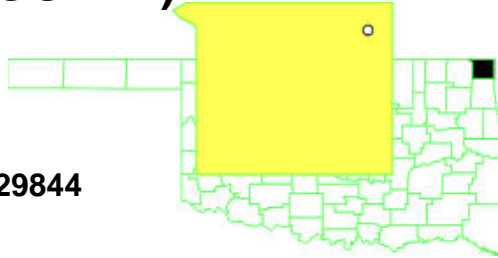


TAR CREEK (OTTAWA COUNTY) OKLAHOMA

EPA REGION 6 CONGRESSIONAL DISTRICT 02



EPA ID# OKD980629844
Site ID: 0601269

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Updated: March 2009

Current Status

OU1 (Surface Water/Groundwater)

- The 3rd Five Year Review was completed in September 2005 and is available on EPA's website.
- EPA is funding the ODEQ to monitor ground water in the Roubidoux aquifer; groundwater monitoring activities are on-going.

OU2 (Residential Properties)

- On Saturday, May 10, 2008, an EF-4 tornado struck parts of the Tar Creek Superfund site. EPA responded to the scene and conducted air monitoring and surficial soil sampling. EPA also established hand wash stations and distributed dust masks to responders and residents as a normal safety precaution when dealing with debris from a disaster. A risk evaluation of the field data collected was performed and concluded that there are no immediate adverse health concerns associated with lead from exposure to soil to first responders or residents returning to their homes and that there are no adverse health effect from inhalation of particulate matter.

EPA is working with federal, state, and local officials to assess the impact of the tornado and to ensure that prompt and comprehensive assistance is provided to affected residents. EPA has also provided \$8 million in federal funding to the Oklahoma Department of Environment Quality to expedite the buyout and relocation of residents of Picher, Oklahoma.

- More than 2,295 residential yards and public areas have been remediated since the inception of cleanup in Quapaw, Cardin, Picher, Commerce, and North Miami. Work on the final 119 properties in Commerce began in December of 2005 and was completed in October 2007.
- The EPA is funding ATSDR and Ottawa County Health Department (OCHD) to provide community health education and blood lead screening for the five-city mining area. The OCHD also works with local health professionals including Indian Health Service physicians to provide education to the medical community.
- October 2004, Report To Congress by the Agency for Toxic Substances and Disease Registry (ATSDR). This report shows that children between the ages of 1 and 5 living at the Tar Creek site who had a blood lead level in excess of the 10ug/dL level decreased from 31.2% in 1996 to 2.8% in 2003. The 2.8% level is only slightly higher than the findings of the National Health and Nutrition Examination Surveys (NHANES) for children living in the United States as a whole, which stands at 2.2% for children between the ages of 1 and 5 during the years 1999-2000.

OU4 (Chat Piles, Other Mine and Mill Wastes, Smelter Wastes)

- EPA in coordination with ODEQ, the Quapaw Tribe, BIA, DOI, and the OK-DOT conducted Chat Sales Availability Sessions and a Workshop August 19-20, 2008. The Availability Sessions enabled participants to meet one-on-one with the parties listed above, and gain additional insight on their role

involving chat and chat sales. The workshop informed participants on the purpose of the Chat Rule, record keeping requirements, the desire to facilitate chat sales and encouraged the exchange of information between chat sellers, purchasers, and owners of chat.

- On June 17, 2008 EPA conducted a series of meetings with chat sellers and a gravel operator in Picher, OK. Participants included representatives from the Bureau of Indian Affairs, EPA-Region 7, the Oklahoma Department of Environmental Quality and the Quapaw Tribe. During these meetings, EPA discussed the Chat Rule, reporting requirements, upcoming plans to conduct a chat sales workshop in August, and addressed questions posed by the participants. The exchange was beneficial to all parties and EPA gained additional insight on measures that should be pursued to enhance participation at the upcoming chat sale workshop. EPA will continue to meet and coordinate with its stakeholders in preparation for the workshop.
- EPA signed the Record of Decision (ROD) for OU4 on February 20, 2008. The ROD provides a complete explanation of EPA's final decision, a summary of site investigations, and a responsiveness summary that addresses comments received during the public comment period on the July 2007 Proposed Plan. The ROD is available on EPA's webpage - <http://www.epa.gov/earth1r6/6sf/6sf-decisiondocs.htm>. The ROD and the OU4 Administrative Record, which is a collection of technical site material and documents that forms the basis for the selected remedy, is available at the following site repositories:

Miami Public Library
200 North Main St
Miami, OK 74354
918-542-3064
U.S. EPA - Region 6
1445 Ross Ave
Dallas, TX 75202
214-665-6427 (Please call for an appointment if you desire to review the file)

Oklahoma Department of Environmental Quality
707 North Robinson
Oklahoma City, OK 73102
405-702-1000

