075. INFLUENCE OF AGING ON THE KINETICS OF Pb RELEASE FROM SOIL. Daniel G. Strawn and Donald L. Sparks, Department of Plant and Soil Sciences, University of Delaware, Newark, Delaware 19717-1303

The fate of Pb in soil has been the subject of intense study for many years. However, few studies have considered the effect of long residence times (aging) on soil-Pb interactions. In this paper the significance of aging on Pb sorption and release from soils and soil components, was investigated. Sorption of Pb on soil from 1 day to 70 days increased from 1697 mg/kg to 3370 mg/kg, respectively, after which the change in sorbed Pb was only slight. Lead release studies on incubated soil revealed that aging decreased the percent of Pb released in a 12-hour desorption time. Both the rate, and the percent of Pb release from the field contaminated soil, was less than from the laboratory contaminated soil. These findings indicate that soil-Pb interactions in aged field soils differ significantly from those in soils incubated in laboratory experiments over short time scales. Such results could have significant impacts on metal mobility and remediation of contaminated soils.