Dear FCC:

The paragraph numbers included herein refer to NPRM document 03-104 and 04-37, "Carrier Current Systems, including Broadband over Power Line Systems" and "Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems," (A-BPL) respectively, and are incorporated herein by reference.

In general, the NPRM excludes or does not consider items critical to the success or failure of the A-BPL systems and in certain instances ignores existing Parts applicable to licensed systems. Lack of consideration would be similar to the FDA authorizing sale of prescription drugs without human testing.

Specifically, in Paragraph 35 expects a licensed operator to orient his antenna to minimize reception of power line emissions instead of addressing whether or not the power line provider is in compliance with Part 15 of the rules, or whether or not it is indeed possible or practical to do so considering the direction of the intended receiver or transmitter. Clearly this statement favors Part 15 transmitters over licensed transmitters, and must be amended or redacted as against existing Rules.

Additionally, in response to Paragraph 36 and in reference to Appendix C, measurements will be woefully inadequate unless taken at defined distances on a line perpendicular to the path of the power line in question, and at a distance equal to the average predicted ionospheric skip distance for a given frequency.

As of the date of publication, the atmosphere is experiencing a sunspot cycle in its lowest point. When the highest point returns during or after calendar year 2006, even the smallest amount of RFI may turn up hundreds or thousands of miles distant after reflection from the ionosphere, rendering any of today's measurements questionable. Amateur radio operators have operation similar to this condition, termed "QRP," which includes operation on any frequency with a power to the antenna of less than 10 watts, PEP. Often such operation uses power in the range of 100 milliwatts, or 0.1 watts, which is similar to levels of A-BPL, and covers hundreds of miles on a given frequency.

Additionally in Paragraph 36 and 37, no consideration has been given to harmonics of emissions caused by galvanic and dissimilar metal rectification of RF. Such harmonics appear because of one, two, or more signals are present in power lines that have corrosion or where power lines are supported by mounts that do not have the same composition as the cable, eg. aluminum cable supported by or connected to brass, copper, or steel hardware. Such interfaces occur in critical areas, such as circuit breaker boxes and transformer connections, or wherever insulation is arcing.

This phenomenon is evident on a daily basis on virtually every vehicular mounted AM Broadcast band radio, manifested in the characteristic "buzz" when driving under power lines. Such buzz begins as a frequency of 60 cycles per second, i.e. 60 Hz, and is transformed into frequencies dozens of times higher, often as high as 150 MHz. For the highest observable frequency in the AM broadcast band, this buzz is above the 28,000th harmonic or multiple.

While A-BPL will not transmit at the voltages of typical power lines, enough evidence exists to mandate emissions testing up to and including aircraft or other VHF frequencies, ESPECIALLY considering the fact that aircraft will have an unobstructed view of the A-BPL equipment, and emergency vehicular traffic utilizing HF, VHF-LO, and VHF-HI bands will be in close proximity to the power

lines.

Further, no consideration has been given to the long power lines acting as multiple wavelength antennas at A-BPL frequencies and their harmonics. Such antennae typically magnify signals in predictable ways proportional to length. Because power line lengths are untractable with respect to A-BPL operating frequencies and their harmonics, further credence is given to measurement at a distance to the power lines and at harmonics of A-BPL's operating frequencies. These measurements would eclipse the current recommendations of Paragraph 37 and Appendix C.

For these reasons, the NTIA is justified in its concern with interference to military, general, and commercial aviation radios that operate on AM in the 110 MHz to 130 MHz range.

While the United States and FCC does not necessarily acknowledge Global Maritime Distress and Safety Systems (GMDSS) used by foreign maritime interests, implemented under the supervision of the UN, such emergency equipment is required to receive and relay emergency traffic on the HF bands from other vessels on numerous HF frequencies, EVEN IF these foreign vessels are in proximity to USA harbors. These devices utilize 2, 4, 6, 8, 12, and 16 MHz frequencies under the A2 specification. No consideration is given to who will mitigate interference with these stations in Paragraphs 37 and 40 or Appendix C, especially if A-BPL is utilized in or around harbors.

Paragraph 39 concerning cessation of operation and protection of power customers begs the questions: "How can this possibly be enforced?" "Who is responsible for mitigation?" "Who pays for enforcement and mitigation activities?" "What fines are appropriate?" "Who is the ultimate expert in this activity: FCC, A-BPL carrier personnel, or civilians?"

