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ENGINEERING EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
REPLACEMENT DIGITAL TRANSLATOR
HEARST-ARGYLE PROPERTIES, INC.
STATION WMTW-DT, POLAND SPRING, MAINE

Hearst-Argyle Properties, Inc. (hereafter, Hearst), is the licensee of Station WMTW-DT, Poland Spring, Maine. Station WMTW-DT operates on Channel 8 with effective radiated power of 29.8 kW and antenna height above average terrain of 612 meters. Channel 8 is the former analog channel for WMTW. With the commencement of digital operation on channel 8 after the transition, complaints of none, or poor, reception of WMTW-DT were received, principally, from the heavily populated Portland, Maine area. The facility proposed in the instant application for a Replacement Digital Translator (RDT) service station for Portland, when implemented, should materially alleviate the reception problems. Operation is proposed on Channel 26, with effective radiated power of 6.2 kW. A non-directional antenna is proposed.

ELIGIBILITY

The underlying purpose of the RDT service is to afford digital stations an opportunity to replace lost analog service that may have occurred in transitioning to digital. Part of the requirements governing this service is that no, or only de minimis, extensions of service occur. The accompanying Figure 1 shows the calculated Grade B contour for the analog WMTW, Channel 8, operation, and the normally protected 51 dBu contour for the proposed Portland RDT. Clearly, no extension of coverage will occur from implementation of the instant proposal.

To assist in making determinations of gains and losses that occurred as a result of the transition, the FCC commissioned the preparation of maps that compare digital to analog coverage for all stations. While, in the instance of WMTW-DT, no losses are depicted in the Portland area, the station has received numerous phone complaints of lost, or poor, reception. This situation has arisen for many stations that returned to the original VHF analog channel for post transition digital operation.

In many cases, poor outdoor antenna installations, and failures to re-scan the converter boxes were determined to be the problems, but a number of complaints were attributable to situations involving indoor antenna installations with less than adequate available WMTW-DT signal strength. Unfortunately, in many such instances, the affected viewers are foreclosed from installing outdoor antennas, particularly those residing in multi-story, multi-family, dwelling units.

The undersigned was provided a log that was kept of post transition reception complaints of the WMTW-DT signal. More than 200 complaints were logged. The log noted the nature of the complaint and the resolution. Postal zip codes of the callers, who deigned to provide such information, also, were logged. The undersigned culled through and identified the postal zip codes for unresolved reception complaints. These are the locations that were deemed to, generally, have inadequate WMTW-DT signal strength for satisfactory reception by the complainants. Figure 2 is a map of postal zip code zones that highlights, by means of beige tinting, the locations of unresolved WMTW-DT reception complaints, i.e., lost WMTW-DT service relative to the former WMTW analog service.

The proposed UHF translator would provide service to a substantial portion of the areas in, and close to, Portland that have lost service. The proposed Channel 26 RDT would help fulfill the purpose set forth in the NPRM. Based on the 2000 Census, the net service that would be made available by the proposed RDT is to 293,940 persons.

PROPOSED OPERATION

The proposed RDT, Channel 26, antenna will be mounted atop a time and temperature sign that is located atop the penthouse on the roof of a building in downtown Portland. The NAD '27 geographic coordinates for the site are: 43° 39' 26" North Latitude; 70° 15' 38" West Longitude. The site elevation is 24.4 meters above mean sea

level, and the building height with the penthouse and sign is 59 meters above ground level. The RDT, Channel 26, antenna will increase the overall height above ground by 5.2 meters, i.e., to 64.2 meters. Since the overall structure height increase will be less than 6.1 meters, FAA clearance is not required according to TOWAIR

A Scala., 8-bay, Model SL-8, Channel 26, omni-directional, horizontally polarized antenna will be employed. The antenna has a maximum power gain of 11.4 dBd. The antenna radiation center will be 85.9 meters AMSL. A translator with an average power output rating of 500 watts (-3.01 dBk) will supply energy to the antenna by means of a 15.2 meter length of ERI, type LDF 5-50, coaxial cable that has a loss of 0.45 dB at Channel 26 (542-548 MHz). After taking into account the transmission line loss and the antenna's power gain, the maximum effective radiated power will be 7.94 dBk (6.2 kW)

ALLOCATION CONSIDERATIONS

The undersigned has conducted studies using the TV Interference and Spacing Analysis Program as implemented by Mr. William Meintel. A Sunblade processor was used. The short-cut title for the program that was used was "tv_process_dlptv_pt" and was set to use the 2000 Census. The post-transition database was used. No changes were made to any of the FCC default settings. A simple mask filter was specified.

