Cherokee Zinc Company (Weir Smelter) Superfund Site
Weir, Cherokee County, Kansas

Community Involvement Plan - Removal

April 2019

SECTION 1
Overview of the Community Involvement Plan

The U.S. Environmental Protection Agency will use the information in this Community Involvement Plan (CIP) to help identify and address current matters of concern, and to review past community involvement efforts as the cleanup project progresses. The CIP will also provide guidance to EPA staff and help to ensure that community needs are addressed throughout the cleanup process.

The CIP is intended to:

- Encourage community interest and participation throughout EPA's involvement at the site.
- Initiate and support two-way communication between EPA and the community.
- Help ensure that community members understand the Superfund process and the opportunities it presents them to participate in the decision-making process regarding site cleanup.

This Community Involvement Plan identifies issues of concern and interest to the community potentially affected by the Cherokee Zinc Company (Weir Smelter) Superfund Site, located in Weir, Cherokee County, Kansas. A glossary with technical term definitions can be found in Appendix D, and/or identified within the acronym list in Appendix E of this CIP. This CIP contains information from the files of the U.S. Environmental Protection Agency Region 7 office, as well as information gathered by EPA during community interviews and conversations with other interested parties and regulatory authorities.

EPA Invites Your Comments

If you have comments on this community involvement plan, please contact:

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In This Plan:

Community Engagement Specialist (CES) Anna-Marie Romero developed this CIP for the Cherokee Zinc Company (Weir Smelter) Superfund Site. EPA Region 7 is conducting activities at the site under the guidelines of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a federal law passed in 1980 and commonly known as Superfund; the Superfund Amendments and Reauthorization Act, enacted in 1986; and the National Oil and Hazardous Substances Pollution Contingency Plan, revised in 1990.

The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the National Contingency Plan or NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases. The NCP is the result of efforts to develop a national response capability and promote coordination among the hierarchy of responders and contingency plans.

Cleanup Responsibility: Federal and state regulatory authorities each have a role to play in cleaning up hazardous waste sites.

When EPA has the primary responsibility for Superfund activities at a site, the state provides technical and regulatory guidance and support to EPA, as needed. In some cases, the state takes the lead while EPA provides regulatory and technical support.

SECTION 2
Community Involvement Plan Objectives

Throughout the investigation and cleanup of the site, EPA will endeavor to keep community members informed of and involved in the cleanup process. To do this, EPA may employ a variety of tools and techniques, some of which are described in the next section. The specific communication effort will be based on the level of community interest, identified community issues and concerns, and the complexity and duration of the site investigation and cleanup. The level of participation sought by some communities or individual community members varies. EPA encourages those who want a greater level of participation to consider forming a Community Advisory Group and/or applying for Technical Assistance Plan funding. For additional details on the TAP and CAG programs, contact the Community Engagement Specialist listed in Appendix A.

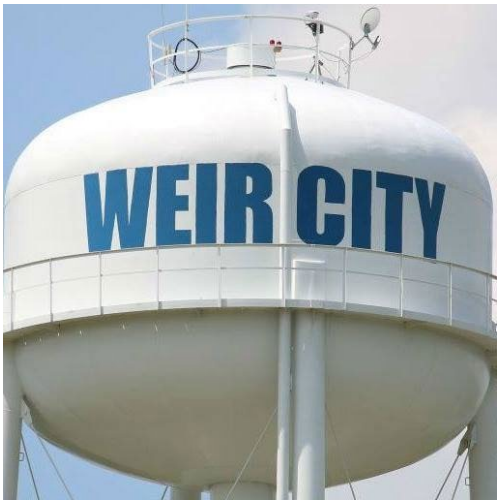


Photo Credit: City of Weir, Facebook

The CIP for this site is intended to provide general Superfund program information to interested community members, as well as help them identify the many participation opportunities and options available to them throughout the cleanup. The CIP is also intended to be an information resource for EPA staff members assigned to the site team. The following community involvement objectives help to ensure that avenues of communication between EPA and the community are established and maintained.

Objectives include:

- Provide timely, site-specific information to community members so that they are able to participate in, or closely follow, site-related activities to the maximum extent they desire and the process allows.

- Provide a direct contact for community members by assigning a CES for this site. The CES will act as a liaison between the community and EPA.
- Provide opportunities for community input that are tailored to the needs and concerns of the community.
- Help ensure that community members are well-informed, so that they are knowledgeable about site activities and the Superfund process.
- Enhance communications between EPA and local officials to help ensure that officials are informed of site-related activities, and that EPA benefits from the officials' insights regarding the community and its concerns, the site and its history, and local regulatory issues.
- Enhance communications between EPA and the media to help ensure reporters are provided timely information about site-related activities and events, and are aware of pertinent site-related topics.

SECTION 3
Community Involvement Activities

By performing the following activities, EPA can help ensure community members know about the Superfund process and the actions taking place at the site, and that they are aware of the opportunities for the community to participate in site-related decisions. By providing accurate information about the site investigation and cleanup, EPA will enable interested parties to make recommendations regarding the site that are appropriate for their community.

- Assign an EPA Community Engagement Specialist (CES)
  A site-assigned CES provides community members a direct link to EPA Region 7, and acts as a liaison between EPA and the community. As a member of EPA's site team, the CES can often respond to inquiries as they are received. Should an inquiry require specific information the CES does not have, the CES can obtain the information or refer the inquiry to an appropriate specialist, such as the remedial project manager or toxicologist assigned to the site. Interested parties may contact the CES at any time, whenever questions or concerns arise, and the CES will make every effort to respond promptly and accurately to all inquiries. (See Appendix A for all related EPA contact information, including the On-Scene Coordinator or the Remedial Project Manager.)

- Establish a toll-free hotline number for the public
  EPA maintains a hotline for Superfund inquiries. The hotline can be used to reach EPA or the Agency for Toxic Substances and Disease Registry employees located in the EPA Region 7 office. During working hours, the community engagement staff may answer the hotline. When calls are answered by an answering machine, callers should state which site they are calling about, in addition to leaving their name, phone number, and the reason for their call. Every effort will be made to return calls promptly. The toll-free number is 1-800-223-0425.

- Prepare and distribute fact sheets to residents and interested parties
  Fact sheets (also referred to as community updates or newsletters) are useful when communicating with large groups about topics of common interest. For example, fact sheets are helpful for explaining specific events and issues, discussing and dispelling rumors, explaining relevant scientific or technological data, or informing interested parties about progress or problems related to the site or the schedule of work.

Fact sheets should be provided on an as-needed or annual basis. An annual fact sheet should be considered when site activities are "invisible" to the community for long periods of time, as is the case when laboratory analyses are being completed, data is being verified, reports are being written, or access and other legal agreements are being negotiated.

- Develop and maintain a mailing and contact list
  Mailing and contact lists are developed and maintained to facilitate distribution of materials, such as fact sheets and meeting notices, to interested and potentially affected community members. The lists also provide EPA a quick reference to key community members, such as local officials and community group leaders, in the event EPA wants to provide a timely notice about unanticipated events, such as sudden media interest in site activities.

  Local residents, local businesses, elected officials, and the media are routinely included on mailing and contact lists. Community surveys and local tax maps form the basis of most mailing lists, but the lists are revised to include those who request to be added (or deleted) and those who provide their names and addresses on meeting and event sign-in sheets or correspondence. EPA makes every effort to protect the privacy of community residents, which includes denying requests to share personal information, such as names, addresses, and individual residential sampling results, with nongovernment persons. The mailing list will be periodically updated and revised throughout the course of the cleanup. Email lists, as well as U.S. Postal Service lists, may be verified on a regular basis to ensure the most up-to-date information is maintained.

