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HAND DELIVER

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Paulette Laden, Esq.
James Shook, Esq.
Hearing Division, Room 7212
Federal Communications Commission
2025 M Street, N. W.
Washington, D.C. 20554

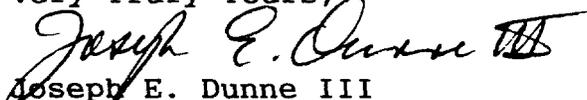
RE: Calvary Educational Broadcasting Network, Inc., MM Docket No.
92-122, Poplar Bluff, Missouri

Dear Ms. Laden and Mr. Shook:

On behalf of Calvary Educational Broadcasting Network, Inc. (Calvary), and in compliance with the Presiding Officer's Order, 92M-795, released July 20, 1992 (as modified by the Presiding Officer on October 20, 1992), I am herewith enclosing copies of the exhibits which Calvary will offer into evidence at the hearing the above-referenced matter, scheduled to commence on November 17, 1992.

Should any questions arise concerning this matter, please don't hesitate to give me a call.

Very Truly Yours,


Joseph E. Dunne III
Attorney for Calvary Educational
Broadcasting Network, Inc.

JED:gmc:A64
enclosure

xc: The Honorable Joseph Stirmer
Administrative Law Judge (Hand Deliver)
Nina Stewart

INDEX OF EXHIBITS

- Exhibit 1. Testimony of Charles A. Lampe
- Exhibit 2. Testimony of Donald Stewart
- Exhibit 3. Testimony of Nina Stewart
- Exhibit 4. Testimony of Joseph Harrison
- Exhibit 5. FCC Report of Clark Poole
- Exhibit 6. FCC Report of M. Moffitt and K. Raines
- Exhibit 7. Petitions in Support of KOKS

KU3-26MIDIT 1

KOKS-FM, POPLAR BLUFF

EXHIBIT 1

TESTIMONY OF CHARLES A. LAMPE

FEDERAL COMMUNICATIONS COMMISSION

Docket No. 92-122 Exhibit No. KOKS 1

Presented by KOKS

Identified 11/12/92

Disposition: Received 11/12/92

Rejected _____

Reporter B. Lord

Date _____

TESTIMONY OF CHARLES A. LAMPE

1. I have lived in Poplar Bluff approximately 40 years. I went to elementary, junior high school and high school in Poplar Bluff, and attended two years at Three Rivers Community College in Poplar Bluff. I worked for A-1 Electronics for approximately five years after I quit school, and was the Assistant Service Manager of Montgomery Ward for two years. I have owned my own business, "Charlie's TV Repair," for over 13 years. I sell TV sets and Satellite systems, and service and repair television sets, radio and two way receivers, and satellite systems.

2. I have worked as a contract engineer for several radio stations over the years, beginning with AM radio station KLID, Poplar Bluff, many years ago, for approximately a year. I have worked as a contract engineer for KJEZ-FM, Poplar Bluff, Missouri for over ten years. As KJEZ' contract engineer I maintain the transmitter and studio equipment, am on call 24 hours a day in the event of an equipment failure, and offer technical advice to the station when they request it. I also do engineering work for Hunt Broadcasting, the licensee of an AM-FM combination in Piedmont, Missouri I formerly held a first class radiotelephone license, when the FCC awarded such licenses, and am now the holder of a current general class radiotelephone license.

3. Since my job is to help cure my customer's problems with their equipment and their reception, I have sold many television sets, antennas and boosters to the people of Poplar Bluff and in

the surrounding region. Because of the difficult conditions for TV reception in the area, I am often asked to install special equipment, such as boosters, special antennas and filters, on TV sets in the area.

