

**EPA Superfund
Draft Explanation of Significant
Differences for the
Record of Decision:**

**Tar Creek Superfund Site Operable Unit 4
Ottawa County, Oklahoma
February 2010**

DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCES

I. INTRODUCTION

Site Name and Location:

Tar Creek Superfund Site, Operable Unit 4 – Chat Piles, Other Mine and Mill Waste, and Smelter Waste
Ottawa County, Oklahoma

Lead and Support Agencies:

U.S. Environmental Protection Agency (EPA) - Lead Agency
Kansas Department of Health and Environment (KDHE) - Support Agency

Statute and Regulation that Requires Explanation of Significant Differences (ESD):

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 117(c), 42 U.S.C. § 9617(c), and the National Oil and Hazardous Substances Contingency Plan (NCP) at 40 CFR § 300.435(c)(2)(i).

Purpose of ESD:

The purpose of this document, called an Explanation of Significant Differences or ESD, is to explain significant changes that have occurred in one of the operable unit¹ remedies selected to address contamination at the Tar Creek Superfund Site (the “Site”). Specifically, this Draft ESD says that EPA is proposing to offer relocation to the residents of Treece, Kansas, as part of its remedy for Operable Unit 4 (OU4) of the Site. This relocation includes both residential and business properties.

In 2007, Congress provided EPA with an exemption from the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA) for Oklahoma Site residents.² This exemption enabled EPA to relocate Oklahoma Site residents at a much lower cost. As explained in EPA’s OU4 Record of Decision³ (ROD) (February 2008) and as explained below, with this

1 The NCP, 40 CFR Section 300.5, defines an operable unit as a discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site.

2 See Water Resources Development Act of 2007 (WRDA), Public Law 110-114, at Section 3135 (Effective November 8, 2007).

3 See EPA’s Record of Decision, Operable Unit 4, Chat Piles, Other Mine and Mill Waste, and Smelter Waste, Tar Creek Superfund Site (February 2008) at Section 16.0 (Description of Alternatives).

2007 URA exemption, EPA decided that it would make the OU4 remedy more cost-effective if the Site residents living near the greatest concentration of large chat piles were relocated. Consequently, EPA's selected remedy documented in the 2008 ROD for OU4 includes voluntary relocation for these Oklahoma residents.

The residents of Treece, Kansas also live near this concentration of large chat piles, and now Congress has provided EPA with an exemption from the URA for the relocation of Treece residents.⁴ Consequently, EPA has decided that it is cost effective to also offer Treece residents the opportunity to relocate. Similar to the relocation performed for the towns of Picher, Cardin and Hockerville, relocation for Treece will also be voluntary. Once residents are relocated, EPA has determined that the vacated homes in Treece will be demolished so that other people do not move into the area. Depending on the number of residents who participate in the voluntary relocation, municipal services such as water and sewer service may not be readily available to residents who remain.

EPA documented its remedy for OU4 in a February 2008, ROD. As explained in the ROD, piles of gravel-like milling waste called "chat" are some of the principal sources of lead contamination on the Site. Chat makes an excellent road construction material, and it has other safe uses as well when managed according to the criteria provided in the Chat Rule, 40 CFR Part 278, and its preamble; consequently, as part of the remedy selected in the OU4 ROD, EPA is encouraging chat sales for safe uses as a cost-effective way to remove chat from the Site.

Supported by requests from the State of Oklahoma, the Quapaw Tribe of Oklahoma and the community, EPA's goal is to prevent another generation of residents living near the source materials⁵ from being exposed to lead contamination. In EPA's July 30, 2007, Proposed Plan for OU4⁶ our preferred alternative did not include relocation of Site residents because EPA determined it was not cost effective. Without relocation, EPA decided that the remedial action, including chat sales, had to be completed in 20 years in order to prevent exposing another generation.

On November 8, 2007, however, the Water Resources Development Act of 2007 (WRDA), Public Law 110-114, became law. Section 3135 of WRDA is specific to Ottawa County, Oklahoma and it exempted relocation of the Site residents from the URA and its costs. With the cost savings provided by WRDA, EPA decided that it would be cost-effective to relocate the Oklahoma residents on the Site who live near the large concentrations of contaminant source

4 On October 29, 2009, H.R. 2996: Department of the Interior, Environment, and Related Agencies Appropriations Action, 2010 became Public Law 111-88. Section 430 of P.L 111-88 exempts EPA relocation of the residents of Treece, Kansas from the URA.