- Make site-related information, including data and documents, available to community members locally
  EPA developed a project website for site-related information, which is available to the public at: https://semspub.epa.gov/src/collections/07/AR65668. EPA assessed the ability of the public to access documents for the site through an internet-based repository, and determined that the local community has this ability. Documents for the site will be available online for anyone with an internet connection. For community members without internet service, the local library has computers available with internet connections. The project website includes documents such as the Administrative Record, this CIP, and other site-related documents. For information regarding the Superfund process, visit the following EPA website: https://www.epa.gov/superfund. Information is also available to community members at EPA Region 7 in Lenexa, Kansas. (See Appendix B for location and contact information for the EPA Region 7 office.)

- Keep local officials well-informed about site activities and developments
  By keeping local officials abreast of the work schedule and site-related developments, EPA can promote a collaborative relationship to help ensure that officials are able to respond knowledgeably to citizens' inquiries. When local officials are well-informed, they can enhance the flow of accurate information between EPA and concerned community members. (See Appendix A for contact information for federal, state, and local officials.)

- Keep local media well-informed about site activities
  By distributing timely and accurate information to the local media, EPA can minimize misinformation and speculation about site-related risks and cleanup activities. News releases, written materials, and direct phone calls are all appropriate ways to provide information to media

representatives. The media should always be notified of public meetings and similar events, and may be offered opportunities to participate in news briefings or conduct interviews with EPA officials. Upon request, or when circumstances warrant, special information sessions or news conferences can be useful to ensure that complex situations are understood and accurately conveyed to the public. Every effort will be made to address media inquiries quickly. (See Appendix B for media contacts.)

- Conduct public meetings and/or public availability sessions
  Public meetings are required when EPA is approaching a formal decision, and they are recommended whenever project milestones are reached, such as the start or finish of a remedial investigation. Public meetings are held at a convenient location during evening hours so that most interested parties will be able to attend. Public availability sessions are less structured than meetings. Generally, there are no formal presentations. Instead, community members are invited to come at their convenience within the set time frames, and talk one-on-one with EPA and other experts associated with the site cleanup activities. Public availability sessions may include both afternoon and evening hours so that interested parties can attend at their convenience.

  EPA Region 7 is committed to providing reasonable accommodations to individuals with disabilities. If you require a reasonable accommodation to participate, please notify EPA Reasonable Accommodation Coordinator Jonathan Cooper at 1-800-223-0425 or by email at cooper.jonathan@epa.gov at least seven days prior to a public meeting and/or public availability session. Speech or hearing-impaired individuals should email or call using the local relay service.

- Place public notices in local publications
  Public notices regarding required and elective activities will be selectively placed in the local newspaper. (See Appendix B for a list of local media.) To ensure the widest possible exposure, public notices about Superfund activities often run as retail display ads, rather than placed in the classified or legal notice sections. Public notices announce important site-related developments, public meetings and availability sessions, the release of site-related documents, or any other information of importance to the community at large.

- Hold public comment periods
  Superfund law requires EPA to advertise and conduct public comment periods at key points in the cleanup process, such as prior to making official cleanup decisions or significant changes to previously announced cleanup decisions. Although there is no requirement that EPA conduct public meetings during comment periods unless a request is received, EPA Region 7's policy is to do so.

  Meetings held during comment periods allow community members to discuss EPA's rationale for proposed actions with EPA and other regulatory authorities. At public meetings held within public comment periods, community members may express their opinions and concerns for inclusion in the official record, without having to provide a written statement to EPA. A stenographer transcribes all meetings held during official comment periods, and prepares an official transcript of the proceedings for EPA's records. Those who do not attend the official

meetings may still submit their comments via regular mail or email within the announced public comment period time frames.

- Prepare Responsiveness Summaries and Record of Decision
  A Responsiveness Summary, or RS, is a required part of the official cleanup decision document, known as the Record of Decision. The RS summarizes all substantive comments submitted to EPA during the comment period and provides EPA's responses to them. EPA prepares the RS after the public comment period closes.

- Promote information sources available through EPA
  EPA provides various sources of information to assist community members in understanding the Superfund process and site-related activities. EPA representatives may be contacted directly by phone, mail, or email. Information may also be accessed through EPA websites at: http://www.epa.gov/superfund.

  A toll-free hotline (1-800-223-0425) is available for questions or concerns. Additionally, EPA has established a local repository to store site-related information and documents for public viewing. Contact information and additional information resources will be included in all materials that are distributed to community members.

- Provide support for Community Advisory Groups (CAGs)
  CAGs are community-led groups intended to represent and include all interested members of the community, including representatives of the potentially responsible parties. By meeting regularly to discuss the cleanup and the community's issues and concerns, CAGs often help to keep the community informed and involved in the cleanup process. CAGs can also provide valuable information to EPA and local governments concerning the future use of Superfund properties and the community's collective long-term goals. Although these groups are not funded by EPA, the Agency can assist interested community members in forming CAGs and also provide support services to the groups, such as assistance with production and mailing of newsletters they develop. To learn more about CAGs, visit the following website: https://www.epa.gov/superfund/community-advisory-groups.

- Provide information about the Superfund Job Training Initiative (SuperJTI)
  The SuperJTI program is designed to provide job training for residents living near Superfund sites, particularly residents in disadvantaged communities. EPA has partnered with the National Institute of Environmental Health Sciences to support pre-employment training and classroom instruction. SuperJTI is a valuable program that can enhance community involvement and benefit the local economy. SuperJTI can help residents gain career job skills and may provide an employment base for Superfund site cleanup contractors. To learn more about SuperJTI, visit the following website: https://www.epa.gov/superfund/superfund-job-training-initiative.

- Revise community involvement plan as needed
  Superfund projects can take several years to complete. It is important that the CIP is periodically updated to reflect changing concerns of the community as the site cleanup progresses. The CIP contact list should be revised whenever elections result in a change in elected officials, or when personnel changes affect nonelected official contacts. This is the first CIP for this site.

The Superfund Community Involvement Toolkit files are available online and can be accessed at the following website: https://www.epa.gov/superfund/community-involvement-tools-and-resources.

SECTION 4
EPA Background

Superfund Program

Superfund cleanups are very complex and require the efforts of many experts from numerous disciplines. Experts in various sciences, engineering, construction, public health, management, law, community and media relations, and numerous other fields will be called upon to participate. The Superfund program is managed by EPA in cooperation with individual states and tribal governments. The program locates, investigates, and cleans up hazardous waste sites, and responds to hazardous materials emergencies and the threat of hazardous materials releases. An example of a threat of release is an abandoned, or poorly maintained, facility where hazardous substances are stored in deteriorating, or inappropriate, containers and are unprotected from vandalism; and/or the facility is without emergency response capabilities, such as alarms or fire suppression systems.

Superfund is a federal program. It was created in 1980 under the Comprehensive Environmental Response, Compensation, and Liability Act, which was amended in 1986 by the Superfund Amendments and Reauthorization Act. Superfund is guided by the National Oil and Hazardous Substances Pollution Contingency Plan. The NCP outlines the procedures that EPA must follow when investigating or addressing a release of hazardous materials into the environment. Under CERCLA, EPA has the authority to:

- Prevent, control, or address actual or possible releases of hazardous substances.
- Require parties responsible for environmental contamination to conduct or pay for cleanup.
- Provide funding for cleanup activities when money is not available from responsible parties.

