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Susan Mosier, MD, Secretary

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April 1, 2016

Ms. Sherry Wilson, Acting Director
Office of Surface Mining Reclamation and Enforcement
Tulsa Field Office
1645 South 101st East Avenue, Suite 145
Tulsa, Oklahoma 74128-4629

RE: Unit 28 Slurry Stabilization Reclamation Project
Request for Authorization to Proceed

Dear Ms. Wilson:

Enclosed is the Environmental Assessment for the Unit 28 Slurry Stabilization Reclamation Project on PAD # KS-0218. Included are copies of the consultation letters from the appropriate agencies. The purpose of this project is to abate hazards associated with clogged stream lands within a Mined Land Wildlife Areas in Cherokee County. The project is being done in conjunction with Watershed Grant funding awarded to Southeast Kansas Resource Conservation and Development (See-Kan RC&D).

As we are anticipating beginning construction in the later summer of 2016, please expedite this request for an Authorization to Proceed. If you have any questions, please contact myself or Marlene Spence of my staff.

Sincerely,

Murray J. Balk, Chief
Surface Mining Section

C: File w/encl
Ec: MB, MNS w/o encl.

Encls.

MJB:MNS

ENVIRONMENTAL ASSESSMENT

Unit 28 Slurry Stabilization Reclamation Project

Abandoned Mine Land Reclamation Project

PAD # KS-0218

Cherokee County, Kansas



Prepared by
Kansas Department of Health and Environment
Surface Mining Section



In Cooperation with
United States Department of the Interior
Office of Surface Mining Reclamation and Enforcement
Tulsa Field Office
April 2016



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Section 1: Project Description Narrative

A. Description of the Proposed Action

The Kansas Department of Health and Environment (KDHE), Surface Mining Section (SMS), has developed an abandoned mine land reclamation project, hereafter referred to as the Unit 28 Slurry Stabilization Reclamation Project. The project is to be accomplished as a part of a partnership agreement with the Southeast Kansas Resource, Conservation & Development (See-Kan RC&D), the Kansas Department of Wildlife, Parks and Tourism (KDWPT), the United States Department of Interior, Office of Surface Mining Reclamation and Enforcement (OSM), Cherokee County, Kansas and KDHE-SMS. See-Kan RC&D has been awarded a Watershed Cooperative Agreement Grant from OSM which will cover a portion of the cost. The remaining funding will be from abandoned mine land grant monies awarded to the State of Kansas. The OSM Tulsa Field Office Director, must issue an authorization to proceed with the Unit 28 Slurry Stabilization Project in order to accomplish the purpose described below.

Pittsburg & Midway Coal Company's Mine 19 was located in southwest Cherokee County, Kansas. The preparation plant at the mine had approximately 85 acres with six impoundments into which it discharged fine coal waste slurry for disposal, as well as recycling water. Four of these impoundments, which cover approximately 65 acres on the southeast and southwest portions of the disposal area, were elevated approximately 20 feet above two lower impoundments. The two lower impoundments were built along Deer Creek (a perennial stream with approximately 11 square miles of watershed) and were relatively free of slurry at the time the mine was shut down. After a few decades of mining, the land owned by the coal company was donated to the State of Kansas, Kansas Fish and Game Commission (now KDWPT), for use as wildlife areas in 1981 and is now part of Mined Land Wildlife Area (MLWA) Unit 28.

After the mined land was donated to the State of Kansas, maintenance at the site ceased. The slurry ponds at Mine 19 are listed on the SMS's Abandoned Mine Land Inventory System (AMLIS) as being hazardous (primarily as dangerous embankments and clogged streams), as well as potential environmental problems.

The purpose of the Unit 28 Slurry Stabilization Reclamation Project is to eliminate the public health and safety problems associated with Priority 2 clogged stream lands at the location of the project in Section 5, Township 33 South, Range 22 East, and Section 32, Township 32 South, Range 22 East in Cherokee County, Kansas and as located on the U.S.G.S Oswego, Kansas 7.5 minute quadrangle. There is one general project area which have been identified in the AML Inventory as Problem Area Description (PAD) # KS-0218 (37.206020°, -95.027252°). The problem area is the result of surface mining and processing of the Mineral, Fleming and possibly Croweburg coal seams at the Pittsburg & Midway Coal Company's Mine 19 tippie site.

The Unit 28 Slurry Stabilization Reclamation Project will involve site specific solutions to eliminate safety hazards. Work will be done to alleviate the hazards associated with the clogged stream lands within KDWPT MLWA Unit 28. Various water control structures will be installed as needed to implement the reclamation plan. All disturbed areas will be revegetated with appropriate species. Erosion control devices will be placed and remain in place until acceptable vegetative cover has been achieved. Mitigation for wetland disturbances will be completed on the project site within MLWA Unit 30 which is owned by the KDWPT.