The study that was conducted reviewed the possible impact of the proposed facility on 21 other facilities, including licensed stations, authorized construction permits, and pending applications for full service digital, Class A, digital and analog LPTV and translators. The Channel 26 operation proposed herein would not cause interference to 20 of the 21 facilities that were within the culling radius for consideration by the computer algorithm. The remaining station, WTEN, Albany, NY, Ch. 26, was determined would

receive new interference from the proposed Portland RDT impacting 0.007 % of the net served population within the WTEN 41 dBu contour. This is well below the "not to exceed 0.5 % maximum limit" that is permitted. The proposal complies with FCC allocation requirements.

Insofar as interference received is concerned, as a secondary service relative to the primary status of full service and Class A stations, Hearst agrees to accept such interference as may occur to its proposal.

ENVIRONMENTAL IMPACT CONSIDERATIONS

The building on which the antenna will be located is the location of the WMTW-DT studio. Rooftop access is available only via the elevator penthouse, and entry is available only to authorized personnel. The following discussion first addresses exposure levels from the proposed operation at uncontrolled locations, which is then followed by a discussion relative to controlled location exposure situations.

The proposed antenna will be mounted atop the electric time and temperature sign that sits atop the building's elevator penthouse. The sign, looking down from the top, is of triangular cross-section. The proposed antenna will be placed in the center of the triangle with the radiation center 12.5 meters above the building rooftop. For the purpose of determining compliance with the adopted guidelines for maximum permissible exposure (MPE), the rooftop is here being considered as available to the general public, although, in actuality, access is limited to authorized personnel. However, in recognition that not all persons who may have access to the rooftop could be aware of the prospect for overexposure, the FCC's more stringent requirements for general population exposure will be considered.

Due to the location of the proposed antenna, and the area occupied by the elevator penthouse, the closest point on the rooftop that a person could be to the antenna is a horizontal distance of 3.4 meters. The base of the antenna would be vertically spaced 10 meters above the rooftop.

In the interest of conservatism, all radiation from the antenna is considered to emanate from the bottom of the antenna. Again, in the interest of using conservative assumptions, a target located 2 meters above the rooftop has been selected for determining the maximum power density level that could be anticipated from the proposed operation. The 2-meter above ground level target represents the approximate head-height of a standing individual. The closest rooftop location to the antenna that a person could be located is such that the slant range from the antenna base to a target 2-meters above the rooftop is approximately 8.7 meters. The depression angle below the horizontal plane to the closest target point is 67.0° below the horizontal plane.

The most remote rooftop spot from the antenna that a person could stand is a horizontal distance of 24.7 meters. The depression angle below the horizontal plane to a target that is two meters above the rooftop level at this "farthest possible location" point, is 17.9°. The slant range distance from the bottom of the antenna to a target that is 2 meters above the rooftop is 26.0 meters. Within the applicable depression angle range from 17.9° to 67.0° below the horizontal plane, the maximum vertical plane relative field for the proposed antenna is 0.22. Thus, the maximum radiation exposure that can occur is to a person at the closest possible location with a slant range distance of 8.7 meters. Using the OET Bulletin 65, Edition 97-01, recommended equation, the maximum power density that can occur is 0.13 mW/cm^2.

The MPE at Channel 26 for the general public is 0.36 mW/cm^2. Thus, the proposed installation will pose no threat of overexposure to anyone on the rooftop, or within the building below the rooftop. Also, there are no close-by buildings of a height comparable to the height of the proposed antenna that could result in exposures that could exceed the MPE. No question arises concerning possible overexposure to the general public.

As to worker exposure concerns, the following is relevant. The ladder that is affixed to the penthouse wall is the only means for gaining access o the top of the elevator penthouse, and to the electric time and temperature sign and, ultimately, to the proposed antenna. Any work that is required atop the elevator penthouse, which includes the periodic replacement of burnt-out bulbs on the time and temperature sign, will require pre-coordination so that, either excitation to the RDT antenna can be terminated, or a reduction in power can be arranged, depending on the particular location of the work effort. In addition, a radiation hazard warning sign will be placed on the wall adjacent to the ladder. In this manner overexposure to workers will be avoided.

