

CONCLUSIONS The Tenth of Ramadan City is a new settlement in Egypt, located along Cairo–Ismailia Desert Road with a general slope towards the north. In drinking well (No. 1), the TDS and the concentration of major ions, minor ions and the concentration of trace elements and volatile organic compounds do not exceed the international limits of drinking water. The existence of abnormal concentrations of iron, manganese, lead, zinc, nickel and chromium in the groundwater of the Pleistocene aquifer reflects the effect of oxidation ponds as a recharging source to the Pleistocene aquifer particularly at high pumping rates. The Pleistocene aquifer is mainly recharged by seepage from Ismailia Canal, the return flow after irrigation in the agricultural lands, the replenishment from the desert wadies and seepage from the main Nile Delta aquifer. The chemical analysis of water samples collected from the area of study reflects an accumulation of different chemical constituents in oxidation ponds and the groundwater of the Pleistocene aquifer. All types of wastewater including domestic, agricultural and industrial are collected and disposed into three oxidation ponds northeast of the city. The domestic, agricultural and industrial wastewater of the city has been collected and disposed into three oxidation ponds with an amount reaches about 70,000 m³/day. As the distance from oxidation ponds increases, the concentration of trace elements in the groundwater of the Pleistocene aquifer will be decrease. The Pleistocene deposits are the main water bearing formation in the studied area. 2.3.5.6.7.8.9. 10. 12.