Before the

Federal Communications Commission

Washington, D.C. 20554

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In the Matter of	)	
	)	
Digital Audio Broadcasting Systems	)	MM Docket No. 99-325
And Their Impact on the Terrestrial	)	
Radio Broadcast Service	)	
	)	

PETITION FOR RECONSIDERATION

I, Alan W. Jurison am personally filing this Petition for Reconsideration of the third Order issued by the Commission, released January 29, 2010. I would also like to file comments and analysis in response to the *ex parte* filing of National Public Radio ("NPR") on January 28, 2010 ("NPR Response"). The purpose of these remarks is to clarify and to respond to NPR's reply to my *ex parte* comments filed with the Commission on January 6, 2010.

Pursuant to Section 1.106 of the Commission's Rules, I am filing this Petition for Reconsideration. NPR submitted its test data and interference criteria in November 5, 2009. Because of the large volume of data that NPR filed, it took time to analyze the data they filed. I

submitted my response to the NPR filing on January 6, 2010. While I was not a party in the original proceeding, I was a party in *ex parte* presentations and comments as was NPR. Since all of this dialogue has occurred outside of the proceedings' official comment windows, it was impossible for me to participate in earlier stages of the proceeding. Because the Commission had been delaying a decision in this proceeding, waiting for NPR's testing, and, based many of its decisions in the third Order on NPR's data submitted in *ex parte* proceedings, the Commission should also be able to accept and respond to public comments on NPR's tests. The public deserves the right to comment on this matter. The Commission's third Order accepted many of the findings of the NPR Labs report on November 5, 2009 and adopted many of its suggestions. In its third Order, the Commission didn't appropriately address my findings of significant flaws in NPR's submitted data. Moreover, NPR has not addressed these flaws even four months after they have been brought to light. I feel these flaws unfairly skewed the data to show more interference on elevated digital operations, and feel this adversely affects the public by putting very restrictive rules on the newly approved digital power increase. These rules that were crafted based on poor data. As a member of the public, I am advocating relief of the restrictive power increase rules so stations can increase to -10dBc, providing solid, reliable digital reception.

I respectfully request that the Commission weigh my comments as equally as NPR's, and respond to these comments as well, as both NPR's tests and my comments were filed outside of the comment window and were considered *ex parte* presentations.

NPR Inappropriately uses Digital MOS Scores with No Analog Control Sample

On Page 5 of the NPR Response letter, NPR states that there was no "analog only" submitted data on WRNI because "analog-only transmission was not permitted from the IBOC station" and "[c]onsequentially, it would not be appropriate to display partial data averages for analog alongside the full data averages for IBOC transmissions in Figure 24" of the NPR Labs Study. Using NPR's same logic, because there was no "analog only" data from WRNI, it is inappropriate that NPR uses the WRNI "digital data" in Figure 26 of the NPR Labs Study. NPR uses the digital data, with poor MOS scores, without ever having shown what the "analog to analog" would have scored in that same location. NPR can not use the argument that data should be omitted in Figure 24, but then should not be omitted in Figure 26. This is a major flaw in their January 28, 2010 response and the November 5, 2009 NPR Labs Study.

Because NPR did not collect "analog to analog" data for WRNI, all of the digital data should be removed from the study. NPR has no control sample and cannot prove that the "analog to analog" reception at these points was acceptable. It is therefore my opinion that the methodology surrounding the digital data points is flawed and that all data resulting from this portion of the research should be excluded from consideration by the Commission. NPR states that they were not permitted to do the "analog to analog" testing on WRNI, but does not state why. In earlier filings in this proceeding from Greater Media and Rhode Island Public Radio, various digital power levels and no digital carriers were used to investigate alleged interference

complaints between the two test stations[1]. Greater Media stated "Even with no HD transmissions by WKLB(FM), the WRNI reception was… relatively noisy"[2]. NPR does not demonstrate why they were not permitted to do the "analog to analog" testing in this case, when clearly Greater Media has demonstrated it was able to remove digital power in its investigation of interference, and has shown on the record its willingness to accommodate interference testing in its experimental authorization for elevated digital power levels. Moreover, if the licensee of WKLB(FM) "did not permit" analog to analog testing, NPR could have filed a complaint with the Commission stating that they were not assisting in the experimental portion of their authorization. Alternatively, NPR could and should have selected other test stations where "analog to analog" testing could have been performed. They did not do this and it discredits their use of WRNI data in the study.

