Interagency Cleanup Partnership Attracts Vital Community Healthcare Services

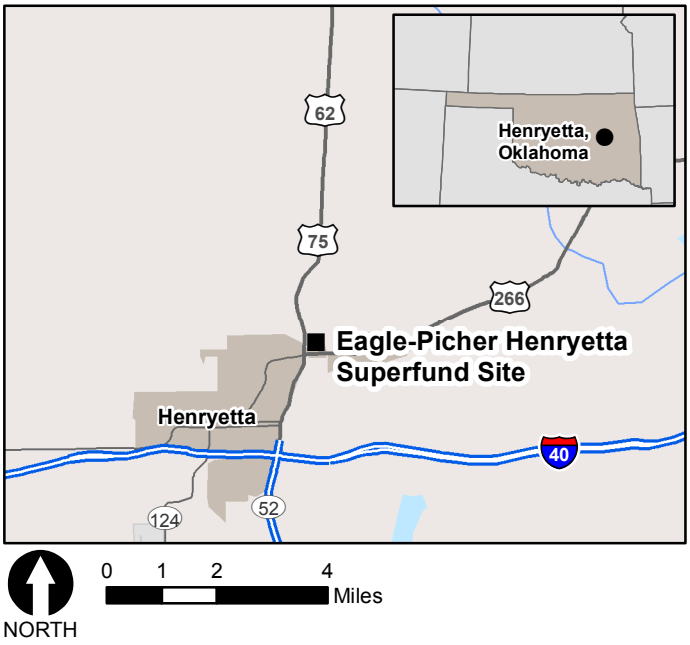
THE EAGLE-PICHER HENRYETTA SUPERFUND SITE IN HENRYETTA, OKLAHOMA

Introduction

In 1968, 50 years of smelting operations came to a halt at the Eagle-Picher Smelter in Henryetta, Oklahoma. Mountains of smelter waste covered the 71-acre site, which Eagle-Picher donated to the city of Henryetta in 1974 and then declared bankruptcy. The local government was eager for an opportunity to revitalize the site, addressing the area's smelting past to pave the way for future beneficial uses. The city of Henryetta felt that the property location with easy access to major roadways made it a prime site for a new industrial park. Nevertheless, held back by land uses uncertainties, concerns about utility access for redevelopment and difficulties accessing available parcels, the former smelting property sat mostly vacant and underused for several decades.

As with many Superfund redevelopment projects, changes at the site moved forward in stages over time rather than overnight. The city of Henryetta remained a stalwart advocate for its reuse, working with EPA contacts to find ways to attract businesses to the cleaned-up site and make reuse a reality. Today, collaborative engagement and open communication among EPA Region 6, the Oklahoma Department of Environmental Quality, the city of Henryetta, and the broader Henryetta community have driven economic revitalization efforts and resulted in development of the Shurden-Leist Industrial Park and a new health center that provides affordable medical services for people in Okmulgee County, Oklahoma, and surrounding areas. Indirect benefits of site cleanup include the simultaneous cleanup of the adjacent Victory Metals smelter property and reclamation of a 90-acre strip mine.

This case study explores the tools and working relationships that have led to successful cleanup and transformation at the Eagle-Picher Henryetta site. The following pages trace the evolution of cleanup and reuse efforts, highlighting the community's leadership, engagement of local stakeholders, and coordination of remedy and reuse considerations to attract businesses to the site. Today's site uses support community revitalization through new jobs at the industrial park and improved community services through accessible, affordable healthcare amenities. The case study provides information for parties interested in examples of sustained collaboration between site owners and agencies to support the safe and beneficial reuse of Superfund sites, opportunities to align remedial design and reuse planning, how agencies at cleaned up sites can provide continued clarity and guidance for appropriate reuses and EPA tools to clarify Superfund site status for Superfund site reuse.



Location of the Eagle-Picher Henryetta Superfund site in Henryetta, Oklahoma.

Aerial view of the Eagle-Picher Henryetta Smelter facility. (Source: ODEQ)

Site History, Contamination and Remediation

From 1916 to 1968, the Eagle-Picher Mining and Smelting Company (now Eagle-Picher Industries) operated a horizontal retort smelter for roasting, sintering and recovery of zinc, cadmium and germanium on site. In the mid-1950s, the smelter was reportedly the world's second largest horizontal retort primary zinc smelter, with a furnace capacity of 8,000 retorts. The facility recovered metals from ores from locations across the Tri-State Mining District of northeast Oklahoma, southeast Kansas and southwest Missouri.