5 "Source material," as used in the OU4 Record of Decision, means mine and mill waste including chat, fine tailings, overburden, development rock, smelter waste and other tailings. Source material is generally found in chat piles, chat bases (the area once occupied by a chat pile), smelter wastes, and tailings ponds.

6 EPA's Proposed Plan for the Site (July 30, 2007) was made available to the public for comment in July 2007. The Proposed Plan can be found in the information repositories maintained with ODEQ Central Records at the Oklahoma City Office, at the Miami, Oklahoma, Public Library, and at EPA's offices in Dallas, Texas (document repository addresses and contact information appear below in this ESD).

material (*i.e.*, the large concentration of chat piles in the core of the Site). EPA determined relocation of those Oklahoma residents would be cost effective in part because, with the residents relocated, EPA could extend the remedial action, and allow chat sales to continue for an additional ten years. This ten-year extension meant that certain planned activities would take place later in the remedial action, and, when spending happens later, there are savings associated with the increased value of money over time. In addition, the more chat that is addressed through chat sales, instead of other more costly cleanup measures, the less expensive the remedy becomes. Now that Congress has made EPA's relocation of Treece residents exempt from the URA requirements, EPA determined that it would be cost effective to offer voluntary relocation to the Treece residents.

In the National Contingency Plan (NCP) at 40 CFR § 300.435(c)(2), EPA has developed an administrative process which balances the public's continuing need for information about, and input into, post-ROD remedial action decisions, with EPA's need to move forward expeditiously with design and implementation of the remedy after fundamental decisions have been made in the ROD. 55 Fed. Reg. 8666, 8772 (March 8, 1990). After a ROD is issued by EPA, if the remedial action taken differs significantly from the remedy selected in the ROD, but does not fundamentally alter the remedy selected in the ROD, EPA notifies the public that an Explanation of Significant Difference (ESD) is available as part of the administrative record.⁷ While the ESD is being prepared and made available to the public, the EPA may proceed with the remedy.⁸

EPA's decision to offer voluntary relocation to the residents of Treece is not a fundamental change to the ROD. As described above, EPA's OU4 ROD already explained why relocation of Oklahoma residents under a congressionally-provided exemption from the URA was cost-effective and consistent with the NCP. Now we are making the same remedial decision with respect to the residents of Treece. This scope of the voluntary relocation differs significantly from the remedy described in the OU4 ROD, but it does not fundamentally alter the remedy.

The authority for the remedial action described in this Explanation of Significant Differences has been delegated to the Director of the Superfund Division, EPA, Region 6.

Administrative Record:

This ESD will become part of the Administrative Record for Tar Creek OU4. The Administrative Record is available to the public for review during regular business hours at the following two locations:

⁷ See 40 CFR § 300.435(c)(2)(i).

⁸ See A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents, OSWER Directive 9200.1-23P (July 1999) at p. 7-2.

Miami Public Library
200 N. Main Street
Miami, Oklahoma 74354
(918) 542-3064

Johnston Public Library
210 West 10th Street
Baxter Springs, KS
(620) 856-5591

II. SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

Tar Creek Operable Unit 4

Site History

The first ore discoveries and earliest mining operations in Ottawa County, Oklahoma occurred in the vicinity of Peoria (6 miles east and 1 mile south of Lincolntonville) in 1891. The next major ore discoveries occurred 1.5 miles northeast of Lincolntonville near Quapaw in 1902, followed by discoveries in 1905 near Commerce. The real expansion of zinc and lead mining at the Site occurred after a major ore discovery in 1914 near the current site of Picher, Oklahoma.

Following this discovery, there was a major expansion of mining in what became known as the Picher Mining Field (Picher Field) of Oklahoma and Kansas. By 1918, the Oklahoma section of the Picher Field was well defined by producing mines, with 230 mills built or under construction.

