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## **Officials look for ramifications of lead exposure at 'ground zero' and downstream**

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A door-to-door survey of residents in Miami and northern Ottawa County supports the belief that individuals living in and around the Tar Creek Superfund site are being exposed to greater health risks than most other Oklahomans.

"The results of the survey are startling," said Diane Bostic, a nursing instructor from Tulsa Community College who organized nursing students to help conduct the survey. "I think they will shock a lot of people."

The survey was conducted last summer and fall by the nursing students and other volunteers and contained 27 items for scoring. Information from 562 households was gathered in the course of the survey. Households in Miami, Cardin, Commerce, Picher, Quapaw and North Miami and in rural areas around the cities and towns took part in the survey. The survey is not scientific and did not employ a random sample. Those who answered questions were found in their homes, at fitness centers, senior nutrition sites and places of business.

"We've heard for years from people who would say 'if you would go door-to-door in my neighborhood you would find all kinds of people with problems with cancer or kidney problems or some other disease related to exposure to lead or heavy-metal or some other toxic substance,'" said Earl Hatley, president of the Local Environmental Action Demanded, a local group that organized the study and paid for it with a federal grant.

Hatley said that although the Tar Creek site had been placed atop the national priority list for cleanup in 1983, no study has ever been done to determine how living in and around the 43-square-mile lead and heavy metal contaminated site has effected residents.

"Some people ask 'what is making us sick?'" said Rebecca Jim, a retired Miami school teacher and counselor and the environmental group's executive director. "Others ask 'are we sick or are we sicker than anywhere else?' But, everyone wants to know the answer."

The survey revealed that respondents and those living in their households had a high prevalence of a wide range of some medical problems when compared to other Oklahomans. Nearly a quarter of respondents said their household had experienced a miscarriage. That compares to about 10 percent for all Oklahomans

Respondents also reported a high prevalence of Parkinson's disease, 24 percent; heart disease, 40 percent; hypertension, 58 percent; cancer, 38 percent; diabetes, 43 percent; and kidney disease, 11 percent, according to a report based on the survey that was distributed on the final day of the National Conference on Tar Creek, an annual event held in Miami to bring together federal and state officials, researchers and residents.

Southeast Miami, an area through which Tar Creek runs to the Neosho River, showed a high prevalence of asthma, with 44 percent; diabetes, 48 percent; heart disease, 46 percent; Parkinson's disease, nine percent; hypertension, 65 percent; miscarriage, 31 percent, and cancer, 51 percent.

"This area includes Tar Creek down to its convergence with the Neosho River," Hatley said. "It has been found that the metals loading is higher and pH is lower in that area than near the epicenter of the mine sites in the Cardin-Picher area."

Evelyn Acheson, a nursing professor from the University of Oklahoma who has worked on a statistical analysis of the data gathered for the study, pointed out that information gathered by state health officials reveals stroke-related deaths in Ottawa County are 33 percent higher than the state average and that cancer deaths in the county exceed the state average by 23 percent.

“These results could be related to a high rate of tobacco use in Ottawa County,” she said. “And like all of Oklahoma, Ottawa County has a large number of people with a sedentary lifestyle and high rate of obesity.”

Organizers of the survey are hoping it will spur further research and study of the health of individuals living in and around the Tar Creek site. The federal Agency for Toxic Substance and Disease Registry is currently preparing a report that will determine if area residents face an imminent health risk related to their proximity to the Tar Creek site, part of a mining district where mining operations ceased in the late 1960s and early 1970s. The agency’s report should be completed by the end of June. Researchers with the agency have also unsuccessfully sought funding for a comprehensive health study.

“What I’m hearing is alarming,” said Dean Seneca, director of the tribal affairs office for the agency. “We’ll be looking at these diseases and trying to find what are their causes.”