The fact that NPR alleges the IBOC station did not permit "analog to analog" testing is irrelevant and avoids addressing the problem. The digital WRNI data is not relevant because there was no "analog to analog" MOS scoring data. The digital WRNI data should not be included in the report. Greater Media is on record stating the "analog to analog" testing of WRNI was "relatively noisy". What would the MOS scores of that "relatively noisy" analog reception be? Would non-biased listeners score this above or below a 2.7 MOS? We do not know because NPR did not collect the data or do any testing in this area.

[1] *See* Reply Comments of Rhode Island Public Radio, MM Docket 99-325, July 17, 2009 and published media reports http://www.rwonline.com/article/84360

[2] *Ibid.*

WRNI Test Route Evaluation: My Own Field Observations

On February 19, 2010, between approximately 9-10 PM, I drove the test route that NPR Labs performed in their tests. I immediately noticed a very fragile "desired" station of WRNI on portions of this route. In my filing of January 6, 2010, Exhibit B, I provided a Longley Rice plot of the area of WRNI's coverage area where NPR did its testing. In that filing, I suggested that the Longley Rice data showed very weak signals portions of that region of WRNI, despite being in the protected 60dBu FCC contour. The Longley Rice plot showed predicted receive signal levels well below 60dBu, and also, based on the blotched color pattern in the test areas, shows an area of weak and fragile signal. My own field observations on February 19, 2010 confirm this. While my observations show some areas of the test path WRNI had decent reception, other areas it was not. The areas that WRNI did not perform well, there was a lot of signal drop outs and multipath, typical of the terrain obstructions between the transmitter and receiving location. These locations coincide with NPR's data of having poor D/U ratios inside the protected contour.

When I was listening, WRNI was transmitting in mono, (i.e. no stereo pilot or stereo subcarriers) which allows the receiver to continually operate in its optimal noise-free position. According to documents filed in this proceeding from WRNI, NPR's tests were done with WRNI in stereo[3]. It is my professional experience that running WRNI in stereo would make the WRNI signal even more fragile in these areas, making what might be a marginal monaural signal completely unlistenable in stereo, or, the receiver would be going in and out of mono blending in addition to displaying other artifacts of poor reception. My comments filed on January 6, 2010

[3] *Ibid* at Footnote 5.

suggested perhaps the "mono blending" circuit of the NPR test radio was causing the undesirable MOS scores, but, because NPR failed to perform testing on this very critical point, we do not know. Based on my direct observations of WRNI, it is poor engineering practice to not take any "analog to analog" recordings of WRNI and do MOS scoring on the data.

NPR does not provide any information as to what areas the audio samples were used on these test routes; nor have they provided the audio clips for the public to listen to or comment on[4]. Moreover, since there were no "analog to analog" samples collected on WRNI, it is certainly possible that NPR selected, whether intentionally or inadvertently, an area of weak analog reception that would have failed a 2.7 MOS in the "analog to analog" tests. Based on my observations, all of the WRNI data included in the NPR report should be removed because NPR failed to take any "analog to analog" data.

