

QUAPAW TRIBE REMEDIAL EFFORTS AT THE TAR CREEK SUPERFUND SITE

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Quapaw Tribe of Oklahoma

Environmental Justice Forum

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OVERVIEW

- History
- Tar Creek Superfund Site
- Quapaw Environmental Office
- Building Capacity
- OU4 Remedial Action
- Environmental Justice
- Questions/Answers

QUAPAW TRIBE HISTORY

- Several hundred years ago, the Quapaw were a division of a larger group known as the Dhegiha Sioux. They split into the tribes known today as the Quapaw, Osage, Ponca, Kansa, and Omaha when they left the Ohio Valley.
- The Quapaw moved down the Mississippi River into Arkansas. This is how the Tribe became known by other Tribes as “Ugaxpa” (“Ugakhpa”), which means (roughly) “the downstream people.” The Tribe’s name eventually became “Quapaw” which was easier to pronounce for Euro-American explorers and settlers.
- Another tribe (the Illinois Tribe) referred to the Quapaws as “Arkansa”; thus the name of the Arkansas River and the State of Arkansas.
- French explorers also applied the name of the river to the Quapaw people-Riviere des Arks or d’Asark from which Ozark (as in “Ozark Mountains”) was derived.

QUAPAW TRIBE HISTORY

- The Quapaws settled in the area where the Arkansas River met the Mississippi, where the meandering of the two massive rivers had deposited nutrient-rich soil conducive to farming.
- This is where the Quapaw stayed until they were pushed out by the Arkansas Territorial, and US Governments in the 1820s.
- After being removed from Arkansas, the Quapaws suffered greatly from disease and starvation until the US Government was finally convinced, in 1833, to establish a reservation for them in Oklahoma (then known as “Indian Territory”).