Potentially responsible parties currently fund about 70 percent of all Superfund cleanups nationwide, and frequently conduct cleanup activities under EPA oversight. Funding for the remaining site cleanups has, historically, come from a trust fund (aka the Superfund) established by Congress with revenue from a tax levied on the chemical and petroleum industries. However, EPA's authority to collect the tax expired in 1995, and fund monies are being depleted. Since the tax expired in 1995, Congress has not reauthorized it. EPA does not have the authority to reinstate this tax.

EPA currently funds cleanup actions with what monies remain in the trust fund, as well as with monies from other sources, such as general revenue funds and funds that become available when other funded projects are delayed, discontinued, or completed under budget. Careful prioritization of cleanup projects ensures sites that pose a significant risk to human health or the environment will continue to be funded for the foreseeable future. As always, EPA will continue to seek reimbursement of cleanup costs from polluters whenever possible.

- Identifying Sites for Cleanup
  EPA investigates hazardous waste sites throughout the U.S. and U.S. Territories. A preliminary assessment/site inspection and/or removal site evaluation are performed at each site to determine whether hazardous contaminants pose a significant risk to human health or the environment, such that additional investigation or cleanup is needed.

  Each site is evaluated using the Hazard Ranking System. The HRS is a measurement tool that calculates a site-specific score based on the potential for a hazardous substance to reach a receptor. It is a numerically-based screening system that uses information from the PA/SI to assess the relative potential of a site to pose a threat to human health or the environment. Part of the HRS calculation considers exposure pathways. EPA places sites with an HRS score of 28.50 or higher on the National Priorities List. HRS scores do not determine the priority in funding EPA remedial activities or the ranking place of a site on the NPL. A site may also be addressed through a removal action if it meets the criteria specified in the National Oil and Hazardous Substance Pollution Contingency Plan (NCP).

- Selecting and Implementing a Cleanup Plan
  After a site is placed on the NPL, EPA performs a remedial investigation and a feasibility study. The RI identifies the types, concentrations, and extent of contamination, and defines subsurface conditions at the site. A risk assessment is then performed to determine the threat these findings pose to human health and the environment. The risk assessment is incorporated into the RI report. The FS considers the physical characteristics of the site and evaluates possible cleanup technologies that could be used to control, remove, or reduce the contamination identified by the RI. Information from these studies is used to develop several possible cleanup alternatives that could be used at the site. After comparing the alternatives, EPA will recommend the cleanup method believed to be the best for the site in a Proposed Remedial Action Plan. A 30-day public comment period begins when the PRAP is released to the public. The community is asked to review the plan and offer comments on EPA's proposed actions. All pertinent comments received during the comment period must be considered by EPA before a final decision is made. After reviewing the community's comments, EPA will prepare a Responsiveness Summary to summarize the comments received, as well as EPA's responses. The summary is attached to the document that records the cleanup alternative selected by EPA for the site. This document is called a Record of Decision, or ROD. If a site is being addressed through a removal action, an Action Memorandum is prepared by EPA to document the decision and selected removal action alternative(s).

- Implementing EPA's Cleanup Decision
  When a ROD or Action Memorandum is signed, EPA must decide whether to conduct the next steps itself or to seek cooperation from PRPs. If financially-viable PRPs are available, EPA may negotiate their participation in the remedial design and remedial action. Remedial design refers to the period when a work plan is written, and drawings and specifications are developed for the cleanup alternative selected by the ROD. This period can take several months depending on the complexity of the design and other factors, such as the need to conduct pilot studies, obtain permits, or conclude legal negotiations. When the remedial design is completed and approved, the remedial action may begin. Remedial action refers to the actual work that will turn the cleanup design into a reality. Some typical activities that are conducted during remedial actions

include fence and field office installation, vegetation clearing, well drilling and installation, general construction, and earthmoving activities. EPA may seek reimbursement from the PRPs for the cost of any work performed by EPA at any time during the cleanup process.

When the remedial action is completed, Operation and Maintenance will begin, unless all contaminants have been removed from the site. In addition to site-specific Operation and Maintenance and routine monitoring, sites not ready for unrestrictive use are thoroughly reviewed by EPA every five years to ensure the remedy is operating as planned, that it remains protective of human health and the environment, and that it is in compliance with any applicable or relevant and appropriate requirements.

Once a site is listed on the NPL, it will remain a Superfund site even after the cleanup is completed, until the site is formally deleted from the list. A site can be removed from the NPL only after the cleanup goals established for it have been reached and confirmed, and EPA certifies that the cleanup is complete. When this point is reached, EPA must publish a Notice of Intention to Delete a site in the *Federal Register*. The notice will also be published in one or more local newspapers, announcing the NOID and the public comment period regarding the NOID.

- Site-Related EPA Offices and Branches

  EPA has 10 regional offices across the nation and a headquarters in Washington, D.C. Each regional office has both community involvement and technical staff involved in Superfund site cleanups. EPA Region 7 comprises Iowa, Kansas, Missouri, Nebraska, and nine tribal nations. The EPA Region 7 office is located in Lenexa, Kansas. It houses several different offices and branches that work on a number of hazardous waste sites.

  Descriptions of the EPA offices involved in the site include:

  Superfund: Superfund is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills, and natural disasters. To protect public health and the environment, the Superfund program focuses on making a visible and lasting difference in communities, ensuring that people can live and work in healthy, vibrant places.

  Removal: Removals are generally short-term actions to prevent, minimize, or mitigate damage to human health and welfare or the environment. Removals can be triggered by fires, leaks, explosions, or other releases or threats of releases of hazardous substances. Removal responses may be conducted as emergency or time-critical situations if the release or threat of a release poses a threat to public health, welfare, or the environment. Removals also can be non-time-critical. This type of an action allows for a longer time period (six months or more) for planning the response.

  Remedial: Remedial actions are designed to provide permanent solutions to mitigate risk to human health and the environment from the release of hazardous substances to the maximum extent practicable. Remedial sites typically have contamination of more than one environmental medium (soil, surface water, or groundwater) by many types of chemicals. Common remedial

actions include the excavation and treatment of contaminated soil, containment and treatment of leachate, or the extraction and treatment of contaminated groundwater.

Enforcement Coordination Office: Region 7's Enforcement Coordination Office supports all divisions and programs with national and regional enforcement priorities and policy implementation, the implementation of environmental justice guidelines and policies, and activities to ensure meaningful community engagement. The Enforcement Coordination Office also coordinates the Region's statutorily required community involvement related to RCRA corrective action and Superfund cleanup. The office works closely with EPA's Office of Enforcement and Compliance Assurance, Office of Regional Counsel, Superfund Division, Office of Public Affairs, Office of Policy and Management, and the Region 7 Enforcement Programs under the direction of the regional administrator and deputy regional administrator.

Office of Public Affairs: The primary office for all EPA communications. The director of the Office of Public Affairs is the principal advisor to the regional administrator on all issues concerning short-term and long-term strategic communications.

Environmental Sciences and Technology Division: Conducts research, development, and technology transfer programs to increase the understanding of environmental exposures to human and ecological receptors.

Office of Regional Counsel: EPA Offices of Regional Counsel are located within each EPA regional office and provide day-to-day support to each region and headquarters for all general legal matters, including defensive litigation and counseling issues. Specifically, these responsibilities entail counseling regional program staff and managers on the application of statutes, regulations, case law, and policies, as well as any other legal issues that arise.

