...only minimal regulations are appropriate. However, this does not mean that we have not been cognizant of the need to protect existing licensed services from interference. To address this issue, *the Office of Engineering and Technology (OET) has done thorough testing of BPL systems* to ensure the rules we are adopting protect existing governmental uses, amateur radio operators, and other licensees from interference." (emphasis added).

The *Access BPL Order* relied heavily on the Commission's "research," "investigations," "field tests," "field measurements," and "analyses" to support its conclusion that "BPL network systems can generally be configured and managed to minimize and/or eliminate . . . harmful interference potential." *See, Access BPL Order* at ¶¶ 2, 23, 39. ARRL's Freedom of Information Act request *for the test results on which the Commission relied in the adoption of the Access BPL Order* resulted in the release of the tests and studies prepared by the Technical Research Branch. The Court of Appeals, in ordering the disclosure of the unredacted studies, field measurements, "thorough" test results and analyses, held with respect to these documents that "in reaching its 'low'-likelihood [of harmful interference] conclusion, the Commission stated that '(t)he record *and our investigations* indicate that [Access] BPL network systems can generally be configured and managed to minimize and/or eliminate...harmful interference potential [to licensed radio services][35]...The Commission also relied on 'information provided by our field tests,' 'our own field measurements of Access BPL installations' and 'our own field testing.'[36] [37] The Court held that the studies released on remand constituted "a central source of data for its critical determinations." [38] The Court made it clear that the Commission chose to rely on these Technical Research Branch studies and measurements, and noted that they were not unauthorized staff activities. [39]

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[35] Citation to the Access BPL Order, 19 FCC Rcd at 21266 and 21,322 omitted.
[36] *Op. cit.,* 19 FCC Rcd 21275-76, 21282, and 21296.
[37] *American Radio Relay League, Inc. v. FCC*, 524 F.3d at 233.
[38] *Id.,* 524 F.3d at 245, *citing* Access BPL Order, 19 FCC Rcd at 21266, 21322, 21275-76, 21282, 21296 and the Commission's 2006 Order on Reconsideration, *Memorandum Opinion and Order* in ET Docket Nos. 04-37, 03-104, 21 FCC Rcd 9308 (2006)
[39] *Id.* 524 F.3d at 245, 246. "Under the circumstances, the Commission can point to no authority allowing it to rely on the studies in a rulemaking but hide from the public parts of the studies that may contain contrary evidence, inconvenient qualifications, or relevant explanations of the methodology employed."

12. Yet, in this R&O the Commission tries to hide from the conclusions of its Technical Research Branch that are "inconvenient truths" at variance with its reaffirmed conclusions with respect to BPL's interference potential. At Paragraph 3 of the R&O, the Commission concedes only that it "considered" the Technical Research Branch conclusions in establishing the rules. They are referred to as mere "informal presentations"[40] "of information, impressions and ideas." It is argued that no formal peer review was conducted, and so the documents were "more properly viewed as discussion materials and options rather than settled conclusions."[41] Ultimately, the Commission said that the documents constituted the "opinions of one staff member" as to whether BPL systems are point-source systems and "that staff member's opinion on possible ways to treat these systems." And the ultimate dismissal: "Also, the assessments and recommendations in the redacted portions of the presentations merely reflect the views of the Laboratory engineers who performed the testing and analysis; they do not necessarily reflect the consensus view of other engineers, the management of the Laboratory or of OET." [42] The Commission's effort to distance itself from the results of its own Technical Research Branch field studies which it secreted; on which it *chose* to rely; and which squarely rebut its findings that BPL has a low interference potential (and thus that no modified rules are necessary to prevent interference), is unavailing under the circumstances. All of the 2003 and 2004 field studies and the July, 2009 documents prepared by the Commission's Laboratory staff studies were conducted using scientifically valid methodologies and the R&O does not rebut them as a technical matter. As with ARRL's numerous technical submissions, the R&O simply discounts them. The results of the Technical Branch's studies and investigations concluded, consistently,