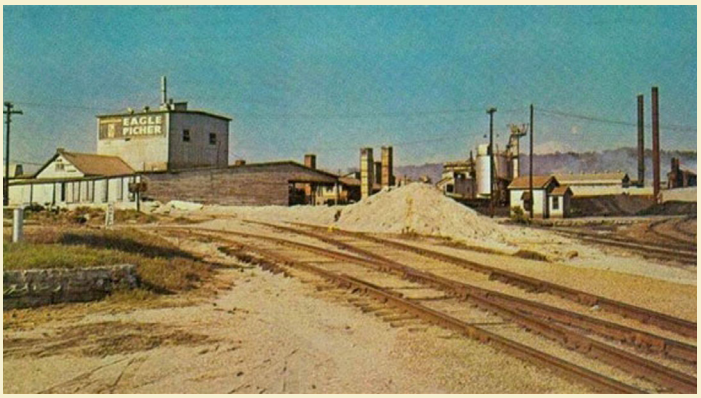
The smelter closed down in 1968 and the company donated the 71-acre property to the city of Henryetta in 1974. Eagle-Picher Industries demolished most of the production buildings at the site before declaring bankruptcy. However, slag and cinder piles from smelting operations remained. Wind-dispersed dust containing heavy metals killed area vegetation. Stormwater runoff leached contaminants from waste into the Coal Creek watershed.

Between 1974 and 1995, the city – unaware of the metal contamination in the waste piles – used soil from the site as fill material at neighborhoods, schools and parks across the community. While the city never operated on the site property, it leased parts of the site to four companies in 1975. The city also unknowingly spread contamination from the site. As a result, the city became a potentially responsible party (PRP) and settled with EPA and ODEQ to cleanup the site.

EPA and Oklahoma state agencies led several site investigations in the 1980s. A 1988 EPA site assessment concluded that contaminant levels in waste on site did not present an unacceptable risk to human health and the environment at that time. Later, when the lead health standards were changed, ODEQ requested EPA assistance at the site to determine its protectiveness with the new, lower standards. EPA concluded that contamination at the site now posed an imminent risk to human health and the environment and contaminant migration to nearby properties had already been confirmed. ODEQ also confirmed that wastes used as fill material throughout the city were in high-access areas such as residential driveways, schools and alleys, posing potential health risks to children and adults.

Taking community priorities into account, EPA selected a site cleanup plan in 1996 that would be compatible with industrial land uses. EPA implemented the $8.5 million removal action under the authority of the Superfund program. EPA signed a cleanup agreement with ODEQ establishing agency roles and responsibilities in August 1996. EPA agreed to lead waste excavation, consolidation and capping efforts. ODEQ would lead the establishment of vegetation to minimize erosion in capped areas and provide an 18 percent reimbursement for EPA cleanup costs.

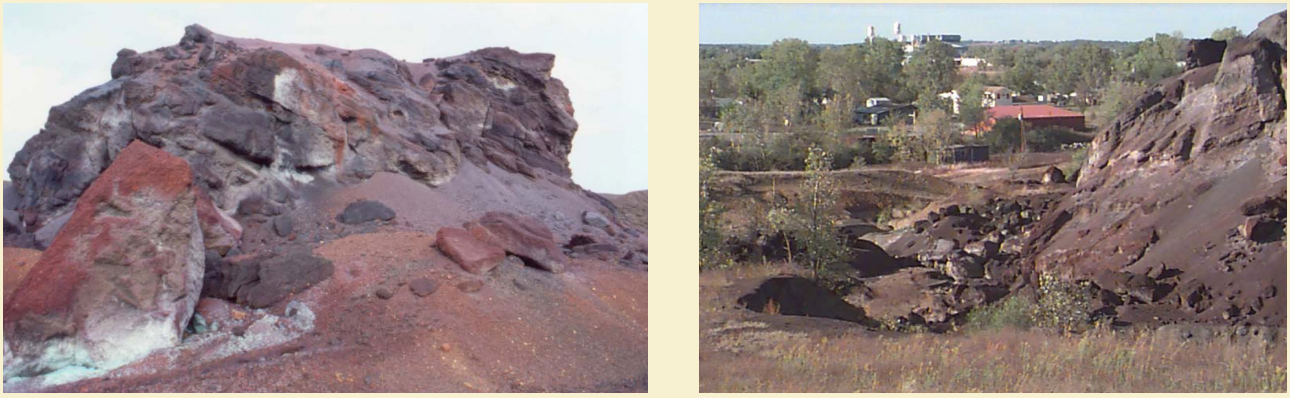
Cleanup included excavation of contaminated material at three public parks, three schools and 162 residential properties. EPA contractors brought excavated waste materials to the site for consolidation and encapsulation. When additional off-site contamination areas, including the adjacent, former Victory Metals smelter property, were identified during the cleanup, waste materials from these areas were brought on site, consolidated with site wastes and capped on site.