- Agency for Toxic Substances and Disease Registry
  ATSDR is an agency of the U.S. Department of Health and Human Services. It was created in 1980 under CERCLA to prevent adverse human health effects and diminished quality of life associated with environmental pollution. ATSDR is not a regulatory agency like EPA. It is a public health agency that advises EPA on the health effects associated with exposure to hazardous materials. ATSDR is required, under Superfund law, to become involved with all sites proposed to the NPL. Specifically, ATSDR conducts public health assessments of, and/or health consultations with, NPL site (or proposed NPL site) communities.

- State Role
  Superfund cleanups require EPA and states to work together. In most cases, EPA is the lead regulatory agency conducting cleanups, but states may choose to take the lead. Typically, however, states provide support to EPA by bringing their technical expertise and resources to bear and provide regulatory guidance. In addition, states are responsible for 10 percent of the cost of the cleanup, and for Operation and Maintenance of cleanup technologies in place after the cleanup construction is completed. The state agency cooperating in the cleanup of this site is the Kansas Department of Health and Environment (KDHE). (See Appendix A for contact information for the state representative for this site.)

KDHE is the state health agency associated with this site. EPA and ATSDR consult with state health authorities on site-related health matters, as needed, to keep each entity informed of issues that may be of concern to local residents.

- Local Role
  EPA has been and will continue to consult with city and county officials during the cleanup process to ensure that cleanup activities are conducted in accordance with local ordinances. The city and county officials can provide EPA with information concerning the operating history of sites and regulatory issues, as well as community concerns and demographics. They also may act as a conduit of information to concerned community members who may contact them for site-related news and updates. (See Appendix A for contact information for local officials.)

SECTION 5
Site Background

- Site Description
  The Cherokee Zinc Company Site is located in Weir, Cherokee County, Kansas. The former Cherokee Zinc Smelter (Weir Smelter) is located on the north side of Weir adjacent to the Weir City Hall and Shop and municipal rodeo grounds.

- Site History and EPA Actions to Date
  The Chicago Zinc Works (Chicago Zinc) began smelting zinc in Weir in 1872 and was the first known commercial smelter in the state of Kansas. Chicago Zinc located the smelter in Weir due to nearby commercial coal deposits to fuel the smelter, and the proximity to the Tri-State lead and zinc mining district. Chicago Zinc later abandoned the smelter, and in 1896 the Cherokee Lanyon Smelter Company purchased the smelter and owned it until 1906. Other operators of the smelter included the Weir City Zinc Works, Cherokee Zinc Company Smelter, and Cherokee Lanyon Spelter Company. Several owners, including the Pittsburg Railway and Light Plant, held the property until the Weir Smelting Company purchased the smelter in 1917 and sold it in 1920. It is unknown if the Weir Smelting Company actively ran the smelter, since other historical information indicates that smelting operations apparently closed around 1909 when natural gas wells in areas west of the Site in Allen, Neosho, and Montgomery counties in Kansas made smelter operations from coal unprofitable.

Photo Credit: City of Weir, Facebook

EPA and KDHE have documented elevated levels of lead in soils and waste at the site. In March 2004, a KDHE contractor completed a Focused Former Smelter Assessment (FFSA) under KDHE's State Water Plan program (SWP). The FFSA did not include any on-site sampling, but

recommended sampling due to the historical documentation indicating smelter operations at the site and visual observations of smelter waste during the site visit. In November 2004, the Phase II FFSA was completed by the same KDHE contractor. During the Phase II FFSA 34 unbiased and 8 biased soil samples were collected. The maximum lead detection was 12,100 mg/kg by X-ray fluorescence analysis (XRF) in HS-8. Two of the off-site samples (PS-1 and PS-6) indicated lead above 400 mg/kg, the current residential Risk-based Standard for Kansas (RSK).

In December 2008, a Site Investigation was completed under KDHE's SWP. An additional 55 soil samples were collected and field analyzed by XRF. Six off-site samples were collected. A test trench was excavated in the former smelter works to determine the horizontal and vertical extent of waste. A total of 10 sediment and five surface water samples were collected from the intermittent branch of Brush Creek that flows through the site area. The maximum lead, arsenic, cadmium, and zinc concentrations in soil were 10,615 mg/kg, 143 mg/kg, 147 mg/kg, and 18,172 mg/kg, respectively. The highest concentrations were observed in the eastern portion of the site near the former railroad right-of- way. The initial waste estimation from the sampling and exploratory trench was approximately 19,000 cubic yards. Sediment and surface water were also determined to be impacted. Several samples collected in the predominant downwind directions based on historical wind roses indicated lead and arsenic above residential RSKs of 400 mg/kg and 18.9 mg/kg, respectively, demonstrating a likely wind deposition of contamination from the smelter works.

In December 2011, KDHE's SWP completed a Supplemental Site Investigation (SSI). The primary purpose of the SSI was to evaluate five off-site residential properties, and to collect sediment and background soil samples. The residential yard sampling was conducted consistent with EPA's *Superfund Lead-Contaminated Residential Sites Handbook,* OSWER 9285.7-50, Page 19 (August 2003), with each yard being subdivided into quadrants for composite sampling. Two yards were determined to be impacted by lead contamination above 400 mg/kg. The SSI recommended additional residential yard sampling to further determine the area of contamination. An Integrated Assessment was completed by KDHE in June 2013 followed by a Request for Federal Action (RFA) in July 2013.

A Removal Assessment Report was completed by EPA's Superfund Technical Assessment and Response Team (START) contractor in February 2016. During the Removal Assessment, 22 properties were sampled in addition to sampling of surface water and sediments. These 22 properties included verification sampling at eight properties previously sampled by KDHE and an additional 14 properties previously not sampled. The Removal Assessment Report concluded that 13 properties were impacted above the Removal Management Levels (RML) of 400 mg/kg for lead in one or more quadrants outside of the drip zone. An additional five properties had lead levels above 400 mg/kg in the drip zone but no exceedances outside of the drip zone. The Removal Assessment also concluded that soil, sediment and surface water were likely impacted above background concentrations for lead, arsenic, cadmium, and possibly selenium on, or adjacent to, the former smelter property. This removal action is only being contemplated for

residential properties in Weir, and the former smelter property itself is anticipated to be addressed through additional assessment and response actions by EPA.

Yard removals in Weir began the week of August 27, 2018. Yard removal consists of removing contaminated soil; conducting confirmation sampling with X-ray fluorescence (XRF); bringing in backfill from outside the site area that has been sampled to assure acceptable lead levels are present; and then sodding or reseeding the backfilled areas.

- Site Contamination

  Lead is a hazardous substance as defined by CERCLA section 101(14), as amended, and has been released into the soil at the site, as demonstrated by analytical data. The term "release," as defined in CERCLA section 101(22), means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.

  The primary contaminants of concern at this site are lead and lead compounds. Recent additional sampling by EPA identified 55 properties in Weir that exceed the RML of 400 mg/kg. A residential property is defined in the Superfund Lead-Contaminated Residential Sites Handbook, as any area with high accessibility to sensitive populations, and includes properties containing single- and multi-family dwellings, apartment complexes, vacant lots in residential areas, schools, daycare centers, community centers, playgrounds, parks, green ways, and any other areas where children may be exposed to site-related contamination media. The Handbook defines sensitive populations as young children (those under the age of 7, who are most vulnerable to lead poisoning) and pregnant women.

  EPA is continuing its sampling efforts to ensure that all potentially impacted properties have been assessed, and to identify the source. Additional information about these chemicals of concern can be found at: https://www.atsdr.cdc.gov/.

