

# Washington

## Federal Strategies

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Timothy Dwyer  
TUV Rheinland of North America  
12 Commerce Road  
Newtown, CT 06470

Re: FCC Equipment Certification for Novariant Terralite System

Dear Mr. Dwyer:

Novariant has developed a Terralite™ radio system designed for use in mining operations to enhance the safety and efficiency of mining operations.

I am writing to you at this time to try to help clarify some issues that seem to be holding up the equipment certification for Novariant's mining radio system. The radio system is governed by Part 90 of the FCC's rules regarding radiolocation services, and other applicable regulations related to business radio systems as specified in part 90. The equipment is also subject to all other relevant sections of Part 47 of the Code of Federal Regulations.

In preparation for the equipment certification process, in April 2005 Stewart Cobb and Andrzej (Anjay) Skoskiewicz of Novariant came to Washington, DC to participate in two meetings at the FCC. Those meetings were intended to help Novariant get answers to a variety of questions about how the Commission would view this equipment and how different regulatory provisions would be applied to the equipment. It is my understanding that several of the questions we discussed with the Commission were actually questions that you presented to Novariant for us to cover in those conversations. Both meetings took place on Friday, April 22, 2005.

First meeting: Public Safety and Critical Infrastructure Division

Key Issue: Waiver of Station ID

On Friday morning, we met with staff of the Public Safety and Critical Infrastructure Division of the Wireless Bureau of the FCC. This division oversees licensing of radiolocation services. Novariant's technology falls in this category. Present at the meeting for the FCC were: Scot Stone, attorney advisor to the division chief, Herb Zeiler, a manager in the division, and Tom Eng, an engineer working on this matter. The purpose of the meeting was to discuss the applicability of 47 C.F.R. § 90.425 on Station Identification to this radio system. There were several questions about how the rules would be applied in this instance. At that meeting, we discussed the possibility of seeking a waiver of the station identification requirement because of its apparent inapplicability to Novariant's technology.

Initially, the Novariant Terralite transmitters were designed without the station identification. The design originally did not include the ID because it was unclear whether that rule provision was applicable to this system. The system design, without the station ID was incredibly efficient, and it was not originally planned to re-design the system. The conversations with the Public Safety and Critical Infrastructure Division led to the following conclusion: the regulations as written, some years ago, did not envision the development of a radio system like the Terralite system. As a result, the regulation did not seem particularly to be applicable to this situation. However, the letter of the regulation seemed to require station identification. Novariant was offered a choice by the FCC: redesign the system to comply with the requirement in some way or seek a waiver from the FCC to ensure that the equipment could receive its authorization. In this, the licensing division was planning to coordinate with the lab in Columbia, and they asked for a report on our subsequent meeting with staff at the lab.

Novariant made a business decision to explore the possibility of redesigning the transmitter to broadcast the required station identification. Due to the ingenuity of Novariant's engineers, it was possible to make that modification efficiently. The change was made. The equipment before you operates as a Terralite transmitter, and it broadcasts the mandated station identification for this radio system. Thus, no waiver was necessary.

*Second meeting: FCC's Office of Engineering and Technology Lab*

*Key Issue: Applicable Emission Mask*

In meeting later on April 22 at the FCC's lab in Columbia, MD, we met with Rich Fabina, Joe DiChoso, Stanley Lyles, and an engineer named Steve. At that meeting, we explored the appropriate emission masks, categorization of the radio system, labeling, and other technical parameters. The engineers at the lab concurred with categorizing this as a radio system. While we discussed with them the question of the station identification, we agreed that the ID issue would be handled with the Wireless Bureau since it is not part of the equipment certification.

The key issue discussed at the lab was choosing the proper emission mask. According to the provisions of section 90.210, it appeared us that there was some ambiguity about whether to use mask B or mask C. Stewart Cobb asked which emission mask was appropriate, and the FCC staff told us that the appropriate emission mask to use for this equipment is mask B.

Mask B is generally applicable to a number of radio transmitters while emission mask C is designed for voice communications. We were told that Novariant's technology should be tested for compliance with emission mask B, and it is my understanding that the technology clearly meets these requirements.

Because there was no ambiguity about this matter at the FCC, we have not sought any other clarifications from the Commission on the question of the applicable emission

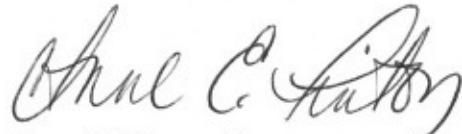
mask; it was unequivocal that the FCC told us to apply emission mask B. No waiver was needed on this point.

Conclusion:

Novariant met with the FCC and discussed two key issues. Of course, the conversations covered a few additional topics, such as the use of plastic or aluminum labels, etc. The essential questions were: 1. was a waiver appropriate to deal with the regulatory requirement of a station ID? We determined with the Wireless Bureau that a waiver would be required unless the system was redesigned, and then the system was redesigned so no waiver was necessary; and 2. which emission mask was applicable to this radio system? The answer from OET's Equipment Authorization branch staff was that emission mask B was applicable. There is no waiver needed from the FCC to complete the equipment authorization on the Terralite system.

If you have questions about this system or the FCC's guidance to Novariant on preparing for the equipment authorization process, please contact me or Anjay promptly. I can be reached by e-mail at [alinton@wfsllc.biz](mailto:alinton@wfsllc.biz) or by telephone at 301-951-7062. Time is of the essence in completing this process, and we hope that this letter will clear up any lingering confusion about the applicability of various regulations to this radiolocation system.

Sincerely,



Anne E. Linton, Esq.  
Counsel for Novariant

Cc: Andrzej Skoskiewicz  
Stewart Cobb