It should be noted that my driving on February 19, I noticed no digital interference on WRNI, even though WKLB was running at -14dBc under experimental authorization at the time. Given my experience on this topic, the impairments I heard to WRNI inside the protected contour were related to the signal of WRNI, and not that of WKLB's digital operation. I used several radios in my analysis, including an OEM receiver in a 2008 Jeep Grand Cherokee, model RER, the portable Insignia NS-HD01 and iPod Nano 5th Generation FM receivers in my tests. The areas of WRNI impairments that I heard were almost certainly the cause of terrain shadow and the lack of WRNI signal in those areas, not IBOC digital interference. Often times, the portable players could not tune in WKLB's analog signal because of the far distance; meaning the digital carrier was not in question when the far more powerful analog signal could not be

[4] In contrast, NPR has audio samples of earlier lab tests conducted in November 2008 on their website at http://www.nprlabs.org/research/index.php. Why is NPR not being forthcoming with the data collected of their in field tests submitted to the FCC on November 5, 2009?

received. Yet, the multipath, "picket fencing" and complete carrier drop outs of WRNI on all three of these receivers in these areas is evidence of how fragile WRNI is on the test route NPR selected. Running WRNI in stereo in these areas, which NPR also did during their tests, would only exacerbate the problems of WRNI's signal propagation in the area.

I also drove quite a bit outside of WRNI's protected contour on my way to and from the test routes, and was able to enjoy WRNI programming well beyond the protected contour with the OEM mobile receiver. My observations show -14dBc is overprotective and not as damaging as NPR claims. The interference to WRNI outside its protective contour does not sound like NPR's "in lab" November 2008 tests (as posted on their website) until I was miles beyond the protected contour of WRNI. The goal of this proceeding should not be to protect stations from digital interference beyond their protected contours. Yet, my observations show that they are.

It is clear to me, after visiting the NPR test route of WRNI, that the "analog to analog" reception (i.e. no digital carriers) is a critical piece of information that has been overlooked by NPR. By not taking audio samples and performing MOS scoring at the same locations, the NPR data is flawed. Conclusions made regarding this in the absence of a control sample are epistemologically questionable.

Other Test Route Analysis

Additionally, these observations I have made on WRNI do not fare well for data collected of KBPN Minnesota. A Longley-Rice plot of these areas also shows NPR did its testing in terrain impaired areas of the stations coverage range. The inclusion of low received signal

strengths is suspect, as I suggested in my January 6, 2010 filing. **Exhibit A** depicts a Longley-Rice Plot on KBPN Minnesota, zoomed in to show an estimate of the stop and start markers of KBPN Route 3[5]. These markers were estimated based on the maps submitted by NPR on November 5, 2009, in Figure 47 and correspond to received signal strengths of KBPN in the 28-40dBu region as shown in Figure 44. You'll clearly note the Longley-Rice plot shows that KBPN falls well below the predicted FCC 60dBu contour for this region. Further, NPR's submitted data in Figure 44 shows received signal strengths at approximately 1.5 meters AGL even lower than what the Longley Rice plot shows. Looking at the test route, and the areas near it in Exhibit A, you can get a feeling for KBPN's signal in this area. Based on the data I see, the KBPN signal is very weak and fragile, even in analog mode in the area NPR selected for testing. Performing a cursory Longley-Rice analysis of the other test routes selected by NPR on KBPN, they appear to have the same issue. NPR should be required to produce the data of KBPN Minnesota.

While NPR admits there was no "analog to analog" control on WRNI, NPR continues on Page 5 to state that "contrary to what Jurison stays on pages 13 and 14, analog data was used for all three of the other test stations". While it is true that "analog data" was used in the report on the other stations, NPR's statement is overreaching and takes my analysis out of context. My point on the preceding pages was in the 0-13 dB D/U region of NPR's tests, NPR has failed to provide valid "analog to analog" MOS scores as a control sample. In the NPR Labs Study, Table 5 on Page 21 shows "Samples Used in Mobile Tests", only KBPN Minnesota was used in the 0-13 dB D/U ratio region with analog only testing. The other two stations' "analog to analog" data

[5] One can only estimate the stop and start markers because NPR has not provided further details of their test data.

is used in the report, but, according to Table 5, these other stations are only used in the 14-28 dB D/U tests. NPR is unfairly clouding the most important part of this issue: they do not have a control sample, and without an "analog to analog" control set, their digital interference analysis is scientifically meaningless.