[40] R&O, at¶ 8, fn. 26
[41] *Id.*
[42] *Id.*, at ¶ 19. It is far too late to dismiss these scientifically valid findings and studies as "one man's opinion", as the Court of Appeals already noted. The Commission chose to rely on them and it has offered nothing that contravenes the findings.

that Access BPL has a significant harmful interference potential to normal residential Amateur Radio operation.[43] Now, the R&O claims (vaguely) at paragraph 19 that the Commission has "considered all of the available information on BPL systems and their performance, submissions in the comments and other publicly available information." *Besides the comments in the record on remand, however, what is that other available information*? Why was the other information considered by the Commission not included in the record earlier so that the public could comment on it? Why did the Commission not disclose the information in response to ARRL's earlier Freedom of Information Act request? The simple answer is that there is no other information.

13. At Paragraph 54 of the R&O, the Commission states that:

> We acknowledge that a compliant BPL system will increase the noise floor (sic) within a relatively short (sic) distance of the power lines (typically ranging from less than 15 meters to 400 meters, depending on frequency, type of receive station and location-specific behavior of the BPL operation), and have determined that this increase is acceptable so long as the system's operation does not cause harmful interference.

The term "relatively short" has no application to interference contours that extend 400 meters from power lines. Almost every licensed Amateur Radio station is located within 400 meters of a power line. A majority of those stations are located within *30 meters* of an overhead powerline. The unquantified "increase in noise floor" is apparently not acceptable if the victim receiver operates in a United States government frequency band. It is only acceptable to the Commission when the victim of the predictably high interference potential is an Amateur Radio station. The Commission states at Paragraph 55 of the R&O that it is:

[43] One FCC study, based on actual measurements, showed that Access BPL raises ambient noise levels at substantial distances from the power lines by as much as 40 dB in some cases, and by at least 30 dB in 60 percent of the areas measured, and by 20 dB in essentially 100 percent of the locations measured, at locations typical of the distance between an Amateur radio antenna and an overhead MV power line. The Commission's Technical Relations Branch concluded that the interference levels would be typically at "25-35 dB."

> aware that amateur receive sites are typically located outdoors in relatively close proximity to power lines and that BPL emissions are likely to be present over all or large portions of the amateur bands. These considerations, as well as similar considerations with respect to other services, led us to require that Access BPL operators be capable of remotely managing their facilities to reduce or eliminate emissions in locations where interference might occur and to require establishment of a database of BPL operations so that licensed radio users could contact the local BPL operator if interference were to occur.

14. The Commission has never adequately explained why Amateur stations, located in residential areas in very close proximity to overhead power lines in grid configurations throughout entire municipalities should not be protected from BPL interference *before it is reported.* The services which are protected *ex ante* by notching requirements are routinely located outside residential areas, typically much farther from overhead medium voltage power lines than are Amateur stations. In the Access BPL Order, the Commission referred to the Amateur Service as a "hobby service" and by that dismissive characterization justified its abandonment of the entire paradigm of unlicensed device regulation as it applied to Amateur Radio. Now, to justify avoidance of advance protection from interference of the licensed service with the *greatest* expectation of interference protection from unlicensed devices, the Commission continues to deny evidence of the interference potential of Access BPL. It claims that there is only a "small" interference potential[44] which can be resolved after the fact[45] despite a full and complete record that indicates precisely the contrary. This treatment of licensed radio services is arbitrary and capricious on its face, given the record in this proceeding.[46] There is a far more compelling case for full-time notching of Amateur

[44] The NTIA has shown that the interference potential that the FCC refers to as "small" is almost 100 percent at the distances that Amateur Radio stations are typically located from power lines.

[45] At paragraph 37 of the R&O, the Commission states that it: " did not address the frequencies used by the amateur service on an individual basis, but rather concluded that amateur radio frequencies generally do not warrant the special protection of frequency exclusion that was afforded frequencies reserved for international aeronautical and maritime safety operations." Nor did the Amateur Service even warrant notification procedures that were applicable to public safety systems located near BPL systems. See Section 15.615(e) of the rules.

