and 17, 1997. (T35, p. 2) Mr. Hurst observed very good reception of the Monticello station from the hot spot both times that he observed it, and it had been reported to him that reception in the hot spot was continually good. (TR 1877-1878)

159. Mr. Hurst testified that he observed the hot spot to be two to three feet square. (TR 1877)

160. Mr. Hurst testified that, while he did not have an explanation of the cause of the hot spot on the roof of the Mediterranean Towers, he had observed other hot spots that were continuous over a long period of time in a two to three feet area. (TR 1878) Mr. Hurst considered the odds to be less than one percent of finding a reliable hot spot. (TR 1891)

161. Mr. Hurst also testified that he observed that a good quality signal of the Monticello station could be received at the hot spot on the roof of the Mediterranean Towers without the use of a filter but that from other points on the roof the use of a filter would be necessary. (TR 1887-1888)

162. Mr. Hurst also testified that the presence of a microwave audio path "dummy load" could not have been a contributing factor to the existence of the hot spot. (TR 1908)

3) October 16 and 17, 1997 observations of Independent Consulting Engineer John Hidle

163. Mr. Hidle testified that he observed the existence of the hot spot on the roof of the Mediterranean Towers on October 17, 1997, by listening to reception of the Monticello station signal without filtering directly off the air from the hot spot. Mr Hidle testified that the quality of the reception was fairly good, but not perfect, with "a slight bit" of what appeared to have been first adjacent channel interference occasionally. (TR 1923-1924) Mr. Hidle confirmed that the

Pomona translator places a strong signal over the Fort Lee translator and that the Monticello station places a strong signal over the Pomona translator. (T7, pp. 3-4)

164. Mr. Hidle testified that he searched for hidden methods of signal delivery to the Fort Lee and Pomona translators. Based upon his "careful examination" of the facilities of both translator stations, Mr. Hidle determined that: "There were no sources of audio program input observed other than that provided by the off-air reception." (T7, p. 6)

4) Perceptible delay in audio heard at the Dumont studio

165. Mr. Turro testified that some Jukebox Radio employees have told him that they have observed a brief delay between the live programming in the Dumont studio and the programming as it is heard on the air from the Fort Lee translator on 103.1 MHz. (T1, p. 9) Mr. Turro testified that the ordinary path that the Jukebox Radio programming follows, from the Dumont studio across the landline connection to the Monticello station, and then through each of the two translators and their audio processing equipment, causes this brief delay. (Ibid.) Mr. Turro stated that he has never maintained any equipment which would cause this delay artificially. (Ibid.)

166. William H. Owen, an on-air broadcaster who has worked for Jukebox Radio, testified that he had observed a brief delay between the live audio heard in the Dumont studio and the audio heard off the air from the Fort Lee translator on 103.1 MHz. (T4, p. 3)

167. David Charles Lynch, another on-air broadcaster who has worked for Jukebox Radio, testified that he had observed a brief delay between the live audio heard in the Dumont studio and the audio heard off the air from the Fort Lee translator on 103.1 MHz. (T5, p. 3) Mr. Lynch testified that he had been aware of this delay during every one of his on-air shifts since he

started his employment in July 1995. (Ibid.) His employment commenced at Jukebox Radio officially on July 4, 1995. (TR 1262)

5) Mr. Lynch's testimony about program interruptions

168. Mr. Lynch testified that he remembers about four or five times when Jukebox Radio went off the air, although he did not remember the exact dates. Mr. Lynch testified that interruptions in the lines delivering programming from the Dumont studio to the Monticello station resulted in the loss of Jukebox Radio audio heard on the Fort Lee translator on 103.1 MHz. (T5, p. 2) Mr. Lynch explained that

> ...we first learned of such program delivery interruption because the broadcast on 103.1 MHz would go silent. On each of those occasions, when the program lines between the Dumont studio and WJUX were repaired, Jukebox Radio would start up again on 103.1 MHz. (T5, p. 2)

169. Mr. Lynch testified that, to his knowledge, there has never been a time when Jukebox Radio programming was transmitted by the Fort Lee translator when WJUX was not transmitting. (T5, p.2)

170. Mr. Lynch testified that on one occasion the Pomona translator lost the signal of the Monticello station and the Fort Lee translator started to retransmit Christian programming from a station in Maryland which operated on 99.7 MHz, an incident which caused a number of telephone calls to Jukebox Radio. (T5, pp. 2-3)

171. Mr. Lynch testified that on another occasion, the Pomona translator was struck by lightning and the Fort Lee translator started rebroadcasting a Long Island station which operates on 94.3 MHz, another incident which generated calls from the public. (T5, p. 3)