Historical images showing the Eagle-Picher Smelter's operations at the site, 1910s and 1940s. (Source: ODEQ)

Site History, Contamination and Remediation (continued)

EPA staged waste in the 26-acre Central Plateau area of the site prior to consolidation and capping to the north of the Central Plateau. The wastes were then capped with a clay cap and soil cover. Materials brought from off-site locations had significantly lower contaminant concentrations and provided a better vegetative growth base. This material was used in the upper 12 inches of subgrade, providing an additional buffer layer over onsite waste material and the site was brought to grade with a minimum of another 12 inches of clean fill. Contouring and grading designs established proper drainage. A 6.5-acre consolidated waste area is located to the north of the Central Plateau. This area is unsuitable for future construction development because of the highly contaminated materials buried there. EPA completed cleanup actions in 1997. ODEQ finished establishing the capped area's vegetative cover in 1998.



Slag piles and smelter wastes prior to cleanup. (Sources: EPA and ODEQ)

In 2000, the city of Henryetta entered into an agreement with EPA and ODEQ to conduct long-term maintenance of the site remedy. The agreement also protects the city, a potentially responsible party at the site, from liability for response costs and third-party contribution claims. Current site uses include a family healthcare facility, a construction company and recreational use by an Academy of Model Aeronautics radio control airplane club.

Slag pile cleanup on site. (Source: ODEQ)

Site Timeline

1916	Zinc, cadmium, lead and germanium production operations began.
1968	Smelting operations ended.
1974	Eagle-Picher donated 70-acre site property to city of Henryetta.
1974-1995	City of Henryetta used soil from site as fill material throughout community, including for homes, schools and parks.
1975	City of Henryetta began leasing parts of property to four companies.
1988	Based on available lead exposure and risk data, EPA site assessment concluded that contamination did not present unacceptable risk and no further action was necessary.
July - August 1995	EPA began site investigations.
December 1995	EPA performed additional sampling at Wilson and Henryetta Townsite additions as well as driveways, parks, schools and Central Plateau area.
1996	City of Henryetta received state and federal grants and completed construction of the Shurden-Leist Industrial Park in 1996.
April 1996	Changes to lead exposure and risk data resulted in finding of imminent endangerment. EPA completed streamlined risk evaluation.
August 1996	EPA began removal actions.
August 1996	EPA placed gravel-pad parking area and office trailers on Central Plateau area for staging waste prior to consolidation and capping on 6.5-acre area to the north.
October 1996	Residential excavations began in Henryetta. Contaminated material from residential excavations stockpiled at Central Plateau area.

February 1997	Remediation of former smelter facility, including the Central Plateau area, underway.
March 1997	Drainage systems installed in Central Plateau area.
July 1997	Bermuda grass installation began on Central Plateau area.
August 1997	Remediation of former smelter facility completed. Cleanup included creation of consolidated waste area, recontouring of site wastes, placement of cover material and site revegetation.
August 2000	U.S. Department of Justice approved Administrative Order on Consent between EPA, ODEQ and the city of Henryetta to preserve EPA and ODEQ's right of access, provide notice of the cleanup to the public, and clarify site responsibilities.
January 2001	City of Henryetta signed Notice of Deed Restriction and planned installation of clean utility corridors for the Shurden-Leist Industrial Park.
May 2006	First business – ProStreet Framework – located at Shurden-Leist Industrial Park.
May 2008	Shurden-Leist Industrial Park won 2007 Phoenix Award for Region 6.
March 2015	ECOFHC requested comfort letter from EPA to support its health center grant application.
May 2015	EPA and ODEQ jointly issued RfR Determination for site's Central Plateau area.
May 2016	U.S. Department of Health and Human Services awarded ECOFHC a $1 million grant to help fund development of health care facility on site.
October 2018	EPA Region 6 and ODEQ presented ECOFHC with its Excellence in Site Reuse Award at opening of health care facility on site.

Looking Forward

EPA began site investigations in July 1995 and completed a streamlined risk evaluation for the site in April 1996. During the evaluation of remedial alternatives for the site, EPA consulted with the city of Henryetta about its reasonably anticipated future use. The city indicated that the industrially zoned property would hopefully be able to support new industrial uses following cleanup, recognizing its ideal location near U.S. Highway 75 and Interstate 40. For its part, the city proceeded with state and federal grant applications to fund the project.

Removal actions began in 1996, which addressed residential and high-access areas first to minimize the potential for exposure to heavy metals in the community. Remedial contractors stockpiled materials at the site, then began remediation of the former smelter property itself in 1997. City officials kept in close contact with EPA and ODEQ during the cleanup, and also reached out to potential private- and public-sector partners to support the site's potential future industrial use.