The proposed RDT facility operation for Hearst does not require an Environmental Assessment.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 5, 2009

Bernard R. Segal, P.E.

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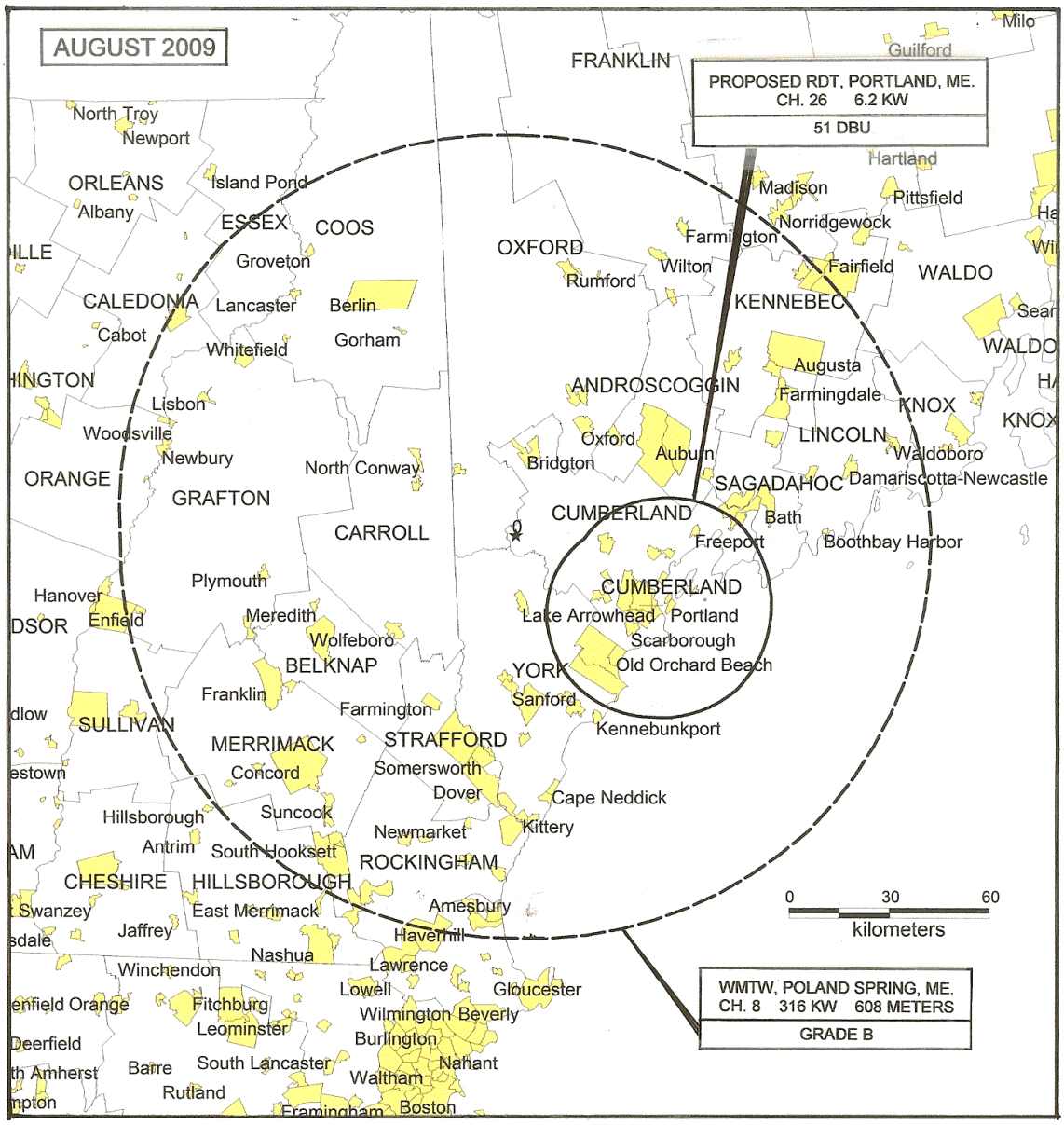
FIGURE 1