[46] It is impossible to rationalize the implicit finding of the Commission that protection of Amateur Radio communications from interference is somehow accomplished by the adopted rules, while protection of more important services is not, even though those other services (1) are typically located further away from power lines;

bands than there is for any other service in terms of the likelihood of interference from Access BPL systems.

15. The Commission must admit that the majority of BPL systems has implemented full-time, all-Amateur-band notching. It therefore cannot rationally hold that it is a burden on BPL systems to have to do so (to a reasonable notch depth) by rule as a means of protecting the Amateur Service. It claims at paragraph 39 of the R&O that mobile Amateur stations do not need any degree of regulatory protection inasmuch as there are allegedly low signal levels permitted under the Part 15 emission limits and the fact that a mobile transceiver is only in one place for a limited period and "can be readily re-positioned to provide some separation from the Access BPL operation." As the record shows many times over, however, no after-the-fact interference mitigation can address mobile interference. It must be prevented *ex ante*. After suffering repeated communications preclusion in a wide area where overhead power lines are in a grid configuration, the mobile station could in fact move out of the area, but that would of course be long before any mitigation can be done. During the time the mobile station is in a BPL area, absent full-time notching of the Amateur allocation, the operation of that mobile station will most definitely be repeatedly disrupted and communications precluded. This was proven clearly during the ill-fated Manassas, Virginia BPL deployment, as the Commission's records and the instant docket record show.[47] A mobile Amateur station should not have to drive outside an entire city or community in order to be able to communicate.

16. Ultimately, the Commission claims at Paragraph 51 of the R&O that there is no <u>need</u> to require full-time, Amateur band notching:

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(2) use receivers of considerably less sensitivity, and (3) typically utilize desired received signals of higher signal strength.

[47] At paragraph 56 of the R&O, the Commission claimed that its "staff has also made other observations of notched BPL signals, for example at the Manassas, VA system, where notching capability as required under the rules was implemented and was very successful in eliminating interference." This is a blatantly false statement. There were constant and repeated interference reports from local radio amateurs filed with the Commission noting that interference to mobile Amateur Radio operation was impossible in numerous areas of the deployment area due to BPL wideband noise and incomplete notching.

> While some interference is possible at locations close to the power line, we believe that in the great majority of locations, interference will not occur to radio services because either propagation conditions limit the range of the Access BPL emissions or there is no licensed amateur station present and operating on the frequencies on which such emissions appear. We see no need to require an Access BPL operator to reduce emissions below the Part 15 limits where there is no potential (sic) for interference. In addition, we have required that a database of Access BPL systems be established to allow amateur operators to identify BPL operations in their area before the systems commence operation so that they have an opportunity to alert the BPL operator of their presence before the system is activated.

The Commission's suggestion that there are areas where there are no Amateur stations now (and hence "no potential" for interference) ignores the ubiquitous nature of Amateur Radio, and completely fails to prevent interference to mobile stations. The location of Amateur stations is not static; neither the Commission nor the BPL operator can know where an Amateur station will be located and operating at any given time. There is *always* the potential for interference from a BPL system that is not notched on Amateur bands, at significant distances from power lines carrying BPL. At any given location, Amateur stations are likely to be located within the substantial interference distance from an overhead power line carrying BPL.[48] And as shown above, the BPL database is completely useless and always has been. If *post hoc* remedies were sufficient, this might be a reasonable approach. However, where interference complaints have consistently been unaddressed where they arise; where the capability to notch to any reasonable notch depth is meaningless because it is not implemented, and where the Commission has shown a universal

