

TECHNICAL STATEMENT

KPHX, PHOENIX, ARIZONA, 1480 KHZ, 0.95 KW-D, 0.32 KW-, DA-1
CEDAR COVE BROADCASTING, INC.

FCC FORM 301

APRIL 2018

The Technical Statement supports a minor change application to the licensed operation (BZ-20030109AGS) for KPHX(AM), 1480 kHz, Phoenix, Arizona, facility ID 13790.

Proposed Transmitter Location

Due to the loss of the property at its currently licensed tower site, KPHX seeks to relocate to an existing transmitter site on the southeast side of Phoenix, Arizona. This site is the currently licensed tower site for KSUN(AM) Phoenix, Arizona, facility ID 21430. The site is a privately owned 10 acre site located in Phoenix. KPHX is currently operating during the daytime hours only under a low power (90 watt) engineering STA, BSTA-20171101ACN, so that it can continue to serve the community of Phoenix until this new proposed licensed operation can be authorized and constructed.

The proposed tower is an existing 129.5 meter (425 feet) overall guyed tower, FCC registration number 1219664. The tower is located at N33°-23'-21", W111°-59'-53", NAD 27. The electrical height of the tower will be 227.5 degrees, or 128 meters (420 feet) at 1480 KHz. A new "drop wire" antenna will be installed from the larger tower and be utilized as "Tower #2". The wire will be supported from a new insulated guy wire to be strung from about the 30 meter level above ground from the taller existing tower #1, down to a guy point on the ground at an azimuth of 218 degrees from Tower #1. The new drop wire will be 40 degrees electrically and 22.5 meters (73.8 feet) from

the base of Tower #1. The new drop wire will be strung from this new guy wire vertically and will be 55.1 degrees in electrical length at the operating frequency of 1480 Khz. It will be 31 meters in electrical length and base of the wire will be elevated 1.7 meters above the ground. This new drop wire will serve as Tower #2 of the proposed directional antenna system being proposed for KPHX(AM). The same directional pattern will be used for both the daytime and night proposed operation of KPHX(AM). Daytime power will be 0.95 Kilowatt, and the night power will be 0.32 Kilowatts at night.

The proposed ground system will consist of a 15 meter (50 foot) round ground screen located at the base of the tower, with an additional 120, evenly spaced, 128 meter long (420 feet) long radials at the base of the tower. This is the current ground system being used by KSUN(AM) on 1400 KHz with 1 KW-U, ND. Additional copper ground screening will be added around the base of the Tower #2 drop wire feed, 24.4 meters round (80 feet) for additional grounding.

A diplex operation by KPHX(AM) at the KSUN(AM) tower site is being proposed. De-tuning and filter networks will be utilized to protect the current non-directional operation of KSUN(AM).

KPHX(AM) currently operates with 5 KW-D and 0.5 KW-N, with different directional patterns day and night (DA-2). KPHX(AM) is proposing to operate with 0.95 KW daytime, and 0.32 KW nighttime with the same directional pattern day and night (DA-1) at the KSUN(AM) tower site.

Blanketing

There are 82 persons residing within the 1000 mV/m contour based on the 2010 U.S. Census data. A map is attached showing the 1000 mV/m coverage area for the daytime operation. Since there are no occupied homes within the immediate area around the tower site, no blanketing interference issues are anticipated. The proposed Night operation of 320 watts will obviously have a much lower blanketing coverage area since it will operate with the same directional pattern.

Community Coverage

The present and proposed daytime field strength contours are attached with an exhibit. As indicated, the proposed daytime 5 mV/m contour will completely encompass the city limits of Phoenix. FCC M-3 ground conductivity data was used in determining the extent of the coverage contours. The nighttime interference free contour study is also attached.

Daytime Allocation Study

A daytime allocation study was made utilizing FCC figure M-3. Daytime field strength contours for the proposed 0.95 KW (950 watts) daytime directional operation were calculated in accordance with Section 73.183. Based on this analysis, the proposed facility will comply with all relevant allocation criteria. An exhibit is attached showing all of the pertinent co-channel and adjacent channel stations of interest for both the present and proposed operations.

Nighttime Allocation Study

A nighttime allocation study was made to determine the limiting stations for the proposed operation with 0.32 KW (320 watts) using the same Daytime directional operation. Also attached are several exhibits showing the protection to all pertinent co-

channel and adjacent channel stations of interest. Also, the calculations for the nighttime interference free contour (NIF). A coverage map shows the proposed NIF coverage contour is also attached (5.583 MV/M). The new NIF contour will cover approximately 60% of the city of Phoenix.

Ground Level Radiofrequency Electromagnetic Field Exposure and Environmental Statement

A fence restricting access is already installed at the base of the tower to assure that persons on the property outside the fenced area will not be exposed to radiofrequency field levels in excess of those recommended by ANSI. Using Figures 2 and 3 of Supplement A to OET Bulletin 65, the worse case interpolated distance at which the electric and magnetic fields would fall below ANSI guidelines is less than 3 meters. Both the proposed 0.95 KW operation of KPHX and the current 1.0 KW operation of KSUN were utilized for the study. The current fence is 6 meters (20 feet) square centered around the base of the tower. RF radiation signs are posted on each face of the fencing. A new fence will be constructed around the base of the new “drop wire” feed system to prevent access. This new fence will be 3 meters square (10 feet). This is in compliance with the standards specified in Section 1.1307(b) for human exposure to radiofrequency radiation. The station will cease operation when maintenance work is performed on the tower to insure safety to tower personnel.

The applicant feels that that existing tower should be categorically excluded from any further environmental processing under the provisions of 47 CFR 1.1306 and 1.1307, since the tower has been existence since 1983, and that the only changes will be to add a

new guy wire, drop wire (which is consistent with the current guy wires in use), some filter and network tuning boxes located at the base of the tower.