Depletion of high-grade ores caused a marked decline in annual production after 1946, and depressed metal-market prices forced a cessation of most mining activities in 1958. The last record of significant production from Ottawa County occurred in 1970.

With few exceptions, the crude ore produced at the Site was mined utilizing underground mining methods. Based on production records maintained by the U.S. Department of Interior, Bureau of Mines, a total of 181,048,872 tons of crude ore was produced from the Oklahoma portion of the District. Milling of this ore produced 8,884,898 tons of zinc concentrates and 1,686,713 tons of lead concentrates. With the exception of a limited amount of lead concentrates treated at the Ontario Smelter, all of the concentrates produced from the Site were transported off-Site for the conversion of the concentrates to metal by smelting.

The wastes from the mining operations were discarded mining and milling tailings. The mill tailings, locally known as chat, are primarily composed of small chert fragments, intermingled with sand-sized particles. After the excavated rock was processed and the metal ore extracted, the mining tailings that remained were deposited into piles that were up to 200 feet in height. Many of these chat piles remain on the Site, including some piles which are over 100 feet high. An inventory conducted in 2005 as part of the Remedial Investigation for OU4 identified 83 chat

piles occupying 767 acres with 31 million cubic yards, 243 chat bases (or former piles) occupying 2079 acres with an estimated 6.7 million cubic yards.

In addition to piles of mining wastes, a large but lesser quantity of floatation pond tailings from the floatation milling process was produced. Most of the floatation ponds have since evaporated leaving behind very fine mining waste sediment which remains on the Site. Fine tailings generated from milling and washing chat are currently found in 63 ponds occupying 820 acres and total approximately 9 million cubic yards.

Over the years, the mining wastes have been used and continue to be used for a variety of unsafe purposes including the following: railroad ballast; sandblasting sand; sandbag sand; roadway, driveway, alleyway, and parking lot aggregate; general fill material in residential areas; and impact-absorbing material in playgrounds. EPA describes acceptable uses of chat, including use in hot mix asphalt, in its ROD for OU4 and in the Chat Rule, 40 CFR Part 278.

The Site first came to the attention of the State of Oklahoma and EPA in 1979 when acid mine drainage began flowing to the Site surface from underground mines through abandoned mine shafts and boreholes. The Governor of Oklahoma formed the Tar Creek Task Force to investigate the effects of acid mine drainage on the area's surface and ground water. Based upon the information discovered by the Tar Creek Task Force, EPA proposed, in July 1981, to add the Site to the Superfund National Priorities List (NPL), 40 CFR Part 300, Appendix B. The NPL means the list, compiled by EPA pursuant to CERCLA section 105, of uncontrolled hazardous substance releases in the United States that are priorities for long-term remedial evaluation and response. The Site was added to the NPL in September 1983.

Contamination

Mining and milling operations have resulted in the accumulation of large volumes of chat and fine tailings on the Site. These waste materials are found in chat piles, chat bases (a "chat base" is an area once occupied by a chat pile), haul roads, railroad grades and tailings ponds (a "tailings pond" is an area where a mill or a chat washing operation has discharged water contaminated with fine tailings waste) at various locations throughout OU4 of the Site. These mine and mill wastes contain elevated levels of lead, zinc and cadmium. The media surrounding these accumulations were also evaluated including soils, surface water and ground water.

Chat is a type of waste tailings produced by the gravity separation milling process once used in the Tri-State Mining District. Chat consists of coarse gravel intermingled with other material such as medium to fine sands, silt and clay. The highest concentrations of lead in chat are generally found in the fine tailings material. A total of 83 chat piles covering a total area of 767.05 acres and with a total volume of 31.32 million cubic yards were identified. The concentration of cadmium in the chat ranged from 43.1 milligrams per kilogram (mg/kg) or parts per million (ppm) to 199.0 mg/kg with an average of 94.0 mg/kg. Lead in these samples ranged from 210 mg/kg to 4,980 mg/kg with an average concentration of 1,461 mg/kg. Zinc ranged from 10,200 mg/kg to 40,300 mg/kg with an average concentration of 23,790 mg/kg.