Since NPR did not collect "analog to analog" data on the KLDN Texas and KBWA Colorado stations in the 0-13 dB D/U region, the digital data they have presented is also lacking a control sample and is scientifically meaningless. NPR fails to acknowledge that their data is severely lacking scientific credibility in the 0-13 dB D/U region, which is where they make their entire basis and claims for a limited power increase and a burdensome process to get to -10dBc.

Please note that, in NPR's response dated January 28, they do not address this issue at all. They are quick to throw out other portions of my analysis, but they do not address the fact that their digital data is scientifically meaningless without an analog control sample from the same receiving location. They have avoided the topic, because it is the most critical point of my comments. Case in point, in NPR's response they object that I have questioned their scientific integrity and considered this practice disingenuous, but they do not address the most serious challenge I made about their data, that it is scientifically meaningless because it lacks an "analog to analog", non digital control sample.

While NPR purports on pages 4 and 5 of their response that field strengths below 45dBu are valid, they do not respond to my requests for the break-out of the MOS scoring data and audio samples obtained on KBPN Minnesota in low received signal conditions. NPR unfairly latches onto the number of 45dBu and says that I '...[misunderstand] the range of absolute RF levels, claiming that field strengths below 45dBu are 'bad'". While it is true that I questioned

the use of data in the 28-45dBu range, I stated in my comments that NPR should provide a revised Figure 26 "dropping any digital point where the analog field strength recorded at any given point was below a 2.7 MOS."[6] NPR purports I do not understand, yet on pages 13 and 14 of my original filing I clearly do understand. I did not arbitrarily select 45dBu as a threshold to discard data, NPR did. I suggested a more scientific process salvaging the data NPR already collected but misused to determine the appropriate cut-off point of when a digital sample should be dropped. NPR could have used this opportunity to furnish the data and make an explanation as to why they did not do this in the first place, but instead, they unfairly challenge my understanding of this topic by taking things out of context and not considering the entire analysis I presented.

NPR continues to hold their data in secrecy instead of "opening the books" and allowing the public to interpret the data themselves. NPR is keeping the data closely guarded and has refused to clarify or publish any more information as it relates to their November 5, 2009 study. I maintain that points collected with very low received signal strengths at the edge of the station's coverage area would likely sound bad, and have poor MOS scores in "analog to analog" testing. In fact, my own field observations of WRNI Rhode Island show this is likely the case. NPR's response does not provide any data refuting this claim, only that I am "mistaken". If I am mistaken, then NPR should have had no problem publishing the data I have requested on pages 13-14 of my January 6, 2010 comments. NPR needs to prove that analog field strength data in low received signal strength areas was acceptable before any digital testing was done. They have failed to do such.

[6] *See* Jurison Ex Parte Comments, MM Docket 99-325, January 6, 2010, Page 14.

iBiquity Study Did Have "Analog to Analog" Control Sample

NPR did not follow the basic scientific practice of having a control sample. iBiquity, in its tests filed on June 10, 2008, did. Note, the methods in which iBiquity took their audio samples are highlighted on Page 41, section 6.3. Before making a recording, iBiquity took a receiver in a location with a good received analog signal strength and reception. In those tests, iBiquity confirmed the "analog to analog" reception (no HD) was acceptable before conducting the tests. NPR did not do this. I feel iBiquity should have recorded the "analog to analog" audio in these situations and then present them for MOS scoring too, however they did not. However, iBiquity, at the very least made sure the "analog to analog" reception was good before conducting the test. At least someone made the subjective decision of "this analog signal sounds good, let's try the digital now to see if it interferes" at the same receiving location. NPR did not take this into account and this is a serious flaw in their methodology.

