VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JnanaSangama" Belagavi – 590018

PROJECT REPORT ON

"COMPARATIVE STUDY ON GEOTECHNICAL PARAMETERS OF MINED AND UNMINED AREA"

Submitted in partial fulfilment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING

Submitted By

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Certificate

This is to certify that following students

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Has submitted final report on **"COMPARATIVE STUDY ON GEOTECHNICAL PARAMETERS OF MINED AND UNMINED AREA"** for VIII Semester Bachelor of Engineering in Civil Engineering during the academic year 2018-19 The final report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree

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ABSTARCT

Contamination is a present threshold issue whether it might be soil, air or water and this present study deals with the aim of solidification of the soil. Agriculture, urbanization, mining activities and industrialization are the key reasons from which heavy metals in the soil come from. Mine action is taken as one among the most anthropogenic actions in world ,among which the Arsenic is life threating and is commonly found in soil at two oxidation states: arsenate+5 in aerobic soils, and arsenate+3 in anaerobic (wetland) soils (Alker et al., 2000).So for our study we have collected virgin soil from Mudabool , Shahapur taluk(16.42°N, 76.50°E) and arsenic contaminated soil from Hutti (16.1977°N, 76.6470°E) and from 5km away Medinapur.Atomic Absorption Spectroscopy (AAS) has been carried out to know the concentration of arsenic present in mining soil and it is found out to be 5.91pp,. For 5km away it is found out to be 2.32ppm and the concentration of arsenic in virgin soil is nill.Index Properties was carried out on all the three soils, like Moisture content, Grain size analysis, Atterberg limits, OMC, and MDD. Engineering properties like UCS was carried out. Soil was solidified with 4%, 8% and 10% of lime. OMC got increased when compared with virgin soil and also MDD got decreased when compared to virgin soil. The moisture content of mining soil was decreased when compared with virgin soil. Atterberg limits of mining soil increased when compared with virgin soil also specific gravity of mining soil got decreased compared to virgin soil. the engineering property like UCS for mining soil got decreased compared to virgin soil.

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