



AIR TECHNIQUES

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Gentlemen:

This letter is to comment on the proposed rule for certification of respiratory protective devices under 42 CFR Part 84. Air Techniques (ATI) is a leading filter test equipment manufacturer and welcomes this opportunity to comment on the proposed rule. ATI's main concern is with section 84.184 of the proposed rule, the section on particulate instantaneous penetration filter test.

The primary concern is with part (i) of the section where it is stated that the particle size of the aerosol must be determined with a differential mobility particle sizer. ATI objects to this for several reasons:

- 1) The cost to the filter testing industry would be excessive.
- 2) There is no latitude for technological innovation in particle sizing.
- 3) There are several different technologies available to determine particle size and DMPS has not proven itself to be superior.
- 4) The ATI DOP unit has a continuous integral particle sizing device, the Tyndall Owl. The Tyndall Owl has worked fine over the last 40 years and there is no reason to obsolete it for a more expensive, more complicated, external instrument that does not continuously monitor.
- 5) ATI equipment would have to be evaluated by a competitor's instrument.

ATI strongly recommends that the section be reworded to remove any reference to a specific type of technology and instead specify a method for qualifying a particle size instrument.

ATI is also concerned with part (a) section 1 which specifies a sodium chloride (NaCl) aerosol as the test aerosol for a solid only respirator. As worded, there is no latitude for other aerosols. ATI believes that other solids such as borosilicate or polystyrene latex may be used for this test. The wording should be changed to allow an equivalent as in the DOP testing. This will allow for technological innovations in generating the solid particle aerosol. It should also be noted that in part (i) a light scattering photometer is mandated to assess the instantaneous penetration. The British, who have been using NaCl for HEPA filter testing for thirty years use a flame photometer to measure the penetration. The regulation should be changed to allow for this type of measurement device.

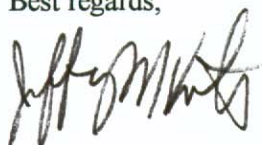
JUL 22 1994

In part (g) it is stated that both the solid and liquid aerosol are to be neutralized to the Boltzman equilibrium state. In the work place, aerosols are not neutralized and it has been shown that charged aerosols are a more deleterious test for electrostatic type filters. ATI believes that if a filter manufacturer tests with a non-neutralized aerosol it would be a more stringent test that better simulates the workplace and this should be allowed.

Part (h) specifies the particle size for the DOP test aerosol. The specification allows a greater standard geometric deviation than that allowed by MIL STD 282. As the filter industry produces filters that may be used in both the military and commercial markets, the filter test regulations should be in concert. The MIL STD 282 specification has over 40 years of data that shows a repeatable and reliable history. ATI believes that the NIOSH regulation should conform to it.

At the public meeting it was shown that in a round robin test by several filter manufacturers, there were significant differences between the ATI thermally generated DOP and a competitor's cold generated DOP. This is a matter of great concern because the aerosol from both generators meet the proposed specifications and should give equivalent results. The results showed that for conventional filter media the cold and hot DOP were equivalent. For unknown reasons, when testing electrostatic filter media, the cold DOP always showed significantly less leakage than the hot DOP. If this is indeed the case, the rule should be modified to state that the electrostatic filter media be tested with hot DOP as this is the most stringent and therefore, safest test.

Best regards,



Jeffrey M. Kiley
Sales & Marketing Engineer

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