At ODEQ's request, EPA evaluated and ultimately included consolidation of waste materials from the adjacent Victory Metals smelter property with the consolidated waste from the Eagle-Picher Henryetta site. Because the cleanup approach and contaminants were the same, both areas could be addressed simultaneously, optimizing resources and mobilization for cleanup. Area businesses and property owners also pitched in to assist with cleanup efforts that would pave the way for future use. For example, a local glass manufacturing company donated clay from its property for the site's capped area, creating an impermeable layer over waste at the site. This minimized the potential for rainwater infiltration as well as contaminant leaching and migration. Hamilton strip mine, a closed former coal mine, donated soil from piles of overburden on its property for the soil cover above the clay cap and across the entire site. Knowing that the city intended to use the property for industrial use, EPA contoured and graded waste materials prior to placement of the clay cap and the soil cover that leveled the site. Future industrial park tenants could then build on concrete pad foundations on top of the cap without need to dig into the clean soil cover.

The U.S. Bureau of Reclamation's Technical Service Center Environmental Research Laboratory provided soil sample analysis to confirm the acceptability of the topsoil as borrow material. By following a Natural Resource Conservation Commission Plan, donation of overburden also enabled the reclamation of the 90-acre Hamilton strip mine property. The U.S. Department of Agriculture's Natural Resources Conservation Service worked with ODEQ and local agencies to establish a vegetative cover to protect the new cover from erosion. The city of Tulsa and the city of Okmulgee provided sewer sludge that could be applied as a biosolids treatment for soil to facilitate establishment of vegetation. ODEQ planted Bermuda grass across the Central Plateau area of the site.

The city of Henryetta secured nearly $500,000 in resources to support the development of an industrial park at the site. The city secured funds from both state transportation and environmental grants and federal Department of Housing and Urban Development (HUD) and economic development grants. The city completed construction of the Shurden-Leist Industrial Park, named for former Oklahoma Senator Frank Shurden and Representative M.C. Leist who supported the effort, in 1996.

Capping

Capping involves placing a cover over contaminated material such as landfill waste or contaminated soil. Such covers are called "caps." Caps do not destroy or remove contaminants. Instead, they isolate them and keep them in place to avoid the spread of contamination. Caps prevent people and wildlife from coming in contact with contaminants. The site has two types of caps – a clay cap with a soil cover on the Central Plateau area and an engineered cap encapsulating the waste with highest contaminant concentrations in the consolidated waste area.

> ***"I just see unlimited possibilities, that the cleanup has made this area amazing for the city to develop."***
>
> – Jennifer Munholland, Mayor of Henryetta

1998 – 2008
Ready and Waiting for Reuse

With completion of Shurden-Leist Industrial Park in 1996, EPA-led remedy construction completion in 1997 and vegetation established on site, it seemed that all pieces were in place for

Contouring of site slag piles during cleanup. (Source: ODEQ)

Filling in excavated areas with clean material. (Source: ODEQ)

Final site grading. (Source: ODEQ)

Cover soil placement. (Source: ODEQ)

Aerial view of the final soil cover in place. (Source: ODEQ)

Revegetation. (Source: ODEQ)

Clay donated by a local glass manufacturer to cap waste on site. (Source: ODEQ)

A nearby mining company donated overburden soil from its property to use as part of the site cap. (Source: ODEQ)

