



**ARRL** *The national association for*  
**AMATEUR RADIO**  
INTERNATIONAL SECRETARIAT OF THE INTERNATIONAL AMATEUR RADIO UNION

**Office of the General Counsel**  
**14356 Cape May Road**  
**Silver Spring, Maryland 20904-6011**  
**(301) 384-5525 telephone**  
**(301) 384-6384 facsimile**  
**W3KD@ARRL.ORG**

January 5, 2006

Via U.S. Mail and E-mail  
Joseph.Casey@fcc.gov  
Bruce.Franca@fcc.gov  
James.Burtle@fcc.gov

Joseph Casey, Esquire  
Chief, Spectrum Enforcement Division  
Enforcement Bureau  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

Bruce Franca, Acting Chief  
Office of Engineering and Technology  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

James Burtle, Chief  
Experimental Licensing Division  
Office of Engineering and Technology  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

**RE: Pending Interference Complaints, Ambient  
Corporation Broadband Over Power Line System at  
Briarcliff Manor, New York; Continued Request for  
Immediate Cessation of Operation Pursuant to  
Experimental Authorization WD2XEQ, File No. 0118-  
EX-RR-2005.**

Gentlemen:

ARRL, the National Association for Amateur Radio, also known as the American Radio Relay League, Incorporated (ARRL), filed on October 12, 2004; December 17,

**AMERICAN RADIO RELAY LEAGUE**

ADMINISTRATIVE HEADQUARTERS • 225 MAIN STREET • NEWINGTON, CONNECTICUT, USA 06111-1494  
TELEPHONE 860-594-0200 • FAX 860-594-0259 • INTERNET: [hq@arrl.org](mailto:hq@arrl.org) • WWW: <http://www.arrl.org/>

JIM HAYNIE  
W5JBP, PRESIDENT  
JOEL M. HARRISON  
W5ZN, FIRST VICE PRESIDENT  
KAY C. CRAIGIE  
N3KN, VICE PRESIDENT  
RODNEY J. STAFFORD  
W6ROD, VICE PRESIDENT  
INTERNATIONAL AFFAIRS

JAMES E. McCOBB  
W1LLU, TREASURER  
DAVID SUMNER  
K1ZZ, CHIEF EXECUTIVE OFFICER  
SECRETARY

BARRY J. SHELLEY  
N1VXY, CHIEF FINANCIAL OFFICER  
MARK J. WILSON  
K1RO, CHIEF OPERATING OFFICER

MARY M. HOBART  
K1MMH, CHIEF DEVELOPMENT OFFICER

PAUL RINALDO  
W4RI, CHIEF TECHNOLOGY OFFICER



OFFICIAL JOURNAL

2004; and on January 7, 2005, complaints of ongoing harmful interference regarding, and requests for an instruction by the Commission to Ambient Corporation to cease the unlawful operation of, a Broadband over Power Line (BPL) system located in Briarcliff Manor, Westchester County, New York. The BPL system operates on power lines owned and used by Consolidated Edison. The complaints included technical reports on the result of tests conducted by ARRL. The conclusion reached in each complaint, which ARRL now reiterates, is that this facility was, and now still is, causing harmful interference to Amateur Radio stations and must be required to cease operation immediately.

The ARRL complaints followed multiple earlier complaints about the same system by an individual Amateur Radio licensee resident in the area, Mr. Alan Crosswell.

In December of 2004, Mr. Riley Hollingsworth of the Commission's Enforcement Bureau visited the Briarcliff Manor site; personally witnessed the interference complained of by ARRL; and can verify it. However, according to a letter to undersigned counsel from Mr. Franca dated February 10, 2005, Commission staff inspected the Briarcliff Manor installation on January 18, 2005 and allegedly found no harmful interference. Mr. Franca's letter was responded to by ARRL on March 17, 2005. That ARRL response noted that the Commission's staff did not contact the complainant in Briarcliff Manor when they allegedly conducted their investigation; they conducted only a truncated investigation on only one single frequency; and they never visited the site of substantial interference along Dalmeny Road. ARRL staff conducted more comprehensive measurements on February 18, 2005, and found that, along Dalmeny Road, there remained emissions which would preclude Amateur communications throughout the Amateur 20-meter band.

No further Commission action has been taken with respect to these multiple complaints, and the experimental license pursuant to which this system has been authorized by the Commission was renewed without any apparent concern on the Commission's part for an additional term, from August 1, 2005 to August 1, 2007. The Briarcliff Manor BPL system currently (still) causes harmful interference to Amateur Radio communications and it is not compliant with applicable FCC part 15 regulations, including Section 15.5 thereof. Neither is it compliant with the terms of the experimental authorization granted by the Commission, most recently on August 1, 2005. Finally, it is not listed in the BPL publicly accessible database that is maintained by UTC. ARRL reiterates its request, now more than a year old, that the BPL facility at Briarcliff Manor, New York be instructed to shut down immediately; and that it not resume operation unless the facility is shown to be in full compliance with Commission rules regarding radiated emissions and with the non-interference requirement of both Section 15.5 of the Commission's Rules and the terms of the experimental authorization. Finally, information about it must be listed in the BPL publicly accessible database.

