

ENVIRONMENTAL EFFECTS OF SELECTED CHEMICAL AND PHYSICAL
GEOTHERMOMETERS AT OLKARIA GEOTHERMAL POWER PLANT

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ABSTRACT

To evaluate environmental implications of the geothermal power plant at Olkaria Kenya, fluid samples were collected at Olkaria power stations (1 and 2) and Olkaria wells 908 and 701. They were analyzed for; Cl, H₂S, CO₂, CH₄, O₂, H₂, N, SO₄²⁻, B and F. The pH was also taken. A UV/VIS spectrophotometer, ion-selective electrode, gas chromatograph, titroprocessor, pH-meter, and a Weber separator were used for analysis. The levels of these geothermometers were found to be very low. The pH at the wells was observed to be basic while at the stations, acidic. In conclusion, no significant negative environmental effects were observed.

Keywords: Olkaria geothermal power plant, environmental effects, geothermometers, pH, ions, greenhouse effect, global warming.

INTRODUCTION