Without the "analog to analog" control data from the same location digital audio samples and scores were taken, we have no way to objectively determine whether the areas that NPR has selected have been skewed by signals that are already impaired before IBOC operations are considered. While NPR's tests have all been done within the desired station's protected contours, it seems that the areas that NPR selected have analog signal impairments. My Longley-Rice study of WRNI shows the area that they did their tests has significant shading and performs far worse than the predicted 60dBu FCC (50:50) contour. Any diligent consulting engineer, if plotting the WRNI signal, would likely advise their client that they are going to have

reception issues due to terrain in the area NPR did its testing. Just because it is within the 60dBu contour, perfect reception is not guaranteed. My field observations on February 19, 2010 confirm this.

A similar Longley-Rice study of KBPN shows the areas that had 28-40dBu received signal strengths are on the outskirts of the coverage area and are severely impacted by terrain in these areas. If the "analog to analog" MOS scores were broken out in these very low signal areas, they would likely be impaired. However, NPR continues to withhold this data and not publish it, even four months after I have requested it to be made public.

NPR, in their response, emphasizes that all of the readings were taken inside the protected contour. But, they fail to acknowledge the fact that there are sometimes areas inside a stations protected contour with signal impairments. If terrain or other factors produce a received signal strength of 28dBu within the protected contour, its MOS scoring of the analog audio would likely be poor and also considered unacceptable by listeners in an "analog to analog" basis. NPR is using this situation to limit the IBOC power increase; that is bad science and, in my opinion unfair. They continue to defend this practice by saying that they found these conditions inside the protected contour. For some station owners, it is disappointing when their signal does not perform well in certain areas, but this is by no means a new concept, and is something that broadcasters have had to deal with long before IBOC. The goal of this proceeding should not be to protect *any* signal within the protected contour, regardless of external factors. Sometimes, a signal is too poor to listen to, and we should not be using these situations as the basis of our interference analysis. The protected contour does not *guarantee* that everyone within it will receive unimpaired reception. The Commission affirmed this in the

third *Order* by stating "[t]his methodology does not ensure reception at every location within these protected contours"[7]. NPR continually reminds us they found areas in the protected contour with low signal values, but they do not link those areas with "analog to analog" MOS scores at the same locations as a control. NPR is attempting to protect analog reception in areas with bad reception; this would effectively establish a higher interference protection standard for digital operations than analog.

The Commission should not use NPR's data or adopt NPR's suggested policies for elevated digital operations, because this is not the current policy for analog operations. If there are terrain impairments between the transmitter and the receiver, and it creates an unusable analog signal, it should not be protected even if it is within the protected FCC contour. NPR continues to hold digital to a higher interference standard than that of "analog to analog". NPR continues to dodge this topic by not responding to this section of my comments, and by not breaking out the MOS scoring in this region for KBPN. By not collecting MOS scoring in this region on the other three stations, NPR's engineering analysis is scientifically lacking and unacceptable in this area.

Receiving Location of "Analog to Analog" tests

It is not clear in NPR's November 5, 2009 filing, nor in their January 28, 2010 response if the "analog to analog" tests presented from MOS scoring were performed at the exact same locations on the test routes as the digital -20dBc, -14dBc, and -10dBc locations. In the NPR

[7] *See* Third Report and Order at ¶ 24.

Labs Report on Section 4.1, they outline that the digital tests were taken at the exact same locations, although they make no mention of the "analog to analog" (no digital carriers) recordings on which they did MOS scoring[8]. In their effort to select random audio samples, did they uncouple the few control samples they might have had? Every digital sample needs to have an "analog to analog" only sample for it to be scientifically valid. This is relevant because, in my driving of the WRNI test routes, there were areas where the analog was in very good condition (even with WKLB's -14dBc). If NPR would have taken the "analog to analog" recordings and then later score them with MOS testing, it is safe to assume they would have scored well. But, likely the digital tests would have performed well in these same areas (because -14dBc sounded good in these areas too). If NPR did not directly couple the few "analog to analog" tests to the exact same receiving location in every single situation as they did with the digital tests, then this is yet another flaw in their methodology.

