

ENGINEERING EXHIBIT
Incentive Auction Channel Reassignment

**Application for License to Cover
Auxiliary Antenna Construction Permit
Digital Television Station**

prepared for

Hearst Stations Inc.
WCVB-TV Boston, MA
Facility ID 65684
Ch. 33 922 kW 350 m

Hearst Stations Inc. (“*Hearst*”) is the licensee of digital television station WCVB-TV, Facility ID 65684, Boston, MA. Reassignment of WCVB-TV from Channel 20 to Channel 33 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (“*CCRPN*”, DA 17-317, released April 13, 2017). A Construction Permit (“*CP*”, file# 0000034567) authorizes construction of the WCVB-TV main post-auction facility on Channel 33. A separate CP (file# 0000071503) authorizes WCVB-TV to utilize an auxiliary antenna on its reassignment Channel 33 at a separate site from the authorized main facility.

The WCVB-TV auxiliary antenna facility has been constructed and *Hearst* herein seeks a license to cover the CP. The initial WCVB-TV operation on reassignment Channel 33 has commenced with the subject auxiliary antenna (see file# 0000072233, granting extension of the main facility CP for reassignment Channel 33).

The WCVB-TV auxiliary antenna facility has been constructed pursuant to the technical parameters specified in the CP, except that elliptical polarization was implemented in lieu of horizontal polarization. The resulting increase in vertically polarized ERP is permitted by §73.1690(c)(4) to be specified on a license application. However, electronic filing provided by the FCC’s Licensing and Management System does not provide opportunity for the applicant to change polarization.

Hearst requests that the license record specify elliptical polarization rather than horizontal polarization as authorized in the CP. The effective radiated power, nondirectional pattern, antenna location, and antenna height as constructed match the values authorized in the CP. A summary of the technical values which differ from those authorized in the CP is provided below.

	<u>CP File# 0000071503</u>	<u>As-Built Values for License</u>
Polarization	Horizontal	Elliptical

The antenna provides 17.7 percent vertical polarization¹ for WCVB-TV, where the maximum horizontally polarized nondirectional ERP is 922 kW and the maximum vertically polarized nondirectional ERP is 163 kW. The vertically polarized component does not exceed the horizontally polarized component at any azimuth.

Chesapeake RF Consultants, LLC

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¹The antenna provides for adjustable vertical polarization. The antenna provides separate inputs for horizontally polarized and vertically polarized radiators, which permits each of the television stations that share the antenna to individually choose how much vertical polarization to utilize.