- Meetings and consultations between EPA, ODEQ, the Quapaw Tribe, and the 10 Downstream Tribes on site activities are being conducted as needed.
- A public meeting was conducted on August 28, and an Availability Session was held the following day (August 29) for the public to meet with EPA representatives on a one-on-one basis to ask any questions related to the Proposed Plan.
- EPA released the Proposed Plan of Action for OU4 on July 29, 2007 for public comment. The 30-day public comment period that was scheduled to conclude August 30, 2007, was extended, to accommodate the public's request. The public comment period on the Proposed Plan of Action for OU4 concluded October 1, 2007.
- EPA conducted consultations with representatives of the eleven Federally-recognized tribes from January through July 2007, to hear and address their concerns on the draft Proposed Plan of Action. The consultations were accomplished through group meetings, individual meetings and conference calls.
- EPA has completed 3 chat disposal pilot projects. Approximately 34,600 tons of chat was injected into under ground mine caverns. An additional 40,000 tons of mine waste were contained in an innovative trench/road system. Two more pilots are underway. Both include injecting washed chat fines directly into mine caverns and eliminating sediment/holding ponds. The data will help better define design criteria.

OU5 (Sediment and Surface Water)

- EPA Region 6 is working with EPA Region 7 as part of multi-state effort to characterize sediment and surface water throughout the Spring and Neosho River basins. Sampling was conducted in the river basins on May 1 – 5, 2006.
- A second phase of sampling was conducted in Summer 2007. This sampling focused on collecting data on the toxicity of the sediments and the results will be used to guide future cleanup activities.

Memorandum of Understanding (MOU) Activities

- Representatives from the various tribes, USACE, USGS, BIA, EPA, and ODEQ are conducting multiple meetings, in order to share information and keep parties abreast of pilots and studies that are being pursued in and around the site.

Benefits

The cleanup of lead-contaminated soils from over 2,000 residential yards and high access areas located within the five-city mining area has significantly reduced the exposure of the population, especially young children.

- October 2004, Report To Congress by the Agency for Toxic Substances and Disease Registry (ATSDR). This report shows that children between the ages of 1 and 5 living at the Tar Creek site who had a blood lead level in excess of the 10ug/dL level decreased from 31.2% in 1996 to 2.8% in 2003. The 2.8% level is only slightly higher than the findings of the National Health and Nutrition Examination Surveys (NHANES) for children living in the United States as a whole, which stands at 2.2% for children between the ages of 1 and 5 during the years 1999-2000.
- Abandoned well plugging has reduced the potential for contaminants in the shallow Boone Aquifer to migrate to the Roubideax drinking water aquifer.

National Priorities Listing (NPL) History

Site Hazard Ranking System Score: 58.15

Proposed Date: 7/27/1981

Final Date: 9/08/1983

Location: The Tar Creek Superfund Site (hereinafter "the Site") is part of the Tri-State Mining District, which includes northeastern Oklahoma, southeastern Kansas, and southwestern Missouri. Specifically, the Site includes the Old Picher Field lead and zinc mining area located in northeastern Ottawa County.

Population: Approximately 19,556 people live in the surrounding area.

Setting: The Site consists of five mining cities, Picher, Cardin, Quapaw, Commerce, and North Miami, and other areas within Ottawa County. Chat piles are located throughout the communities.

Photos: [Site Photos](#)

Principal Pollutants: Lead, cadmium, and zinc.

Health Considerations:

- Lead-contaminated soils and chat piles are a source of exposure to the population, especially to young children. A percentage of young children living in the five-city mining area are known to have blood lead levels in excess of the 10 µg/dL (micrograms per deciliter) standard set by the Center for Disease Control (CDC). The percentage of children with elevated blood lead levels remains well above state and national averages.
- Children are the most sensitive population for lead exposures. Chronic exposure can deleteriously affect the immune system, blood system, nervous system, and kidneys. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children.

Record of Decision (ROD)

Operable Unit 1: ROD signed on June 6, 1984

Operable Unit 2: ROD signed on August 27, 1997

Operable Unit 4: ROD signed on February 20, 2008

The OU1 ROD addressed (1) the surface water degradation by the discharge of acid mine water, and (2) the threat of contamination of the Roubidoux Aquifer, the regional water supply, by downward migration of acid mine water from the overlying Boone Aquifer through abandoned wells connecting the two. Recharge was to be prevented by utilizing diking and diversion structures to stop the surface water of Tar Creek from entering the two collapsed mine shafts in Kansas, which were identified as the main inflow points. Additionally, the remedy called for preventing the downward migration of acid mine water into the Roubidoux Aquifer by plugging 66 abandoned wells. During remediation, an additional 17 wells were identified and addressed, bringing the total to 83 wells. Construction activities were concluded on December 22, 1986.

The OU2 ROD addressed the residential areas. The full text for this ROD is located on the Internet at: www.epa.gov/earth1r6/6sf/6sf-decisiondocs.htm

The OU4 ROD addresses the source materials, rural residential yard contamination, transition zone soil contamination, and contamination in water drawn from rural residential wells. The selected remedy also includes relocation, which will continue to be implemented by the Lead Impacted Communities Relocation Assistance Trust (LICRAT), and chat sales. Though EPA does not own any chat and will not purchase any chat, it will assist chat sales participants as part of EPA's CERCLA remedy. The full text for this ROD is available at the webpage listed above.

Site Contacts

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EPA Toll-Free Telephone Number:		1-800-533-3508
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Quapaw Superfund Program Manager:	Vacant	