D Adverse testimony

1) Wilson La Follette's Measurements

172. Based upon the February 10, 1995 CDE statement ("CDE statement"), Mr. La Follette testified that based upon "monitoring and measurements" by three CDE investigators, of whom Mr. La Follette was one, the Fort Lee translator was receiving Jukebox Radio programming directly from the Dumont studio on a basis of full time origination by transmission from WMG-499 on its authorized frequency of 951 MHz, in violation of Sections 74.531 and 74.1231(b) of the Commission's Rules. (MMB6, p. 99; MMB6, pp. 99-100)

173. Those measurements were taken on February 2, 1995. (TR 652)

174. The CDE statement asserted that the Jukebox Radio programming was "fully oriented to the Bergen County and the proximate area of New Jersey" which was a practice prohibited in Report and Order in MM Docket No. 88-140, FCC 90-375 regarding the KBUR-AM/KGRS-FM case. (MMB6, p. 99-100; MMB6, p. 102)

175. The CDE statement asserted that the Pomona translator simultaneously carried the Jukebox Radio service so that it, too, was in violation of the same Commission rules and policies as the Fort Lee translator. (MMB6, p. 100)

176. The CDE statement asserted that based upon testing from a building in Fort Lee approximately 0.6 km southeast from the Fort Lee translator, as a technical matter the signal from the Monticello station was "unusable for retransmission" by the Fort Lee translator due to low signal strength and the "severe" first adjacent channel interference from WBAI, New York, New York, which transmitted on 99.5 MHz. (MMB6, pp. 103-104)

177. The CDE statement asserted that Figure 3 to the CDE statement (MMB6, p. 107)

demonstrated that the ratio between the signal received from the Monticello station and the signal received from WBAI was approximately 38 dB, (MMB6, p. 104) *i.e.* that the signal strength of WBAI exceeded the signal strength of the Monticello station by 38 dB. Mr. La Follette also testified that Figure 3 shows that the signal of WBAI "encroaches" on the Monticello station signal so that filtering would be difficult. (TR 663-666)

178. The CDE statement asserted that the high aural quality of the Pomona translator observed by the CDE engineers indicated that the Pomona translator was not receiving its signal off-the-air from the Monticello station and, instead, it was either retransmitting the Fort Lee translator's signal or was receiving a direct program feed. (MMB6, pp. 104-105)

179. Mr. La Follette's statement dated October 22, 1997, adopted the truth and correctness of the CDE statement without qualification. (MMB6, p. 93) Mr. La Follette affirmed all of the CDE statement, "of whatever nature." (TR 680)

180. Mr. La Follette testified that Mr. Howard Warshaw asked CDE to "observe and assess" the Fort Lee translator "in order to reach some conclusions as to whether or not it appeared to comply with the FCC Rules." (TR 648) Mr. La Follette also testified that he did not recollect that Mr. Warshaw asked to have CDE prove that the Fort Lee translator was being programmed directly from the Dumont studio. (TR 651)

2) Rebuttal to Mr. La Follette

a) Lack of information and inconsistencies concerning the Fort Lee translator

181. Mr. Warshaw testified that he retained the CDE engineers to prove that Jukebox Radio programming was being originated at the Dumont studio and sent directly over WMG-499

to the Fort Lee translator. (TR 1049-1050) Mr. Warshaw testified: "But when I became convinced that they were operating illegally, I called the engineers to verify that the law was being broken." (TR 1069)

182. The amount of time spent listening to the programming and testing the signals which are the subject of the CDE statement was approximately three hours in total. Of that three hours, Mr. La Follette testified that he had personal knowledge of approximately one and one half hours in total, broken into segments. (TR 682-683)

183. Mr. La Follette testified that his opinion that the Fort Lee translator received its programming directly from the Dumont studio over WMG-499 was based solely on the fact that he had heard the Jukebox Radio audio on 951 MHz, the WMG-499 frequency. (TR 698)

184. Mr. La Follette testified that he could not know for certain if the Fort Lee translator actually retransmitted the signal of WMG-499 without an on site inspection of the Fort Lee translator, which he did not make. (TR 698-699)

185. Mr. La Follette testified that "a very common usage" of intercity relay stations is to relay telemetry between a studio and a transmitter site. (TR 705)

186. Mr. La Follette testified that the basis for the assertion in the CDE statement that the signal strength of the Monticello station was too low to be usable at the Fort Lee translator was soley because of the adjacent channel interference from WBAI. (TR 657-659)

187. Mr. La Follette testified that CDE found that the WBAI signal was 38 dB greater than the Monticello station signal from their test location, and that adjacent channel signal from WBAI rendered the Monticello station signal "unusable" in Fort Lee. (TR 659)

188. Mr. La Follette testified that there was no way to get rid of the 38 dB of interference

and provide the quality of service he heard from the Fort Lee translator. (TR 660)

