

Miller, Diane M. (CDC/NIOSH/EID)

From: Alan Hack [ahack@sprynet.com]
Sent: Monday, October 01, 2007 4:12 PM
To: NIOSH Docket Office (CDC)
Subject: 111 - NPPTL Facial Anthropometrics Research Roadmap

Following are comments on the NPPTL Docket NIOSH-111:

NPPTL has proposed a robust research effort to expand their Anthropometric knowledge relative to respirator facepiece fitting. We can only hope that funding will be available to continue this extensive 10 year effort.

The issue that continues to concern me the most is our recommendation 5-2, asking NPPTL to abandon Qualitative Fit Testing (isoamyl acetate) in favor of Quantitative Fit Testing (QNFT). I cannot over emphasize that NIOSH needs to impose this change as soon as possible. The considerable effort on improving facial anthropometry will be wasted unless all facepieces are certified using QNFT.

I would also put strong emphasis on item 4-6. Facial dimensions, landmarks, and measuring techniques are only important as they relate to respirator fit. It is the effect of facial size and shape on facepiece fit that is key, rather than any academic study of anthropometry.

The goal of all of this work should be a practical method of selecting faces (test subject panels) necessary to determine whether a particular respirator facepiece provides the quality of fit necessary to meet NIOSH standards. I expect future certification requirements related to facepiece fit to become more stringent when fit testing becomes required on the improved test panels. There is simply no reason to accept the current low APF of 10 for halfmasks. Dust filter media became better when the new filter requirements of 42CFR84 were issued. Similarly I would expect better facepieces to become available to meet tougher fit test requirements.

There is a discussion of headforms in 4-1. I trust that these will be used for research and design only. I am reluctant to accept the results of face fit tests done on headforms rather than on actual human test subjects. I don't think that there is any information supporting such a substitution.

Good luck with all your endeavors.

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IOM Committee for the Assessment of the NIOSH Anthro Survey

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