Figure 26 and NPR's Interference Protection Methodology Flawed

On Page 4, NPR states "…[T]hat the 4 to 8 dB D/U ratio was not the critical range in determining the protection ratios of this study, the median ratios from the 14 to 18dB were, as evident in Figure 26." They further claim "[t]his Fundamental misunderstanding negates Jurison's claims of 'Data Inconsistencies'". NPR is incorrect in this statement. In the NPR Labs Report, they discuss the creation of their Interference Protection Methodology, which centers on

[8] In the NPR Labs Report, Section 4.1, Item 1. *"Identical audio was recorded at each location in field testing at -20 dBc, -14 dBc and -10dBc, so that the sample triad was made up of the SAME audio sample at all IBOC injection levels."* NPR does not state the "analog to analog" recordings and MOS scoring they performed were at the same location.

Figure 26 on pages 29-30. The regression lines drawn in dark blue, magenta and yellow indicate data collected from the -20dBc, -14dBc, and -10dBc tests. The regression lines that NPR have depicted are unfairly weighed down in the 6 to 13 D/U range because NPR unfairly included digital only data without corresponding analog only MOS scoring on WRNI Rhode Island. Moreover, they did not do any testing in this region on the other test stations KLDN Texas and KBWA Colorado. So, the digital data in this region is from only two of the stations in the report, and the analog data is apparently plotted with the KBPN data, although only one data point is shown.

NPR has ignored my request to drop KBPN digital data in this region that failed to meet a minimum "analog to analog" MOS score of 2.7. I feel this is bad engineering practice and indicates a serious flaw in NPR's Interference Protection Methodology. They included digital data without an analog control sample, and these areas are lowering the digital averages. These same areas would also likely have poor analog MOS scores under 2.7. NPR selected bad digital data points that are unfairly lowering the regression line. To date, NPR still has not published the raw data four months after requested. While NPR states they have not manipulated any data to achieve a predetermined result, by not following the accepted scientific and engineering practice of including a control sample is, in my opinion, a manipulation of the data.

Despite what NPR purports in their January 28, 2010 response, the regression lines are what defined their interference analysis. After they plotted the regression lines on Figure 26, they drew lines intersecting where the regression line crossed a 2.7 MOS score. This is how they derive the 14 to 18 D/U range, and is the basis of their interference analysis. If the digital samples included in Figure 26 were linked with analog controls samples that had an MOS of

above a 2.7 MOS, this would be a valid methodology, but NPR did not do this. They inappropriately lowered the regression lines without a control sample. Had digital samples been directly linked to an analog only control sample in every situation, the MOS scoring results of the digital samples would have likely been higher and also more acceptable. The regression lines would have not had such a steep slope, and the points where they meet the 2.7 MOS would also have been higher, resulting in an even higher allowable interference tolerance. NPR is "dancing around" this issue and does not address this fundamental flaw in their methodology in their response.

Reconsideration of Commission's Adopted Protection Policy

Because Figure 26 is inappropriately weighted down with poor digital samples that were not tied to an analog control sample, NPR's Interference Protection Methodology is flawed. Accordingly, its calculations in Appendix J are also skewed. NPR has failed to revise the figures and analysis at my request. The Commission's should reconsider its reliance on the NPR data in the third Order.

If the Commission wants to continue to use NPR's guidance, I strongly encourage the Commission to demand NPR publish the data I have previously requested in pages 13-14 in my January 6, 2010 *ex parte* comments. Specifically, NPR should be required to revise Figure 26 and their interference analysis to only consider digital points with an analog control MOS score of above a 2.7. Or, alternatively, the Commission should require NPR to perform additional testing. After all, while testing was done on four stations in the NPR report, only one station had "analog to analog" testing in the 0-13 dB D/U range, so there are many digital points that are skewing the results inappropriately. The Commission should acknowledge this flaw in NPR's methodology and demand that NPR address this issue directly if the Commission is to continue to use NPR's interference methodology in its policies determining elevated digital power levels.

