Asst. to Chief for Epidemiology
and Field Studies, DOH -- 4/8/66

At the Mahwah laboratory a number of brake testing dynamometers were available which could simulate various operating conditions. These machines were set to test a variety of typical brakes and air samples of the decomposition products were taken on membrane filters. Electron micrographs were made of the deposits thus collected and a number of fields were scanned for the presence of fibers. Where significant numbers of fibers were found an estimate of the fraction of the decomposition product which was fiber was made by sizing all of the particles and fibers seen. The results of these tests are as follows:

Decomposition of Brake Linings

No.	Type of Brake	Condition of Test	Presence of Fibers	% Fiber (mass)
1	Disk Brake	Normal driving	Few	< 5
2	Bus Brake	City driving	None	0
3	Automobile	100-200 F drum temperature	Few	~0
4	Automobile Brake	300-500 F drum temperature	*	< 1
5	Automobile Brake	600-700 F drum temperature	Numerous	15
6	Automobile Clutch	Normal driving	None	0
7	Bus Brake	450-550 F drum temperature	None	0
8	Automobile Brake	100-300 F drum temperature	None	0
9	Automobile Brake	400-600 F drum temperature	Few	~0
10	Bus Brake	450-550 F drum temperature	None	0

*One clump of fibers still largely coated with binder and having a roughly rectangular shape.