

Study of dustfall in the Labu-Nilai-Pajam area

NG THAM FATT¹, YAP SIAW YANG¹ AND YEAP EE BENG²

¹Institute of Advanced Studies
University of Malaya

²Department of Geology
University of Malaya

Fugitive dust from rock quarries is a contentious issue. It is often regarded as a significant contributor to ambient particulate levels and a potential air pollutant. A standard method of monitoring dust deposition has not been formulated by the local regulatory authorities, and data on the dustfall and characteristics of dust emitted by quarrying operations are scarce.

Concerns about dust pollution in the vicinity of rock quarries has prompted this on-going research project, commissioned in October 1994. A simple and economical dust deposit gauge was developed based on the ASTM standard dust deposit gauge with some modifications. This paper presents some initial findings of this project. This include the level of dustfall obtained

from 20 monitoring sites covering an area of over 100 km² in the Labu-Nilai-Pajam area. The study area has 7 operating quarries producing crushed rock aggregate from granitic rocks, and 2 more are in the pipeline. The field efficiency between the dust gauge used and the British Standard dust deposit gauge as well as the dry inverted Frisbee gauge will be discussed. The mineralogy and granulometry of the dust are studied using X-ray powder diffraction analysis and microscopy. Some aspects of dust characterization will be presented.
