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FEDERAL
COORDINATING
OFFICE

MOUNT ST. HELENS TECHNICAL INFORMATION NETWORK

federal emergency
management agency

Friday, June 20, 1980

BULLETIN #21 - "Aviation Considerations"

Safety information and recommended actions associated with aircraft exposure to volcanic ash were promptly distributed by the Federal Aviation Administration (FAA) and some aircraft and engine manufacturers after the first major eruption of Mount St. Helens. The immediate concern included exposure to ash in the air and on the ground. While the high altitude concentrations have diminished, recurrence associated with future volcanic activity can be expected and the possibility of ground contamination is a continuing problem.

Several incidents have been reported that involved flight through an ash cloud. Two airplanes that were briefly exposed to the airborne dust cloud with extremely high particulate concentration, had windshields and engine fan blades pitted. The most extreme example, which was reported in Aviation Week and Space Technology, involved exposure of a Transamerica Airlines Lockheed L-100 transport taking off from McChord A.F.B. at Tacoma, Washington, May 25, 1980. In less than five minutes exposure to a heavy concentration of ash, two turbines were destroyed and the other two were severely damaged. The radome, wing leading edges, propeller and windshields were reported to have sustained sandblast damage.

Extreme incidents such as these can be avoided. After each of the eruptions, data is provided through FAA Advisories and NOTAMs, (Notice to Airmen) forecasting the location of airborne dust clouds. Flight restrictions in the immediate vicinity of the volcano will be in effect

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for the foreseeable future. Current information can be obtained from any FAA Flight Service Station.

Airports have been closed for extended periods in the presence of heavy dust and can be expected to be closed again. Even without additional eruptions, the combination of dry weather and wind will cause recurring problems from the present ash in some areas. Closure of the airport is the responsibility of the owner/operator of the airport. The FAA notifies pilots of such closures through their NOTAMs system.

In addition to following instructions as to flight restrictions and the like, FAA and manufacturers' instructions for maintenance, cleaning and operations must be followed to avoid damage to equipment. Much information has been disseminated by government and industry. These are discussed at length in the June 9, 1980 issue of Aviation Week and Space Technology. The advisories from the aircraft and engine manufacturers are reproduced on pages 41-45. Further, all agencies and individuals involved in operating aircraft near the volcano or in ashfall areas must refer to the May 21, 1980, FAA special issue of General Aviation Airworthiness Alerts titled "Volcanic Ash Hazard" (AC No. 43-16). This publication has been distributed to all fixed base operators, all aircraft owners and all pilots of record in the region. Copies remain available at all FAA Flight Service Stations.

Manufacturers advisories of record include the following:

Boeing (Special message) May 23, 1980.

Boeing (Customer support service letters) May 29, 1980.

McDonnell-Douglas (Advisory to operators) May 22, 1980.

Lockheed (Deferred because few if any operations in the area).

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General Electric (Engines) May 21, 1980.

Pratt & Whitney (Engines) May 21, 1980.

Rolls Royce (Engines) May 22, 1980.