

**Development of an ems for marmot granite mines (T) limited to manage pollution: the case
of Songwe river**

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Songwe quarry is located on the cliff with Songwe river lie downstream making quarry operations one of the major source of pollution to the river. EMPs implementation has been a problem due to poor flow of information between the management and workers. The aim of the study is to establish an EMS for the company, to improve environmental management efficiency. Methodologies used were through laboratory analysis, review of existing data, interviews, focused group discussion, consultation and site visits. The current environment status (water and land) is not good. Water quality in the river is polluted. Some parameters exceed standards (TBS) , e.g. turbidity (from 92.6 to 175) Iron (from 0.3 to 1.1) manganese (from 0.1 to 0.8) e, Ammonical Nitrogen (from 1.51 to 2.13), and permanganate value (from 0 to 7.6), all measurements are in mg/l. Other parameter are within the set standards, but have increased value from upstream to downstream. Land degradation has also been found, no rehabilitation of the disturbed environment is done. Socio-economic status is also not good. Nearly villagers keep cows within the mining area and these are poor medical care for workers. The organizational structure has been proposed to improve information flow. There are acts which do not comply and other few do comply with the requirements. The proposed EMS utmost has considered all components for its adequacy which are; environmental policy, planning implementation and operation, checking and EMS review. This will enable reduction of impacts and improve environmental efficiency. Application of environmental monitoring tools, rock quality study prior mining and the quarrying activities reaction test to control pollution in the river, are recommended.