4. Television reception for many channels in many homes in Poplar Bluff and the surrounding area is poor. The transmitter site for channel 6 in Paducah, Kentucky is located some distance away, and the station does not put a grade B signal anywhere close to Poplar Bluff. Reception of channel 6 in this area is marginal in most instances, and channel 6 is subject, in many locations, to co-channel interference from channel 6 in Mountain Home, Arkansas. Likewise, channel 8, KAIT, from Jonesboro, Arkansas is often subject to co-channel interference from channel 8 in Carbondale, Illinois. Many people in Poplar Bluff also orient their antennas away from channel 8, which results in a weaker signal. Channel 12 in Cape Girardeau, Missouri also is a popular station in Poplar Bluff, and it too puts a very weak signal over Poplar Bluff. All channels coming into Poplar Bluff, with the exception of local channels 15 and 39, I would consider fringe or deep fringe signals.

5. Before I became involved with KOKS I had some experience with FM blanketing interference caused by Radio station KKLR in Poplar Bluff when working around its tower, and it is most pronounced on channel 6. Blanketing interference usually blanks out the channel completely, or shows in the picture as zig-zag or

herringbone lines running from the top to the bottom of the picture. A rolling picture alone is not caused by FM blanketing interference. "Ghosting" in a TV picture is not the result of FM blanketing interference. What most people describe as "snow"--a grainy or snowy picture--is not the result of FM blanketing interference.

6. FM blanketing interference is also not intermittent. You either have it or you don't, it does not occur one day and then not the next. Many of the TV sets in our area, particularly in the area close to the KOKS transmitter site, are subject to intermittent interference from the two-way radio transmissions of the Missouri highway patrol station located about a mile from the transmitter site. Unfortunately, the IF beat interference caused by the highway patrol transmissions looks on a TV set very much like FM blanketing interference, but the interference, unlike blanketing interference, only occurs when the highway patrol radios are transmitting. Many viewers in the area complained of hearing the highway patrol transmissions on their TV sets. In fact, I have received calls from people complaining of this intermittent interference from the highway patrol before KOKS even came on the air. However, this intermittent interference from the highway patrol also caused certain people to hear KOKS transmissions on their sets, even though the primary interference was not caused by the station.

7. The IF frequency of most television sets is approximately 45 MHz, with a bandwidth of 6 MHz. Many sets have Automatic Frequency Control (AFC) circuitry which searches out and locks on to the strongest frequency. KOKS broadcasts on 89.5 MHz, the highway patrol on 42.06 MHz. With IF beat interference the interference usually occurs on a frequency which is the result of the combination of the sums and differences of the two frequencies creating new frequencies. Here the frequency occurs on approximately 47.5 MHz, which is within the 5 MHz bandwidth of 45 MHz. Because KOKS is the stronger signal, its audio sometimes is heard when this sort of interference occurs, rather than the highway patrol transmissions. As I'll discuss later, much of the interference attributed to KOKS actually came from the highway patrol. Once I went to one woman's home to respond to her call before I became involved with KOKS. The interference problems, which were intermittent, were clearly not the result of the radio station. She would not believe me until I called the highway patrol station after we both saw the interference on the TV set, and had the highway patrol engineer confirm for her that the highway patrol two-way radio had just been in use.

8. I first went to work for KOKS in February, 1989 as a contract engineer. My contract is attached to this testimony in Attachment A. My job is to maintain and repair the station's studio and transmitter equipment, ensure that all the equipment is operating in accordance with FCC rules, and to be on call in

emergencies. I thought a great deal before I took the job. As I will recount below, as a TV and antenna repair man I had heard a lot about what people thought was KOKS interference. When I took the job, however, I was not responsible for dealing with any complaints about interference.

9. My major job when I started working for KOKS was trying to keep the station's antenna in repair. I knew before I came on that KOKS had problems with antenna bay fires because a friend of mine at the highway patrol had told me of seeing a fire in the antenna bays. The antenna bay fires continued, and we had reports of arcing between the antenna bays. During the summer of 1989 we had the station's four bay antenna taken down and replaced by a two bay stand-by antenna while the station's antenna was completely rebuilt. The rebuilt antenna was mounted on the tower in the fall of 1989. This antenna performed reasonably well for three or four months and then, during the rainy season, or when there were heavy fogs, we would see arcs between the various antenna bays. Once again, there were fires. This antenna was replaced with a wholly new four bay antenna. Finally, we switched to a seven bay FM antenna with exactly the same directionality and performance in October, 1991. The problem has been corrected.

