

METRO MOBILE

ORIGINAL

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APR 17 1990
CONNECTICUT
SITING COUNCIL

April 16, 1990

Connecticut Siting Council
136 Main Street
Suite 401
New Britain, Connecticut 06051

Attention: Joel M. Rinebold, Executive Director

Re: Metro Mobile CTS of New London, Inc. - Colchester

Dear Mr. Rinebold:

Metro Mobile CTS of New London, Inc. ("Metro Mobile" or the "Company") plans to install cellular antennas and related equipment at the existing tower facility owned by the State of Connecticut, Department of Public Safety ("DPS") in Colchester, Connecticut. Please accept this letter as notification, pursuant to R.C.S.A. Sec. 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Sec. 16-50j-72(b).

The existing facility is a 320' self supporting lattice tower located on an approximately 150' x 150' parcel on Windham Avenue in Colchester. Metro Mobile plans to install nine antennas on the tower.

The addition of Metro Mobile's antennas and equipment to the DPS tower site does not constitute a modification as defined in C.G.S. Sec. 16-50i(d) because the general physical characteristics of the DPS facility will not be significantly changed or altered. Rather, Metro Mobile's planned use of the DPS facility falls squarely within those activities which explicitly do not constitute a modification to an existing tower, as set forth in R.C.S.A. Sec. 16-50j-72(b).

First, the height of the existing facility will be unaffected. Three whip-type transmit antennas, Antenna Specialists Model ASPE-973, will be mounted on three 6' sidearms at the 180' level of the tower. The transmit antennas will extend upward approximately 14' from the mounting points. Six panel type receive antennas, Kathrein Model 740 028, will be mounted on the tower legs at the 170' level of the tower. The receive antennas will extend upward approximately 3' from

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the mounting points. Thus, Metro Mobile's antennas will extend no higher than the 194' level of the 320' tower.

Second, the proposed addition will not expand the site. Metro Mobile's electronics equipment will be installed in a prefabricated equipment shelter which the Company will locate at the site within the currently fenced in area. No strengthening of the tower is necessary in order for the tower to support the additional loading.

Third, the proposed addition will not increase the noise levels at the existing facility by six decibels or more. Except during construction, the only noise associated with Metro Mobile's equipment will be from air conditioning, when in use.

Fourth, Metro Mobile's additional antennas will not increase the total radio frequency electromagnetic radiation power density measured at the tower site boundary to a level at or above the State Department of Environmental Protection standard. The cumulative power density from currently approved users of the tower is summarized in the attached table which was initially submitted by the DPS in its exempt modification notification dated May 26, 1989. As this table shows, approved users are operating at a level of approximately 0.306% of the standard at the base of the tower. A worst case calculation at the base of the tower indicates Metro Mobile's operation would contribute 0.0432 mW/cm² to the total cumulative power density. 0.0432 mW/cm² is 1.48% of the standard for cellular frequencies (870 to 880 MHz) of 2.92 mW/cm² resulting in a total site exposure level of approximately 1.786% of the standard.

For the foregoing reasons, Metro Mobile respectfully submits that the planned addition of the Company's antennas and associated equipment to the existing DPS facility constitutes an exempt modification under R.C.S.A. Sec. 16-50j-72(b).