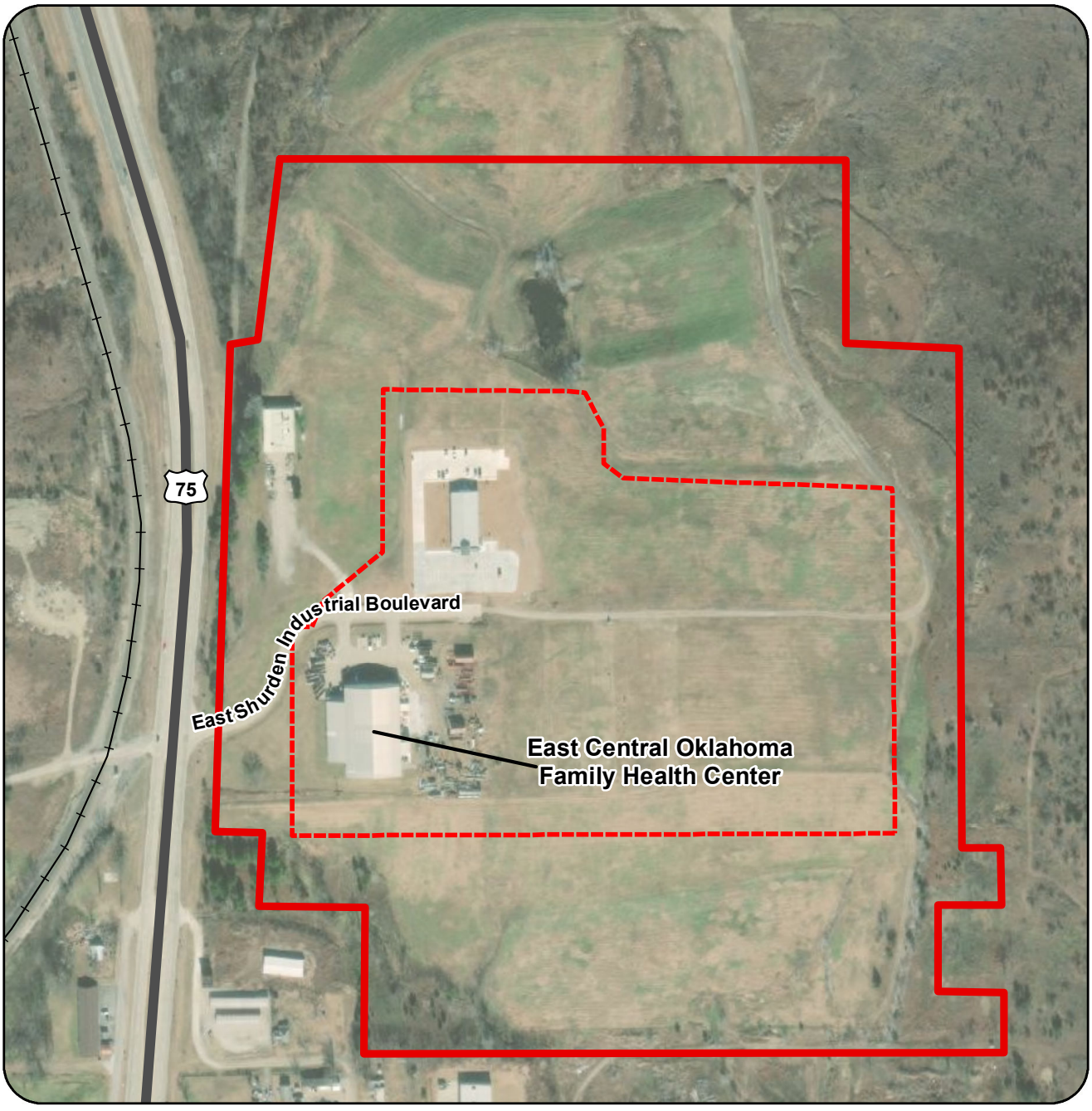
the industrial redevelopment of the site. The cleanup had been completed with industrial reuse in mind. The project had strong community buy-in, with local agencies and businesses supporting cleanup and reuse efforts. Funding had been secured from state and federal partners backing the project. Despite these factors, however, the city waited for its first tenant at the industrial park for a decade.

In 2000, EPA, ODEQ and the city of Henryetta entered into an Administrative Order on Consent to preserve agency access to the site, provide public notice of the cleanup, and clarify parties' roles and responsibilities moving forward. The city agreed to take on responsibility for maintenance of the site's remedy and filed a Notice of Deed Restriction in January 2001. In addition to protecting the site's remedy, the notice clarified due diligence steps and restrictions for prospective industrial park tenants interested in developing facilities on capped areas at the site. Still the anticipated tenants did not come.

Concerned by the sustained lack of interest in the property, Henryetta's Economic Development Authority reached out to ODEQ, which was responsible for oversight of site development and maintenance activities that might impact the cleanup. The main concerns raised by prospective tenants were insufficient utility services and access limitations. The 2001 land use restrictions prohibited disturbance of the cap, which limited installation of underground utilities. ODEQ provided guidance on a way to install clean utility corridors. With appropriate oversight and controls, an area of the protective cover and waste could be excavated, leaving clean conduits for running utilities that would not require digging through waste materials. Clean fill and reestablishment of the cover by the city left the remedy intact and industrial park lots "pad ready" for tenant development. The city also extended an industrial access road to the entrance of the industrial park to facilitate truck and machinery deliveries.

In May 2006, ProStreet Framework, a motorcycle manufacturing facility, signed on as the first tenant at Shurden-Leist Industrial Park. The industrial park went on to receive the 2007 Phoenix Award for redevelopment success in EPA's South-Central Region.

Improved access roads and clean utility corridors attracted Shurden-Leist Industrial Park's first tenant in 2006. (Source: EPA)



0 250 500 1,000 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo and the GIS User Community.

Legend

- Central Plateau
- Former Facility

Skeo

NORTH

Eagle-Picher Henryetta Former Smelter Facility

Henryetta, Okmulgee County, Oklahoma

2015 – 2018
Stepping Up to Address Community Healthcare Needs

By 2015, cleanup had literally paved the way for future use opportunities at the site. EPA and ODEQ cleanup efforts were complete. The city of Henryetta had clarified land use restrictions to support the long-term maintenance of the remedy and its compatibility with site uses. ODEQ continued to provide oversight and helped address hurdles that had deterred prospective site users, resulting in site access improvements and utility upgrades by the city. With these key pieces in place and tenants located at Shurden-Leist Industrial Park, the city remained focused on recruiting more tenants to fill out the industrial park. Meanwhile, ODEQ learned that a healthcare facility was looking for a new location and began introducing the group to both the city of Henryetta and EPA Region 6 to explore options.