189. Mr. La Follette had never been provided Mr. Hidle's Statement, T7. (TR 661)

190. After reviewing Mr. Hidle's testimony that, based upon testing of the same model of Sony radio receiver used at the Fort Lee translator, he had determined that the receiver itself could provide 33 dB of first adjacent channel discrimination (T7, p. 7), Mr. La Follette agreed that if the "test signal" was the same as the WBAI signal, then the receiver plus five more dB of discrimination would solve the problem. (TR 663) Mr. La Follette testified that Figure 3 of the CDE statement (MMB6, p. 107) indicated that sideband transmissions from WBAI into the Monticello station bandwidth might prevent additional filtering from eliminating interference from WBAI. (TR 663-665)

191. When asked if the "Channel Eliminator" (*i.e.* the Phase Canceller) could solve the WBAI interference problem, Mr. La Follette would not render an opinion without additional studies, but conceded that it was possible that the Phase Canceller would eliminate the WBAI interference, although he considered it "highly unlikely." (TR 665-666)

b) Testimony of Mr. Hidle and Mr. Cohen

192. Mr. Hidle testified that the Phase Canceller used at the Fort Lee translator is specifically designed to eliminate co-channel interference, as well as adjacent channel interference. (T36, p. 2) Mr. Hidle testified that because "co-channel signals are found in the same frequency spectrum as the desired signals, the Phase Canceller can obviously deal with allegedly encroaching adjacent channel signals of the kind attributed by Mr. La Follette to WBAI." (T36, p. 2)

193. Mr. Cohen testified that a Phase Canceller could be used to cancel co-channel or

adjacent channel interference. (TR 605-607; see also T31)

194. Mr. Hidle testified that, based upon his testing, the Phase Canceller could reduce undesired signal levels in excess of 45 dB without material damage to the desired signal. (T36, pp. 2-3)

195. Mr. Hidle also testified that Mr. La Follette had relied upon Figure 3 to the CDE statement (MMB6, p. 107) erroneously to assert that the WBAI signal encroached into the Monticello station signal. (TR 663-666) Mr. Hidle explained that performing the same measurement with a spectrum analyzer at a higher resolution eliminated the apparent signal encroachment asserted by Mr. La Follette. Mr. Hidle stated: "Therefore, in my opinion, the apparent signal encroachment from WBAI shown in Mr. La Follette's statement is a result of the coarseness of the resolution bandwidth used and is not real." (T36, p. 3)

196. Mr. Hidle measured the field strength of the Monticello station signal at the Fort Lee translator to be -90.9 dBm (T7, p. 4), which was 12.9 dBm lower than the field strength of -78 dBm measured by Mr. La Follette. (MMB2, p. 59)

c) Mr. La Follette's testimony concerning the Pomona translator

197. At the hearing, Mr. La Follette testified that he had measured the signals of the Pomona translator at a site near the Fort Lee translator and found them to be 224 microvolts, a noise free, high quality signal. (TR 666-667) He considered that the Pomona translator signal, as he heard it while testing in Fort Lee, to be "a very good quality signal." (TR 706)

198. Mr. La Follette had "not believed" that the Pomona translator was receiving programming off the air from the Monticello station because he had observed that the transmitter

link (*i.e.* WMG-499) between Dumont studio and the Fort Lee translator carried that programming even though he had "certainly considered" the possibility that the Pomona translator received its programming from the Monticello station. (TR 667-668)

199. Mr. La Follette testified that he had no reason to think that the Monticello station would not provide a "perfectly good" and "reliable" signal to the Pomona translator. (TR 668) Mr. La Follette agreed that the Monticello station "probably would" provide a perfectly good and reliable signal to the Pomona translator. (Ibid.)

200. Mr. La Follette testified that on February 2, 1995, he had recommended to Mr. Warshaw that an investigation be made of whether the Pomona translator was receiving its programming from the Monticello station. (TR 668-671) Mr. La Follette testified:

> Well, I felt it would be useful to ascertain whether or not it appeared that the Pomona translator was receiving its input signal from Fort Lee or whether it was receiving it from another source, or directly over the air. (TR 671)

201. Mr. La Follette stated that he never made any investigation of the Pomona translator and that he did not know of any such investigation being undertaken by anyone else, except that he recalled that there might have been some preliminary steps taken, such as viewing the site of the Pomona translator. (TR 671-672)

202. The CDE statement, affirmed by Mr. La Follette, represented to the Commission that:

> The fine aural quality and absence of noise observed may indicate that the Pomona W232AL translator is not retransmitting the signal of WXTM-FM. Instead, it may be retransmitting W276AQ or it may be receiving a direct program to it." (TR 673; MMB6, pp. 104-105)

Mr. La Follette confirmed that this representation to the Commission about the Pomona translator remained his opinion. (TR 674)