Since the cessation of mining and maintenance on the site, the discharge pipes between the slurry impoundments failed and breaches developed in three of the upper embankments which allowed slurry to wash into the lower impoundments. This kept it from being discharged off the mine site into Deer Creek. However, in May 2004, the SMS was informed by the KDWPT and Cherokee County officials that there had been a significant slurry spill from the Mine 19 site into Deer Creek with at least a mile of stream contaminated by fine coal waste slurry. Since the time of that spill, multiple projects have been completed at the site to remedy the situation and successfully maintain the slurry on site. These included:

- The breaches between the upper slurry cell embankments were repaired and chimney drains were installed on two embankments to allow water to move through the system without carrying slurry material. A new spillway replaced failed pipes on the other slurry cell.
- A new discharge point was installed on the lower impoundment to provide for discharge of high flows of water.
- A containment berm was installed on the lower cell with open channel spillways installed to allow the movement of water while trapping slurry.
- A short section of Deer Creek was relocated away from the toe of the lower slurry cell embankment to prevent undercutting and potential failure of the embankment. At the same time, the floodplain of the creek in this location was reestablished and the dam reinforced.

At this time, slurry has been contained and is not entering the creek but due to the light weight nature of the material, it continues to move and seek equilibrium. The previous projects have successfully prevented the slurry from short circuiting out of the impoundment and the relocation of Deer Creek and reinforcement of the slurry impoundment dam continue to be stable. As the slurry material moves it is filling the next impoundment in the system. At the present time, a rodent (beaver or muskrat) dam is in place and this is the only thing that is keeping the slurry from again short circuiting to Deer Creek. The SMS is proposing to replace the rodent dam with a constructed embankment and provide a spillway outlet at the opposite end of the impoundment for the water that is currently discharging from the system allowing slurry material to settle in the storage area of the impoundment. Additionally filter strips of clay or mine spoil vegetated with grasses will be placed in various locations across the upper and lower cells to again help contain the slurry material on site. Geotextile fabric will be used to bridge the slurry during the placement of the filter strips. The filter strips will include spillways lined with sized rock to control the flow of water through the system. The remaining portions of the strips will be vegetated with warm season native grasses.

The previous work was completed as a cooperative effort between See-Kan RC&D, Cherokee County, the KDWPT and the SMS. The See-Kan RC&D applied to, and received, a Watershed Cooperative Agreement grant from OSM. With this grant, along with additional project funding (both cash and “in-kind” contributions) from the partners, the See-Kan RC&D was able to proceed with construction to address the problems that created the slurry spill. The SMS participated by “donating” engineering, inspection and construction management services.

The Surface Mining Section (SMS) of the Kansas Department of Health and Environment, Division of Environment, Bureau of Environmental Remediation, is the agency responsible for the reclamation of abandoned coal mines in Kansas under the Surface Mining Control and

Reclamation Act of 1977 (P.L. 95-87). To this end, Federal funds are available through OSM for the reclamation of priority one and two problems which are hazards to the health and safety of the public. The See-Kan RC&D has once again been awarded Watershed Cooperative grant monies from OSM and will partner again with the same groups to complete the latest reclamation project.

B. Need for the Proposed Action

The proposed action is necessary to insure the health and safety of the general public along Deer Creek just northwest of Hallowell, Kansas. The land where the hazards are present is publically owned and managed by the Kansas Department of Wildlife, Parks and Tourism (KDWPT) and reclamation addresses public health and safety issues. The site where mitigation work will be completed for wetland disturbances is a part of the same public use areas. The most common hazards associated with the past mining on the Unit 28 Slurry Stabilization Reclamation Project area are 24 acres of Priority 2 clogged stream lands associated with the slurry impoundment located adjacent to Deer Creek. The impoundment is at capacity and previous projects have been completed to prevent the failure of the embankment that contains the slurry. Due to the lightweight nature of the material, the water flowing through the slurry impoundments continues to move quantities of the material to lower impoundments. At this time there is a small rodent embankment in place in one of the lower slurry cells that is preventing the material from short circuiting to the adjacent stream, Deer Creek. If this small embankment fails, the slurry will enter Deer Creek and possibly pollute water supplies for downstream communities.

Priority 2 - Clogged Stream Lands

Site KS-0218 is located two miles west and two miles north of Hallowell, Kansas on NW 110th Street between Center Star Road and Bethlehem Road. There is one general area within this PAD which consists of 73 acres of Priority 2 Dangerous Piles and Embankments, 24 acres of Priority 2 Clogged Streams Lands. This project will address 24 acres of Priority 2 Clogged Stream Lands. Site KS-0218 is a part of KDWPT MLWA Unit. 28. Wetland mitigation will be conducted on adjacent MLWA Unit 30.

C. Alternatives Considered

Alternative 1: Issue an authorization to proceed with the proposed project.