[48] The Commission, at paragraph 43 of the R&O, states that it "acknowledge(s) ARRL's point that the modeling in the *NTIA Phase 1 Study* predicts that Access BPL emissions on frequencies below 30 MHz that are at the Part 15 limit would raise the mobile radio noise floor at 15 MHz and 25 MHz by 30 dB in 59% of residential locations." However, the Commission claims that the noise level varies by location. The same NTIA study, however (and the Commission carefully avoids any reference to this in its R&O) predicted that the interference contour of a BPL system to a fixed Amateur station trying to receive low-to-moderate signals at HF (the normal situation) could expect to receive interference at a distance of 460 meters — a distance of nearly five football fields — from the power lines, even assuming that the BPL devices met the radiated emission limits in existing Part 15 regulations. ARRL's experience and extensive field investigations, many of which have been reported to the Commission, are entirely consistent with this finding.

proclivity to ignore BPL interference cases when brought to its attention, the need for full-time notching, which is not problematic for BPL systems, is manifest.[49]

17. That full-time Amateur band notching is both possible and necessary is illustrated by the case study discussed at Exhibit A, page 26 of ARRL's November, 2010 *ex parte* submission. ARRL stated, with respect to the IBEC BPL system in Lovington, Virginia, as follows:

> IBEC also initially completely notched the ham bands in its deployment in the Central Virginia Electric Cooperative in and around Lovingston, VA, in preparation for testing done by local Amateurs in that area....Although notch depth was not measured during that evaluation testing, the local Amateurs reported that the universal notch filtering implemented by IBEC system-wide at that time in preparation for this testing was effective in preventing widespread interference problems involving Amateur Radio...
>
> *****
>
> Unfortunately, contrary to the provisions in the IEEE P1901 standard, and its early assurances to ARRL and local Amateurs in its Virginia deployment area, IBEC has stopped following industry practice with respect to notching the Amateur bands, despite the positive EMC results it had in its Virginia system when universal notching was employed. This is a clear indication that, industry assurances notwithstanding, and even with IEEE standards in place that require that Amateur bands not be used for BPL, without a mandate in regulations that mirrors this industry-standard practice, some BPL operators will not follow industry standards and will deploy systems that cause interference to Amateur Radio operation.
>
> As demonstrated by recent interference complaints and ARRL testing, IBEC has discontinued the practice that it had used to demonstrate that its notching resulted in systems did not cause harmful interference to Amateur Radio. After this demonstration, in contradiction to its entries in the BPL database, IBEC has chosen to use the Amateur spectrum its database entries indicate that it is not using. The result is predicable – in the BPL system deployed by IBEC in the Central Virginia Electric Cooperative, interference levels on the Amateur bands are strong over the entire service area.
>
> IBEC has, to a degree, implemented notching in and around fixed Amateur stations that have filed formal complaints, but the local Amateurs indicate that the process of trying to implement notching on a case-by-case basis has been a difficult and iterative one, sometimes taking months to implement. Once notching is implemented, if a new customer signs on to the IBEC service near the licensed Amateur, based on a report of an Amateur in the Lovingston area, the process must be repeated again and again.

This establishes empirically that full time mandatory notching of Amateur bands to a reasonable notch depth should be required by the Commission's rules.

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[49] ARRL established at pages 7-12 in its June, 2011 *ex parte* filing in this proceeding in response to the UTC two-page, unsupported letter filing dated May 4, 2011 that full time notching can be done without any substantial loss in data rate, and that such notching is supported by worldwide industry standards. In some cases, notching spectrum that is being affected by strong interference improved the data rate. Why the Commission finds that showing and the cited standards to be unpersuasive is not explained in the R&O.

IV. Any Variability in the Median Noise Level, and Any Variability of the Decay of RF Fields Near Power Lines Militates in Favor of Requiring Full Time Notching of Amateur Bands By BPL Facilities, and Vitiates the Commission's Measurement Procedures.