203. Mr. La Follette agreed that "it was entirely possible" that the Monticello station signal could be received by the Pomona translator "in an entirely different way," *i.e.* off the air. (TR 675) Mr. La Follette also testified that it had been his within his power to confirm whether or not this allegation of misconduct in connection with the Pomona translator by Mr. Turro was accurate and that Mr. La Follette had not so confirmed it. (TR 675)

204. Mr. La Follette testified that this representation was not "irresponsible" even though he "would have much preferred investigating" it. (TR 675-676)

3) Testimony of Mr. Cohen

205. Mr. Cohen, an engineering consultant for the Bureau and Universal, testified that he performed a study (MMB5) examining whether or not the Fort Lee translator could receive a signal from the Monticello station of such reliability that it could be the basis of delivery of a high quality signal to the Bergen County area. (MMB5, p. 89)

206. Mr. Cohen concluded that the signal of the Monticello station available at the Fort Lee translator is of marginal quality and not suitable for rebroadcast. (MMB5, p. 89) In reaching this conclusion, Mr. Cohen testified that he predicted that the Monticello station signal would be 5.5 dBμ at the Fort Lee translator. He predicted this calculated field strength of 5.5 dBμ by subtracting 20.4 dBμ in order to be considered reliable 90 percent of the time. (MMB5, p. 90)

207. Mr. Cohen also testified that WBAI, a first adjacent station to the Monticello station, would have a calculated field strength of 91.8 dBμ, or 86.3 dBμ greater than the

calculated 90 percent of the time signal strength of the Monticello station at the Fort Lee translator. (MMB5, p. 91)

208. Mr. Cohen testified that: "A combination of sophisticated filtering and antenna discrimination could not eliminate completely interference from the first adjacent channel station." (MMB5, p. 91)

209. Mr. Cohen testified that the reception of the Monticello station signal at the Fort Lee translator could be affected adversely by reflected signals from buildings or other objects in the vicinity. (TR 604)

210. In consideration of Mr. Hurst's testimony about the hot spot on the roof of the Mediterranean Towers, Mr. Cohen opined that such a an occurrence would "very likely be a very temporary thing, highly variable" and a "hot spot to provide consistent, good quality reception as Mr. Hurst describes is highly unlikely." (TR 623) Mr. Cohen had not encountered such a hot spot on any rooftop in 50 years of engineering experience. (TR 624)

211. Mr. Cohen testified that it would be necessary to take extended observations to confirm such a hot spot. (TR 623)

4) Rebuttal

a) Admissions on the basis of Mr. Cohen's study

212. Mr. Cohen testified that his study (MMB5) was theoretical, that he was not furnished any information by Universal and that his sources of information were the Federal Communications Commission databases. (TR 590-591)

213. Mr. Cohen testified that he had not visited the locations referred to in his study and that he had not examined any of the equipment in use there. (TR 594) He stated that he had not examined the Fort Lee location. (TR 604)

214. Mr. Cohen testified that the only subject of his statement is the question of whether or not the Fort Lee translator could receive the signal the Monticello station of such reliability that it could be the basis of delivery of a high quality signal to Bergen County and adjacent areas. (TR 593)

215. Mr. Cohen testified that he had not studied the radio path from the Pomona translator to the Fort Lee translator and that he had no understanding of the quality of that signal. (TR 594)

216. Mr. Cohen testified that his prediction of a Monticello station signal strength of 5.5 dBμ at the Fort Lee translator was a prediction that the signal strength would be 5.5 dBμ, or more, for 90 percent of the time with a 90 percent confidence factor. (TR 595-596)

217. Mr. Cohen stated that the predicted median field strength of the Monticello station signal at the Fort Lee translator would be 15.9 dBμ, also including a confidence factor. (TR 596-597)

218. Mr. Cohen agreed that a confidence factor is based upon a statistical likelihood. (TR 597)

219. Mr. Cohen testified that for "50 percent of the locations 50 percent of the time and no more than a 50 percent confidence factor," the predicted field strength of the Monticello station signal at the Fort Lee translator would be 25.9 dBμ. (TR 598)

220. Mr. Cohen stated that he had not read Mr. Hidle's Statement (T7). (TR 600)

221. Mr. Cohen testified that antenna discrimination could be as much as 20 dB. (TR 603-604)

222. Mr. Cohen testified that he had no basis to dispute Mr. Hurst's testimony that the Sony receiver used at the Fort Lee translator provided 33 dB of first adjacent channel discrimination. (TR 603)

b) Actual conditions rebut Mr. Cohen's study

223. Mr. Hurst testified that, based upon his personal inspections of the surroundings of the Fort Lee translator site, there were no structures in the vicinity which could be expected to be sources of reflections of signals suggested by Mr. Cohen to be possibly adverse to signal reception. (T35, p. 3)

