

## Poultry Waste Marker Constituents in Edge of Field Runoff Samples from the Illinois River Watershed.

J. Berton Fisher, Lithochimeia, LLC, Tulsa, OK

Roger Olsen, CDM, Denver, CO

Michael Smolen, Lithochimeia, LLC, Stillwater

It is well known that poultry feeds are formulated to contain high concentrations of phosphorus, copper, zinc, and, frequently, arsenic. Grab samples of runoff from fields within the Illinois River Watershed (edge of field samples) to which poultry waste had been recently applied were collected and subjected to extensive chemical analysis. The analytical data obtained show a high degree of correlation between the concentrations of Total P, Total Zn, Total Cu and Total As. Moreover, these correlations were consistent with the relative ratios of these elements in samples of poultry waste collected from poultry operations within the Illinois River Watershed and with the concentrations of these elements in soils from the Illinois River Watershed to which poultry waste has been applied. These data demonstrate that the Total P, Total Zn, Total Cu and Total As found in these edge of field samples in the samples are from land disposed poultry waste.