeding. Specifically, we have addressed SunCom's request that Section 90.725(f) of the Commission's rules be modified to allow a 5-year construction period with benchmarks and other restrictions.

In presenting its plan for a national communications network formed from individual 220 MHz local licensees ("Request For Rule Waiver" as amended in SunCom's comments in Docket 93-252, dated February 1, 1994), SunCom has described the size and complexity of its network. (A summary plan of the SunCom 220 Mhz network, dated July 21, 1994, provided to MLJ, is attached hereto.) Because of the time anticipated in coordination, design, and construction of the planned network, SunCom set forth a proposed "Extended Construction Schedule". This schedule, which proposes construction benchmarks through the fifth year, appears to reasonably meet the time requirement to fully engineer and construct such a large multi-regional network. However, the time established by the FCC for construction of stations by 220 MHz non-nationwide licensees, who compose SunCom's consortium, is only eight months from initial grant of license (see 47 CFR 90.725(f), recently extended to December 2, 1994).

It is apparent that the Commission has allowed licensees of other Private Radio services five-year periods to complete construction. For example, Section 90.629 of the Commission's rules may allow licensees of Specialized Mobile Radio Systems an "extended implementation period" up to five years for wide-area or trunked systems. This rule states that extensions may be granted on a case-by-case basis, as determined

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by the time needed "to plan, approve, fund, purchase, construct, and place in operation" a "coordinated or integrated wide-area system. SumCom's network proposes both wide-area and trunked technology, according to its FCC submissions.

In view of the above points, SunCom's proposal for a multi-year construction period appears to be consistent with both its construction requirements and the FCC's conditions for other radio services in similar situations. In addition, SunCom's goal to achieve lower-cost service for vehicular mobile voice and data communications, as described in the attached summary plan, generally appears to be technically sound. This is due to the superior signal propagation characteristics of the 220 MHz frequency band for terrestrial communications and SunCom's "macrocell" approach to coverage.

I trust this information will be helpful in supporting your filing before the Federal Communications Commission.

Sincerely,

John C. Kean
Engineering Manager

cc: Thomas Gutierrez, Esquire
David LaFuria, Esquire

SunCom
Mobile & Data, Inc.

July 21, 1994

220 MHz Network

The following describes the essential elements of the SunCom Network design, which is consistent with[1] the description provided to the FCC in the SunCom "Request for Rule Waiver" submitted on February 1, 1994, as modified in the SunCom "Comments" in Docket No. 93-252 submitted on July 20, 1994.

1. 100 or more markets, most of which are in the top 100 MSA's.

2. In most cases, 4 or more licenses per market (commercial trunked 5-channel pair licenses).

3. In all but several of the largest MSA's, only 1 to 3 base stations needed for suitable coverage.

4. In most cases--especially for primary, initially-built stations--each base station built would have a minimum of 20 channels (4 of the 5-channel licenses, with all 20 channels trunked).

5. Construction schedule: A market would be considered "constructed" as far as meeting the "benchmarks" below when SunCom constructs: (i) in markets within the top 75 MSA's, the lesser of three licenses (15 channels) or all the channels under management; and (ii) in markets beyond the top 75 MSA's, the lesser of two licenses (10 channels) or all the channels under management.

Benchmark	Markets Constructed
1.5 years	20%
2.5 years	40%
3.5 years	75%
5.0 years	100%

6. To begin with, services would be mostly mobile voice for half-duplex fleet dispatch use. Over the years, increasing percentages of services would include mobile voice for general public use (half- and perhaps full-duplex), interconnect, and mobile data. All planned services would utilize vehicular installed mobile radio units, not lower-power hand-held or transportable units. Integrated voice and data would be an important mid-range goal. Voice messaging and paging services are planned. There would be no "roaming" surcharges among SunCom markets for any SunCom subscriber.

[1] Consistent in all material respects, but not identical: some variations due to evolution of the Network plan, numbers of licenses signing up, and other details given above.