224. Mr. Cohen testified that if he accepted that the receiver provided 33 dB of discrimination and the antenna provided another 20 dB of discrimination, totaling 53 db of discrimination, leaving a 36.3 dB differential, he considered it possible, but "highly unlikely," that sophisticated filtering could eliminate another 36 dB of interference. (TR 604-605)

225. After reviewing T31, Mr. Cohen stated that he was familiar with use of co-channel eliminators (*i.e.* the Phase Canceller). (TR 605-607)

226. Mr. Cohen stated that he recognized that T31 was promotional literature about the Phase Canceller, that he understood that T31 represented that under conditions resembling laboratory conditions, that the Phase Canceller could provide 50 dB protection discrimination from adjacent channels, and that he did not suggest that T31 was lying. (TR 629-630)

227. Mr. Cohen testified that a Phase Canceller could be used to cancel out undesired adjacent channel interference as well as co-channel interference. (TR 606-607)

228. Mr. Cohen also testified that the fact that the desired Monticello station signal was monaural made it somewhat easier to cancel out the interference. (TR 607-608)

229. In reference to Mr. Hurst's testimony (T2, p. 3), Mr. Cohen concluded that 33 dB of receiver discrimination, 30 dB of notch filter discrimination and 20 dB of antenna discrimination would add to 83 dB of discrimination, which would "not be consistent with having a broadcast quality consistent signal." (TR 621)

230. Mr. Hurst subsequently corrected his testimony by stating that initially the Fort Lee translator had used the Phase Canceller when it started rebroadcast of the Monticello station, that the Phase Canceller was replaced in May of 1995 with a 40 dB notch filter, which was the filtering device he personally observed on July 6, 1995, and that subsequently, the 40 dB notch filter was replaced with two 30 dB notch filters in series which he and Mr. Hidle observed in October, 1997. (T35, pp. 1-2)

231. Mr. Cohen testified that it was not impossible that actual experience would show a Monticello station signal at the Fort Lee translator higher that what he predicted and Mr. Cohen did not challenge the accuracy of any statements of persons who observed the reception of the Monticello station signal at the Fort Lee translator or offered actual signal strength measurements higher than his predictions. (TR 635-636)

232. Mr. Cohen testified that "it seems that there are circumstances which we really don't understand." (TR 636)

233. Mr. Cohen testified that processing the incoming signal at the translator "could do something" to deal with noise problems. (TR 636-637)

234. Based upon his actual testing, Mr. Hidle testified that the Phase Canceller could eliminate in excess of 45 dB of undesired signal. (T36, pp. 2-3) Mr. Hidle additionally determined that the Sony Model XR2500 receiver being used by Mr. Turro for reception at the Fort Lee translator is able internally to discriminate a desired signal from an undesired first adjacent channel signal with a signal strength of 33 dB greater than the desired signal (T7, pp. 6-7) and that the antenna could discriminate 20 dB between the desired signal and an undesired first adjacent channel signal. (T36, p. 4)

235. Mr. Hidle testified that his actual measurements of the Monticello station signal strength at the Fort Lee translator was 26 dBμ. (T7, p. 3) Mr. Hidle estimated that the Fort Lee translator antenna only requires a Monticello station signal strength of 21 dBμ. (T7, p. 5) Mr. Cohen predicted the Monticello station signal to be 25.9 dBμ with a 50 percent confidence factor. (TR 598)

236. Mr. Hidle further testified that even for the sake of argument, if he accepted Mr. Cohen's Monticello station signal prediction with the 90 percent confidence factor (*i.e.* 5.5 dBμ), "with the Phase Canceller in operation, the Fort Lee translator is capable of receiving WJUX(FM) (*i.e.* the Monticello station) free from interference from WBAI." (T36, p. 4)

237. If the actual signal strength of the Monticello station at the Fort Lee translator was approximately 26 dBμ, consistent with the actual measurements and the 50 percent confidence field predicted by Mr. Cohen, then the reception of the Monticello station at the Fort Lee translator would be even easier.

E Intercity microwave relay station WMG-499

1) Purpose of WMG-499

238. Mr. Turro applied for a new intercity relay aural microwave station on FCC Form 313 on June 8, 1993. (MMB9) In that application, Mr. Turro stated the intercity relay station would be associated with the Fort Lee translator station and that it would be used "to feed 30-second spot originations" and for "operational communications" from the studio to the Fort Lee translator transmitter. (MMB9, p. 151)

239. In the license for that station, the Commission assigned it call sign WMG-499, stated that the licensee was Gerard A. Turro, and that the transmitter location was 75 Second Street, Dumont, New Jersey. (MMB9, p. 155)