10. Prior to going out with Mrs. Stewart and Mr. Stewart to the 105 people on appendix A of the FCC's list, I only made one visit to anyone's home with respect to any FM blanketing complaint.

Sometime in 1989, I believe, I'm not sure of the date, Mr. or Mrs. Stewart asked me to go out to the Hillis' house and "see if you can help these people." Mrs. Stewart made the appointment. I went to the house and was met by Mr. Hillis at the door, Mrs. Hillis was not home. Mr. Hillis took me through the house and claimed that he was receiving interference on just about everything in the house, and demanded that I fix it and fix it now. He claimed that he was receiving interference on his television, on his portable telephone, on all his computers, on the VCR, on a video game and on two television sets. I don't recall him mentioning any radios specifically, but he mentioned most everything else in the house that was electrical. I knew the station was not responsible for interference to items like VCRs and computers, and Mr. Hillis seemed to be dissatisfied with just about everything. In my experience, you had to get people with the sort of attitude that Mr. Hillis had to identify exactly what the problem was and what he wanted done. If he didn't I thought he was the sort of person who would call you up the next day with a new problem. So I asked him to write down for me exactly what was wrong and what he wanted done and said I would try my best to fix them. As best as I can recall I believe that he said he would write his problems down and mail them to me, and I left. I never heard or saw Mr. Hillis again until I saw him during the 105 home visits I made, nor did I receive a written list of his complaints.

11. Because I am a TV repairman I went to many houses in the Poplar Bluff area during this time period. I did not go, however, as a representative of or at the request of KOKS. I went to people's homes because it is my business and they called me. Mrs. Smith called me many times during 1988 and 1989 for advice, although I did not go to her house. Mrs. Smith's complaints were mostly that she couldn't get channel 6. Many of Mrs. Smith's and Mrs. Hillis' neighbors called as well, asking for advice on how to improve their reception. In almost every call the primary, and often the only complaint was the question of that person's reception of channel 6 in Paducah. The person's primary concern was their reception of channel 6, and how their antenna systems could be modified to improve their reception of channel 6. At that time I had no real suggestions. I did not, for example, know of any filters that might solve the problem except a conventional 75 or 300 ohm FM trap, which might work on all the other channels, particularly channels 12 and 8, but didn't seem to work in many cases with channel 6.

12. As KOKS contract engineer I accompanied Mr. Clark Poole, an FCC employee, during his inspection of the station in early 1989. He seemed generally satisfied with the technical shape the station was in as far as the transmitter, etc. were functioning. He did mention that the second harmonic was better than required, and was 20 dB lower than necessary. I accompanied Mr. Poole during his visit to Mrs. Smith, and waited in the car until he was

finished. He told me that Mrs. Smith was a very unhappy lady. We also discussed the problem that KOKS was providing to the reception of channel 6. Mr. Poole told me, as had Mr. Stewart, that KOKS was not responsible for curing interference to channel 6. Specifically, he told me that "we didn't need to worry about channel 6" because the grade B contour for the station stopped at highway 51, some distance east from Poplar Bluff.

13. I was also the contract engineer for the station when Mr. Tom Moffit and Mrs. Karen Raines from the FCC Field Office in Kansas City when they inspected the station in December of 1989. I did not accompany them during their inspection, although I know Mrs. Raines and have talked to her on many occasions. Mrs. Raines and Mr. Moffit called me while they were staying in town. Mr. Moffit told me that they had tried a number of filters at the Smith and Hillis house without success. Mrs. Raines told me, however, that Mrs. Smith's TV set in her basement most likely had problems with the set's tuner.