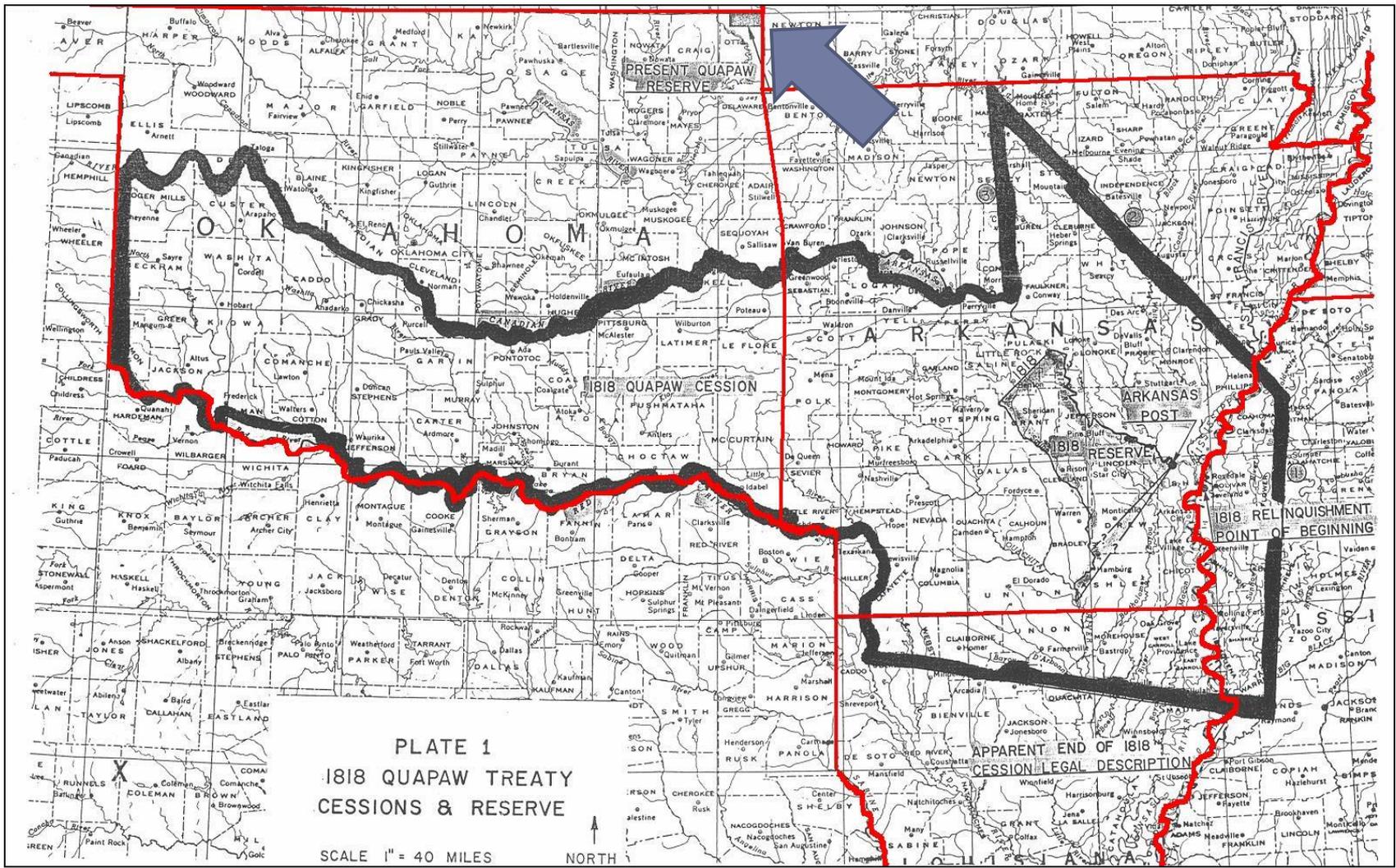


PLATE 1
1818 QUAPAW TREATY
CESSIONS & RESERVE

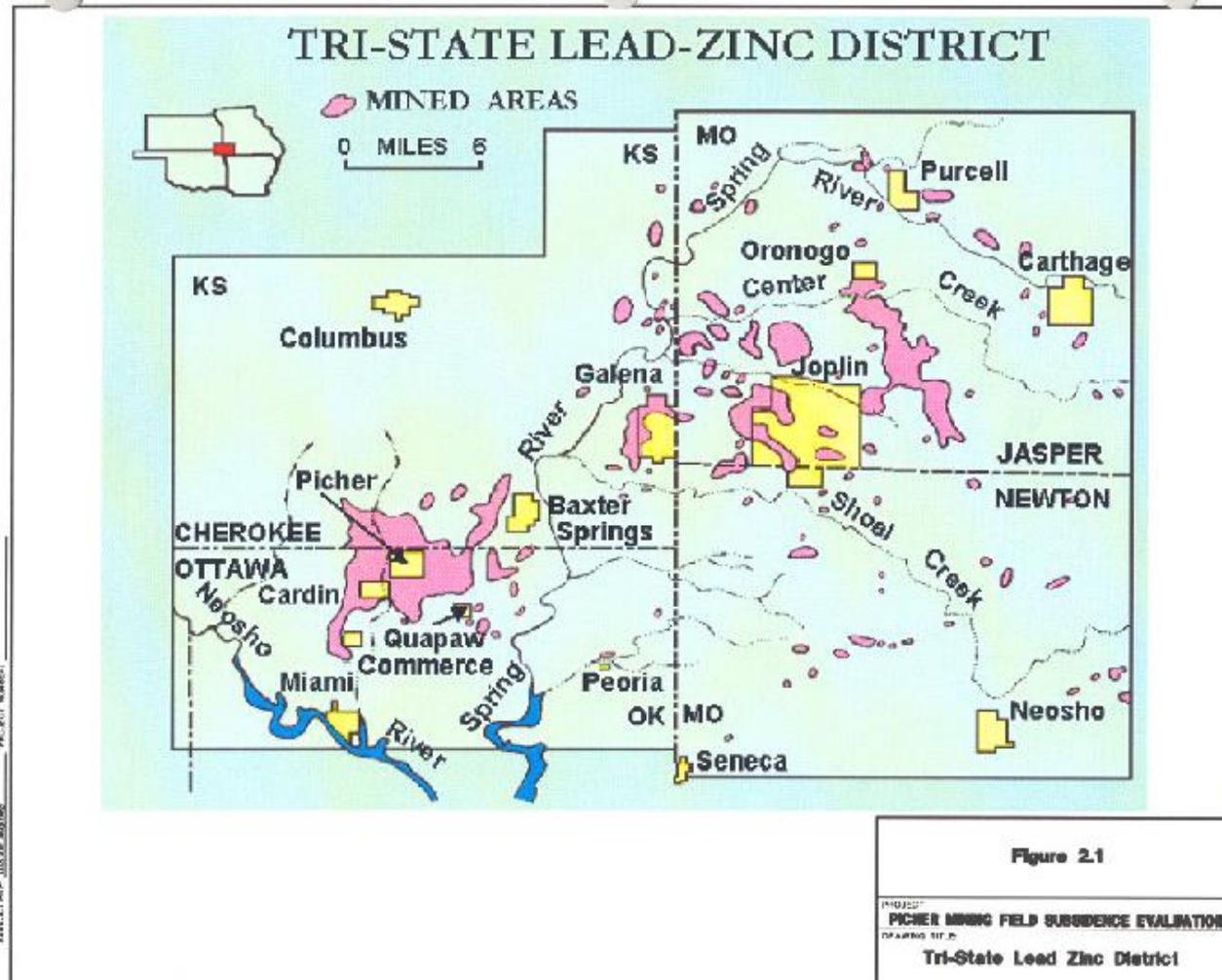
SCALE 1" = 40 MILES NORTH

TAR CREEK SUPERFUND SITE

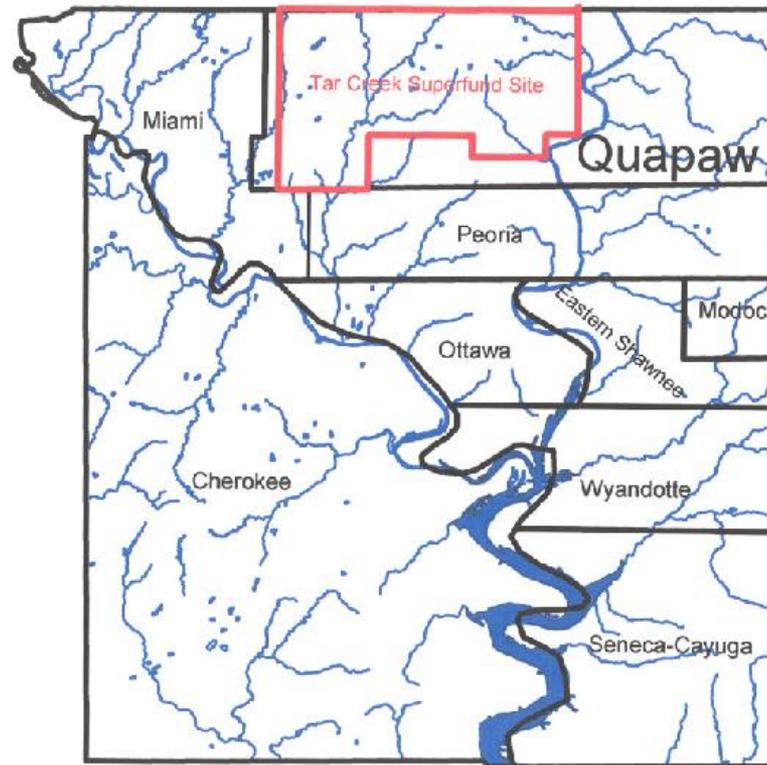
- Tri-State Mining District
- Mining began in the area during the late 1800's and lasted until approximately 1970
- Mining and milling of ore (primarily lead and zinc) produced more than 500 million tons of waste in area
- Two primary types of wastes from mining processes: chat and fine tailings



