Toxic Soil Contamination in Al Muthanna Storage Site Using Geospatial Analysis Technique

Abstract- The Iraqi past chemical program was destroyed by the military operations or destructed by the UNSCOM/CDG teams during the early 90s. Both operations lead to a large number of scattered remnants of contaminated areas. The quantities of hazardous materials, incomplete destructed materials and toxic chemicals were sealed in two well-protected bunkers. Lack of appropriate destruction technology, led to spread the contamination around the bunkers. Since 2009 the Iraqi experts have been working to develop a practical plan for decommissioning the contaminated area. This paper introduces the hazard contamination in the storage site using geospatial analysis technique. The contamination level of two main chemical compounds (Copper Cu and cyanide Cn) have been evaluated and analyzed, taken from different soil samples of the site, surrounding areas have investigated and analyzed compared to the reference points. The storage area divided into 30 sector major sectors level of soil samples from soil surface all samples collected from acquires 10 samples from each sector. The results showed The Cn level exceeds the permitted level by (55000) times and for copper by (1050) times over the permitted level very high Contamination activity was found in the storage area.

Keywords- Al Muthanna Storage site, Geospatial techniques and visual interpretation, Toxic.