2) Mr. Turro's testimony about the use of WMG-499

240. Between October 1994 and early July, 1995, when WMG-499 was deactivated pursuant to an FCC letter, Mr. Turro used it for two purposes, as a remote control connection and for its ability to place emergency messages on the Fort Lee translator. He kept WMG-499 live all the time so that it could provide constant telemetry between the Dumont studio and the Fort Lee translator, and because it was the kind of unit that could be damaged by being turned on and off repeatedly. He maintained two channels on this microwave path, a narrow data channel for telemetry or "operational communications," *i.e.* remote control of the Fort Lee translator, and a second path for audio in the event that an emergency required its use. He placed the Jukebox Radio programming on the audio path so that WMG-499 could be monitored and identified easily by third parties wishing to know the source of the signal because the New York City area has severe frequency congestion. He testified that for the entire time that the Monticello station

has broadcast Jukebox Radio programming, he had never caused that audio path to provide programming to the Fort Lee translator transmitters, unless there was an emergency. Those transmitters were set to rebroadcast the signal of the Pomona translator or the Monticello station. (T1, p. 12) Mr. Turro's consulting engineers confirmed to the Commission by letter dated June 13, 1995, that WMG-499 was in continuous operation: because switching the equipment on and off would lead to equipment failure eventually, to make available insertion of 30 second per hour announcements and emergency messages authorized by Section 74.1231(g) of the Commission's Rules, for provision of telemetry, and to make its transmissions on 951 MHz "readily identifiable." (MMB8, pp. 122-124)

241. Mr. Turro testified that while it was in use, WMG-499 provided the capability to place emergency messages directly from the Dumont studio to the Fort Lee translator, if necessary, consistent with his cooperative understanding with the Bergen County Office of Emergency Management. (T1, pp. 11-12)

242. Mr. Turro testified that in the entire time that WMG-499 was in operation, it was used no more than five times to transmit emergency messages from the Dumont studio to the Fort Lee translator. (T1, p. 11) Mr. Turro clarified that testimony by explaining that, to the best of his memory, WMG-499 had been used to carry emergency messages to the Fort Lee translator no more than five times during the entire time it was in operation, including prior to the time that the Monticello station went on the air. Mr. Turro was unable to recall whether WMG-499 had ever been used to carry emergency messages from the Dumont studio to the Fort Lee translator during the time that the Monticello station was in operation, and that he thought that WMG-499

might never have been so used, but that he was unable to remember. (TR 1807-1810; 2107-2108)

243. Mr. Turro testified that emergency messages were placed on the air no more than five times by use of WMG-499 because that the usual practice was to include emergency messages on the live program feed from the Dumont studio to the Monticello station and then have it retransmitted by the translators, in the course of their ordinary operations. (T1, p. 11). WMG-499 was used for emergencies rarely because there were very few times when the need to broadcast emergency messages occurred at the same time that the connection between the Dumont studio and the Monticello station was out of commission. (Ibid.)

244. Mr. Turro testified that he used WMG-499 to provide the data channel between the TC-8 unit in the Dumont studio and its corresponding end at the Fort Lee translator for the carriage of telemetry. (T1, pp. 11-12; T34)

245. Mr. Turro testified that he configured the remote control system between the Dumont studio and the Fort Lee translator with two failsafe mechanisms. In the event that the telemetry channel on WMG-499 was interrupted, the TC-8 at the Fort Lee translator was programmed to home onto the audio path on WMG-499 and rebroadcast that audio. (T1, pp. 12-13)

246. Mr. Turro testified that the reason for that failsafe was to allow him an alternate means of being able to originate emergency messages on the Fort Lee translator, so that in the event that an emergency required such a use and the ordinary controls on the TC-8 unit in the Dumont studio were not functioning properly, he could interrupt the telemetry and immediately use WMG-499 to provide live emergency programming. (T1, p. 12)

247. Mr. Turro testified that the other failsafe was that in the event that the Fort Lee translator lost the entire signal of WMG-499, then it was programmed to home onto the signal of either the Pomona translator or the Monticello station and immediately retransmit the signal of one of those stations. (T1, p. 13)

248. Mr. Turro testified that at the direction of the FCC in June, 1995 (MMB8, pp. 120-121), he discontinued operation of WMG-499 in early July 1995, and it has not been operation at any time since then. (T1, p. 24)

3) Adverse testimony and rebuttal to it

a) Mr. La Follette

249. Mr. La Follette testified that on February 2, 1995, he heard the Jukebox Radio programming on the WMG-499 frequency, 951 MHz. (MMB2, p. 56) Mr. La Follette also testified that hearing the programming on WMG-499 led him to conclude that it was being used to program the Fort Lee translator directly, but that he could not determine such a use for sure without inspecting the Fort Lee translator's facilities, which he did not do. (TR 698-699)

b) Mr. Warshaw

250. Mr. Warshaw also heard the Jukebox Radio programming on the WMG-499 frequency (TR 1046-1047), and like Mr. La Follette, concluded that it was being used to program the Fort Lee translator directly, but Mr. Warshaw also did not inspect the translator's facilities. (TR 1047)

c) Mr. Loginow's testing on May 15, 1995

251. Mr. Loginow testified that on May 15, 1995, he went to the Mediterranean Towers and from the top floor of the building performed tests with a signal generator which led him to

conclude that the Fort Lee translator was receiving its programming from WMG-499, on its frequency of 951 MHz, and not on the frequency of the Pomona translator, 94.3 MHz, or the frequency of the Monticello station, 99.7 MHz. (MMB4, p. 84; MMB18, pp. 333-334)