TAR CREEK SUPERFUND SITE



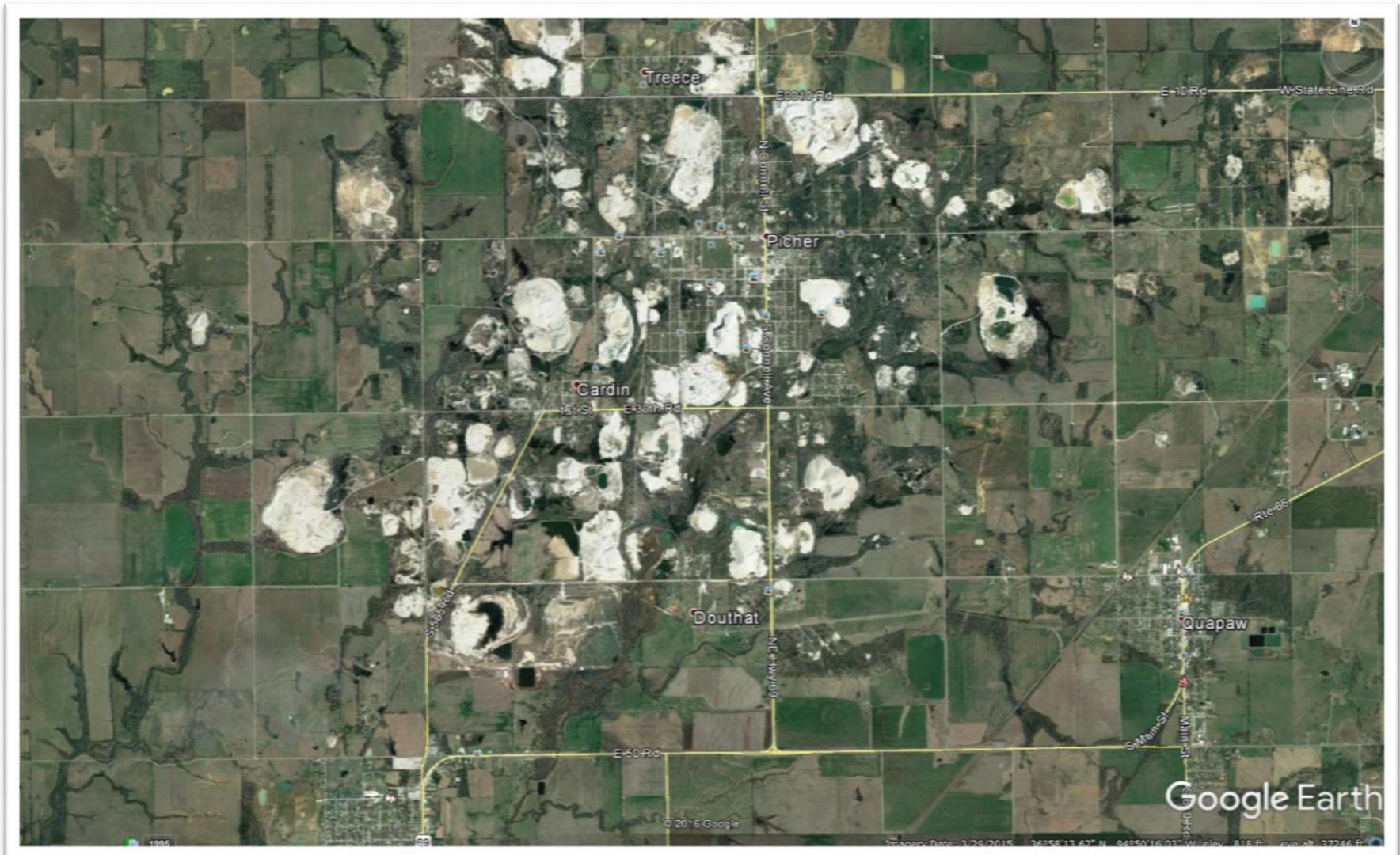
TAR CREEK SUPERFUND SITE



TAR CREEK SUPERFUND SITE



TAR CREEK SUPERFUND SITE



TAR CREEK SUPERFUND SITE



FOR EVERY 1 TON OF ORE
EXTRACTED, APPROXIMATELY 16 TONS
OF CHAT AND TAILINGS WAS LEFT
BEHIND

TAR CREEK SUPERFUND SITE



Operable Unit 4 Record of Decision

- Operable Unit 4 (OU4) consists of “source material” which includes mine tailings (“chat”), smelter waste, and fine tailings
- The Remedial Investigation and Feasibility Study RI/FS for OU4 included a “tribal use scenario” and resulted in Pre-Remedial Goals:
 - Lead- 500 mg/kg
 - Cadmium- 10 mg/kg
 - Zinc- 1100 mg/kg
- Record of Decision (ROD) for OU4 signed in 2008

Operable Unit 4 Record of Decision

- Remedial Action (RA) at OU4 began in 2009
- RA consisted of excavating chat in uplands, disposing of chat in repository, sampling soils (down to 12 inches) beneath the excavated chat, and analyzing samples for Pb, Cd, and Zn
- Soils exhibiting metals above PRGs were excavated and disposed of in repository.

QUAPAW TRIBE INVOLVEMENT AT TAR CREEK

- Working together with EPA and other stakeholders on Tar Creek issues over the past 15 years has enabled the Quapaw Tribe Environmental Office to develop the technical capacity required to administer a remedial response cooperative agreement.
