

DOT&E Response: During its Limited User Test (LUT) during NIE 11.2 in June 2011, the Manpack radio demonstrated poor range performance for both SINCGARS and SRW waveforms. It also demonstrated inconsistent voice quality and poor reliability during this test. Dismounted Manpack radios also experienced heat problems; on three occasions during the LUT users chose to turn off their Manpack radios rather than risk a heat-related radio failure. These same problems were seen during the benign environment of Government Developmental Test (GDT) 2 conducted at Ft. Huachuca in March 2012. During GDT 2, fewer than 20 percent of Manpack's SINCGARS calls were completed at ranges more than 5 km, radio temperatures exceeded safe levels, and reliability was not improved. Because of these numerous flaws, the DASD for Developmental Test and Evaluation stated that Manpack was not sufficiently mature to conduct the planned MOT&E in May 2012. During the MOT&E, the Manpack's SRW waveform range was improved, but it once again demonstrated poor SINCGARS range, poor reliability, and heat problems. Over 60 essential function failures were recorded during MOT&E. After MOT&E the Manpack PM identified 14 separate hardware or software flaws which the contractor attempted to fix prior to September's GDT 3. The contractor's actions to address identified flaws resulted in better SINCGARS performance during GDT 3, but also revealed four new hardware or software flaws which the contractor will have to address to enable the radio to meet reliability requirements. Note that the follow-up test at Fort Huachuca was a relatively short test conducted in a benign developmental test environment, and hence it was insufficient to conclusively demonstrate that the flaws seen during MOT&E have been satisfactorily addressed.

DOT&E Response: The noise floor in the WSMR desert is similar to that of Ft. Huachuca and less than what would be found in the common urban terrain the radios are expected to operate in, among a full brigade's worth of emitters. Prior to and during every major test, DoD ranges routinely conduct "spectrum deconfliction" to ensure that radio frequency (RF) background noise will not impact the results of the test. This was done during the MOT&E to ensure there were no other tests in progress which could affect Manpack performance. An additional RF noise measurement was conducted during the MOT&E to address contractor assertions that RF background noise was causing Manpack's poor SINCGARS range performance. This measurement used the antenna of a Manpack-equipped vehicle, and hence it "saw" the same RF noise that the Manpack radio did. The measurement showed low background RF noise levels in the SINCGARS frequency band, directly disproving the contractor's assertion that RF background noise was an issue during the test. Furthermore, upwards of 1000 legacy SINCGARS radios, operating in the same frequency band and in the same locations as Manpack SINCGARS, achieved typical ranges of 20 kilometers during MOT&E, compared to the Manpack's range of 4 kilometers.

DOT&E Response: As discussed above, the Manpack radio demonstrated poor SINCGARS range performance during GDT 2 at Ft. Huachuca in March 2012, just as it did during the MOT&E at WSMR in May 2012. The reason the Manpack performed better at Ft. Huachuca during GDT 3 in September 2012 is because the contractor addressed the multiple software and hardware flaws which caused poor performance during the LUT, GDT 2 and MOT&E. As noted above, more flaws were discovered during GDT3, which will have to be addressed prior to the Manpack radio being ready to successfully pass a realistic operational test.

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