In Room Testing

On Page 4, NPR claims that I was looking at the wrong data by making comparisons to the "in-studio" or "in-room" data. NPR's claim falls flat and again is out of context. My

analysis showed that the "in-studio" data reflected the analog only MOS scores fell below a 2.7 MOS and, therefore shows a flaw in the NPR methodology because if the analog only scores failed, then the overall testing methodology is in question. While NPR's January 28, 2010 response said they included the in-room measurements only for comparison to the in-car measurements, this is not consistent with their previous filing on November 5, 2009. In Section 4.5 of the NPR Labs Report, NPR states "Because Test 1 showed a significant contrast between studio and car listening, primarily at 60mph, all further testing in Test 2 occurred in the car." It appears that NPR did not like the fact that the "analog to analog" testing failed their stringent 2.7 MOS testing, and elected to drop it from further testing, and focused the remainder of their efforts in the car. This could represent election of resources made in part because they did not like the results obtained in Test 1, and is important, because it underscores in "analog to analog" testing, the MOS scoring is also of low quality and deserves a closer look. Instead, NPR took the opposite approach, did not do studio tests for Test 2, and did not perform any additional research in the 0-13 dB D/U range. This is unacceptable.

Grandfathered Super-Powered FM Stations

On Page 5 of NPR's response, NPR states "Jurison claims that NPR 'suggests that grandfathered 'super-power' stations be 'excluded' from any blanket digital power increase. This is a complete fabrication." NPR's use of the word "fabrication" is misplaced because the NPR Labs Report, on Page 31, clearly states that these stations "…do not necessarily justify a proposed blanket increase." NPR Labs submitted that exact wording to the Commission on

November 5, 2009, yet that is not considered excluding grandfathered 'super-power' stations from a blanket increase? Clearly, NPR is not being objective in this situation. Why would NPR have included *Appendix K* if it did not feel that grandfathered super-powered stations should be excluded? This is not a simple acknowledgement as they state in their response, it is an exclusion.

NPR does not respond to other critical points I made related to grandfathered super powered stations. NPR does not explain why they omitted reserve-band grandfathered stations, and, even after NPR's response, their IBOC Power Allowance Calculator did not process grandfathered super-powered reserved band stations such as WAMC and WILL-FM like their non-reserved counterparts[9]. I applaud the Commission for developing their own calculator in the third Order and treating all grandfathered super-powered stations equally, not using the list that NPR supplied.

Because NPR's response has stated that they are not advocating the exclusion of grandfathered super-powered stations, the Commission should strongly reconsider my points already on record, and allow these stations the same flexibility afforded to every other station, and deal with interference on a case by case basis. No data has been submitted in this proceeding that super-powered stations should be excluded from a meaningful digital power increase.

Reconsideration of Grandfathered Super-Powered FM Station Exclusions

[9] Since the adoption of the third Order, NPR has taken their IBOC Power Allowance Calculator offline and appropriately re-directs visitors to the new rules.

The Commission, in the Order does not address my comments as they relate to grandfathered super-powered FM stations. I respectfully request the Commission reconsider what I stated in my previous comments. Specifically, why is the Commission precluding these stations the ability to use asymmetrical sidebands to avoid interference? The Commission should allow this. The Commission did not discuss why large metropolitan areas like Los Angeles, San Francisco and other communities served by grandfathered stations should not be given any meaningful digital power increases.