Paragraphs 41 and 42 have no merit unless they include the requirement that A-BPL equipment detects strong carriers on its operating frequencies and immediately ceases operating there, plus or minus several dozen KHz. ["Strong signals," TBD]. This comment, however, does not adequately cover interference from possible A-BPL harmonics previously discussed. The "when" of cessation of transmission must be "immediately," as prescribed under other Rules sections.

Paragraph 43 must dictate both FCC and A-BPL providers supply this information via web page or other public document within 10 days of A-BPL system deployment.

Because power lines are part of the A-BPL system, and are therefore susceptible to variations from temperature, age, corrosion, condition, and so forth, they must be included as part of the Part 15 device to be measured. Any measurements made must be performed at specific time intervals, such as 6 months, and results must be kept for public inspection in a form similar to the now defunct Proof-of-Performance reports once required of AM, FM, and TV broadcast stations.

When interference measurement and concerns, above, have been proven deterministic or unnecessary, such Rules may be redacted, similar to requirements in the broadcast arena.

In reference to Paragraph 45 and Appendix C, no consideration is given to radiation above the power lines that may affect aircraft or stations distant. Such measurement specifications must be included, as radiation in this direction is unobstructed, and attenuation is only free space loss. This recommendation includes measurements in the direction perpendicular to the power line at the

same height as the power line, again, usually unobstructed.

Paragraph 46 gives no consideration to measurements directly below power lines, or directly above buried power lines where emergency vehicles may come in close proximity. Because of this proximity, such measurement locations must be included.

Paragraph 47 raises other issues not covered in the NPRM, such as A-BPL undesired entry to specific buildings and residences. Examples are: hospitals, laboratories, and so forth. Should A-BPL be found to interfere with low level EKG equipment sensors or devices utilized by businesses whose activities (for example) include Part 15 certification of computer equipment, how will A-BPL be prevented from entering these structures or areas? Who will mitigate interference with these devices? Failure to address this issue may cost businesses hundreds of thousands of dollars in interference mitigation or suppression devices, such as Faraday cages, et al.

Paragraph 48 is nothing other than cheer leading and its contents must not be included in any rules or further discussion. No impartial third party studies have shown definitive consumer requests or demands for A-BPL, or that such needs could not be met using other technologies.

In Appendix C, paragraph b)(2), as previously stated above, no requirement to measure directly below aerial power lines or above buried lines is given. FCC must include this requirement, as this is likely to be where emergency vehicles will be located that utilize HF, VHF, etc. radios that may be affected. Further, FCC must require measurement at and above the power line heights at distances perpendicular to the direction of the power line.

In Paragraph b)(3) of Appendix C, FCC is urged to define who mitigates interference within buildings and residences. To require occupants to mitigate is out of the typical scope of most business' mission statements, and usually is not within the capabilities of the average businessman or home owner.

In agreement with Commissioner Copp's statements, the FCC must NOT mandate consumer payment of this deployment, as A-BPL is not the primary carrier of E911 communications, and, therefore, is not an absolute requirement for protection of life and property. Payment would be especially unreasonable if A-BPL is erected in areas already covered by telephone dialup, cable, Wi-Fi, or other access previously paid for by the consumer.

I strongly urge FCC to proceed cautiously with implementation of any proposed rules without acting on questions and comments contained herein.

Simply because I did not demand FCC action on or consideration of a topic enumerated herein does not mean consideration should not be given. It should. Doing otherwise would be a political nightmare for all in charge.

Further, I trust that the FCC will give such consideration to these topics in attempt to avoid any potential protracted lawsuits filed by licensed, legally operated stations that will ultimately be paid for by the taxpayer.

Thank you very much.

Kris Harrison

----------32ACCA8FB420A1A8FBADBE17

```
Content-Type: text/x-vcard; charset=us-ascii;
 name="creesesc.vcf"
Content-Transfer-Encoding: 7bit
Content-Description: Card for Kris Harrison
Content-Disposition: attachment;
 filename="creesesc.vcf"

begin:vcard
n:NOT a SPOOFED E-MAIL address!;This is me!
x-mozilla-html:FALSE
adr:;;;;;;
version:2.1
note;quoted-printable:Notice:  Owing to potential virus trouble and DDOS issues,
=0D=0AI have temporarily turned on the most extensive e-mail protection.=0D=0AIf
your message is rejected, it's because your address does not=0D=0Amatch what is
in the Earthlink.Net WebMail Address Book.=0D=0AIf you are unable to resolve the
issue using their utilities, call me at:=0D=0A803-787-5754.=0D=0AThank you for
your patience.=0D=0A
fn:This is me!  This is NOT a spoofed E-Mail address!
end:vcard

--------------32ACCA8FB420A1A8FBADBE17--
```