SECTION 6
Community Background

- Community Profile
  Weir, Cherokee County, Kansas Demographics
  Per the United States Census American Fact Finder website:
  http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml:
  Population: 686
  County: Cherokee County
  Median Household Income: $29,167
  Median Earnings for Workers: $23,382
  Median Age: 46.3

- Environmental Justice (EJ)
  EPA prepared an EJSCREEN for this site. None of the 12 indicators were above the level in which EPA would classify this site as having potential EJ concerns. EJSCREEN is a tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. (See Appendix C for EJSCREEN Map.)

  Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

  EPA has this goal for all communities and persons across this nation. It will be achieved when everyone enjoys:

  - The same degree of protection from environmental and health hazards
  - Equal access to the decision-making process to have a healthy environment in which to live, learn, and work

- Community Interests and Concerns
  EPA conducted interviews with members of the local community on December 19, 2018. Interviews revealed that community concerns focused on human health. Interviews conducted were informational, and provided an update of ongoing EPA actions at the site.

  Some key questions about the site included:

  - What is your understanding of the contamination related to the site?
  - What are your concerns about the site and its cleanup?
  - What is the best way to provide information to you?
  - What was the source of your knowledge?
  - Would you like more information about the site?

EPA staff asked community members what they knew about the site, who or what was the source of their knowledge, and what they thought about actions conducted by EPA at the site. EPA also asked if they would like more information about the site.

- Community Interviews Summary
  On December 19, 2018, EPA conducted several interviews with local residents and helped determine areas of community concerns. Interviewees appeared to be satisfied with recent EPA actions at the site. The interview process also provided EPA an opportunity to update the community on activities at the site.

  Residents were interested in receiving site updates at regular intervals; with major milestones and accomplishments, or in the absence of them. The intervals ranged from monthly, to quarterly, to bi-annual.

  The primary method for communicating directly with the community should be through the mailing list and, if possible, face-to-face conversations. Residents indicated that regular mail updates would be the best way to keep the community informed about major milestones.

EPA Questions	Public Comments
What is your understanding of the contamination related to the Cherokee Zinc Superfund Site?	Majority of the respondents understand that lead contamination is related to the Cherokee Zinc Superfund Site. The lead spread throughout the community by rain and wind. This has led to a health hazard for the community.
Is this site important to you?	All respondents said that, this site is important. One respondent said, "Yes, didn't realize that there was a lead issue. Do not know the health exposures related."
What do you know about the Cherokee Zinc Superfund Site?	Most respondents know little about the Cherokee Zinc Superfund Site but know of a smelter that used to exist. One respondent said that they knew about the site in "2009 through KDHE, remediation has been done and community testing. This has been going on a long time."
Do you have any concerns about the site and the cleanup?	All respondents said that they have little to no concern about the site and the cleanup.
Have you contacted the state or EPA in the past to inquire about the site? (If so, were your questions or concerns answered to your satisfaction?)	All but one respondent replied that, they have not contacted the state or EPA.
How did you first become aware of contamination associated with the site?	Respondents listed a variety of ways on how they became aware of the contamination associated with the site: a. EPA b. The city c. KDHE d. Mayor e. Social media
Is the information from EPA or the state clear and easy to understand?	All respondents said the information from EPA or the state is clear and easy to understand.

Do you feel you have been kept adequately informed? If not, what can be done to change this?	Two respondents replied that, they feel they have been kept adequately informed. One respondent said, "Not necessarily. There has been a lot of talk – as far as in-depth knowledge." Another respondent said, "It has been a while."
What is the best way to provide information to you? (Newsletters, fact sheets, community meetings, CAGs, other)	Respondents answered: 1. "Mail" 2. "Face to face to ask questions" 3. "Something on paper, fact sheet or fliers." 4. "Emails and fact sheets." 5. "Newsletter or email."
How often do you want to get information about what is going on the Cherokee Zinc Company Site?	Respondents said when something significant happens. Intervals range from monthly to quarterly.

- Community Involvement Core Principles

  Community involvement at the site will focus on the following core principles:

  1. Timely and accurate responses to questions raised by area residents, local officials, organizations, and the media.
  2. Establishment of an information repository in the community.
  3. Informal public dialogue between EPA representatives and all interested parties.
  4. Preparation of a responsiveness summary.
  5. Revision to this plan, as necessary.
  6. Assistance to communities by providing information on the following, as necessary:
     - How to apply for a Technical Assistance Grant
     - How to apply for Technical Assistance Services for Communities
     - How to form a Community Advisory Group

Appendix A
List of Contacts

A.1 Federal Elected Officials:
http://elections.mytimetovote.com/elected_officials/kansas.html

Jerry Moran, U.S. Senator
Dirksen Senate Office Building
Room 521
Washington, DC 20510
Phone: (202) 224-6521

Pat Roberts, U.S. Senator
109 Hart Senate Office Building
Washington, DC 20510
Phone: (202) 224-4774

A.2 State Elected Officials:
http://elections.mytimetovote.com/elected_officials/kansas.html

Laura Kelly, Governor
Office of the Governor
300 SW 10th Ave.
Topeka, KS 66612
Phone: (785) 296-3232

A.3 State Agency:
www.kdheks.gov

Jesse Branham
Kansas Department of Health and Environment
1000 SW Jackson St., Suite 410
Topeka, KS 66612
Phone (785) 296-1500

A.4 City/Local Officials:
www.lkm.org

Taylor Gravett, Mayor
306 N Washington
Weir, KS 66781
(620) 396-8214

Clerk's Office
306 N Washington
Weir, KS 66781
(620) 396-8214

Appendix B
Information Repositories and Potential Meeting Locations

B.1 Repository Locations:

Access to Online Repository: https://semspub.epa.gov/src/collections/07/AR65668

Records Center
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, KS 66219
Toll-free: (800) 223-0425
Hours: 7 a.m. to 5 p.m.

Weir Public Library (by internet connection)
111 E. Main Street
Weir, KS 66781
Phone: (620) 396-8899
https://weir.mykansaslibrary.org/

B.2 Local Media Information:

The Galena Sentinel Times
http://www.sentineltimes.com/
511 S. Main Street
Galena, KS 66739
Phone: (620) 783-5034
Email: news@sentineltimes.com

