



## State of West Virginia

Earl Ray Tomlin, Governor

WV Office of Miners' Health, Safety & Training  
C. A. Phillips, Acting Director  
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May 10, 2011

Mr. Geoffrey Simms  
Kutta Radios, Inc.  
2075 West Pinnacle Peak Road  
Suite 102  
Phoenix, AZ 85027-1219

Subject: Verification of functionality of the Kutta DRUM 100 system under WV Legislative Rule Title 56, Series 4 Emergency Rules Governing Protective Clothing and Equipment

Dear Sir:

After the evaluation of the documentation submitted and with the recommendation of our technical reviewer, the WV Office of Miners' Health, Safety and Training verifies that the Kutta DRUM 100 System has demonstrated functionality such as would allow WV underground mining permit holders to meet part of their requirements for emergency communications outlined in the West Virginia Legislative Rule Governing Protective Clothing And Equipment, CSR§56-4-8 and will be included in the listing of approved devices.

Kutta Radios, Inc. shall, upon request, provide this office with verification of valid orders, delivery dates, and status of delivery as required for this office to enforce CSR§56-4-8. Additionally, Kutta Radios, Inc. will notify this office as soon as it is determined that circumstances have arisen that will impact the delivery dates quoted as part of an approved mine communication/tracking plan.

Kutta Radios, Inc. will provide additional information on the functionality of Kutta DRUM 100 System in differing mine environments as it becomes available. Upon validation of the additional functionality the information will be appended to that made available by this office to mine operators.

Sincerely,

A handwritten signature in cursive script that reads "C. A. Phillips".

C. A. Phillips  
Acting Director

CAP:ks

**Review of the Kutta DRUM 100 system Manufactured by Kutta Radios Inc for Functionality with  
WV Legislative Rule Title 56, Series 4 Emergency Rules Governing  
Protective Clothing and Equipment**

**May 6, 2011**

After the evaluation of the documentation submitted the technical reviewer agree that the manufacturer and their representatives, Kutta Radios Inc, presented sufficient proof of functionality such as the Kutta DRUM 100 system would allow WV underground mining permit holders to meet all or part of their requirements for emergency communications outlined in the West Virginia Emergency Rule Governing Protective Clothing And Equipment, §56-4-8 and these products should be included in the Director's listing of approved devices.

WV 56-4 Requirement	Functionality Confirmed
<p>9.5. The Director shall require providers seeking approval submit documentation certified by a licensed West Virginia professional engineer that the product has been tested for functionality in West Virginia underground mines, that the product has been or is in the process of being approved as intrinsically safe by MSHA and other criteria as the Director determines, a description of the process used in making that determination and a certification in the following form: "I, the undersigned, hereby certify that this product, to the best of my knowledge and belief, meets or exceeds all requirements set forth in W. Va. CSR Title 56 Series 4-9, that the product has been tested for functionality in West Virginia underground mines, that the product has been or is in the process of being approved as intrinsically safe by MSHA and other criteria as the Director determines."</p>	<p>A certified letter was provided from Todd Bevan, PE, attesting to the validity of the results presented.</p> <p>Proof of electrical safety approval of Kutta DRUM 100 by the Mine Safety and Health Administration was provided.</p>
<p>9.11. In developing the communication/tracking plan and any revisions, the operator shall take into consideration the needs for emergency communications and tracking/locating resulting for accidents as described at W. Va. Code Chapter 22A Article 2-66(a), physical features of the particular mine, emergency plans, existing communication infrastructure, communications required under W. Va. Code Chapter 22A Article 1-35(k) and 2-42 and W. Va. CSR Title 36 Series 2-2 and 5-2, advances in communication/tracking technologies and any other aspect of the particular mine the operator deems relevant to the development of the communication/tracking plan.</p>	<p>Kutta Radios Inc presented installation and operational flexibility such that the Kutta DRUM 100 could be adapted by operators to meet various underground mining schemes utilized in West Virginia utilizing MSHA approved handheld radios.</p> <p>Kutta Radios Inc presented flexibility in their system such that the Kutta DRUM 100 could be upgraded by operators as technology advances.</p> <p>Kutta Radios Inc presented sufficient technical expertise to aid operators in adapting the Kutta DRUM 100 to their unique mining conditions and integration with other systems.</p>
<p>9.13.1. A communication center monitored at all times during which one or more miners are underground.</p>	<p>Kutta Radios Inc presented documentation that Kutta DRUM 100 features provides a means for operators to monitor communication from a central location.</p>

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WV 56-4 Requirement	Functionality Confirmed
9.13.2. Knowing the location of all miners immediately prior to an event by tracking/locating device in the escape-ways, normal work assignments, or notification of the communication center;	Kutta Radios Inc DID NOT indicate that the Kutta DRUM 100 was intended to be part of tracking system
9.13.3. Knowing the location of miners in the escape-ways after an event providing the tracking system is still functional;	Kutta Radios Inc DID NOT indicate that the Kutta DRUM 100 was intended to be part of tracking system
9.13.4. Check-in and check-out with the communication center by miners prior to entrance and exit from bleeders and remote or seldom used areas of the mine (all times shall be logged);	Kutta Radios Inc DID NOT indicate that the Kutta DRUM 100 was intended to be part of tracking system
9.13.5. Allowing two way communications coverage in at least two separate air courses and at least one of which shall be an intake;	<p>Kutta Radios Inc presented documentation that an operator could deploy the Kutta DRUM 100 in conjunction with other handheld communications devices such that two-way wireless communications would be achieved in two or more airways.</p> <p>Demonstrated specific performance is attached. Performance in conditions others than those attached have not been verified by the information presented and require additional submittals.</p>
9.13.6. Maintaining communication/tracking after loss of outside power and maintain function both inby and outby of the accident event site with suitable supply of equipment for rapid reconnection;	<p>Kutta Radios Inc DID NOT indicate that the Kutta DRUM 100 was intended to be part of tracking system However, they presented documentation that an operator could install Kutta DRUM 100 in a manner such that:</p> <ul style="list-style-type: none"> <li>• Kutta DRUM 100 could provided backup battery power</li> <li>• Kutta DRUM 100 could provide communication between those inby the event</li> <li>• Kutta DRUM 100 could provide communication between those outby the event</li> <li>• Kutta DRUM 100 could provide alternative communication routing to allow inby miners to communicate with the surface</li> <li>• Kutta DRUM 100 could be deployed in a manner that maximizes survivability</li> <li>• Kutta DRUM 100 could be deployed with a rapid reconnect capability</li> </ul>

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9.13.8. Allow for communication to surface at all required emergency shelters/chambers;	Kutta Radios Inc provided information that an operator could deploy Kutta DRUM 100 in manner that would provide communication to the surface from emergency shelters/chambers
9.13.9. All miners and likely emergency responders shall be trained in the use, limitations and inter-operability of all components of the communication and tracking/locating system. This shall be incorporated into ongoing required training. All training shall be recorded and made available upon request;	Kutta Radios Inc provided information indicating their ability to aid operators in developing and implementing necessary training.
9.15.3. A statement regarding how the communications/ tracking system will be tested and maintained; and	Kutta Radios Inc provided information indicating their ability to aid in the training of operator staff or providing maintenance services