SunCom Mobile & Data, Inc. 2509 Stuart Street, Berkeley, CA 94705 Phone: (510) 841-2220 Fax: (510) 841-2201

Unique handsets designed for SunCom are being planned--more attractive and functional than current generation units. Rapid "loading" is planned via aggressive pricing, attractive not only to traditional dispatch users but also to cellular-type mobile telephone users.

7. Equipment suppliers would be those who can provide the best products at viable prices for the above services via current and subsequent generations of equipment.

8. Current licensed sites were selected over three years ago and are not best for 220 "macrocell" coverage.[2] Some licensed sites are no longer available. Relocation of licenses would be required in most cases for viable "real-life" cost-effective coverage. "Short spacing" agreements will probably be required in numerous cases. [3]

9. Expensive downtown sites would not be required in many cases. Outlying nearby sites, on higher elevation, are more suitable, and are available for constructing a new tower, to serve SunCom's 220 (and MAS) network needs, and for commercial lease. This would lower cost of coverage and service--essential for 220 to compete successfully.

10. Primary site(s) would be built first, for covering the most important parts of each Network market. After coverage is determined by sufficient real-life operation, subsequent sites would be constructed to expand and fill in coverage. Eventually, some "mini" sites may be built for special purposes such as filling in gaps in coverage between major sites, or covering highway corridors, which would employ some combination of: a minimum of channels, including only 5; re-use of primary "host" site channels; lower power; directional antennas; compact equipment shelters mountable on towers, etc. (such as employed in various cellular "mini cells" or "cell extenders").

11. Site selection for base stations in each market (each area with contiguous coverage "cells"), for which relocation of most licenses will probably be required, would be performed before construction of any site. However, after the Primary site (see par. 9, above) is in operation and real-life results assessed, further relocation may be required for achieving continuous but cost-effective coverage, and to adjust the channels per site based upon updated traffic-demand projections for each site.

12. Traffic from sites that provide overlapping coverage would be linked by microwave or leased lines.

13. PSTN LEC interconnection are planned in each market or region, similar to cellular, for intra-LATA landline call terminations and originations.

14. Direct connect to a selected IXC is planned in each market or region, when justified by sufficient near-term-projectable interconnect service with long distance requirements.

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[2] Fixed MAS services, in the 900 MHz range, will also employ a "macrocell" approach of similar "cell" sizes and similar market-coverage plan as mobile 220 services. Thus, SunCom expects to be able to utilize the same base station sites for both services in most cases.

[3] If SunCom manages the licenses regarding which such "short spacing" agreements are required, the agreements should be easily obtained. If other parties manage such licenses, SunCom should still be able to negotiate such agreements, as these other management companies will probably want SunCom's licensees to agree with their own relocation "short-spacing" needs.

15. Direct connection between the 220 mobiles on SunCom's system and SMR or cellular mobiles in the same market area may be provided in some cases via equipment such as some vendors have available or can develop for SunCom which connects and switches calls between mobiles on such different mobile services (i.e., without PSTN interconnection).

16. 220 technology is very new and currently there are only limited vendors and first generation units. Only SEA equipment is in service to any substantial degree at this time. (Uniden, UPS, and EF Johnson equipment is currently in service at only a small number of base stations.) 220 should be deployed in stages, not by building hundreds of licenses at once (within a year or less) with such limited first-generation equipment and vendor choices. Successive generations should be developed and put in service based on operational technical experience, market feedback and needs, more real vendor capability and competition, etc.

17. Dual-mode 220-mobile satellite units and services are being explored, with American Mobile Satellite Corporation ("AMSC") and AMTA, which would provide coverage nationwide: similar to AMSC's cellular-satellite dual-mode phones and service program.

18. Sectorization of some sites with sufficient channels may be feasible, to increase capacity. This would be explored.

19. Local operations (system operations and marketing) would be independent of existing SMR and cellular operators, except for easily rescindable performance-based contracts. SunCom does not want its 220 operation to be controlled to any significant degree by companies with competing services who may promote 220 only secondarily or may be or become inclined to have 220 inhibited so their primary services aren't jeopardized.