- Consequently, in 2013, the Tribe negotiated a remedial response cooperative agreement with EPA Region 6 to self-perform the remediation of an historic and culturally significant tribal property known to the Quapaw as the “Catholic 40.” This is the first-ever Tribal-led Superfund Cleanup in the nation.

REMEDIAL ACTION ACTIVITIES

CATHOLIC 40

- “Catholic 40”
- Tribal Trust Land
- 40-acre parcel owned by the Quapaw Tribe of Oklahoma and was set aside in 1892 to the Catholic Church for religious and education purposes. In that same year, St. Mary’s of the Quapaw, a Catholic Church, a cemetery, and a boarding school was established.
- St. Mary’s operated up until 1927, following abandonment, the church leased the property for mining in 1937.
- In 1975, the Catholic Church deeded the property back to the Quapaw Tribe of Oklahoma.



REMEDIAL ACTION ACTIVITIES

CATHOLIC 40

Heritage Study of Tar Creek/Picher Field, Ottawa County, Oklahoma

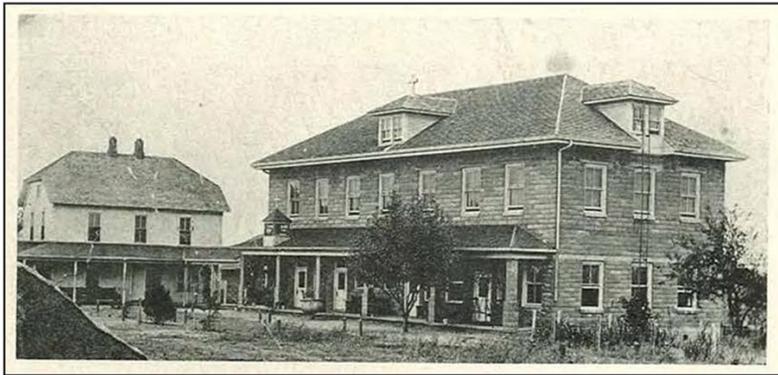


Figure A-5: St. Mary's of the Quapaw School, post-1915
NOTE THE LARGE CHATCRETE STRUCTURE CONSTRUCTED 1915 (PHOTO FROM NIEBERDING 1953).

Heritage Study of Tar Creek/Picher Field, Ottawa County, Oklahoma



Figure A-3: St. Mary's of the Quapaw School, undated. Note the same 2-story building as in the previous figure and small building that may have been John Quapaw's school.
(Photo from Quapaw Pow-wow Program, 1990)



Figure A-4: St. Mary's of the Quapaw School photo showing the reverse side of the same buildings as the previous photo (photo courtesy of the Dodson Museum, Ottawa County Historical Society).



