

memorandum

DATE: September 18, 2008

TO: Ira Keltz, Ahmed Lahjouji

FROM: Scot Stone,
Deputy Chief, Mobility Division

SUBJECT: Peer Review of the JSC Report discussed in the draft *Second Report and Order* (WT Docket No. 04-344)

On August 3, 2007, the Wireless Telecommunications Bureau (WTB) requested that the Office of Engineering and Technology convene a review panel to conduct a peer review of an ITU-R, Working Party 8B, Draft New Report: “*Satellite Detection of Automatic Identification System Messages*”, produced by the Department of Defense Joint Spectrum Center (JSC) and submitted by the National Telecommunications and Information Administration as comments in WT Docket No. 04-344. Pursuant to your review, you concluded on August 13, 2007 that the assumptions, calculations, methodology and conclusions contained in the JSC Report conform to generally accepted standards in the radio engineering field.

While your review agreed with the assumptions made in the JSC report, you also raised some questions related to the assumptions made in the report. You note that many of the parameters and associated values used in the analysis are assumed to be as generic as possible, in order to make the resulting conclusions applicable to a wide variety of potential future AIS satellite systems. For instance, you note that the report recognizes that the conclusions drawn on AIS satellite detection can depend strongly on certain elements, such as the assumed distribution of ships carrying Class A AIS equipment. As stated in the report, if this distribution contains large clustering of ships at various locations, AIS satellite detection will fail. You state that a method to account for this potential problem would be to perform a sensitivity analyses for crucial system variables that was not addressed in the report. You also raised questions as to how specific values and parameters were selected in the sections related to co-channel and adjacent channel land mobile operations compatibility. You state that a weakness in the analysis of the report is that it did not consider actual mobile usage, but rather used generic assumptions (possibly to simplify the analysis). You recommend that if this study is revised or extended in the future that the section on mobile system compatibility be more fully developed. Based on your review, we conclude that, while further studies may yield more accurate results with respect to particular scenarios, it would be reasonable for the Commission to conclude that non-AIS operations on Channel 87B would likely cause interference to satellite AIS communications.