A chat base is an area that was once occupied by a chat pile. Chat bases can be covered with vegetation or are sometimes found bare. There are 243 chat bases identified at the Site, covering a total area of 2,079.26 acres. The concentration of cadmium in the chat bases ranged from 51.0 mg/kg to 151.0 mg/kg with an average of 96.2 mg/kg; lead concentrations ranged from 650 mg/kg to 3,020 mg/kg with an average concentration of 1,863 mg/kg; and zinc concentrations ranged from 9,520 mg/kg to 40,300 mg/kg with an average of 33,600 mg/kg.

Two types of fine tailings were identified: 1) fine tailings generated as a waste during washing of chat, and 2) flotation tailings generated as a waste during the metal extraction process or milling. A total of 63 tailings ponds covering a total area of 820.47 acres were defined. Based on field drilling and mapping, it was estimated there were 7.21 million cubic yards of washed fine tailings and 1.95 million cubic yards of flotation tailings at the Site. The concentration of cadmium in the washed fine tailings ranged from 10.0 mg/kg to 320.0 mg/kg with an average concentration of 79.7 mg/kg; lead concentrations ranged from 220 mg/kg to 26,600 mg/kg with an average concentration of 3,658 mg/kg; and zinc concentrations ranged from 1,730 mg/kg to 70,000 mg/kg with an average concentration of 15,964 mg/kg.

The concentration of cadmium in the flotation tailings ranged from 26.3 mg/kg to 450.0 mg/kg with an average concentration of 133.0 mg/kg; lead concentrations ranged from 1,130 mg/kg to 17,800 mg/kg with an average concentration of 5,694 mg/kg; and zinc concentrations ranged from 4,690 mg/kg to 103,000 mg/kg with an average concentration of 29,842 mg/kg. With few exceptions, flotation tailings contain higher cadmium, lead, and zinc concentrations than washed fine tailings.

Selected Remedy

The Selected Remedy for Tar Creek Operable Unit 4 (OU4) is Voluntary Relocation, Phased Consolidation, Chat Sales and On-site Disposal. Based on State, Tribal and community concerns as well as changes in the cost effectiveness of relocation following the enactment of Water Resources Development Act of 2007 (WRDA), EPA included relocation in its Selected Remedy for the Site. As explained above, relocating the residents who are facing the greatest risk of exposure allowed EPA to extend the timeframe for chat sales to 30 years in its Selected Remedy.

The Selected Remedy addresses source materials, rural residential yard contamination, transition zone soil contamination, and contamination in water drawn from rural residential wells.

The Selected Remedy utilizes various elements, including the following:

PHASE 1

Phase 1 addressed voluntary relocation of residents, chat sales, and Phase 1 will address source materials in a manner that will reduce the overall footprint of contamination and reduce the need for land use restrictions, institutional controls, and operation and maintenance. The following are

Phase 1 actions:

- Residents located in Picher, Cardin and Hockerville have been offered the opportunity to relocate following the procedures and priorities established by the Lead Impacted Communities Relocation Assistance Trust (LICRAT).
- Chat and chat bases from distal areas,⁹ including associated historic chat covered haul roads and non-operating railroad grades, will be excavated to the underlying native soil, transported and released to an on-site chat processor or future processing location located in a previously contaminated area of the Site, injected into mine workings, or disposed in an on-site repository.
- Transition zone soils (soils around and underneath source materials) will be addressed by excavation followed by natural soil rebuilding.
- Smelter wastes will be excavated and disposed in an on-site repository. Smelter affected soils will be managed in the same manner as transition zone soils.
- Fine tailings will be injected into mine workings or covered in place. The covered fine tailings may be consolidated to reduce the footprint of the final cover.
- Source material in Tar, Lytle, Elm or Beaver Creek or other Site waterways, will be addressed on a priority basis through either excavation and/or the installation of a flexible membrane liner, as needed as determined by EPA. As an interim measure, sheet piling, berms, constructed wetlands, or other engineering controls will be installed for near-stream source materials to help prevent contamination from migrating to surface water.
- An alternative water supply will be provided to any household where mining-related contaminants in water drawn from rural residential wells exceed 0.015 mg/L for lead for rural households. Rural households that are within the area that has been designated for relocation under the Lead Impacted Communities Relocation Assistance Trust (LICRAT) relocation program, but which do not elect to participate in the relocation program, would be included in the households eligible for an alternative water supply (estimated two residences).
- Rural residential yards that are found to have concentrations of soil lead that exceed 500 ppm will be excavated to a maximum depth of 12 inches, and the excavated area will be backfilled with clean soil, contoured to promote drainage and revegetated. This includes residential yards that are identified for relocation. The provisions of the preceding sentence apply to approximately 4 households, based on the RI sampling. That is, if those eligible for relocation decide not to relocate, their yards will be remediated.
- On-site repositories will be constructed to accept Site source materials for final disposal. On-site repositories will be closed when they reach capacity or at completion of the remedial action. Closure will be accomplished by covering the repository with a soil cover, contoured to promote drainage, and revegetated.