Appendix C

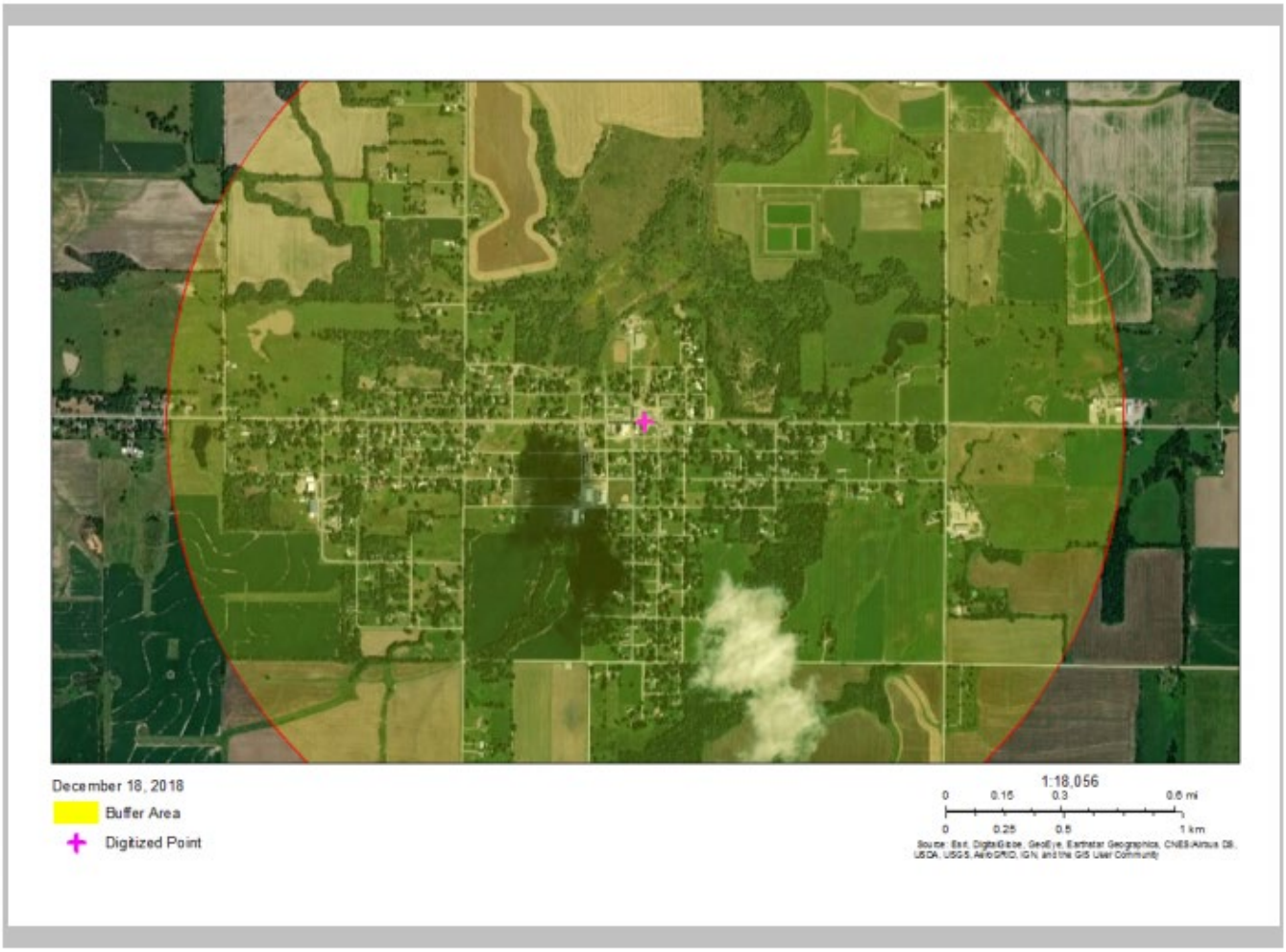
EJSCREEN

EPA United States Environmental Protection Agency

EJSCREEN Report (Version 2018)

1 mile Ring Centered at 37.310090,-94.771210, KANSAS, EPA Region 7

Approximate Population: 568
Input Area (sq. miles): 3.14
Weir, Kansas



EJSCREEN Report (Version 2018)

1 mile Ring Centered at 37.310090,-94.771210, KANSAS, EPA Region 7

Approximate Population: 568

Input Area (sq. miles): 3.14

Weir, Kansas

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	9.55	9.05	77	9.45	61	9.53	47
Ozone (ppb)	43.1	45	7	42.8	54	42.5	56
NATA* Diesel PM (µg/m^3)	0.268	0.64	20	0.78	<50th	0.938	<50th
NATA* Cancer Risk (lifetime risk per million)	36	39	37	38	<50th	40	<50th
NATA* Respiratory Hazard Index	1.1	1.6	15	1.5	<50th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	1.3	140	8	490	5	600	5
Lead Paint Indicator (% Pre-1960 Housing)	0.29	0.36	48	0.35	51	0.29	61
Superfund Proximity (site count/km distance)	0.032	0.07	48	0.091	44	0.12	36
RMP Proximity (facility count/km distance)	0.35	0.96	36	0.92	43	0.72	53
Hazardous Waste Proximity (facility count/km distance)	0.059	0.9	20	0.82	26	4.3	15
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0	1.2	N/A	2.4	30	30	40
Demographic Indicators							
Demographic Index	27%	27%	59	26%	64	36%	44
Minority Population	14%	23%	43	19%	56	38%	29
Low Income Population	40%	32%	68	32%	67	34%	64
Linguistically Isolated Population	0%	2%	58	2%	65	4%	44
Population With Less Than High School Education	15%	10%	79	10%	78	13%	66
Population Under 5 years of age	3%	7%	15	6%	18	6%	21
Population over 64 years of age	23%	14%	86	15%	85	14%	86

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

Appendix D
Glossary of Technical Terms

Action Memo: The official file serves as the primary decision document that determines the need for a CERCLA removal action; authorizes the removal action; identifies the action and cleanup levels (if applicable); and explains the rationale for the removal response [for a non-time critical removal, the Engineering Evaluation/Cost Analysis (EE/CA) approval memo documents the appropriateness of a removal action, which is then chosen in an Action Memo after the EE/CA and public comment].

Administrative Record: The official files containing the remedial investigation report, risk assessment, feasibility study, and all other documents that provide the basis for EPA's selection of a remedial cleanup alternative at a Superfund site.

Applicable or Relevant and Appropriate Requirements: Any state or federal statute that pertains to protection of human life and the environment in addressing specific conditions or use of a particular cleanup technology at a Superfund site.

Cleanup: An action taken to deal with a release or threatened release of hazardous substances that could adversely affect public health and/or the environment. The word "cleanup" is used to refer to both short-term removal response actions and long-term remedial actions at Superfund sites.

Community Engagement Specialist: An individual EPA assigns to work closely with technical staff to keep the local community informed about, and involved in, a site cleanup.

Community Involvement Plan: A document that assesses a community's concerns about a site, recommends activities that EPA may conduct to address these concerns, and suggests means to foster communication between EPA and the community.

Comprehensive Environmental Response, Compensation, and Liability Act: A federal law (commonly known as "Superfund") passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act. The law gives EPA the authority to investigate sites where there is a suspected threat to public health or the environment caused by the release or potential release of hazardous substances. The law also created a special tax on the chemical and petroleum industries. Money was collected under the tax until 1995 and deposited into a trust fund to be used to clean up abandoned or uncontrolled waste sites. Under the law, EPA can pay for the site cleanup when the parties responsible for contamination cannot be located or are unwilling or unable to perform the cleanup. EPA can also take legal action to require parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the cleanup.

Contamination: An adverse effect on air, water, or soil caused by any physical, chemical, biological or radiological substance or matter.

Exposure Pathways: A route or way in which humans or the environment may come into contact with contaminants.

Feasibility Study: A study that examines information provided by the remedial investigation activities and evaluates possible cleanup methods that can be used to remove or reduce contamination at a site.

Groundwater: The supply of fresh water found beneath the earth's surface in empty areas between rocks and soil particles. Groundwater is a major source of drinking water.

Hazard Ranking System: A measurement tool used to evaluate the risks to public health and the environment posed by a hazardous waste site. The HRS calculates a score based on the potential of a hazardous substance moving from the site through the air, water, or soil. EPA places sites with a HRS score of 28.50 or higher on the National Priorities List.

Information Repository: A collection of documents about a specific Superfund site and the general Superfund process. EPA usually places the information repository in a public building that is conveniently located.

National Priorities List: EPA's list of the nation's most serious hazardous waste sites identified for long-term cleanup under Superfund.

Operation and Maintenance: 1) Activities conducted after a Superfund site action is completed to ensure that the action is effective. 2) Actions taken after construction to ensure the constructed facility is properly operated and maintained to achieve expected effectiveness and efficiency levels.

On-Scene Coordinators: OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government.

Potentially Responsible Parties: The companies or people potentially responsible for the contamination at a site. Whenever possible, through administrative and legal actions, EPA requires these parties to clean up hazardous waste sites they have contaminated.

