

Tar Creek Superfund Site Advisory Document for Research

This document is to provide information, guidance, and contact information to individuals or groups interested in conducting research at the Tar Creek Superfund Site. Scientific research is welcomed and encouraged; however, the complexity of the Site does mean that special considerations must be made related to health, safety, and access. The following are the Oklahoma Department of Environmental Quality's (DEQ's) recommendations for researchers at the Tar Creek Superfund Site. This document is not intended to be relied upon as providing legal advice or as an exhaustive list of all operative laws that could pertain to researchers at the Site. Any researcher has the duty to follow all applicable law and should consult their own legal counsel regarding compliance for any potential research project at the Site.

Health and Safety

- Special safety precautions must be considered and implemented before the handling, transportation, processing, and/or disposal of mining waste (commonly referred to as "chat") from the Tar Creek Superfund Site. Mining waste may take the form of chat, fine tailings, development rock, and transition zone soils. Primary health and safety concerns stem from the levels of heavy metals, most notably lead and cadmium. DEQ recommends developing a site-specific Health and Safety Plan prior to conducting research. Common elements in the plan should include the location and route to the nearest hospital, descriptions regarding the human health hazards of lead, cadmium, and other heavy metals, and appropriate personal protective equipment. Researchers should also be sure to acquire all necessary permits and approval (e.g., IRB, IACUC) before beginning research.
- Collecting/Handling/Transportation: Special considerations must be made to properly handle, collect, and transport mining waste on or from the Site. Please consult with the U.S. Environmental Protection Agency (Region 6), DEQ and the Quapaw Nation before handling hazardous material. DEQ recommends HAZWOPER (Hazardous Waste Operations and Emergency Response) Training (29 C.F.R. § 1910.120) before implementation of any research/work on site. Collection should follow guidance for sampling from the EPA under the Resource Conservation and Recovery Act (RCRA) and the Chat Rule. Source material must be properly containerized for transport and stored in a container that meets the appropriate



DOT, OSHA, and EPA regulations for the wastes it contains (i.e., labeled, sturdy, sealed, nonreactive, etc.).

- Disposal: Special considerations must be made to properly dispose of mining waste from the site. All chat, impacted soil, or other waste excavated and removed from the Site should be treated as regulated or hazardous material and disposed of in accordance with applicable laws and regulations.
- Subsidence and Mine Shafts: Researchers will also need to plan for additional safety concerns related to subsidence and mine shaft collapse risk. Approximately 300 miles of underground mine tunnels underlie the Site, and more than 1,320 mine shafts and thousands of exploratory boreholes and air vents were abandoned when mining ceased. Some mine shafts remain open, and subsidence continues to be a concern due to roof collapse and erosion of mine shafts. The Health and Safety Plan should address these additional dangers.



Site Access

- Site Access: The Tar Creek Superfund Site is very large, encompassing approximately 40 square miles in Ottawa County. Land ownership is a mixture of publicly owned, privately owned parcels, and tribally owned parcels. DEQ cannot grant access to any piece of property. Please do not trespass. Coordinate your access directly with landowners before entering the property.

Links to Important Documents and Additional Information

- General Information on the Tar Creek Superfund Site from the EPA Website, including Site Background, Remedial Goals, Health and Environment, Redevelopment, Site Documents and Data: <https://tinyurl.com/72ttan5a>
- General Information on the Tar Creek Superfund Site from the DEQ Website, including general information, DEQ activities, and links to General Site Documents: <https://tinyurl.com/2ekd9sb9>
- OSHA Laws and Regulations (29 C.F.R. § 1910.120) Hazardous Waste Operations and Emergency Response: <https://tinyurl.com/msb9au6k>
- Off-Site Rule (includes EPA Off-Site Rule Fact Sheet and Regional Off-Site Contacts): <https://www.epa.gov/superfund/site-rule>
- Criteria for the Safe and Environmentally Protective Use of Granular Mine Tailings Known as “Chat” (Includes documents such as: Beneficial Uses of Chat Finalized, Tri-State Mining District – Chat Mining Waste, and 40 C.F.R. parts 260 and 278) <https://archive.epa.gov/epawaste/nonhaz/industrial/special/web/html/index-4.html>
- RCRA Waste Sampling Draft Technical Guidance, Planning, Implementation, and Assessment: https://www.epa.gov/sites/default/files/2015-10/documents/rwsdtg_0.pdf

Contact Information

- **EPA**

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