PHASE 2

Phase 2 addresses certain source areas that remain after Phase 1 cleanup activities. These areas may include chat bases, tailings ponds, unmarketable chat piles and bases, and remaining chat from distal area consolidation. Chat sales will continue.

⁹ “Distal Areas” generally means those areas located outside the high density mining areas and includes rural areas as shown in Figure 3 of the OU4 ROD.

- The remedy will be reviewed, at a minimum, every five years since hazardous substances remain on-site with concentrations that exceed concentration levels that allow for unrestricted use and unrestricted exposure. The remedy will be reviewed to ensure protection of human health and the environment. As part of the five-year review, EPA will evaluate the progress of chat sales. Chat piles and bases remaining after 10 years will be evaluated for commercial viability. This determination will be made using input from the chat/land owners, appropriate tribal representatives, and the commercial operators.
- Unmarketable chat piles and bases will be excavated, transported and released to an on-site chat processor or future processing location in a previously contaminated area of the Site, injected into mine workings, or they will be disposed in an on-site repository.
- Abandoned chat haul roads and non-operating railroad grades that are contaminated will be managed the same as unmarketable chat piles and bases. That is, they will be excavated, transported to an on-site chat processor, and released to that processor, or they will be disposed in an on-site repository.
- Institutional controls and operation and maintenance activities will be implemented, as needed as determined by EPA, at repositories and covered, fine tailings ponds.
- Environmental monitoring will be conducted, as needed as determined by EPA, to test for contamination in ambient and near source air, surface water, ground water, and sediment during remediation activities.

The remedial action that EPA is taking on OU4 conforms to the ROD as described above. As explained in this document, the significant differences in the remedial action, as described in this draft ESD, relate to the voluntary relocation of residents of Treece, Kansas. None of these differences fundamentally change the selected remedy.

Cherokee County Operable Unit 4 – Treece Subsite

The Cherokee County Superfund site is located in the extreme southeast portion of the state of Kansas and encompasses an area of approximately 115 square miles. EPA divided the Cherokee County site into seven operable units. The Treece subsite, which covers approximately 11 square miles, is one of the six subsites which make up the Cherokee County, Kansas Superfund site and is designated as Operable Unit 4 of the Cherokee County site. Operable Unit 4 of the Cherokee County site is part of the former Picher mining field which is centered near the town of Picher, Oklahoma. The Picher mining field extended northward from Oklahoma into southeastern Kansas and was one of the most productive lead and zinc mining areas in the United States. The Treece subsite is part of the larger Tri-State Mining District which covers approximately 500 square miles in southeast Kansas, southwest Missouri, and northeast Oklahoma.

The town of Treece, Kansas is located immediately north of the Oklahoma state line and approximately ½ mile west of Highway 69. The 2008 population estimate for Treece is 139 individuals, and recent press reports list the population as approximately 100 residents. There are numerous chat piles and chat bases located within 1/10 of a mile of Treece. Similar to residents in Picher, Cardin, and Hockerville, residents in Treece are located in areas with concentrated sources of potential exposure.

Waste at Cherokee County Operable Unit 4 consists of mining waste including development rock, waste rock, chat and fine grained flotation impoundment tailings. The mine wastes contain heavy metals at concentrations above natural background soil levels. The metals which are the contaminants of concern include cadmium, lead, and zinc.

