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FEDERAL COORDINATING OFFICE

federal emergency management agency

MOUNT ST. HELENS TECHNICAL INFORMATION NETWORK

Friday, June 6, 1980

BULLETIN #13 - "Research Into The Free Crystalline Silica Content Of Mount St. Helens Ash"

Preliminary analyses of four samples of volcanic ash taken from the ground in the Ellensburg, Yakima, and Spokane area by a team of researchers from the national Center for Disease Control (CDC) have shown a consistent, but low concentration of free crystalline silica (SiO_2). The proportion of free silica in the ash has been about 6% of the total respirable size particles (under 10 microns) by weight. Of the free silica, about 4% is in the form of cristobalite and about 2% exists as free quartz.

(This finding represents an update of the finding reported in Technical Information Bulletin #10, "Center for Disease Control Community Based Health Surveillance Program." It should be noted that many agencies are collecting and analyzing the volcanic ash for various purposes. It is the intention of the Mount St. Helens Technical Information Group (MSHTIN) to reconcile differences in findings whenever possible. When such reconciliation is not possible, the MSHTIN will present those data it considers most accurate.)

At present, industrial hygienists from CDC's National Institute for Occupational Safety and Health (NIOSH) are collecting additional samples from both the air and the ground from a number of communities in the plume paths of the two eruptions. Present plans are to sample in the vicinity of Moses Lake, Yakima, and Spokane in the path of the first plume and Longview and Centralia in the path of the second plume.

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