As per the attached Engineering Study prepared by ARRL Laboratory Manager Ed Hare, ARRL visited the Briarcliff Manor BPL site on December 5, 2005. ARRL has repeatedly found in past measurements at the site that the system operates with radiated emission levels strong enough to cause widespread harmful interference to the Amateur

Radio Service. It has also found on several occasions that parts of the system were operating at levels exceeding the emission limits for BPL systems operating under Part 15 of the Commission's rules. On December 5, 2005, ARRL found that the "notching" previously reported by Ambient to have been done on Amateur bands was not in place, and that at several locations, the BPL system was operating at or near the FCC emission limits in the Amateur bands, causing strong interference. The levels of BPL noise in the Amateur bands were at or near S9, or well above that level in some cases, on the signal strength meter of the good-quality communications receiver being used. That signal level is clearly sufficient to produce inevitable harmful interference to stations operating in the Amateur Radio Service.

In addition, as was found in previous tests done at Briarcliff Manor, in a number of locations, the "notching" used was insufficient in one or more Amateur bands, typically leaving about a +15 dB interference-to-noise ratio, completely covering up many of the signals typically used in the Amateur Radio Service.

At one location near the injector for the substation, ARRL's Laboratory Manager measured emissions at a level of 70.6 dBuV/m at frequencies near 37 MHz, extrapolated to 10 meters distance. In this frequency range, the measured levels exceed the FCC emission limits (Section 15.109 of the Commission's Rules) by approximately 31 dB.

Ambient has previously, in its 6-month reports filed with the Commission which it is obligated to file according to the terms of the Experimental Construction Permit and License, repeatedly represented to the Commission that it is not making use of Amateur allocations, as all Amateur bands were "notched out." That is not true. ARRL discovered that the notching is not in place at all locations at which its system operates.

Condition #1 of the Experimental Authorization requires that if any interference occurs, the licensee of this authorization will be subject to immediate shut down. Interference has repeatedly occurred, and it has been witnessed and verified by a member of the Commission's Enforcement Bureau staff.

Condition #5 of the authorization includes a requirement that the progress report filed by Ambient "should include a description of measurements and results demonstrating compliance with Part 15.109." The radiated emissions from the Briarcliff Manor BPL system, between 30 and 40 MHz, were approximately 31 dB above that limit. The requisite showing cannot, therefore, be made by Ambient.

Because this experimental authorization, apparently uniquely and inappropriately, permits station locations on a "US; mobile; nationwide" basis, it is impossible for radio amateurs to know where the Ambient systems are deployed. The Commission wants such information, according to Condition #7 of the Experimental Authorization, but there is no requirement that Ambient report deployments anywhere in the United States to any licensees of the Commission which might be subject to interference from an Ambient BPL system. The BPL system at Briarcliff Manor, having been operating for more than two years, and causing interference for that same period of time, is not, to date, listed in

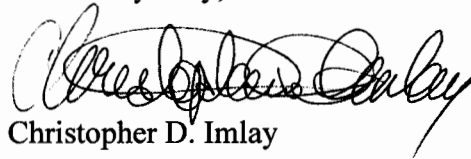
the BPL database, notwithstanding the obligation to provide this information. In its Public Notice released October 13, 2005 (DA 05-2701) the Commission advised that "Access BPL systems will be required to comply with the requirements of Section 15.615 by November 19, 2005." The Public Notice goes on to state, "All information on Access BPL systems as required by 47 C.F.R. Section 15.615(a) must be entered into the database and be available to the public by November 19, 2005." That deadline has now passed. There is no exception for BPL systems operating pursuant to an Experimental Authorization. Section 15.615(a) requires that "Entities operating Access BPL systems shall supply to an industry-recognized entity, information on all existing Access BPL systems and all proposed Access BPL systems for inclusion in a publicly available data base, within 30 days prior to initiation of service."

Accordingly, ARRL now requests that the Commission immediately advise Ambient that it must cease operation of the Briarcliff Manor, NY BPL system until 30 days after the information is available as required by §15.615(a). Furthermore, in light of the record of long-standing interference to licensed stations in Briarcliff Manor and the apparent inability and/or unwillingness of Ambient to resolve interference complaints timely or in good faith, the Commission should require that the BPL system immediately cease, not resume operation until the facility is shown to be in full compliance with Commission rules regarding radiated emissions, § 15.109, and with the non-interference requirement of §15.5 of the Commission's Rules and the terms of the Experimental Authorization.

Alternatively, the Commission should rescind the experimental authorization, and determine other appropriate sanctions against Ambient Corporation.

Kindly address all communications on this subject to the undersigned counsel.

Yours very truly,



Christopher D. Imlay

cc: George Y. Wheeler, Esq.  
Holland & Knight  
2099 Pennsylvania Avenue, N.W.  
Washington, D.C. 20006  
*Counsel for Ambient Corporation*  
(via U.S. Mail, w/attachment)