

Lead Measurement Methods

All lead measurements were collected by NIOSH investigators as part of a health hazard evaluation. Data were extracted from the final report and, in some cases, augmented from investigators' records. Administrative and observational information was extracted from the final report. The Health Hazard Evaluation Program has an extensive internal review process for its reports. Data entered into the database underwent a 100 percent check to ensure accurate entry.

Blood lead levels typically were measured by venous sample collection followed by analysis at a contract laboratory. For air monitoring, NIOSH investigators used personal air sampling pumps to draw air through filters that then were sent to a laboratory for analysis. Commonly used methods for sample collection and analysis came from the NIOSH Manual of Analytical Methods, methods 7105, 7082, 7300, and 7303. Over the years, various methods for collecting wipe samples were used, but they typically involved using a moistened towelette to wipe work surfaces, employee skin, or clothing/personal protective equipment, and then submitting the wipe for lead analysis at a contract laboratory. The most commonly used methods for wipe sample collection and analysis came from the NIOSH Manual of Analytical Methods, methods 9100, 9102, and 9105. Several health hazard evaluations also report 'bulk' sample or vacuum filter sample collection, which typically involved analyzing samples by one of the previously mentioned NIOSH methods.