Figure A-6: St. Mary's of the Quapaw School, post-1915. View of the school toward the south showing the 1915 three story building and two-story frame building (photo courtesy of the Dodson Museum, Ottawa County Historical Society).

REMEDIAL ACTION ACTIVITIES

CATHOLIC 40

Heritage Study of Tar Creek/Picher Field, Ottawa County, Oklahoma

A.3.2. Building 2: St. Mary's of the Quapaw school, three-story school and dormitory.



Figure A-8: St. Mary's of the Quapaw school, Building 2 (1915 Dormitory Building), view northwest of fallen wall section and interior floor support walls.



Figure A-9: St. Mary's of the Quapaw school, Building 2 (1915 Dormitory Building), view east of interior wall frame fallen into the interior of the structure.

Heritage Study of Tar Creek/Picher Field, Ottawa County, Oklahoma

A.3.7. Building 8: St. Mary's of the Quapaw school, chapel/classroom/dorm



Figure A-18: St. Mary's of the Quapaw school, Building 8, view south of north façade with upper stairway landing with arched entrance of stairway to lower story. Alcove at right may have been for firewood.



Figure A-19: St. Mary's of the Quapaw school, Building 8, view southwest of the east elevation and part of the north façade.

REMEDIAL ACTION ACTIVITIES

CATHOLIC 40

- The Quapaw Tribe Environmental Office, retained the services of a consulting engineering firm to assist in generating plans and specifications, and other pre-construction documents.
- Remedial Action began in December 2013 and involved: excavation, hauling, and disposal of approximately 107,000 tons of source material (chat).



REMEDIAL ACTION ACTIVITIES

CATHOLIC 40



REMEDIAL ACTION ACTIVITIES

DISTAL 6a

- SE Distal Zone, Distal 6a
- Unrestricted Property
- State-led project, with the request that the Tribe do the remediation work through an intra-agency agreement, another national first
- Adjacent to “Catholic 40” property
- Remedial Action began in June 2014 and involved: excavation, hauling, and disposal of approximately 83,000 tons of source material



REMEDIAL ACTION ACTIVITIES

DISTAL 6a



REMEDIAL ACTION ACTIVITIES

DISTAL 6a



REMEDIAL ACTION ACTIVITIES

DISTAL 6a



Same soil amendment activities as conducted at “Catholic 40”

REMEDIAL ACTION ACTIVITIES

DISTAL 6a

- Once the Catholic 40 project was complete EPA agreed that the Tribe should take the lead on the remainder of OU4 remediation on Tribal land within the Tar Creek site.
- Similarly, once the Distal 6a project was complete the State of Oklahoma (ODEQ) requested the Tribe perform remediation, with ODEQ oversight, on the remainder of OU4 remediation on private land within the Tar Creek site.

TOTAL TONS REMOVED BY TRIBE SO FAR

Catholic 40	107,310
Beaver Creek North	60,193
Distal 6a	83,838
Distal 7 North	3,515
Beaver Creek URT1	103,667
Distal 13	730,704
Distal 10-12	355,553
Elm Creek UTR1	95,047
Total	1,539,829
2018 1 st quarter	140,042

Environmental Justice

- How are the Tribe, EPA, and the State of Oklahoma helping to address environmental injustices of the past at the Tar Creek site?
 - LICRAT buy-out to help residents relocate.
 - Helping to build capacity within the Tribe to enable the Tribe to drive the cleanup process on tribal land and enable the Tribe to employ tribal members to conduct the cleanup, while also benefitting the local economy.
 - Cleanup itself is putting tribal land back into productive use, which helps stimulate the local economy.

Environmental Justice

- How are the Tribe, EPA, and the State of Oklahoma helping to address environmental injustices of the past at the Tar Creek site?
 - EPA funding assists the Tribe in identifying and protecting culturally significant features/artifacts during remedial action
 - “Chat Rule” promulgated by EPA allows tribal chat sales to occur as part of the cleanup of OU4, thereby allowing tribal members to benefit from chat sales as non-tribal companies/chat owners have for decades.

THANK YOU!!!

QUESTIONS and/or COMMENTS???

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