> ***"Not only do we have medical, we have dental and behavioral health. So, it's a facility that is able to take care of all of the needs of the community."***
>
> – Donna Dyer, ECOFHC CEO

In March 2015, city manager Ted Graham received a letter from the East Central Oklahoma Family Health Center (ECOFHC). The Center was applying for a Health Infrastructure Investment Program (HIIP) grant through the U.S. Health Resources and Services Administration (HRSA) for construction of a health center to provide medical, dental and behavioral health services to people in Okmulgee County and surrounding areas. The center would provide primary health care, certified drug testing, immunizations, vaccines, behavioral health, and primary and preventative dental care for adults and children. As the city had anticipated for years, the site's location was a major attraction. "With this proposed site located on the north side of Henryetta on a major highway, easier access [to health services] from the north side of Okmulgee County would be available," ECOFHC CEO Donna Dyer indicated in her letter.

Ms. Dyer requested the city's assistance with ECOFHC's grant application. She asked for a commitment letter indicating the city's support for the project and developing a health center on city-owned property. For the city, the project represented a potential win-win – securing a new tenant for a city property while also supporting the provision of high-quality and comprehensive health services in a medically underserved area.

EPA and ODEQ reviewed ECOFHC's request and hosted open houses at Henryetta City Hall to help clarify the site's suitability for reuse and address community questions and concerns. She also asked the city to coordinate with EPA and ODEQ for agency documentation of the site's history, cleanup and potential for use. EPA also prepared a status, or comfort, letter regarding the site for ECOFHC. The letter summarized the site's history, cleanup and potential for future use, and shared information about applicable Agency policies or restrictions related to redevelopment. The letter indicated that the proposed health center did not pose any incompatibility issues and that communication should remain open with ODEQ and EPA as development plans proceeded. The letter also shared information about EPA's bona fide prospective purchaser liability protections and what ECOFHC would need to do to qualify for these protections. EPA and ODEQ also prepared a Ready for Reuse (RfR) Determination for the site in support of the proposed health center project. An RfR Determination is a technical document that provides an environmental status summary clarifying if a site, or part of a site, can support specific types of land uses. EPA and ODEQ co-issued the RfR Determination for the site's Central Plateau area in May 2015. It indicated that the area could be used for industrial and commercial purposes, including a health center.

With its application strengthened by the RfR Determination and the city of Henryetta's commitment to the project, ECOFHC received a $1 million construction grant from HRSA's HIIP program in May 2016.[1] The organization worked closely with EPA and ODEQ on the health center's construction to ensure

> ***"EPA, ODEQ, and the city of Henryetta have worked for many years to transform this site from a burden on the community into an asset for the whole region. Because of these efforts, today we can celebrate yet another formerly contaminated property being brought back into economic use, with the people of Henryetta and surrounding communities benefitting for years to come."***
>
> – Anne Idsal,
> Former EPA Region 6 Regional Administrator

[1] This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under C8DCS29734, Health Infrastructure Investment Program in the amount of $1,000,000, 24.46% of this project is funded through non-federal and local resources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government. The total approximate cost for this project is $1.7 million.

"During the Health Infrastructure Investment Program grant application process, ECO Family Health Center was able to coordinate with the city of Henryetta, EPA and ODEQ to meet the needs of the community in a location that at one time was unusable. The former Eagle-Picher zinc smelter site in Henryetta was the perfect location to provide medical, dental and behavioral health services to Okmulgee County."

– Donna Dyer, ECOFHC CEO

the protectiveness of EPA's remedy. Regular coordination phone calls and site visits kept all parties on the same page and allowed a venue for ODEQ and EPA to provide feedback on construction plans.

In October 2018, ECOFHC opened its doors to the community, offering comprehensive health services in a readily accessible location. At the facility's opening, EPA Region 6 presented ECOFHC and the city of Henryetta with Excellence in Site Reuse awards for their dedication to ensuring the safe and appropriate use of the site in a way that also serves the broader community.

"The restoration and redevelopment of this property has turned it into an asset for Henryetta and the surrounding communities, and all of us at ODEQ are proud of what has been accomplished."

– Scott Thompson, ODEQ Executive Director

ECOFHC's new health-care facility officially opened to the public in October 2018. (Source: EPA)

ECOFHC offers medical, dental and behavioral health services to area communities. (Source: EPA)

"Our mission is to provide affordable, high-quality, patient-centered health care for east-central Oklahoma."

– EPA SRP Site Redevelopment Profile

The October 2018 ribbon-cutting ceremony for the ECOFHC facility. (Source: EPA)

EPA Region 6 Excellence in Site Reuse Award

EPA's South-Central Region established the Excellence in Site Reuse Award to recognize parties that have supported the reuse of Superfund sites through outstanding efforts that go above and beyond required cleanup. The award can be given to a responsible party, developer, site owner, nonprofit, local government, community member or other key stakeholder who has demonstrated excellence in working cooperatively with Region 6. Superfund reuse should complement cleanup and may play a key role in ensuring the remedy is protective in the future.

