

COMMONWEALTH OF KENTUCKY
Department of Education
BUREAU OF VOCATIONAL EDUCATION
FRANKFORT 40601

November 16, 1977

Regulations Assistant
N.I.O.S.H.
Room 8-11
5600 Fishers Lane
Rockville, Maryland 20857

RE: 30 CFR Part 11, Testing and Approval of Occupational Respiratory
Breathing Apparatus

Gentlemen:

Although unable to attend the November 29 through December 1 meeting in Washington to discuss testing of respiratory protective devices and possible revisions in 30 CFR Part 11; I would like to offer the following written comments for the consideration of the interagency committee.

The fire/rescue services are major users of protective breathing apparatus, and to date their needs have been ignored in the testing and approval process for these vital devices. Present testing and approval processes for breathing apparatus for fire/rescue service use are not realistic in the physical or fiscal sense. Of all user groups, the fire/rescue services have probably amassed more experiences with breathing apparatus under more conditions.

As the Supervisor of Fire/Rescue Training Programs in the Commonwealth of Kentucky, I feel I can address some important issues viz-a-viz breathing apparatus use by the fire and rescue services. In FY 1977 our 13 full-time and 90 part-time fire instructors conducted training courses for over 11,400 Kentucky firefighters representing 534 fire departments. We currently have almost 60 sets of Scott, MSA, and Surviv-Air self-contained compressed air breathing apparatus devoted exclusively to training use. Some of these units are the pressure-demand type. In addition to experiences gained with our state-owned equipment, we have the benefit of sharing experiences with our client fire and rescue departments during training courses.

Of major concern is the interchange of parts between units of different manufacture. While some compressed air cylinders can be interchanged between breathing apparatus sets of different manufacture, this practice apparently voids the federal approval. If all the air cylinders for breathing apparatus use must meet federal standards (from I.C.C. to N.I.O.S.H./M.E.S.A.), why can't they be interchanged? Physically cylinders can be interchanged. And in some cases where departments have breathing apparatus sets from two or more manufacturers, the interchange of air cylinders is unavoidable. The supposed "loss of approval" does not prevent the user agency from denying respiratory protection if interchange is the only way to provide that protection.

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This inability to interchange air cylinders is not in the consumer's best interest. The present N.I.O.S.H./M.E.S.A. approval process inhibits competition in the breathing apparatus market. Increased competition might reduce prices. Reduced prices might stimulate increased purchases of these vitally important devices.

Rather than "approving" complete assemblies, I would suggest that N.I.O.S.H./M.E.S.A. "approve" components, that in combination with other "approved" components would be satisfactory.

To foster the interchangeability of major components, N.I.O.S.H./M.E.S.A. should adopt uniform standards for air cylinder and face piece connections.

N.I.O.S.H./M.E.S.A. regulations should also be revised to allow approval of certain add-on or after-market devices. The present complete assembly approval process stifles improvements in the breathing apparatus system. Fire/rescue service users have a need for a "buddy breathing" type connection. While add-on devices are available for this purpose, their use voids federal approval. Having a federal approval procedure for these after-market improvements would also assist fire/rescue services in evaluating these devices prior to purchase.

An approval procedure for add-on or after-market accessories would encourage the development of potentially useful subsystems, increase the flexibility, and hopefully encourage new uses for protective breathing apparatus.

The case storage requirement should also be examined. While protection should be provided to stored breathing apparatus, the present carrying cases are less than satisfactory from the users standpoint. Present carrying cases do not encourage quick donning of the apparatus. In fact, the cases are probably an impediment to the use of breathing apparatus. Many "walk-away" type brackets are available that encourage the use of breathing apparatus by increasing the visibility of the devices, and by assisting in the rapid donning of the protective apparatus.

N.I.O.S.H./M.E.S.A. should encourage research efforts in a number of areas. The respiratory protective devices' use environment should be studied in more depth, and appropriate standards developed.

Fire/rescue service breathing apparatus is used in severe temperature extremes. Regulator and exhalation valve freezing may occur in frequently encountered winter temperatures. Face piece "rubber" and plastic lenses may distort (and even melt or burn) at the elevated temperatures encountered in burning structures. Are present operating temperature range requirements realistic?

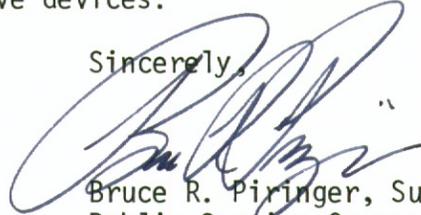
A number of Kentucky fire departments are also experiencing corrosion problems in regulators and exhalation valves. Are federal requirements for safe operation in high humidity and corrosive atmospheres stringent enough?

The breathing apparatus used by fire/rescue services appears unable to withstand repeated use in the firefighting environment. N.I.O.S.H./M.E.S.A. standards should be revised to reflect the real world situations these devices encounter.

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The present regulations and approval process for respiratory protective devices appear to be designed to limit the manufacturers product liability and stifle competition; the present regulations do not encourage research and development of improved equipment, nor do they encourage widespread use of these vital protective devices.

Sincerely,



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BRP/rw

cc Mr. Ed McCormack