14. Sometime in late 1990 or early 1991 Mr. Stewart called me and asked me to find something that would work to restore reception to channel 6. I did some research for awhile, and seemingly found nothing that would work. After some searching I located an advertisement that came to my shop from Microwave Filter Company that mentioned FM filters and traps. I called Microwave Filter company and explained my problem and asked if they had a filter

which might work. They told me that they have one and could manufacture one to fit the need. They made a filter for which they charged \$34.95, and sent it to us. They told me that the specifications for the filter that they made would suppress the signal filtered by 60 dB. Since 3 dB suppression means that the power of the signal suppressed is halved, the filter should theoretically solve the problem.

15. The Stewarts asked me to help them on the home visits required by the FCC in early 1991. I was told there was a deadline that KOKS had to meet, and that we would have to visit the homes and cure the problem quickly because we had a number of homes to visit. At Mr. Stewart's request I ordered 160 filters, which took about three weeks to arrive. Mrs. Stewart scheduled all the visits, and both Stewarts and I went to each house. Generally Mrs. Stewart did the talking, Mr. Stewart was mainly a silent observer, and I did the work that was requested by the person in the house. Mr. Stewart told me to use only one filter per household because we might not have enough filters to go around. Mr. Stewart also told me that we had to get a least one television per house working properly, however, so we used more than one filter at a number of homes. We used more than one at the Ellis home, for example, and the Adams home, as well. Mr. Stewart also told me not to install filters on portable TV sets, defined as anything with a handle.

16. We visited Mrs. Smith's home. Mrs. Hillis was also there, although she didn't say much. She followed me around and took notes. Mrs. Smith, however, kept badgering me, criticizing what I was doing, constantly asking questions, telling me that "that doesn't look better at all," and generally acting unreasonably. I finally told her to stop badgering me, that I was there to help her and that she should let me do my job. Mrs. Smith kept complaining that she could not get channel 8 very well. Her antenna is a fixed directional antenna. It is oriented toward channel 6 and channel 12, and away from channel 8, which is south of Poplar Bluff. When I turned on her set, a Magnovox, channel 15 was terrible, the other stations were not coming in at all. The antenna lead wire, however, was not hooked up properly, which is the reason she wasn't receiving very good reception. When I hooked up the antenna wire the reception on channel 12 improved immediately. She was still not able to get channels 6 and 8. Her set had separate UHF and VHF antenna inputs, but there was only one wire running from the roof. There was no combiner hooked into the set. I tried a 89.5 trap filter on the lead wire, and wasn't happy with the result. Then, with Mr. Stewart's and Mrs. Smith's permission, changed the flat wire from the antenna to coax. I hooked up the UHF and VHF terminals. When we were finished we had gotten a good picture on channels 12 and 15. You could see channel 6, but the picture was not good. When I got on the roof and turned the antenna, at her request, you could see channel 8, but the reception was not good. At her request we left the antenna

orientation the way I found it, aimed at channels 6 and 12. Mrs. Smith asked about ghosts on channel 15, and I told her that the ghosts were because her antenna was directional, and channel 15 was not in the direction in which she oriented the antenna. I reviewed the sheet filled out by Mrs. Stewart at the Smith house and signed it there. The snow mentioned on channels 6, 8 and 15 were not the product of FM blanketing interference. Neither was the rolling in the channel 8 picture. I believe the interference to channel 8 I observed was caused by co-channel interference from channel 8 in Carbondale, Illinois, which is in the direction that the antenna is oriented. At almost every home Mr. Stewart would turn up the sound on channel 6 to see if we could hear any KOKS audio on the TV audio. There was no KOKS audio on channel 6. The only way to be absolutely sure that there is no audio on a particular channel is to use a spectrum analyzer. These are expensive instruments, and to my knowledge no one in Poplar Bluff has a spectrum analyzer that will work for TV. While I was at the Smith home I don't remember anyone asking me to repair any FM radios or any other TV sets.