Award Evaluation Criteria

1. Consideration of and effect on the local community.
2. Implementation of sustainable practices.
3. Innovation and creative thinking.
4. Consideration of long-term implementation of the selected remedy and its impact on the environment.
5. Demonstration of outstanding environmental stewardship.

EPA staff and award recipients celebrate ECOFHC's opening in October 2018. From left to right: Erin Chancellor, EPA Region 6 Chief of Staff; Ken Wagner, Senior Advisor for the EPA Administrator; Anne Idsal, former Region 6 Regional Administrator; Donna Dyer, CEO East Central Oklahoma Family Health Center; Jennifer Munholland, Mayor of Henryetta, Oklahoma; and Casey Luckett, Region 6 Superfund Redevelopment Coordinator.

Lessons Learned

The working relationship between EPA, ODEQ and the city of Henryetta has played a pivotal role in the site's cleanup and reuse. It has fostered open communication among key stakeholders, allowing EPA to design and implement a remedy that protects public health and the environment while also laying the groundwork for compatible future use opportunities prioritized by the community.

- The city of Henryetta engaged early in the Superfund process, indicating interest in the future industrial use of the property, which helped inform site agencies' cleanup planning and design.
- Sustained long-term coordination between site agencies and the city meant that all parties could discuss challenges and issues over time, such as when the industrial park struggled to land its first tenant.
- Henryetta's Economic Development Authority primed the site for redevelopment and then spent a decade working with city leaders and regulatory agencies exploring ways to market the property in a way that would bring in tenants.
- Instead of issuing a blanket "no" for site improvements, ODEQ staff sat down with city officials to identify opportunities for site access and the extension of underground utilities across the site without impacting the site's remedy.
- When ECOFHC approached the city about needing information resources to help support its grant proposal, the city provided a commitment letter and EPA and ODEQ responded rapidly with an RfR Determination that clearly laid out the site's history, remedial status and capacity to support land uses that aligned with ECOFHC's proposal. This status report was a vital piece of information aiding ECOFHC's grant application that ultimately led to the successful funding and construction of the health center on site.

Bigger Picture

In addition to the site-specific lessons above, a range of broader lessons learned can also help guide similar projects at contaminated lands across the country.

Local governments play a key leadership role in cleanup and redevelopment projects.

As a potentially responsible party at the site as well as an advocate for long-term community priorities, the city of Henryetta was uniquely positioned to support the site's transition from its smelter past into a revitalized future. The city engaged early in the Superfund process, working with site agencies to discuss the possibility of future industrial development at the site. It also worked with local businesses to rally support and resources for cap construction and worked with EPA and ODEQ on options for better positioning the property for market, eventually launching an industrial park and then supporting the development of a community health center.

Community partners can bring resources to the table to support the remedy and the reuse of a contaminated site.

Henryetta officials worked with local businesses to secure clay and clean soil fill material to contour, grade and level out the site property under a minimum 12-inch soil cover. A local glass manufacturing company donated clay from its property for the impermeable surface cap placed over consolidated waste. Overburden soils at the former Hamilton strip mine provided soil cover for the entire site.

Inter-agency project coordination can result in resource optimization.

Implementation of the remedy was actually a cleanup three-for-one thanks to coordination among various agency stakeholders. During remedial investigations, ODEQ noted similar contamination at the former Victory Metals smelter property next to the site. With the same contaminants and same cleanup needs, EPA was able to optimize resources to address both properties at once. Donation of the overburden at the former Hamilton strip mine facilitated the reclamation of the 90-acre abandoned mine land by the U.S. Bureau of Reclamation and the Natural Resource Conservation Commission. In addition, ODEQ received sewer sludge from the cities of Tulsa and Okmulgee for use as a biosolid treatment of soil to encourage establishment of vegetation. This creative effort employed a locally sourced green technology to grow a vegetative cover to protect the cap.

State agencies can play a vital role across remediation, restoration and redevelopment activities at contaminated lands and provide critical resources and expertise.

ODEQ worked with EPA on the site's remedial design and implementation and continues to provide oversight and support to the city of Henryetta as it maintains the site remedy. ODEQ staff suggested including the Victory Metals Smelter property as part of site cleanup to optimize resources and save time. ODEQ staff listened to the Henryetta Economic Development Authority's difficulties in attracting tenants to Shurden-Leist Industrial Park and worked with local officials on an approach that enhanced site access and utilities while ensuring the long-term protectiveness of the site's remedy. ODEQ also worked with EPA to support ECOFHC's bid for a health center construction grant by issuing an RfR Determination.

EPA works with communities and stakeholders to support reuse outcomes that are compatible with site cleanups.

