A Major Project Report on

Utilization of Kota stone dust – a useful material

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CERTIFICATE

This is to certify that the project report entitled "Utilization of Kota stone dust-a useful material" is a bona fide record of work carried out by Ritesh Jain (2k12/GTE/013) under my guidance and supervision, during the session 2014 in partial fulfillment of the requirement for the degree of Master of Technology (Geotechnical Engineering) from Delhi Technological University, Delhi.

To the best of my knowledge, the matter embodied in the thesis has not been submitted to any other University/Institute for the award of any Degree or Diploma.

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ABSTRACT

With increased population their need and necessities also increasing day by day and to fulfill their needs industry ,urbanization are growing at a rapid rate and to provide energy various power plants as thermal, nuclear, hydro power plant also increasing. Due to rapid industrialization and power plant produces wastes which are a hazard to society such as Kota stone dust and Fly ash. Kota stone dust is a waste by product of Kota stone mines, Kota stone finishing industries. This waste product is disposed in river, on inhabited land area or on river sides. With wind or water this waste moves from their parent location and may come in contact with human and vegetation's and cause pollution, gives inhalation problem and various diseases. To find out any kind of engineering use of this ecological hazard an attempt is made by mixing Kota stone dust with different proportion with expansive soil. This mix was tested for various engineering properties such as Atterberg's limit, Standard proctor test and unconfined compression tests are performed. To compare the economy of Kota stone dust we did the all test as atterberg's limit, standard proctor test, unconfined compression test are performed on samples formed by mixture of soil, Kota stone dust and fly ash in different proportion. Addition of Kota stone dust and fly ash both show increase in UCS value, increase in maximum dry density an decrease in optimum water content takes place.