252. Mr. Loginow testified that he used a portable signal generator to transmit a "low level signal" (MMB4, p. 84) on each of the frequencies of the Monticello station, the Pomona translator and WMG-499, intending to "override another weaker or more distant signal on the same frequency" and detected no reaction to the signal generator except when it transmitted on 951 MHz. (MMB18, pp. 333-334)

253. Mr. Loginow listened to the transmissions of the Fort Lee translator, on 103.1 MHz, while performing the signal generator tests to determine if there was a reaction to the testing, which would have been silence interrupting the programming. (TR 356-357)

254. Mr. Loginow testified that the signal generator transmitted through a three foot whip antenna which he attached to it and that its maximum power output was less than half a watt. (TR 352)

255. Mr. Loginow performed the signal generator tests on May 15, 1995, from inside the stair enclosure at the roof level of the Mediterranean Towers, at least 25 stories above the ground. (TR 353-354) The enclosure was surrounded by cinder block walls with a metal staircase below it. (TR 359)

256. Mr. Loginow thought about conducting the signal generator testing on May 15, 1995 out on the roof but found the door leading out to the roof locked. (TR 354)

257. Mr. Loginow testified that the surroundings would have attenuated the signal generator's signal "somewhat toward the receiving end." (TR 359) He stated that ideally the testing would have been performed out on the roof. (TR 360)

258. Mr. Loginow testified that distance between the signal generator and the antenna he wanted to affect could be important to the testing process, depending upon the sensitivity of the receiver. (Ibid.)

259. Mr. Loginow testified that the closer he could get the signal generator to the antenna to be tested, the more accurate the testing would be and that he had gone to the roof to be near roof mounted antennas. (Ibid.) Mr. Loginow testified that at some point, distance would make the signal generator unable to affect a receiver. (TR 360-361)

260. In addition, Mr. Loginow testified that obstructions between the signal generator and the system to be tested could affect the validity of the test. (TR 361) He agreed that the signal generator would not work as well from inside of a safe as it would out in the open. (Ibid.)

261. Mr. Loginow stated that "nearly all translator installations have the receive antennas and the transmitting antennas located on the roof (TR 361) and he assumed that all receive antennas for the Fort Lee translator would be located on the roof because a roof is the only "technically logical place" for antennas "in 100 percent of the situations." (TR 364-365)

262. Mr. Loginow was unable to observe antennas on the roof because he was in a locked room and he did not have a map of the antenna locations. (TR 366)

263. Mr. Loginow testified that May 15, 1995 was the first time that he visited the Fort Lee translator building and tested there, but he did not view or inspect any of the translator's facilities at that time. (TR 363)

4) Testing and explanation of the results of the May 15, 1995 testing

a) Why the May 15, 1995 testing did not affect receipt of the Pomona translator

264. Mr. Turro testified that during a period of time in 1995, including on May 15, 1995, he used an antenna located in the basement of the Mediterranean Towers to receive the signal of the Pomona translator because the roof mounted antenna had been vandalized and the basement was secure. (T1, 22-23)

265. Mr. Turro testified that on May 15, 1995, when Mr. Loginow performed his frequency generator tests, the Fort Lee translator was in fact receiving its programming off the air from the signal of the Pomona translator through the antenna located in the basement. In Mr. Turro's opinion, the signal of the frequency generator would have been too weak to pass through at least 23 stories of the Mediterranean Towers and overwhelm the receive antenna in the basement, so that there was no reaction when Mr. Loginow transmitted with the signal generator on 94.3 MHz from the roof enclosure on May 15, 1995. (Ibid.)

266. Mr. Hurst testified that during his inspections on October 16 and 17, 1997, he took part in testing to determine if Mr. Loginow's signal generator at the roof level of the Mediterranean Towers could have overwhelmed an antenna located in its basement which was receiving the signal of the Pomona translator. Mr. Hurst stated that from the basement location where the Pomona translator receive antenna had been located, a signal generator was used to generate a 5 watt signal (ten times the wattage of the signal described by Mr. Loginow) on the frequency of the Pomona translator, and that 5 watt signal was not received on the roof of the building. From that testing, Mr. Hurst concluded that Mr. Loginow's 0.5 watt signal from the

roof could not have caused interference to the Pomona translator receive antenna in the basement. (T35, pp. 3-4)

