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FCC Equipment Authorization Branch

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Applicant:	Novatel Wireless, Inc.
FCC ID:	NBZNRM-MC950D
Correspondence Reference Number:	33891, 33892, 33893, 33894, 33895
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Subject: FCC Equipment Authorization System

Dear Examiner,

We prepared this document on behalf of our client and the applicant of this filing, Novatel Wireless, Inc, to address the questions you have asked in correspondences 33891, 33892, 33893, 33894, and 33895. All the answers are collected here because the five correspondences are identical.

Question: Independent of characteristic measured results, software change in an existing device containing 3GPP Rel6-capable hardware but operating under Rel5 functions/protocols is not considered as a Class I permissive change; note also 47 CFR 2.907, 2.931, 2.944, 2.1033(c), 2.1033(c)(18), 2.1043. Assuming no device hardware changes, and other requirements of 2.1043 are met, Class II permissive change (C2pc) can be used and is needed to activate W-CDMA/HSPA (Rel6 HSUPA/HSDPA) on an existing FCC-ID for a W-CDMA/HSDPA (Rel5) device.

Answer: This filing is a class II permissive change and the intent is exactly as you have mentioned in paragraph one. We would like to activate W-CDMa HSPA in Rel 6 through this class II permissive change on an existing Rel 5 device which has already been granted its own FCC ID. Please refer to the original C2PC request letter from Novatel under the file name:

Question: Per 2.1043(b)(2), the C2pc application must include test report(s) with HSPA measurements, regardless of the emission levels in comparison to other modes, along with other pertinent info describing changes compared to preceding filings under an FCC ID. Implementation differences between Rel5 (HSDPA) and Rel6 (HSUPA/HSDPA=HSPA) necessitate differences in test configurations. Test results from Rel5 operations only may not necessarily support Rel6. Only Release 6 supports HSPA, which is HSUPA + HSDPA using both Rel6 protocol calling and hardware. Rel5 does not support HSUPA, and the requirements for HSDPA in Rel5 are also somewhat

different from the HSPA/HSDPA in Rel6 because it does not have to support the more complex requirements of HSUPA.

Answer: In SAR report (file *SAR_NOVAT_042_07002_MC950D_FCC_v1.pdf*) section 8.1 the conducted output power values for Rel 6 HSPA are listed. These values are comparable with the Rel 5 values in the original filing to within 0.25dB. We realize that HSDPA settings under Rel 5 are different from HSDPA settings under Rel 6. We made this comparison to verify the output power and determined that SAR is worse case when measured with Rel 6 HSDPA + HSUPA. The power settings we used during testing are inline with FCC HSPA interim procedure; details are provided in SAR report appendix D.

Question: Filings must clearly describe all modes of operation, which modes were tested to maximize emissions and details about selection criteria and worst-case determinations. Other info in filing should include details about specific device profiles, device categories, test cases, test scripts, modulations, channelizations, permutations that are appropriate for and were used to test this device, among those in the applicable conformance documents and standards with specific sub clauses identified in filing, specific test equipment. and setup info and installed options/add-ons.

For SAR purposes, some preliminary testing is needed to evaluate whether C1pc or C2pc applies. The series of power measurements described in latest FCC 3G SAR interim guidance can be used to determine whether additional SAR tests are needed. Such power measurement results should be included in the C2pc filing to justify whether SAR is done or not.

Answer: Appendix D also describes the modes of operations. Rel 6 HSPA is achieved with Rohde and Schwartz CMU200 with engineering firmware 4.5.11. A detailed operational description of this tester is attached to this filing for your reference. Please see file "*CMU_WCDMA_Supplement_010_V4-50.pdf*" This file has been marked confidential because it is not yet released by R&S and is for your reference only.

All the other issues described from paragraph five and on are related to Software Defined Radios. Novatel Wireless, Inc has provided this disclaimer that the EUT is not a SDR. Please see attachment.

I hope that this document contains all the answers to your questions. Please feel free to contact us if you have any other concerns.

Best Regards.