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LETTER TO ALL MANUFACTURERS

SUBJECT: Update to the NIOSH CBRN Full Facepiece APR Mechanical Connector and Gasket Drawing from Revision 2 (January 9, 2004) to Revision 3 (April 3, 2007)

There has been concern on the part of manufacturers that the present Revision 2 (January 9, 2004) APR Mechanical Connector drawing does not have sufficient detail to ensure that the connectors manufactured according to this drawing will meet the intention of the NIOSH CBRN APR Full Facepiece Standard. As such, NIOSH has revised this drawing. The revised drawing can be downloaded from the following webpage.

<http://www.cdc.gov/niosh/npptl/resources/pressrel/letters/ltr-040307.html>

The modifications to the drawing are as follows:

- Revision 2 (09 Jan 2004) Figures A, B, C, and D were all on one drawing. To improve the clarity of the figures the drawing was separated into three sheets labeled Figures 1-A, 1-B, and 1-C & D.
- The definition of “Minimum Length of Effective Thread” and “Minimum Thread Runout” were added to Figure 1-A for clarity.
- The note on Figure A “Sealing Surface Section Left to the Choice of the Manufacturer” changed on Figure 1-A to “Sealing Surface Section Left to the Choice of the Manufacturer. Must not interfere with the formation of thread.”
- An enlarged detail showing the external thread profile with dimensions was added to Figure 1-A for clarity.
- A note was added to Figure 1-A “First and second thread must be properly formed in accordance with thread profile and tolerance.”
- An “Air Outlet Inside Diameter” dimension was added to the enlarged detail on Figure 1-A to control the canister inside diameter.
- A note showing “Min. 1°” was added to Figure 1-A clarifying the minimum angle that the canister can be setback from the 40mm threads to assure that a canisters shape will allow interoperability on other masks.

- A note stating “No canister adapters permitted. A canister adapter is defined as any component between the 40mm internal mask threads and the 40mm external canister threads” was added to Figure 1-A formalizing the NIOSH position that adapters are not permitted since they could compromise canister interchangeability and use.
- Previously on figure B “Internal Thread/Sealing Gland” only one example of Option A “With Undercut for Gasket” was illustrated using the short B1 thread length. To more clearly define Option A “With Undercut for Gasket” and Option “B” “Without Undercut for Gasket” illustrations of each option with both the short B1 and long B2 fitting configurations were added.
 - The shorter internal thread option is labeled “B1” and the longer internal thread option is labeled “B2” not Option “A” and Option “B”. The Option “A” and Option “B” pertains to whether the thread is or is not undercut; respectively. NIOSH we will allow either “B1” (Shorter Internal Thread) or “B2” (Longer Internal Thread) with either Option “A” or Option “B”; however, all designs require a gasket with positive retention (see Note 2, Figure 1-C).
- The undercut height to the root diameter of the thread was changed from 1.60mm (min) to 1.60mm -0.0/+0.38. The +0.38mm was added to clearly provide an upper tolerance to the undercut height.
- The gasket thickness dimension on Figure 1-C & D was changed from 1.55mm (min) to 1.55mm -0.0/+0.38. The +0.38mm was added to clearly provide an upper tolerance to the sealing gland thickness.
- The gasket minimum outside diameter was increased from 37.50 mm to 37.75 mm to improve the minimum interface between the gasket and the connectors.

All CBRN canisters currently approved as part of a NIOSH-approved CBRN APR respirator comply with the revised drawing.

Any questions concerning this letter or the revised drawing should be directed to the Policy and Standards Development Branch, NPPTL. The Branch may be reached by calling 412-386-5200.

Sincerely

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