267. While at that basement location, Mr. Hurst observed an abandoned antenna, covered in dust, in the basement of the Mediterranean Towers. (See video tape associated with T2)

268. Mr. Hurst also testified that from that basement location the signal of the Pomona translator could be received with an inexpensive Radio Shack radio (Ibid.) and that the signal was "possibly phenomenal." (T35, p. 3; video tape associated with T2)

269. Mr. Loginow testified that it was his opinion that the signal he generated of less than half a watt from within the roof enclosure would have affected an antenna in the basement due to "ducting." (TR 369)

270. Mr. Loginow testified that an antenna in the basement would not receive the Pomona translator signal to a degree sufficient for rebroadcast. (TR 369)

271. Mr. Loginow had never seen either Mr. Hurst's Statement (T2) or Mr. Hidle's Statement (T7). (TR 373-374)

272. Mr. Loginow has never tested whether the signal generator on the roof would overwhelm an antenna in the basement of the Mediterranean Towers and he never tested the sensitivity of the antenna which had been used by Mr. Turro in the basement to receive the Pomona translator. (TR 370)

273. Mr. Loginow testified that he has never performed a complete inspection of all of the floors of the Mediterranean Towers and that he has no knowledge as to what materials, equipment or anything else located on the approximately 25 stories of the building between the

roof and the basement which could affect the signal generation testing he performed. (TR 379-380)

274. Mr. Loginow testified that ducting is where a radio signal may enter a cavity and travel along it, in particular an air conditioning duct or elevator shaft. (TR 574-575) Mr. Loginow testified that he did not examine any ducting internal to the Mediterranean Towers, including that he did not examine the elevator shafts or air conditioning ducts, if any. (TR 575) He testified that the stairwell where he tested probably could not cause ducting. (Ibid.)

b) Explanation of why the testing on 951 MHz caused a reaction

275. Mr. Turro testified that Mr. Loginow's conclusion was mistaken that the May 15, 1995 signal generator testing proved that WMG-499 was providing programming directly to the Fort Lee translator. In Mr. Turro's opinion, when Mr. Loginow transmitted a signal on 951 MHz, it interrupted, or "jammed," the telemetry channel carried on WMG-499, invoking the failsafe programmed into the remote control system. (T1, pp. 22-23) In Mr. Turro's opinion (T1, pp. 12-13), that failsafe caused the remote control system at the Fort Lee translator to home onto the WMG-499 audio path and retransmit it. Mr. Turro believed that Mr. Loginow's signal generator testing caused the result he found. (T1, p. 23)

276. Mr. Loginow agreed that his signal generator testing would have interrupted or blanketed the WMG-499 transmissions on 951 MHz. (TR 379) The interrupting signal would have been five seconds or less in duration. (TR 568-569)

277. Mr. Turro further testified that he remembered the May 15, 1995 jamming incident because it was unusual. He was in the Dumont studio at the time, listening to the Fort Lee translator on 103.1 MHz, and heard the audio "break up" for about three to four seconds and then

fall to dead carrier. (T1, p. 23) Mr. Turro testified that he hurried upstairs to check the remote control unit, and by the time he got there, the Fort Lee translator was transmitting again and the TC-8 unit had light No. 6 lit, indicating that the translator was rebroadcasting the audio path from WMG-499. (T1, pp. 23-24) Mr. Turro stated that he used the TC-8 to switch the Fort Lee translator back to receiving the signal of the Pomona translator, which it did, with status light No. 5 illuminating on the TC-8 unit in replacement of light No. 6. (T1, p. 24)

278. Mr. Turro testified that he was angry about the May 15, 1995 incident because he was sure that someone from WVNJ had caused the problem. (Ibid.) Mr. Turro testified that he called Mr. Hurst on the telephone and told him about the jamming incident. Mr. Turro stated that Mr. Hurst told him that it probably had not been someone from WVNJ who caused the jamming but it probably had been the FCC conducting tests. (Ibid.)

279. In his testimony, Mr. Hurst confirmed that on May 16, 1995, Mr. Turro called him on the telephone and explained that someone had "jammed" the microwave "in a manner that caused the control circuit to fault to the fail-safe program feed to the translator from the microwave primary audio channel." (T2, pp. 5-6) Mr. Hurst also confirmed that he had advised Mr. Turro the jamming probably had been caused by FCC personnel and not by Universal. (T2, p. 6)

280. Mr. Loginow testified that when he was with Mr. Turro on August 2, 1995, Mr. Turro indicated to him that he was aware that Mr. Loginow had jammed WMG-499 on May 15, 1995. (TR 567-568; 501-503) Mr. Loginow stated that he had no communications with Mr. Turro during the time between the May 15, 1995 testing and the August 2, 1995 investigations, that he did not cause Mr. Turro or anyone with Jukebox Radio to know of the May 15, 1995