Together with ODEQ, EPA has worked to address contamination at the site and supported the site's community-led redevelopment. The city of Henryetta worked with EPA and ODEQ to let them know about their plans for future industrial use at the property, allowing EPA to design their cleanup to support that end use. Once all waste materials had been consolidated, EPA placed a clay cap and soil cover over the area, resulting in a level site for future use. With additional clean fill material over the cap and the city's placement of clean utility corridors, future industrial park tenants could build on concrete surface pads without needing to dig into the clean soil cover for foundations or to access utility connections. EPA also used the RfR Determination tool to provide a comprehensive summary of site information that strengthened ECOFHC's grant proposal.

Ready for Reuse Determination

EPA developed these environmental status reports to help support community efforts to reuse Superfund sites. Written in plain language, they describe how a site can be used productively while remaining protective of human health and the environment. Sometimes this assurance is exactly what communities, developers, site owners and other parties need to move ahead with redevelopment.


EPA

DEQ

On this day, May 05, 2015,
the U.S. Environmental Protection Agency Determines that

26 Acres of the Central Plateau Area of the Eagle-Picher Henryetta Superfund Site
Are Ready for Commercial and Industrial Use

Carl Edlund
Director, Superfund Division
U.S. Environmental Protection Agency Region 6

Kelly Dixon
Director, Land Protection Division
Oklahoma Department of Environmental Quality

500017891

In May 2015, EPA and ODEQ co-signed an RfR Determination for the site that helped support ECOFHC's bid for federal resources to build a health center on site.

"A lot of providers do not take Medicaid patients anymore and most of them don't take uninsured patients, so we're able to fill a need to try to get people in that have healthcare needs that we can take care of."

– Donna Dyer, ECOFHC CEO

Conclusion

At the Eagle-Picher Henryetta Superfund site, EPA partnered with ODEQ on a comprehensive cleanup that was informed by extensive community outreach and coordination with the local government, area businesses and other public- and private-sector stakeholders. This coordination ensured that the final remedy was compatible with community goals for site reuse and also led to the reclamation of a nearby abandoned mine property and the cleanup of an adjacent former smelter property. Patience, perseverance and creative problem-solving has resulted in two phases of redevelopment to date – Shurden-Leist Industrial Park and the East Central Oklahoma Family Health Center. Although EPA completed site cleanup 20 years ago, EPA and ODEQ remain engaged with local stakeholders to ensure the long-term success of the site remedy and the safe and beneficial reuse of this former smelter property. This site's story shows how strong working relationships, inter-agency coordination, community involvement and EPA tools such as RfR Determinations can support the transformation of formerly blighted properties into mixed-use projects that address multiple community needs and priorities.

EPA and Reuse: Lessons Learned

Since the inception of the Superfund program, EPA has been building on its expertise in conducting site characterization and remediation to ensure that contamination is not a barrier to the reuse of property. Today, consideration of future use is an integral part of EPA's cleanup programs from initial site investigations and remedy selection through to the design, implementation, and operation and maintenance of a site's remedy.

At older sites, EPA did not focus on considering reuse during the cleanup design process. At the Eagle-Picher Henryetta site, the city was upfront about its goal to develop the area as an industrial park, which in turn informed EPA and ODEQ's approach to cleanup planning and implementation. ODEQ also worked with the city after remedy implementation to improve vehicular access and utility infrastructure installation at the site in a way that would not compromise the completed site remedy. EPA and ODEQ then stepped up again to draft an RfR Determination to support ECOFHC's bid for a construction grant to bring health services to the site.

EPA also works with site stakeholders to consider how future land use considerations can inform the implementation and long-term stewardship of site remedies as well as cleanup planning. At some sites, for example, reuse considerations can inform the future location of groundwater monitoring wells and other operation and maintenance equipment that might inadvertently hinder redevelopment efforts. At other sites, detailed site reuse plans have provided additional benefits that save time and reduce redevelopment costs. For example, future infrastructure corridors or building footers can be installed in coordination with site cleanup activities.

In-Depth Case Study

THE EAGLE PICHER HENRYETTA SUPERFUND SITE

Sources and Resources

Sources

Images for this case study are provided courtesy of EPA Region 6 and the Oklahoma Department of Environmental Quality. Maps were created by EPA using data from Esri, DeLorme, AND, Tele Atlas, First American, UNEP-WCMC, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo and the GIS User Community.

Resources

EPA site profile page:
https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0601316

EPA Superfund Redevelopment Program:
https://www.epa.gov/superfund-redevelopment

EPA Ready for Reuse Determination for the Eagle-Picher Henryetta Site, Central Plateau Area – Henryetta, Oklahoma (2015):
https://semspub.epa.gov/src/document/06/500017891

Oklahoma Department of Environmental Quality:
www.deq.state.ok.us/lpdnew/index.htm

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