PROPOSED RDT 51 DBU CONTOUR
AND WMTW GRADE B CONTOUR

HEARST_ARGYLE PROPERTIES, INC.
PORTLAND, MAINE, RDT CH. 26 6.2 KW

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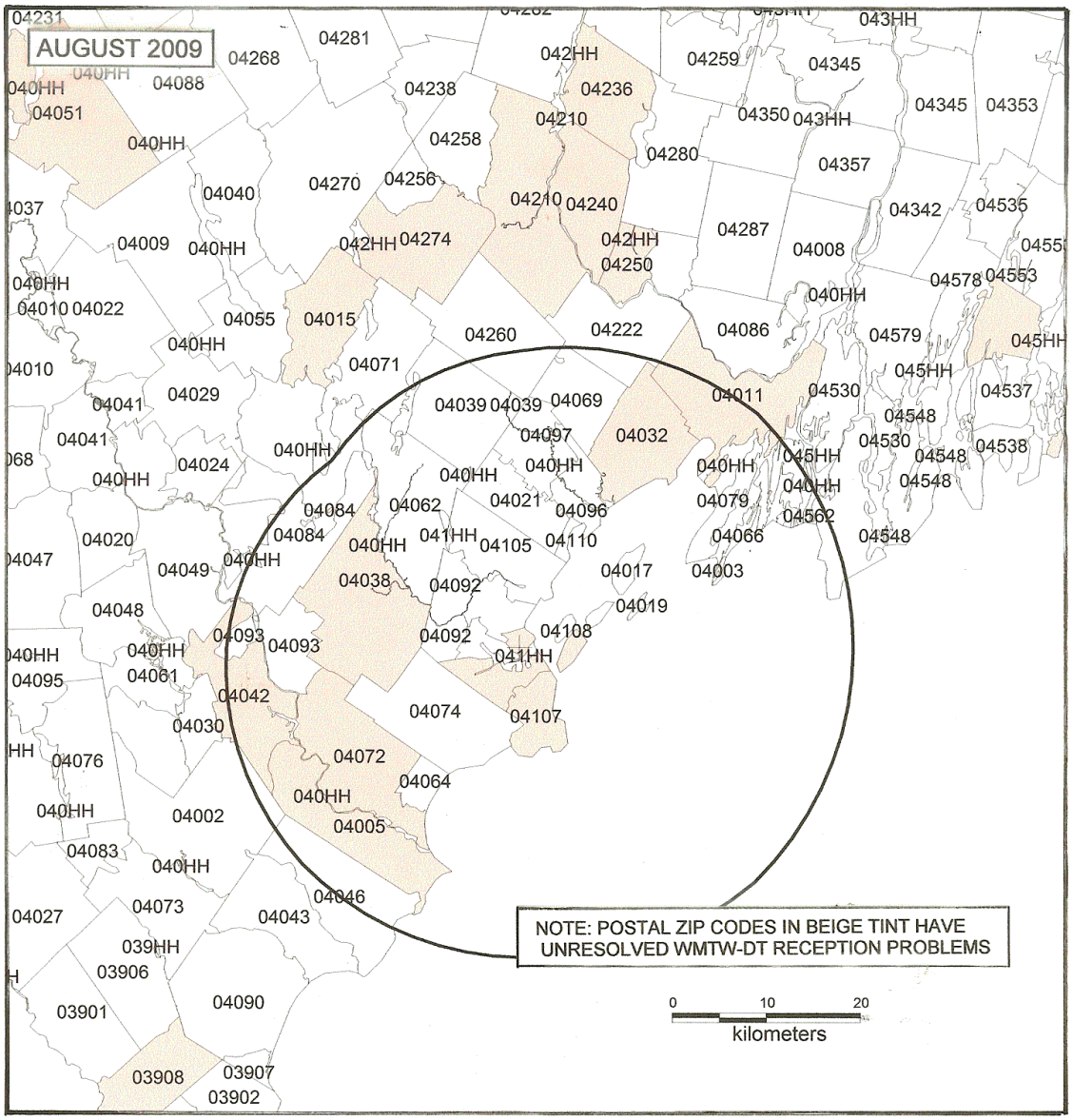
FIGURE 2



PROPOSED RDT 51 DBU CONTOUR AND POSTAL ZIP CODES WITH UNRESOLVED WMTW-DT RECEPTION PROBLEMS

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