18. The Commission claims repeatedly, in an attempt to rebut ARRL's earlier arguments concerning the proper notch depth for BPL modem "capability" that at HF "there is considerable variability around the median noise level, such that increases of as much as 20 dB are common and reduce the reliability of signals at the margin of expected reception. *R&O, at* ¶ 43. At paragraph 11 of the R&O, it claims that there is variability in the attenuation of emissions from BPL systems across individual measurement sites that are not captured by a uniform 40 dB/decade extrapolation factor for signal decay. Given the unpredictability of BPL radiated emission field strengths at distance claimed by the Commission, it is apparent that the Commission can make no assumption with respect to the level of interference at distance from radiating medium voltage power lines. This strongly militates in favor of requiring full-time notching of Amateur bands, even if only to the 25 dB notch depth adopted by the Commission in this proceeding.

19. Given the variability in signal decay claimed by the Commission,[50] it is readily apparent that the Commission's site-specific measurement procedure adopted for BPL systems, which requires measurement at only four points along the BPL system, is woefully inadequate[51] in order to assess the actual compliance level of the BPL system.[52] Furthermore, the Commission has adopted the "slant range distance" used in the BPL measurement guidelines (which did not heretofore appear in the BPL rules) for measurement of BPL radiated emission levels. The Commission holds at

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[50] See paragraph 68 of the R&O.

[51] This can be fixed. The present rules support measurement of extrapolation using 3 points. This works for physically small emitters. The complex pattern of emissions from large emitters does not suit this method. If, however, measurements are made at 4 horizontal distances perpendicular to the line at specified distances *along* the line, and the maximum value is used at each horizontal distance is used in the calculation, the methodology is scientifically justified.

[52] Given the extreme variation in field strength near a large complex radiator, an *in situ* measurement procedure that permits measurements along the ground at only four unspecified points invites "cherry-picking" and allows BPL systems to freely operate well above the permitted radiated emission maxima.

paragraph 2, footnote 7 of the R&O that because Access BPL devices are mounted on overhead power lines and the measurement antenna is at a lower distance closer to the ground, the actual distance from the power line to the measurement antenna is greater than the horizontal distance from the pole on which the BPL device is mounted to the measurement antenna. The correct distance for measurement is therefore the "slant range" diagonal distance measured from the center of the measurement antenna to the nearest point of the overhead power line carrying the Access BPL signal being measured. While this is a slight improvement over measurement at horizontal *distance* from the power line, the Commission has ignored ARRL's point, made repeatedly in the pre-and post-remand docket proceedings that emissions above the power lines are stronger than they are at ground level. Therefore, the measurements made at ground level are misleadingly low.[53] The NTIA Phase 1 study recommended measurement of BPL emissions at a *height* roughly equal to the power line height, using an adjustment factor for higher emissions at higher elevation angles, but the Commission did not adopt the recommendation.

V. The Distance Extrapolation Factor.

20. The bulk of the R&O is dedicated to justifying the Commission's reaffirmation that the 40 dB/decade of distance extrapolation factor is justified, in lieu of the proposed 30 dB/decade extrapolation factor in the Further Notice or some other figure. ARRL submitted voluminous materials in the record in this proceeding, the scientific validity of which ARRL continues to maintain. However, the Commission held at Paragraph 71 that:

> Initially, we observe that the 40 dB/decade extrapolation for frequencies below 30 MHz has served successfully in our program to control emissions from radio frequency devices for many years. We also observe that, while ARRL contends that 20 dB is the only scientifically correct and valid value for an extrapolation factor, the

[53] The R&O states at ¶ 31 that "(a)nalysis and prediction of RF propagation in the HF frequency region is extremely complex and difficult, and particularly at locations close to the ground, as the Commission, ARRL and many other commenters have acknowledged throughout this proceeding." At paragraph 33, the Commission admits that there is free space propagation upward from radiating power lines.

> studies and information before us show considerable differences in extrapolation factors under various power line system configurations and usage conditions. We conclude that there is no single "correct" value for an extrapolation for RF emissions from power lines, and instead find that the compelling and reasonable solution is to use the existing Part 15 extrapolation factor that both has a scientific basis and has stood the test of time for a wide variety of devices and systems. We also note that, as discussed below, using the slant range method in performing measurements has the effect of reducing the extrapolation factor to approximately 20 dB...