In August 1997, EPA signed a ROD to address the mining waste at two of the Cherokee County site operable units. The Operable Units addressed in the Cherokee County 1997 ROD were OU-3 (Baxter Springs subsite) and OU-4 (Treece subsite). An Amended Record of Decision for OU3 and OU4 of the Cherokee County site was signed by EPA in September 2006.

The major components of the selected remedy for Baxter Springs and Treece include the following actions,

- Excavate, consolidate, and/or cap all surficial mine waste followed by disposal and capping.
- Utilize subaqueous mine waste disposal to the maximum extent practicable.
- Encourage source reduction via responsible chat sales before and during remedy implementation.
- Adopt Institutional Controls for future development specified in an earlier ROD

EPA anticipates that these actions will take eight to ten years to implement. With respect to the release in Cherokee County, this time frame is consistent with the goal described in the Tar Creek OU4 ROD which is to prevent another generation of residents living near the source materials from being exposed.

The residents of Treece, however, remain very close to the release in Ottawa County. The huge Ottawa County Oklahoma chat piles will remain an attractive nuisance to children and adolescents for up to 30 years because the Tar Creek OU4 ROD calls for chat sales to proceed over a period of about 30 years. Consequently, EPA will be permanently relocating Treece residents (on a voluntary basis). As explained in the OU4 ROD, relocation of the residents will enable EPA to extend the remedial action, and allow chat sales to continue for an additional ten years, making this aspect of the remedy cost effective.

III. DESCRIPTION OF THE SIGNIFICANT DIFFERENCES AND THE BASIS FOR THE DIFFERENCES:

The purpose of this Draft ESD is to explain that there have been significant changes in the remedial action selected for OU4 of the Tar Creek Site, and to provide the reasons that these changes were made.

In 2007, Congress provided EPA with an exemption from the Uniform Relocation and Real Property Acquisition Policies Act (URA) for Oklahoma Site residents.¹⁰ This exemption enabled EPA to relocate Oklahoma Site residents at a much lower cost. As explained in EPA's OU4 Record of Decision¹¹ (ROD) (February 2008) and as explained above,¹² with this URA exemption, EPA decided that it would make the OU4 remedy more cost-effective if the Site residents living near the greatest concentration of large chat piles were relocated. Consequently, EPA's selected remedy documented in the 2008 ROD for OU4 includes voluntary relocation for these Oklahoma residents.

The residents of Treece, Kansas also live near this concentration of large chat piles, and now Congress has provided EPA with an exemption from the URA for the relocation of Treece residents.¹³ Consequently, EPA has decided that it is cost effective to also offer Treece residents the opportunity to relocate. Relocation for Treece will also be voluntary because EPA understands that some residents may wish to remain in their homes for a period of time. Once residents are relocated, EPA has decided that the vacated homes in Treece will be demolished so that others do not move into the area. Depending on the number of residents who participate in the voluntary relocation, municipal services such as water and sewer service may not be readily available to residents who remain. KDHE will file an Environmental Use Control (EUC) as authorized in Kansas Statute Annotated (K.S.A.) 65-1, 221 through 65-1, 235 on property acquired by the Treece Relocation Assistance Trust. The EUCs are an institutional control that is a legal means of restricting or prohibiting human activity and property use to prevent or reduce exposure to contamination and will be compatible with the remedy selected in the ROD. The anticipated EUC includes preventing future occupancy of the property. The State will be the responsible agency for implementation and enforcement of this institutional control.

The following elements define the voluntary relocation component for Treece:

- Relocation assistance shall be provided as outlined by the State of Kansas, and authorized in Kansas Statute Annotated (K.S.A.) 49-511 through 517. A public trust created by the State of Kansas, K.S.A. 49-512, shall administer relocation assistance. The trust shall also hold and dispose of acquired property.
- The Kansas Department of Health and the Environment (KDHE) will fund the trust using money provided by EPA through a cooperative agreement with KDHE.
- The estimated number of properties being considered for the trust buyout program is approximately 77. Residential and business properties are included.

10 See Water Resources Development Act of 2007 (WRDA), Public Law 110-114, at Section 3135 (Effective November 8, 2007).

11 See EPA's Record of Decision, Operable Unit 4, Chat Piles, Other Mine and Mill Waste, and Smelter Waste, Tar Creek Superfund Site (February 2008) at Section 16.0 (Description of Alternatives).

