



FEDERAL COMMUNICATIONS COMMISSION
ENFORCEMENT BUREAU

memorandum

TO: Bruce A. Franca
Deputy Chief
Office of Engineering and Technology

FROM: Joseph P. Casey
Chief, Spectrum Enforcement Division
Enforcement Bureau

SUBJECT: ET Docket 03-104.

DATE: January 27, 2004

I am writing concerning certain statements made by Aeronautical Radio, Inc. (ARINC) in its Reply Comments filed in response to the Commission's Inquiry Regarding Carrier Current Systems Including Broadband over Power Line Systems, ET Docket No. 03-104.¹

Specifically, I am concerned about the statements ARINC made regarding the FCC's investigation of interference to aeronautical frequencies at ARINC's Half Moon Bay facility. ARINC stated:

...in February 2002, ARINC began receiving intolerable interference on 3013 kHz at Half Moon Bay, California. The signals were measured at -85 dBm at ARINC's receiver site about 1.5 miles away from the main concentration of homes at Half Moon Bay, and this interference easily masked many of the weaker signals being received from aircraft over the Pacific Ocean. The FCC was consulted and investigated the complain(t), but no action has been taken because the multiple sources of interference within Half Moon Bay make it difficult to isolate individual sources of interference. In the residential area of Half Moon Bay, the signal levels were -30 dBm, but a clear fix of any single source was not possible.

ARINC goes on to say:

... Eighteen months later, the interference persists, and ARINC is forced to abandon this frequency at Half Moon Bay. The FCC has been unable to

¹ Reply comments at page 4.

protect safety communications from harmful interference in this instance
(emphasis added).

The Enforcement Bureau's records and the recollections of its field agents tell a significantly different story. FCC field agents responded to ARINC's complaint of interference in February 2002. No strong interference signals were present. ARINC detected some weak noise signals on its large and highly amplified antenna system, but was unable to identify any areas where the signals could be heard with normal receivers or interference resolution equipment. The interference described by ARINC was never observed by the FCC agents at all, and they certainly never experienced either a situation of multiple overlapping interference sources or an interfering signal that was anywhere near the magnitude of -30 dbm. I am absolutely confident that, had either of these situations occurred, the FCC field agents could have readily located the source(s) of the interference and resolved the problems.

In addition to the 2002 incident, the San Francisco office also worked with ARINC in 1998. The following summarizes the Enforcement Bureau records of responses to interference problems at the ARINC facility at Half Moon Bay in each of those years:

1998: In 1998, the FCC San Francisco office investigated a complaint of interference to the ARINC site at Half Moon Bay. The field office determined that the source of the interference was a wireless telephone base unit located in a residence near Half Moon Bay. Upon request by the FCC office the owner of the device stopped operating it and the interference was resolved.

2002: In February 2002, ARINC reported to the FCC San Francisco office that it was receiving interference to its high frequency channel 3013 kHz at its Half Moon Bay site. The San Francisco office investigated the reported interference twice. During the first investigation, the agent detected one brief noise signal at the Half Moon Bay site but did not observe it again during his investigation. There is no indication that this single noise burst had anything to do with the reported interference. ARINC subsequently reported to the agent that the interference had ceased. On the second visit, the FCC agent observed some noise interference on ARINC's spectrum analyzer connected to ARINC's amplified antenna system. This signal was too weak to be detectable on any other FCC or ARINC equipment.

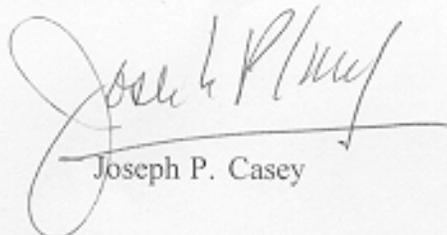
The agent, accompanied by an ARINC technician, searched the ARINC facility at Half Moon Bay and the residential area near Half Moon Bay for interference sources and did not detect any interference. The ARINC technician stated to the agent that the interference might possibly be generated in its (ARINC's) own equipment.

The agent called ARINC two days after the second visit and was advised by ARINC that the interfering source may be from equipment (a pump) in an adjacent cellular radio site. ARINC stated that they would work with the cellular company to try and identify the source of the interference and would keep us advised of their progress. The agent offered to continue to assist ARINC in locating the source of the interference. When ARINC did not accept the FCC

offer to assist in locating the source, the agent notified an ARINC supervisor that the FCC was closing the ARINC interference case and that we would reopen the investigation on request. The ARINC supervisor agreed to contact the San Francisco office if further assistance was needed.

Until we read ARINC's comments in the ET Docket 03-104, neither the San Francisco office nor the FCC's high frequency direction finding center had received a report of further interference to 3013 kHz in the 18 months since the San Francisco office closed the investigation.

The FCC's Enforcement Bureau takes its responsibilities to protect public safety communications from harmful interference very seriously. Our field agents are exceptionally skilled in this area and have been known to go to extraordinary lengths to resolve interference problems. It is simply inconceivable that FCC agents would ever walk away from an interference problem to a safety service as described in ARINC's reply comments, and the official FCC records do not indicate that they did so.



Joseph P. Casey