ARRL **at no time** asserted that 20 dB/decade was "the only scientifically correct and valid value for an extrapolation factor." ARRL has only insisted that the Commission adopt a scientifically valid and supportable extrapolation factor. ARRL is of the view, and the record shows via extensive and definitive studies and analyses[54] that the correct extrapolation factor is *close to 20 dB/decade in the region beyond wavelength/2Pi of distance from radiating BPL systems*. The Commission had in its possession in 2004 and in 2006, at the times that it adopted and first affirmed the 40 dB/decade factor, firm evidence that 40 dB/decade is not the correct extrapolation factor. ARRL incorporates herein by reference the studies and arguments previously submitted on that subject. That said, ARRL has also taken the position that the extrapolation factor is less significant as a practical matter if there is full time notching of Amateur bands by Access BPL facilities to a reasonable notch depth. It is unfortunate, however, that the Commission, unwilling to impose any restrictions on BPL systems regardless of the record evidence, and lacking an unambiguous scientific basis for a single value that would be applicable across the entire 1.7 to 30 MHz frequency range, fell back on the only single value for an extrapolation factor that is scientifically unsupportable.

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[54] See, e.g. Hare, Ed, *Modeling as an Alternative to Measurements in Determining the Extrapolation of Measurements Below 30 MHz,* Exhibit C to ARRL's Comments in this proceeding filed September 23, 2009; Hare, Ed, *Industry Standards Addressing Distance Extrapolation,* Exhibit D to ARRL's Comments in this proceeding filed September 23, 2009; and Hare, Ed, *Rationale for the Abandonment of the Use of a Single 40 dB/decade Extrapolation Factor for Radiated Emissions Measurements Made Below 30 MHz,* Exhibit A to ARRL's written *ex parte* submission in this proceeding filed January 11, 2010.

VI. Conclusions.

21. While BPL has failed in the marketplace as a medium for delivering broadband connectivity to consumers, the technology is still touted as a mechanism for "smart grid" applications. It is time that the Commission stopped stonewalling with respect to (1) the unique and substantial interference potential of Access BPL systems relative to Amateur Radio HF communications; (2) the inapplicability and/or inadequacy of the current BPL rules to Access BPL/Amateur Radio interaction; (3) the clear necessity of mandatory, full time notching by Access BPL companies of Amateur Radio allocations to notch depths of *at least* 25 dB; and (4) the absence of any negative effect on BPL systems of the obligation to maintain full-time notching of Amateur bands. Mandatory full-time Amateur band notching to 25 dB should be implemented right now.

Therefore, for all of the above reasons, ARRL, the National Association for Amateur Radio, respectfully requests that the Commission reconsider and modify the rules governing Access Broadband over Power Line systems in accordance with the foregoing.

Respectfully submitted,

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December 20, 2011

Exhibit A

Errors in the United Power Line Council BPL Database: Second Report

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December 20, 2011

The following report describes the condition of the BPL database as of December 19, 2011.

On November 20, 2010, ARRL filed a complaint with the Commission about the large number of errors that existed at the time in the United Power Line Council (UPLC) BPL database, located at http://www.bpldatabase.org. [UPLC has since been dissolved as a functioning organization, but has been absorbed by its parent organization, the Utilities Telecom Council (UTC)]. This complaint was accompanied by an exhibit, "Errors in the United Power Line Council BPL Database."

That report outlined errors and omissions in the BPL database. It also described a number of BPL systems that were entered into the database, but were paper systems that did not ever exist. The majority of these errors were self-evident and would have – and should have – been identified by even minimally competent administration of the database.

Although some of the errors reported by ARRL over one year ago have been corrected, many obvious errors remain. These errors, known to UTC and FCC for over a year, seriously diminish the ability of the BPL database to serve as a reasonable tool for use in identifying BPL interference.

