TAR CREEK SUPERFUND SITE

DATE: January 22, 2003

TOPIC: Tar Creek Superfund Site - Partnerships with Tribes

SITE STATUS

Remediation of an additional 457 residential properties, three day care centers, and ten park properties (OU2), started on November 20, 2002. The cost to complete this phase of remediation is estimated at approximately $15 million. (Residential cleanups have been underway since 1996. Approximately 1,647 properties, 105 Indian properties, and eight school properties have been remediated to date at a cost of approximately 45 million dollars.)

A Remedial Investigation and Feasibility Study (RI/FS) for the non-residential portion of the Site, Operable Unit 4 - mining wastes (chat piles and flotation ponds), is currently being planned. While two mining companies have withdrawn, the EPA continues to negotiate an Administrative Order on Consent (AOC) with the remaining Potentially Responsible Parties (PRP) (U.S. Department of the Interior, Gold Fields Mining, and Blue T Mining) to perform and finance the RI/FS. The RI/FS is expected to take approximately 2 years to complete, once an AOC is achieved. Upon completion of the RI/FS, a remedy for OU4 will be proposed.

TRIBAL INVOLVEMENTS

Grants That Have Been Awarded:

The Quapaw Environmental Office currently has four U.S. EPA grants. They include: a General Assistance Program (5th year), Superfund (3rd year), Clean Water 106 (3rd year) and Clean Air Act 103 (1st year).

The Inter-Tribal Environmental Council (ITEC)—a technical agency responsible for providing environmental services to the member tribes of ITEC—conducted two Pilot Remedial Investigation/Feasibility Studies (RI/FS) projects on Tar Creek OU4. They were: 1) the Quapaw sites RI/FS Pilot Project and 2) the Beaver Creek Watershed RI/FS Project. The Cherokee Nation’s Office of Environmental Services (the technical agency responsible for providing environmental services to ITEC) and the Quapaw Tribe worked on these projects together. ITEC also conducts site assessments on behalf of EPA.

The Quapaw Tribe receives assistance under a Superfund cooperative agreement in order to participate in the RI/FS under OU4 and to continue to work with government agencies regarding non-specific Tar Creek Superfund issues.

A Technical Assistance Grant was awarded to the Local Environmental Action Demanded Agency, Inc. (L.E.A.D.) in 2001.
Site Activities:

EPA continues to involve the public which includes nine Tribes, seven communities and numerous local stakeholder groups. EPA continues to coordinate town meetings and participate in local stakeholder groups to provide information and answer questions about the site. Superfund also participates in the Quarterly Stakeholders meetings hosted by the Ottawa County Health Department (OCHD). Stakeholders which include EPA, ODEQ, “Speak Out”, the Tar Creek Basin Steering Committee, Tribal Effort Against Lead (TEAL), L.E.A.D. and OCHD provide an update on on-going activities associated with this site.

Operable Unit 2 - Residential Areas

Residential Remedial Action (RA) for Operable Unit 2 (OU2). - The objective of the Residential RA is to reduce the ingestion by humans, especially children, of surface soil in residential areas contaminated with lead at a concentration greater than or equal to 500 parts per million. The Tribes are very active at the site, and Region 6 met with tribal leaders on a frequent basis. The tribes provided EPA-R6 with a list of properties they desire to be sampled. Two properties, the Quapaw Pow-Wow grounds and the Quapaw Tribal Complex, have been sampled and remediated to address health concerns. Sampling is planned for the remaining properties.

Operable Unit 4 - Remedial Investigation/Feasibility Study (RI/FS) for Mining Waste and Beaver Creek

The Oklahoma Trustee Council for Tar Creek, representing the Quapaw, Seneca-Cayuga, Eastern Shawnee Tribes, Wyandotte Nation, the State of Oklahoma, and the Fish and Wildlife Services, along with interested parties such as the Cherokee Nation, are active participants in the Remedial Investigation/Feasibility Study for OU4 of Tar Creek through the Quapaw Tribe. Quapaw will also be an active participant during negotiations with the PRPs for an Administrative Order of Consent for the RI/FS.

A Memorandum of Understanding (MOU) is being developed between EPA, DOI and USACE to facilitate cooperation among multiple Federal Agencies to provide a holistic response to the risks posed by the site. Under this approach, the signatory Federal agencies, working as a whole, will proposed to coordinate with the State of Oklahoma, the affected Indian tribes, the affected local governments, and other stakeholders, in a process to determine the most acceptable manner of resolving the problems posed by the Mining Area. This MOU was on hold until this month at which time Headquarters restarted negotiations. The following tasks highlight what each Agency will focus on:

EPA

- Continue residential yard cleanup.
- Arrange broader partnership initial meeting.
- Continue negotiations with potentially responsible parties
- Oversee potentially responsible party responses.
EPA (Environmental Protection Agency) Air Sampling/Monitoring Definitions:

Environmental Protection Agency - Region 6 (EPA-R6).