Preliminary Assessment/Site Inspection: The preliminary assessment is the initial process of collecting and reviewing available information about a known or suspected waste site or release. The assessment is followed by the more extensive site inspection. The purpose is to gather information necessary to score the site, using the Hazard Ranking System, and to determine if it presents an immediate threat requiring prompt removal.

Proposed Plan: A plan that discusses the remedial investigation and feasibility study and proposes various cleanup methods for a site. EPA highlights its preferred cleanup method in this plan.

Public Comment Periods: Designated periods of time during which EPA requests the public to review and comment on specific documents and/or EPA actions. For example, EPA holds a minimum 30-day

public comment period to allow community members to review and comment on a proposed remedial action plan.

Record of Decision: A formal document that discusses in detail the cleanup plan EPA has decided to implement at a site.

Remedial Action: The actual construction or implementation phase that follows the remedial design of the selected cleanup plan for a Superfund site.

Remedial Design: The engineering phase that follows the Record of Decision. During this phase, technical drawings and specifications are developed for the remedial action at a site. It is similar to a blueprint or work plan.

Remedial Investigation: A study in which EPA identifies the types and amounts of site contamination and determines the threat this contamination poses to human health and the environment.

Remedial Project Manager: EPA or state official responsible for overseeing on-site remedial action.

Removal Action: Removals are generally short-term actions to protect human health and welfare and the environment.

Responsiveness Summary: A summary of oral and written comments that EPA receives during a public comment period and EPA's responses to those comments. The Responsive Summary is part of the Record of Decision.

Superfund: A fund that can be used to finance cleanup actions at hazardous waste sites. The fund was established under the legislative authority of the Comprehensive Environmental Response, Compensation, and Liability Act with monies received largely from a tax levied on the chemical and petroleum industries. Fund monies can be used by EPA to respond directly to releases or threatened releases of hazardous substances that may endanger public health, welfare, or the environment. The term "Superfund" also refers to the EPA programs that conduct cleanups using these fund monies.

Superfund Amendments and Reauthorization Act: Modifications to the Comprehensive Environmental Response, Compensation, and Liability Act enacted on October 17, 1986.

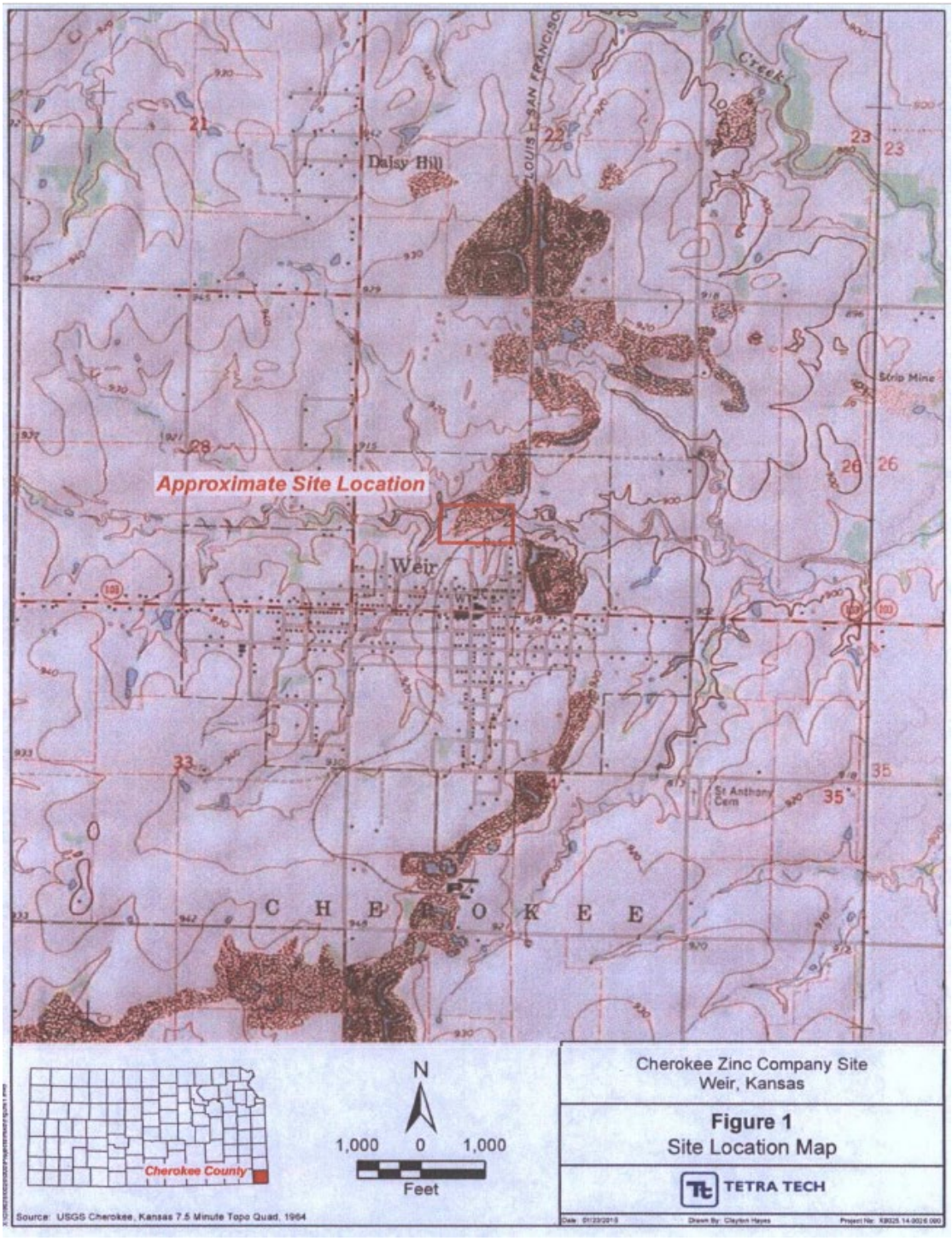
Appendix E
List of Acronyms

AR	Administrative Record
ARARs	Applicable or Relevant and Appropriate Requirements
ATSDR	Agency for Toxic Substances and Disease Registry
CAG	Community Advisory Group
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CES	Community Engagement Specialist
CIP	Community Involvement Plan
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
HRS	Hazard Ranking System
KDHE	Kansas Department of Health and Environment
MCL	Maximum Contaminant Level
NCP	National Contingency Plan (shortened from National Oil and Hazardous Substances Pollution Contingency Plan)
NOID	Notice of Intent to Delete
NPL	National Priorities List
O&M	Operation & Maintenance
OSC	On-Scene Coordinator
PA/SI	Preliminary Assessment/Site Inspection
PRAP	Proposed Remedial Action Plan
PRP	Potentially Responsible Party
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RS	Responsiveness Summary
SARA	Superfund Amendments and Reauthorization Act
TAG	Technical Assistance Grant
TAP	Technical Assistance Plan