There are 171 ZIP codes in the United States that have a BPL system entry in the database.[1] ARRL easily identified errors in 44 of them. This represents a continuing error rate of 26% of the ZIP codes containing *easily* identified errors. There may be other errors that are not apparent from the data or from a "failed-email" error message.

The following BPL operators were contacted by ARRL, but did not respond to ARRL's inquiry:

- New Visions – Recent media reports in the free press indicate that New Visions is no longer operating any BPL in the central NY region. From all indications, these BPL systems have never been in operation.
- Gridline BPL systems have never been in operation.

[1] This number is somewhat lower than it was in ARRL's report and complaint from November 2010 because a block of BPL ZIP codes in Texas for which BPL service was discontinued has been removed. Many other "phantom" systems still remain in the database, however.

Summary of number of ZIP codes with errors:

- System known to be shut down but still listed in database: 36
- System known to be shut down but still listed in database for which the operator of record has confirmed to ARRL that he has informed UPLC that he is no longer the operator of the system: 1
- Contact information email invalid: 19. These systems appear to be no longer in operation.
- Missing frequency, model or other information: 2
- Invalid ZIP code or other: 2

ZIP code	City, State	BPL operator	Error	Notes
01104	Springfield, MA	Amperion	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail, unknown user.	This system has not been in operation for 2+ years. This discrepancy was previously reported to the FCC and UTC.
11520	Freeport, NY	Freeport Electric	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail, unknown user.	
12345	`Washington, DC	Test Company	Not a valid ZIP code	UTC is leaving a test entry in the database
13209	Solvay, NY	New Visions	The contact person in the database did not respond to an ARRL request for information.	Media reports in the free press indicate that New Visions is no longer operating any BPL in the central NY

				region. From all indications, these BPL systems have never been in operation.
13219	Syracuse, NY	New Visions	The contact person in the database did not respond to an ARRL request for information.	Media reports in the free press indicate that New Visions is no longer operating any BPL in the central NY region. From all indications, these BPL systems have never been in operation.
13421	Oneida, NY	New Visions	The contact person in the database did not respond to an ARRL request for information.	Media reports in the free press indicate that New Visions is no longer operating any BPL in the central NY region. From all indications, these BPL systems have never been in operation.
13461	Sherrill, NY	New Visions	The contact person in the database did not respond to an ARRL request for information.	Media reports in the free press indicate that New Visions is no longer operating any BPL in the central NY region. From all indications, these BPL systems have never been in operation.

18015	Bethlehem, PA	PPL Telecom	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail, unknown user.	
20110	Manassas, VA	City of Manassas	Although this system appears in the BPL database, the BPL operator has announced that the system is no longer in operation.	
20164	Sterling, VA	Copper Road	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail, unknown user.	The domain name in the contact email address, CopperRoad.com, is listed as being for-sale
20165	Sterling, VA	Copper Road	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail, unknown user.	The domain name in the contact email address, CopperRoad.com, is listed as being for-sale
20166	Sterling, VA	Copper Road	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail,	The domain name in the contact email address, CopperRoad.com, is listed as being for-sale

			unknown user.	
20167	Sterling, VA	Copper Road	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail, unknown user.	The domain name in the contact email address, CopperRoad.com, is listed as being for-sale
22921	Unknown presumed VA	IBEC	ZIP code is not a valid ZIP code.	
24141	Radford, VA	Designed Telecommun-ications	Although this system appears in the BPL database, the BPL operator has confirmed that the system is no longer in operation.	
24153	Salem, VA	Designed Telecommun-ications	Although this system appears in the BPL database, the BPL operator has confirmed that the system is no longer in operation.	
27709	Durham, NC	Copper Road	The contact information for the BPL operator is incorrect. Email sent to the address provided is returned as failed mail, unknown user.	The domain name CopperRoad.com is listed as being for-sale
27825	Everetts, NC	Copper Road	The contact information for the BPL operator is incorrect. Email	The domain name CopperRoad.com is listed as being for-