Respectfully yours,



David S. Malko, P.E.
Manager, Engineering and Regulatory Services

DSM:ds
Attachment

cc: F. Duncan Green, Jr., First Selectman
Town of Colchester

POWER DENSITY ANALYSIS

RADIO SYSTEMS DATA

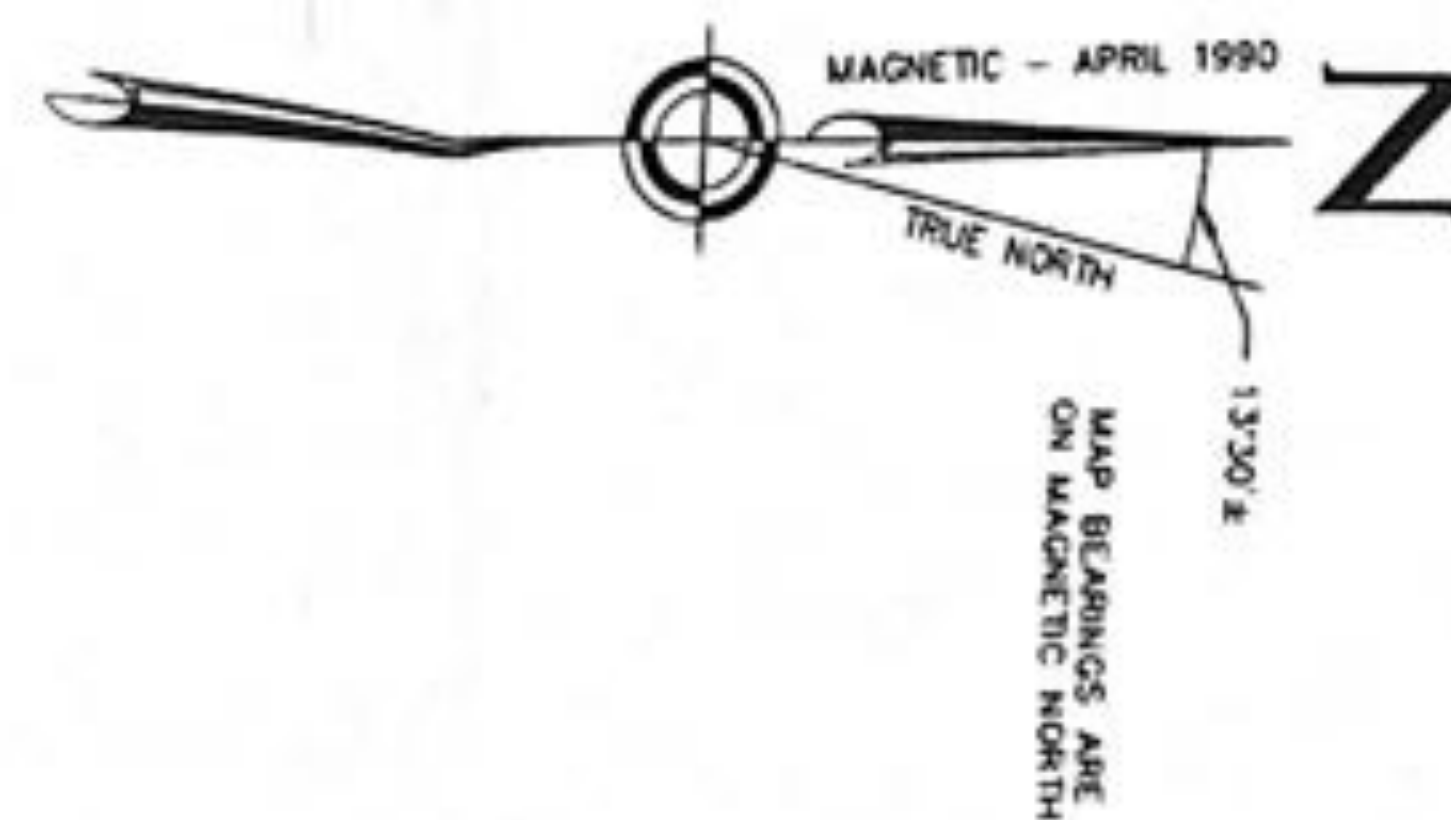
FILE NAME: 50-P
SITE NAME: COLCHESTER
TOWER HEIGHT: 320 FEET

PREPARED BY: T-CAS
ON DATE: 05-11-1989

No	OPERATING FREQUENCY (MHz)	TRANSMIT POWER (WATTS)	ANTENNA HEIGHT (FEET)	LIMIT OF SAFE EXPOSURE (mW/cm ²)	AT THE BASE OF THE TOWER	
					POWER DENSITY (mW/cm ²)	PERCENT OF LIMIT
1	2141.200	1	316	5.000	0.0000009	0.0000172
2	35.000	300	220	1.000	0.0005309	0.0530908
3	154.665	100	214	1.000	0.0001870	0.0187032
4	45.600	100	220	1.000	0.0001770	0.0176969
5	42.250	300	320	1.000	0.0002509	0.0250937
6	45.860	300	320	1.000	0.0002509	0.0250937
7	153.935	50	240	1.000	0.0000744	0.0074352
8	35.000	300	210	1.000	0.0005827	0.0582674
9	35.000	300	180	1.000	0.0007931	0.0793084
10	2138.000	1	90	5.000	0.0000106	0.0002115
11	2133.200	1	90	5.000	0.0000106	0.0002115
12	6700.000	1	80	5.000	0.0000134	0.0002677
13	867.500	350	320	2.892	0.0002928	0.0101231
14	867.500	350	320	2.892	0.0002928	0.0101231
15	18700.000	1	110	5.000	0.0000071	0.0001416
16	822.500	0	320	2.742	0.0000000	0.0000000

TOTAL PERCENT OF SAFE LIMIT FOR ALL 16 RADIO SYSTEMS = 0.3057847

- NOTES: 1. THE 'LIMITS OF SAFE EXPOSURE' HAVE BEEN DETERMINED IN ACCORDANCE WITH THE SAFETY LEVELS DEFINED IN ANSI STANDARD C95.1-1982, ISSUED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE AND ADOPTED BY THE CONNECTICUT LEGISLATURE INTO THE CONNECTICUT GENERAL STATUTES, SECTION 22a-162, IN 1984.
2. THIS ANALYSIS ASSUMES THE FOLLOWING WORST CASE CONDITIONS.
- A. ALL ANTENNAS HAVE ISOTROPIC (UNIFORM) RADIATION PATTERNS, WHICH PROVIDE HIGH ILLUMINATION OF THE GROUND.
- B. ALL TRANSMITTERS ARE ON SIMULTANEOUSLY.



File No. 043183-2

Approved by:

Scale: 1"=20'