

STANDARD OIL COMPANY
(Incorporated in New Jersey)
30 Rockefeller Plaza
New York, N. Y.

MEDICO - SAFETY MEMORANDUM

DUST PRODUCING OPERATIONS IN THE PRODUCTION OF PETROLEUM PRODUCTS
AND ASSOCIATED ACTIVITIES

- INTRODUCTION - Long looked upon as objectionable, dust today is also recognized as dangerous - especially with regard to occupational disease (Pneumoconiosis) and dust explosions. Since the dust encountered in the production of Petroleum products and associated operations are non-explosive under ordinary working conditions, no further attention will be devoted to this phase of the dust hazard.

Studies have revealed that the time element (exposure) and the concentration and size of the dust particles are major factors in producing health hazards. Heretofore difficulty has been encountered in determining actual dust concentrations and sizes of the particles, but recently developed instruments such as the Zeiss Konimeter and the Bausch & Lomb Dust Counter make it possible to obtain dust counts and estimate size of dust particles which, while not absolutely accurate, are indicative of the dustiness of the area.

The data presented in this memorandum are based upon material taken from the available literature on the subject, upon field investigations and conferences with technical specialists and upon 1008 actual dust counts made with a Zeiss Konimeter, using a 20 to 30 micron (a micron is about 1/25,000 of an inch) porcelain filter.

In the report of the Preventive Engineering Committee of the Air Hygiene Foundation, Professor Philip Drinker of Harvard, chairman, and other technical specialists on the Committee write:

"If the breathing of dust causes disability of any sort - silicosis is only one manifestation - then it follows that there must be some degree of air cleanliness from which no disability will result to the average man during the average working period.

"There is no satisfactory medical answer at present to this question, but the engineer is making a bad mistake if he lets men breathe heavy dust concentrations of any material. If no other reason for dust control can be found, then one should read transcripts of some of the recent suits at common law in which fantastic damages for alleged silicosis were granted to men who breathed dust containing little or no silica. The Courts and Compensation boards are not impressed with subtle distinctions between dusts with 10% and 40% quartz, especially when medical experts are reluctant to make definite statements as to the comparative significance of such differences.

"It would be well to realize that men working in dusty trades suffer far more from respiratory troubles of all kinds than do men who work in clean air. The evidence that excessive dustiness of any kind is harmful is beyond argument".