17. We also visited the Hillis' home, and both Hillis' were there. Upon inspection I found the antenna lead wire in her conductors was discolored. Clearly the Hillis' had experienced a lightning strike. I tried a 89.5 trap filter on the flat lead wire from the antenna. When this didn't prove satisfactory I put coax down from the antenna to the window. The Hillis' did not want to put a notch in the window to accommodate the Coaxial cable, nor did

they want to put a hole in the wall either. I brought flat wire from the TV to the window and spliced the wire to the coax. Because the Hillis' wanted the window closed tightly there was a crimp in the flat lead wire to the TV. I don't remember if I installed a balun. I reinstalled the trap, and told Mr. Hillis to disconnect his satellite if he wanted to get channel 12. The beat pattern on channel 12 is because the 70 MHz satellite IF frequency will interfere with channel 12 reception. I was on the roof for some portion of the time, but I don't remember anyone asking us to look at any other TV set or radio. I left the lead connected to the VCR because they asked me to do that. When we left channel 12 was coming in well, channels 8, 15, 23 and 39 were coming in with snow, and channel 6 was coming in with snow and lines. The continuing problems with the reception that I observed, such as the snow and rolling lines with channel 6, was not the result of interference from KOKS. The snow and rolling lines I observed were a result of weak signal and co-channel interference from channel 6 in Arkansas. We turned up the audio on channel 6 and did not hear any KOKS audio.

18. I did visit the home of Leatha Piper, but Mrs. Piper asked me to come to her home to fix her set in late July, 1989, before I was involved in any way in helping KOKS with blanketing interference. She had her TV hooked to her VCR. If you get a marginal signal anyway, hooking up a VCR reduces the signal even more. I went to her home 4 or 5 times. she asked me if my sets

were any better, and asked me to bring one out to try. She liked the reception she got on my set better, and bought the set on August 1, 1989. Channels 8, 12, 15 and 23 had bad snow, but the interference was not FM blanketing. Channel 6 was receiving blanketing interference. To improve her reception on all channels I installed a line booster, and while this improved the reception of the other channels and specifically channel 23, it increased the interference to channel 6.

19. I have also been to the home of the Ellis', both in a business capacity and for KOKS. The Ellis' are long time customers. I went to school with their children, and have been to their house many times to service their sets over the years. In 1989, I believe, I visited the Ellis home at their request.

20. I went to their house in February of 1991 with Mrs. Stewart. We installed a filter at the VCR and a filter at the television set. The reason we installed a filter on the VCR is that they didn't wish to keep disconnecting the VCR to watch television. They seemed pleased with the improvement in their reception, and all channels were coming in well. I observed no FM interference to their reception.

21. I went to the Ellis house again in response to their call later in 1991. When I looked at the set I knew something was creating interference, but the interference was somehow related to

the booster they had installed. I disconnected the booster and the interference was removed, but the picture was snowy. The snow in the picture was not, however, the result of FM blanketing interference, but the result of poor signal strength and trying to run two TV sets. I told Mr. Ellis that he could replace the booster if he wanted, and he said he did. I replaced the booster for him. The reception on all channels was fine when I left.

22. I also visited the home of Mrs. Marie Christian. Mrs. Christian has a booster amplifier. She had two sets, a console in the living room and a portable TV set in the kitchen. She told us, however, that she was going to remodel and run all of her TV sets off the same line from her booster. I told her how she should hook up the sets and where to put the filter to cure the interference on all sets. She asked for a filter for two more of her sets, but Mr. Stewart told her that KOKS could fix one set. When we left her house the reception on all her channels was fine and there was no KOKS audio coming through on channel 6.

23. Another house I remember visiting for KOKS was the Garrison home. I installed two filters on the set and the picture quality noticeably improved. There was snow on channel 6, but again, the snow was not the result of FM blanketing interference but poor reception. Mr. Garrison was, to my way of thinking, acting very unreasonably. He kept saying that the filters messed up the picture and that we had not caused any improvement in the

picture, and being sort of nasty about it. I thought the picture improvement was noticeable. This went on for some time, Mr. Garrison claiming that the filters were actually destroying his TV reception which they clearly were not. Mr. Stewart told me to remove the filters and to leave the TV as I had found it.

