Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
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Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations	)))))	MB Docket No. 03-185

To: The Commission

Response to NPR Opposition to Petition for Reconsideration of Hammett & Edison, Inc.

The firm of Hammett & Edison, Inc., Consulting Engineers, respectfully submits its response to the November 30, 2011, filing by National Public Radio (NPR), in opposition to the August 9, 2011, Hammett & Edison, Inc. (H&E) Petition for Reconsideration of the MB Docket 03-185 Second Report and Order (Second R&O). Hammett & Edison, Inc. is a professional service organization that provides consultation to commercial and governmental clients on communications, radio, television, and related engineering matters.

I. NPR Has Misunderstood the H&E Petition for Reconsideration

1. We are surprised by the opposition of NPR to our Petition for Reconsideration. We certainly did suggest that a secondary Channel 6 LPTV or TV Translator station does have an obligation not to cause actual interference to a primary station. Whatever the interference mechanism, if a secondary station causes actual interference to a primary station, then the secondary station must give way. But mitigating interference after-the-fact should be a last-step safety net; the FCC Rules should provide interference criteria to make it unlikely that interference will actually occur.

2. Thus, both primary and secondary stations need to have clear, up-to-date rules defining whether a proposed station is likely to cause interference, if built. Both classes of stations need to meet their respective interference criteria in order to obtain a grant of their application. Where primary and secondary stations differ is that once an application has been granted, the primary station has a safe harbor for continued operation (at least as far as interference issues are concerned) so long as it constructs and operates its facility in compliance with its FCC

construction permit. On the other hand, a secondary station has a further obligation not to cause actual harmful interference to a primary station, even when the secondary station has built its facilities in accordance with its construction permit. However, the secondary station should have a reasonable expectation that if it does meet the interference test criteria at the application stage, and thereby qualifies for grant of its application and builds those facilities, then it should be unlikely that actual interference to a primary station will be caused. But lacking up-to-date and applicable technical rules, there is no way to achieve such an expectation.

3. We are surprised by NPR's claim* that our Petition asks for an "extraordinary policy change." We respectfully disagree. The above-described two-threshold criteria for secondary LPTV and TV Translator stations (and also FM Translator stations) has been in place for years: Secondary services have a "safety net" provision to ensure that the secondary station should not cause actual interference to the primary station; even if the secondary station has passed the first-test interference protection criteria at the application stage, and received a grant, it is still required to provide ongoing protection to the primary station. These FCC rules are Section 74.703(b) for LPTV/TV Translator stations, and Section 74.1203 for FM Translator stations. We did not propose to change this approach; indeed, we affirmed it.

4. Our contention is that there needs to be first-stage technical criteria to determine whether a new digital LPTV Channel 6 station would be likely to cause interference to a non-commercial educational FM (NCEFM) station. The D06-into-NCEFM protection calculations could be based on the D06 station's use of either the simple, stringent, or full-service mask, and based on the assumption of out-of-channel energy exactly at the pertinent mask limit. A first-cut test for BFO interference could be reasonably taken from Section 73.318 of the FCC Rules: Use the 115 dBu contour, and assume a distance to that contour of 0.394 times the square root of the D06 station's ERP in kW. For a maximum-power, omnidirectional D06 dLPTV station, this distance would be 0.68 km. If there is population that is within the 60 dBu contour of a NCEFM station on any channel that is also within the 115 dBu contour, the secondary D06 application should not be grantable. That is, do not allow from the start an unwise D06 dLPTV station location. But do allow the D06 applicant to optionally take into account the proposed azimuth and elevation patterns of the proposed transmitting antenna, and perhaps show that the 115 dBu contour never reaches ground level, and thus has zero persons of predicted interference, even though the D06 site might be inside the protected contour of a NCEFM station and have population in the immediate area.

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* NPR Opposition, at page 3.

5. Technical criteria to predict whether D06-into-NCEFM interference for Channel 201, 202 and 203 NCEFM stations would require the Commission to derive the necessary protection ratios. Perhaps industry associations with an interest in seeing such protection criteria established could assist with that work, carried out as a Further Notice of Proposed Rulemaking to the MB Docket 03-185 proceeding. Having interference criteria, would after all, benefit protected incumbents, proposed newcomers, and FCC staff, by eliminating unnecessary interference mitigation tasks.

6. Similarly, a new or modifying NCEFM station needs to have up-to-date rules for FM-into-*digital* Channel 6 protection, so the DTV Channel 6 station is protected, although this protection would apply only to a primary full-service station or to primary Class A DTV Channel 6 station, and not to secondary digital Channel 6 LPTV or TV translator station. But the current FCC Rule Section 73.525 does not do that, since it applies only to full-service analog TV Channel 6 TV stations, which no longer exist. Further, while Section 73.623(f) addresses the obligation of a Petition for Rulemaking for a new full-service DTV Channel 6 allotment to address how it would avoid interfering with existing NCEFM stations, that rule provides no technical criteria for such a showing, and does not apply to existing full-service DTV Channel 6 allotments or stations.

7. It would be technically invalid to require new or modifying NCEFM stations to comply with Section 73.525, as that rule was developed to protect *analog* Channel 6 TV stations with a 47 dBu protected contour, not *digital* Channel 6 TV stations with a 28 dBu protected contour. Further, digital Channel 6 signals have the advantage of coding isolation that analog Channel 6 signals did not. Thus, H&E would expect that NPR, and NCEFM licensees in general, would be in favor of an updated Section 73.525. That update might well find that the coding isolation more than offsets the weaker protected signal contour, but the opposite is also possible.

II. Summary

8. We were surprised by the NPR opposition to our Petition for Reconsideration, and we hope that this further filing has clarified our intentions. There is nothing new about the two-test process for secondary stations. All we are requesting is that the first test, at the application stage, include up-to-date interference criteria that all parties can apply: The applicant, possibly affected incumbent stations, and FCC personnel who are expected to decide whether an application for a secondary station should be granted.

Respectfully submitted,

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