Air Quality System (AQS) - large (mainframe) computer where all EPA air monitoring data are stored for reference by the public, Tribes, EPA, State and Local air monitoring agencies.

1) Lead (Pb) air sampling.
2) Coarse Dust air sampling.
3) Continuous Coarse Dust air monitoring.
4) Continuous Fine Dust air monitoring.
5) Non-Regulatory Silica air sampling.

2003-4 Ouapaw Tribe, Tar Creek Air Monitoring

4 primary and 3 alternate Tribal air monitoring sites were located on Restricted Indian Allotment Land in October (2001 and 2002).

Due to predominant southerly winds, selected air monitoring sites are generally located north of chat piles in order to collect air monitoring data from chat piles.

There will be 1 Quality Assurance (QA) site during the project. The QA site will be either: Site 9 which is generally located north of the Western chat pile and is expected to become Tribally active with the sale of chat, or Site 3 (north of the Fisher chat pile) which may function as a non-Tribally active QA monitoring site.

Last year, my section at EPA-R6 (the Air Quality Analysis Section) reviewed (at the request of EPA-R6 Superfund) the air monitoring data collected during 1995 Superfund project.

Based on our review, we recommended to Superfund that further relevant air monitoring be performed for at least 1 year, in order to collect more data under the various weather conditions and obtain more representative data.
Department of Interior (DOI)

- Conduct a Remedial Investigation and Feasibility Study (RI/FS) on chat piles and flotation ponds in non-residential areas. (Negotiation with other private parties are ongoing. These parties may also conduct the RI/FS).
- Plug open mine shafts based on prioritization from the State.
- Fence remaining chat piles to prevent unauthorized chat access.
- Develop a Geographic Information System (GIS) in coordination with the State of Oklahoma to store and share data to facilitate information exchange and avoid duplication of effort.
- Collect routine water quality data and monitor flow data for Tar Creek with an emphasis on mine seeps.
- Fund, in part, United States Army Core of Engineers’s (USACE) development of a hydrogeologic model of the area.
- Complete initial wildlife study.
- Fund USACE’s construction of a passive treatment pilot at the Mayer Ranch including creating multipurpose trails and outdoor education facilities, and covering a multi-acre area with flood-plain trees and native vegetation with a goal of restoring the aquatic habitat.
- Fund USACE to develop a constructed wetlands in support of a comprehensive approach to restoring and revitalizing the Tar Creek Mining Area.

USACE

- Develop a hydrogeologic model of the area (through funds from other Agencies) through the USACE Support for Others Program. Coordinate studies with on-going and planned studies by DOI.
- With funds from DOI, develop a constructed wetlands in support of a comprehensive approach to restoring and revitalizing the Tar Creek Mining Area.
- With funds from other Agencies, construct a passive treatment pilot at Mayer Ranch including creating multipurpose trails and outdoor education facilities, and covering a multi-acre area with flood-plain trees and native vegetation with a goal restoring an aquatic habitat.
Regulatory air monitoring will commence in January (2003) and will include the following regulatory air monitoring:
1) Lead air sampling on the EPA 3 day sample schedule,
2) Coarse Dust air sampling on the EPA 3 day sample schedule,
3) Continuous Coarse Dust everyday air monitoring,
4) Continuous Fine Dust everyday air monitoring, and
5) non-regulatory silica air sampling on the EPA 3 day schedule only at the QA air monitoring site.

Regulatory and non-regulatory air monitoring will continue for 1 year.

After 1 complete year of regulatory air monitoring data is submitted to AQS, EPA-R6 will review the regulatory air monitoring data to determine if additional air monitoring is warranted.

All regulatory air monitoring data will be submitted to AQS.
Non-regulatory silica data will not be submitted to AQS.

Additional air monitoring will be warranted if the AQS quarterly arithmetic mean Pb concentration >/= 1.0 ug/m3 or annual arithmetic mean Coarse Dust concentration >/= 33.5 ug/m3).
* (0.67 corresponding 1) quarterly arithmetic mean Pb National Ambient Air Quality Standard [Pb Standard = 1.5 micrograms/cubic meter (ug/m3)] or
2) annual arithmetic mean Coarse Dust Standard = 50 ug/m3.)

Additional air monitoring will also be warranted if the 24 hour average Coarse Dust Standard = 150 ug/m3 is violated in accordance with 40 CFR Part 50 Appendix K regulations (the 3 year average annual expected Coarse Dust exceedances >/= 1.05). The 24 hour average Course Dust Standard is attained when the 3 year average annual expected Course Dust exceedances </= 1.04.

If additional air monitoring is warranted and continued after 1 year of air monitoring data are submitted to AQS, corresponding air monitoring will continue until 3 complete, sequential calendar years of air monitoring data are submitted to AQS.

If additional air monitoring is unwarranted, corresponding air monitoring will be discontinued within 3 months.