24. I also visited the home of Thomas Crutchfield, who had a booster and had both his TV sets hooked up to a booster. I put a filter at the splitter. The reception on channel 12 was acceptable, and there was ghosting on channels 15 and 39. Channel 23 came in pretty well. Channel 6 did not come in well at all, but there was no KOKS audio on the channel. Mr. Crutchfield asked me if there was anything he could do to improve his reception of channel 6, and I told him to get a special antenna cut to the channel. The poor reception that I observed on Mr. Crutchfield's set was not the result of FM blanketing interference. Both the problems with channel 6 and 15 were caused by poor reception of the signal.

25. In February 1992 I was at the station when Mr. Ron Ramage and a younger fellow I beleive was Mr. Gusick were inspecting the station. Mr. Ramage mentioned to me that the plate current reading at the studio was low, and if the reading were correct the station was operating at about 64 percent of its actual power. At the studio the usual transmitter reading are taken and include the: plate voltage; the plate current; and the percentage of authorized

power the transmitter was providing. When I check, I check the transmitter at the transmitter site. There, in addition to the reading noted above, the transmitter also has a reading for transmitter power output. I always check the transmitter power output and it has always been legal while I have checked it. At the studio, the percentage of power reading has also always indicated that the station was operating within legal limits. While Mr. Ramage was there I told him that there was a warning in the Harris manual that the plate current meter reading could be incorrect if there was damage to system by, say, a lightning strike. We had had many lightning strikes at the station. I showed Mr. Ramage the manual where it said this, and he told me not to make any repairs or change anything until after he left. I called Harris, the transmitter manufacturer, while Mr. Gusick was there, and he heard me confirm with Harris that the plate current meter reading might be lower than the actual current if the system had been hit by a lightning strike. Mr. Gusick heard this. After Mr. Ramage left I replaced the diode as recommended by Harris and the plate current reading returned to normal, where it has remained ever since. The transmitter did not ever, to my knowledge, run at a power that was less or more than authorized and sanctioned by the FCC. This is shown by the percentage of authorized power readings at the studio and the transmitter power output reading at the transmitter site. KOKS had a broken meter, as the manual warned. KOKS did not run over or under power contrary to the rules. I have attached a copy

of the page from the manual I showed Mr. Ramage and a copy of my letter to KOKS about this to my testimony in Attachment B.

DECLARATION

I, Charles A. Lampe, hereby declare that the foregoing is my testimony for submission to the Federal Communications Commission in connection with docket number 92-122, that it is true and correct and given under penalty of perjury of the laws of the United States and the State of Missouri.

IN WITNESS WHEREOF, I have set my hand and seal this 26th day of October, 1992.



Charles M. Lampe

TESTIMONY OF CHARLES A. LAMPE

**ATTACHMENT A
KOKS CONTRACT WITH MR. LAMPE**

30

On this 1st day of Feb, 1989,
 Charles Lampe of Charley's T.V. Repair agrees to
 engineer the radio station KOKS-FM. KOKS-FM agrees
 to pay Mr. Lampe \$350.00 on the first day of each month
 for services up to 16 hours per month. The station
 KOKS-FM further agrees to pay Twenty-Five (\$25.00)
 Dollars per hour for each hour of service over 16 hours.
 KOKS-FM will also pay for any special equipment for maintenance
 and/or tower maintenance should it become necessary.

In return Mr. Lampe will perform routine maintenance
 and special maintenance when necessary and within Federal
 Communication Commission guidelines. Mr. Lampe will
 also notify station management of problems and/or solution
 options should it become necessary in regard to normal
 radio signal operation.

Mr. Lampe or Charley's T.V. Repair will not be responsible
 for any problems arising from pre-existing radio frequency
 interference.

The agreement may be terminated by either Charles Lampe
 of Charley's T.V. Repair or KOKS-FM radio station with
 thirty (30) days written notice.

Charles Lampe
 Charles Lampe, Charley's
 T.V. Repair

Don Stewart
 Representative, KOKS-FM

2/3/89
 Date

2-3-89
 Date

TESTIMONY OF CHARLES A. LAMPE

**ATTACHMENT B
EQUIPMENT MANUAL PAGE AND LETTER TO STATION**