12 See Section I (Introduction)

13 On October 29, 2009, H.R. 2996: Department of the Interior, Environment, and Related Agencies Appropriations Action, 2010 became Public Law 111-88. Section 430 of P.L. 111-88 exempts EPA relocation of the residents of Treece, Kansas from the Uniform Relocation Act requirements.

- Structures that remain after residents have been relocated will be removed or demolished and disposed by the public trust.
- EPA will not acquire property under this relocation program. Final disposition of the properties will be determined by the Kansas public trust.
- The estimated cost to EPA will be approximately \$3,500,000¹⁴, itemized as follows:

Property replacement	\$2,657,770
Moving expenses	\$ 74,000
Family rent compensation	\$ 72,000
Business rent compensation	\$ 24,000
Demolition costs	\$ 265,000
Contracting costs	\$ 100,000
Subtotal	\$3,192,770
5% Contingency	\$ 159,639
KDHE Agency Costs	\$ 147,591
Total	\$3,500,000

Note: The projected cost is based on an order-of-magnitude engineering cost estimate that is expected to be within +50 or -30 percent of the actual project cost.

This change increases the revised total estimated cost of the OU4 ROD by approximately two percent, as follows:

Activity	Alternative 5	ESD	Total
Voluntary Relocation	569	77	646
Present Worth	\$167,288,000	\$3,500,000	\$170,788,000

Note: The projected cost is based on an order-of-magnitude engineering cost estimate that is expected to be within +50 or -30 percent of the actual project cost.

14 Depending on the time and effort required by KDHE the cost could be \$100,000 or more. No budget has been included for the expenses of the trustees. A total cost of \$3,500,000 would allow for most of these costs. Additionally, the proposed budget for this project has been tightened to the point that many of the nicer mobile homes will need to be moved rather than be replaced. The legislation also allowed for payments to local school districts; however, no line item has been provided for that expense.

IV. SUPPORT AGENCY COMMENTS

| See attached letter of concurrence from the Kansas Department of Health and the Environment.

V. PUBLIC PARTICIPATION ACTIVITIES

While not required by Section 300.435(c), EPA is holding a public comment period on this Draft ESD to ensure that all interested parties have an opportunity to provide input to EPA before it makes a final decision on this modification to the remedy.

The public comment period begins February 12, 2010 and concludes March 15, 2010. The Draft ESD is available on the Internet at: <http://www.epa.gov/region6/6sf/6sf-decisiondocs.htm>. Written comments may be submitted during this period to:

Ms. Janetta Coats
Community Involvement Coordinator
U.S. EPA (6SF-VO)
1445 Ross Avenue
Dallas, Texas 75202-2733

The EPA will select a final remedy after considering all comments and will present its decision in a Final ESD.

This Draft ESD will become part of the Administrative Record for the Tar Creek OU4 Superfund Site. EPA will also publish a notice of availability of the Final ESD and a brief description of the ESD in a local newspaper. For additional information regarding this ESD, please contact the EPA Remedial Project Managers for the Tar Creek OU4 Superfund Site:

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VI. STATUTORY DETERMINATIONS

The significant changes to the remedial action include the addition of provisions that call for:

- 1) the voluntary relocation of the residents of Treece, Kansas, including both residential and business properties;
- 2) the demolition and disposal of structures (approximately 77) vacated by residents who relocate;
- 3) an estimated increase in the cost of the remedy for OU4 of approximately \$3,500,000

The remedy selected in the 2008 OU4 ROD remains fundamentally unaltered and the statutory determinations made in the ROD still apply:

The Selected Remedy is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, is cost effective, and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable.

High concentrations of lead are addressed under the Selected Remedy; however, the concentrations of lead are not so high as to be several orders of magnitude above levels that allow for unrestricted use and unlimited exposure. Therefore, the lead is not considered to be a principal threat under the NCP; consequently, there is no expectation under the NCP that the lead be treated.

Because this remedy will result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unrestricted use and unrestricted exposure, a statutory review will be conducted within five years after initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

Samuel Coleman, P.E.
Director
Superfund Division

Date