

FEDERAL
COORDINATING
OFFICE

MOUNT ST. HELENS
TECHNICAL INFORMATION
NETWORK

federal emergency
management agency

Tuesday, May 27, 1980

BULLETIN #3 - "Precautions in Handling Volcanic Ash"

The Health Services Division of the Washington State Department of Social and Health Services, in consultation with the Center for Disease Control (CDC), Atlanta, and the National Institute for Occupational Safety and Health, Morgantown (NIOSH, CDC) have been working with the laboratory at the University of Washington, and with other experts, in the preliminary analysis of ash from the Mount St. Helens eruptions. In addition, we have reviewed reports of analyses being undertaken at other laboratories, including the U.S. Geological Survey.

It is known that the ash contains silicon, but only certain types of this material are known to cause silicosis. Silicosis is an industrial disease resulting from scarring of the lungs, usually after many years of heavy occupational exposure to certain silicon dusts.

In our opinion, a sufficiently detailed analysis of the ash is not yet available to make a complete evaluation of the risks of exposure. However, from the knowledge gained so far, the short term exposures currently being received by the general population are unlikely to pose a significant health hazard. Nevertheless, certain precautions should be adopted by those people receiving heavy exposures, such as workers engaged in clean-up operations or other occupations in which exposure may occur.

These precautions include handling the dust out-of-doors or in well-ventilated areas; and whenever possible, the ash should be wetted down to reduce its movement. High efficiency dust masks should also be worn by those who will be heavily exposed. (See appendix).

People in the general public should avoid unnecessary exposure and a light face mask (e.g. surgical mask) worn out-of-doors may be helpful in reducing the inhalation of large particles of dust which may give rise to irritation of the throat and mucus membranes.

Patients with chronic bronchitis, emphysema, and asthma should take special precaution to avoid undue exposure.

A team of physicians and industrial hygienists from CDC and NIOSH have been requested by the state to undertake studies of the immediate and long term health effects of dust exposure. Surveillance of certain hospitals in affected areas has been in progress since last week and reports of ill health have been studied. There is no indication so far that current or past exposure have given rise to any serious disease, though complaints of irritation from the dust have been received, particularly among smokers and persons with respiratory diseases. The health of the affected communities will continue to be monitored. Certain occupational groups receiving heavy exposure will be studied to evaluate the effectiveness of preventive measures.

Further statements will be made as soon as further analysis of the ash becomes available.

BULLETIN #3 APPENDIX

Masks which provide protection against lung damage from small mineral particles are approved by the National Institute of Occupational Safety and Health (NIOSH). Masks with printing on the manufacturer's container indicating NIOSH approval for protection against "pneumoconiosis" and "fibrogenic dusts" are the masks which will filter out these small particles. The mask will also carry a coded marking starting with "TC-21C" and followed by another two or three digit number.

We have been able to identify the following brands which have the appropriate NIOSH approval:

Single Use Approved Face Mask, (up to \$3.00 each. Throw away when they become difficult to breathe through, or structure of the mask is destroyed).

<u>Manufacturers</u>	<u>Number</u>
3M	6983
3M	8710
3M	9900
3M	9910
3M	9920
American Optical (AO)	R1050
Binks	40-150
Norton	7170
Willson	1400
Willson	1410

NIOSH Approved Masks for Multiple use, (\$8.00 and up for holder and .25 to \$1.00 each for replaceable filter elements - elements need be replaced only when they become difficult to breathe through).

<u>Manufacturers</u>	<u>Number</u>
American Optical (AO)	R2090N
American Optical (AO)	R4030
American Optical (AO)	R5030
American Optical (AO)	R6030
MSA Dust FO	66
MSA Dust FO	77
MSA Dust FO	88
MSA Comfo II	459440
Willson	560
Willson	1210
Willson	1211
Willson	1212