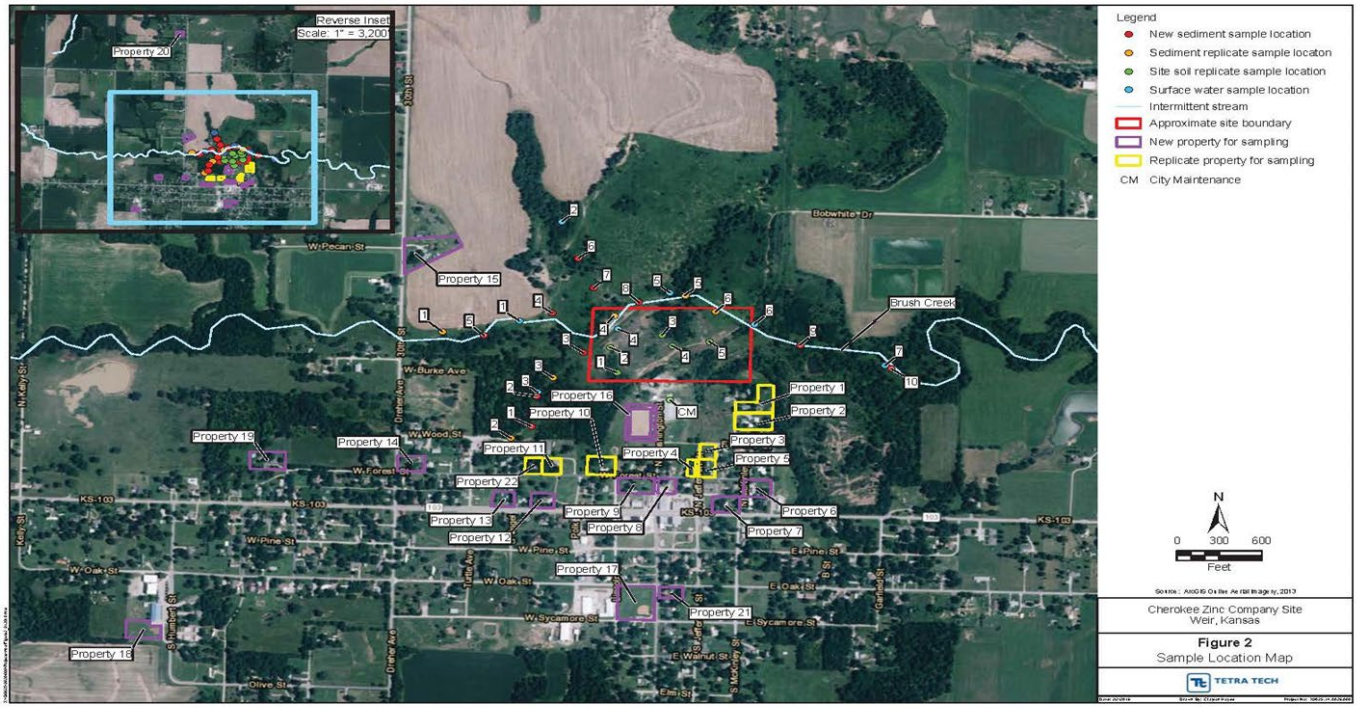
For health-related questions regarding trichloroethylene (TCE) contamination, contact your local health department (www.cherokeecountyks.gov) or the Agency for Toxic Substances and Disease Registry at 1-888-422-8737 or www.atsdr.cdc.gov.

Appendix F

Map of Former Smelter Works



Sample Location Map



Appendix G

Lead – ToxFAQs™

CAS # 7439-92-1

This fact sheet answers the most frequently asked health questions (FAQs) about lead. For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to lead can happen from breathing workplace air or dust, eating contaminated foods, or drinking contaminated water. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Lead can damage the nervous system, kidneys, and reproductive system. Lead has been found in at least 1,272 of the 1,684 National Priority List (NPL) sites identified by the Environmental Protection Agency (EPA).

What is lead?

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States.

What happens to lead when it enters the environment?

- Lead itself does not break down, but lead compounds are changed by sunlight, air, and water.
- When lead is released to the air, it may travel long distances before settling to the ground.
- Once lead falls onto soil, it usually sticks to soil particles.
- Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil.

How might I be exposed to lead?

- Eating food or drinking water that contains lead. Water pipes in some older homes may contain lead solder. Lead can leach out into the water.
- Spending time in areas where lead-based paints have been used and are deteriorating. Deteriorating lead paint can contribute to lead dust.
- Working in a job where lead is used or engaging in certain hobbies in which lead is used, such as making stained glass.
- Using health-care products or folk remedies that contain lead.

How can lead affect my health?

The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high-levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production.

How likely is lead to cause cancer?

We have no conclusive proof that lead causes cancer in humans. Kidney tumors have developed in rats and mice that had been given large doses of some kind of lead compounds. The Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

Agency for Toxic Substances and Disease Registry
Division of Toxicology and Human Health Sciences

ATSDR

CS265956-A

Lead

CAS # 7439-92-1

How can lead affect children?

Small children can be exposed by eating lead-based paint chips, chewing on objects painted with lead-based paint, or swallowing house dust or soil that contains lead.

Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood.

How can families reduce the risks of exposure to lead?

- Avoid exposure to sources of lead.
- Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.
- If you have a water lead problem, run or flush water that has been standing overnight before drinking or cooking with it.
- Some types of paints and pigments that are used as make-up or hair coloring contain lead. Keep these kinds of products away from children.
- If your home contains lead-based paint or you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house of dust and tracked in soil.

Is there a medical test to determine whether I've been exposed to lead?

A blood test is available to measure the amount of lead in your blood and to estimate the amount of your recent exposure to lead. Blood tests are commonly used to screen children for lead poisoning. Lead in teeth or bones can be measured by X-ray techniques, but these methods are not widely available. Exposure to lead also can be evaluated by measuring erythrocyte protoporphyrin (EP) in blood samples. EP is a part of red blood cells known to increase when the amount of lead in the blood is high. However, the EP level is not sensitive enough to identify children with elevated blood lead levels below about 25 micrograms per deciliter (µg/dL). These tests usually require special analytical equipment that is not available in a doctor's office. However, your doctor can draw blood samples and send them to appropriate laboratories for analysis.

Has the federal government made recommendations to protect human health?

The Centers for Disease Control and Prevention (CDC) recommends that states test children at ages 1 and 2 years. Children should be tested at ages 3–6 years if they have never been tested for lead, if they receive services from public assistance programs for the poor such as Medicaid or the Supplemental Food Program for Women, Infants, and Children, if they live in a building or frequently visit a house built before 1950; if they visit a home (house or apartment) built before 1978 that has been recently remodeled; and/or if they have a brother, sister, or playmate who has had lead poisoning. CDC has updated its recommendations on children's blood lead levels. Experts now use an upper reference level value of 97.5% of the population distribution for children's blood lead. In 2012-2015, the value to identify children with blood lead levels that are much higher than most children have, is 5 micrograms per deciliter (µg/dL). EPA limits lead in drinking water to 15 µg per liter.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for lead (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636.

ToxFAQs™ Internet address via WWW is http://www.atsdr.cdc.gov/toxfaqs/index.asp.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

If you have questions or need additional information, please contact:

Anna-Marie Romero
Community Engagement Specialist
Enforcement Coordination Office
U.S. EPA Region 7
11201 Renner Boulevard
Lenexa, KS 66219
Toll-free: 1-800-223-0425
Email: romero.anna-marie@epa.gov

Randolph L Brown, P.G.
On-Scene Coordinator
Superfund Division
U.S. EPA Region 7
11201 Renner Boulevard
Lenexa, KS 66219
Toll-free: 1-800-223-0425
Email: brown.randolph@epa.gov

Reasonable Accommodations: EPA Region 7 is committed to providing reasonable accommodation to individuals with disabilities. If you require a reasonable accommodation to participate in a public meeting, please notify the EPA Reasonable Accommodations Coordinator, Jonathan Cooper, toll-free at 1-800-223-0425 or by email at cooper.jonathan@epa.gov. Speech or hearing-impaired individuals should email or call using the local relay service.