Additionally, the Commission did not discuss why grandfathered super-powered FM stations should have to protect stations that elected to receive interference from these grandfathered stations. Yet, the Commission addressed this issue as it relates to LPFM stations[10]. The same logic that the Commission used in justifying not protecting LPFMs from higher digital power levels should apply to in this case too. Specifically, to the extent that super-powered neighboring stations are operating at substandard spacings, it is generally the result of voluntary decisions by those licensees to accept interference from nearby grandfathered super-powered stations. These stations elected to receive the interference; they do not deserve special protection. The ability to "accept" received interference is enormously beneficial to these stations, providing greater flexibility in choosing transmitter sites and, in many instances, permitting the licensing of stations that would not be possible under full-service rules. Grandfathered super-powered stations should not be limited because of this. Moreover, the Commission did not address my comments as they relate to these neighboring stations being able to increase digital power to -14dBc (or above) and cause additional potential interference to the

[10] See Order at ¶ 22.

Grandfathered station. Also, because there have been no restrictions to the short-spaced neighboring station, should they elect to go to higher powered digital operations, they can potentially degrade the digital performance of the Grandfathered station even more; which should be unacceptable.

Grandfathered super-powered stations deserve a -14dBc blanket authorization like every other station. I outlined a compromise position in my comments filed January 6, 2010, that I request the Commission reconsider and address. Specifically, grandfathered stations should be allowed a blanket -14dBc authorization, and then handle any interference on a case-by-case basis based on a higher protected contour value, such as the FCC 70dBu F(50,50) but consistent with the policy adopted in paragraphs 27-30 of the third Order.

I respectfully request the Commission reconsider the grandfathered rules and policies it has adopted in the third Order. As stated in my previous comments, the Commission has already ruled that the consideration of super-powered status is beyond the scope of this proceeding[11]. The Commission has adopted specific rules and policies that deny super-powered stations the ability to increase digital power and has created a limitation of the super-powered status. The Commission did not comment on this issue either in its most recent Order, and I respectfully request that it reviews and reconsiders this matter. The third Order is in direct conflict with the second Order as it relates to super-powered status, and the Commission has not addressed this.

[11] *See Second Report and Order,* Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, MM Docket No. 99-325 (FCC 07-33, May 31, 2007) 41 CR 960, 22 FCC Rcd 10344, 72 FR 45670, 72 FR 45712 at ¶ 98.

Summary

NPR's response on January 28 does not address many of the most serious objections I have of the NPR Labs Report submitted to the Commission as the basis for this limited power increase. NPR focuses on certain aspects of my argument, but completely ignores the most important fact: NPR's Interference Protection Methodology is flawed because the digital data samples used were not directly linked with a control sample of good analog reception in those areas.

NPR had an opportunity in its response to become more transparent and present more data that I requested. They instead used their response to take my comments out of context to try to discredit me and they do not address many of the technical deficiencies in their report. Moreover, NPR has had over four months to produce the additional data and information requested, but has chosen not to disclose any further information.

I maintain it was poor engineering practice for NPR to include some data collected in their analysis, yet exclude it from others. Some of the data that NPR presented should have been discarded because of an unusable analog signal level. If this data had been dropped, the NPR report would likely have shown -10dBc digital operation is acceptable.

As it relates to the Commission's third Order, if the Commission continues to use the NPR methodology as its basis for limitations on the digital power increase, I strongly encourage the Commission to demand NPR publish the data requested, and revise Figure 26 and their interference analysis to only consider digital points with an analog control MOS score of above a 2.7. As an alternative, the Commission should require NPR to do additional testing. If the

Commission is going to use NPR's report as the basis of its rules and policies, then it is even more important that this occurs.

I still maintain that if those digital points without a corresponding acceptable analog signal were dropped, the NPR report would have shown that -10dBc was acceptable. Because NPR has not addressed its significant flaws in its study, the Commission should reconsider and approve a blanket -10dBc authorization on all stations, including grandfathered super-powered stations. The Commission should handle all reported interference on a case-by-case basis, using the criteria already adopted in the third Order, Paragraphs 27-30.

Respectfully Submitted,

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Exhibit A: Longley-Rice Analysis of KBPN Test Route 3