Under this alternative, the OSM, Tulsa Field Office Director, would authorize construction activities in the amount of \$800,000 for use by the SMS in implementing the Unit 28 Slurry Stabilization reclamation proposal described in the following:

In order to create a more permanently stable site, the SMS proposes to:

1. (See Project Diagram) Stabilize the slurry in Cells A, B, and E by installing filter strips of borrow material from the designated areas. The strips will have 16 foot wide tops with 4:1 side slopes and riprap spillways to allow for the movement of water through the system.
 - a. Borrow Area 1(Primary Borrow) is approximately 8 acres in size and is a poorly functioning wetland. There is a berm in place around three sides of the wetland with a stoplog structure to control water elevation. Excavation would include removal of the berm and materials inside the berm to create a deeper incised wetland.

Excavation will be staged to keep the water in the wetland cell. Sediment will be held on site since the structure is incised. Silt fence would be installed along the downstream perimeter of the structure. A new culvert will be installed under the county road in order to direct additional watershed into the wetland cell.

- b. Borrow Area 2 (Additional Borrow) will only be used if needed and is adjacent to an NPDES sedimentation pond (Ricci Mining Fleming Mine 19: I-NE75-PO01) used by the now defunct mining operation. Material taken from this area would be excavated below the existing grade to create a wetland cell adjacent to the pond. Discharge would be through the existing sedimentation pond or alternative sediment control where needed.
2. Reroute the discharge from the settling pond that is presently being filled with slurry by installing a dam embankment at location 1 and building a new discharge spillway for the pond at location 2. The embankment (plug) will have a 16 foot wide top at an elevation of 830.0 with 4:1 side slopes.
3. Install various spillways on the filter strips to route the water through the system using prudent engineering methods to determine the size, configuration and material necessary to create a non-erodible structure.
4. Vegetate disturbed upland areas to warm season native grasses and forbs beneficial to the long term wildlife management plan of the area by KDWPT. The main area of reclamation is approximately 69 acres with an additional 8-11 acres of borrow in two locations for a total of 80 acres. Disturbance for access to the area will be about 4 acres. The total disturbance will depend on the number and final configuration of filter strips installed which will be based on the project bid but is anticipated to be less than 25 acres.

The project is divided into a main construction site and two borrow areas. The main construction site is approximately 69 acres and the two borrow areas total 11 acres for a total of 80 acres. Disturbance will be limited to access areas (4 acres), borrow (11 acres) and filter strips (+/- 10 acres) The final land use will include +/- 25 acres of warm season native grass habitat in the disturbed areas and 11 acres of wetlands if all borrow areas are utilized. All borrow areas will be limed, fertilized, seeded and mulched unless inundated with water where the post construction land use is wetland.

The native soil at the main construction sites was removed and buried during mining operations. Mine spoil exists which is a mixture of the material above the mined coal seam. Spoil typically consists of clay, shale, limestone, and sandstone in varying amounts. Any materials encountered which are deemed suitable for a growing medium will be salvaged and reused. The mine spoil is classed as Kanima silty clay loam. There is a small undisturbed area of Hepler silt loam indicated on the NRCS soils map that if encountered will be salvaged and used for growing medium to improve vegetative response. The "A" Horizon soils in the Borrow 1 (Primary Borrow also known as the Anselmi Marsh) area were previously removed by KDWPT in the initial construction of the wetland and are contained in the adjacent berm. Reclamation will include replacing these soils in the wetland cell for use as a growth medium. All disturbed areas will be revegetated to help offset the loss of the variety of woody and herbaceous species that were present on the overburden before reclamation.



Clearing and grubbing activities will be limited to the fall and winter months in order to avoid the major migratory bird nesting activity which, in Kansas, occurs during the period of April 1 to July 15. Should proposed construction take place during the nesting season, a field survey of the affected habitats and structures by qualified personnel will be done in order to determine the presence of active nests. Should construction work uncover any buried archeological materials, work will cease and the SHPO will be contacted. KDWP has determined that a Threatened and Endangered Species Permit is not required because the project will not carry any significant impact on any T&E species or their habitats. Documentation of consultation with those agencies which were contacted and did not require specific permits can be found in Section 2.

The reclamation plan discussed in Alternative 1 requires a Storm Water Pollution Prevention Plan. KDHE, Bureau of Water has issued a Stormwater Construction Permit for the project (KS Permit No. S-NE75-0010, Federal Permit No. KSR111716). Activities involving wetlands are authorized by a 404 permit issued by the U. S. Army Corps of Engineers (COE) (Authorization MRKGP No. GP31K, Permit # NWK-2016-00389).

KS-0218 (MLWA Unit 28): This problem area includes 73 acres of Priority 2 Dangerous Piles and Embankments and 24 acres of Priority 2 Clogged Stream Lands. The inventory also includes 10 acres of Priority 2 Clogged Stream Lands completed under a Watershed agreement between See-Kan RC&D and OSM.

The primary goal of the reclamation is to address the 24 acres of Priority 2 Clogged Stream Lands. Work in MLWA Unit 30 will be to improve and create mitigation wetlands for the project. Before and during grading operations, temporary devices will be used to control erosion and minimize sediment transport. Erosion control devices will remain in place until acceptable vegetative cover has been achieved. Existing ditches which are to remain and newly constructed ditches will be protected with either vegetative cover alone, temporary or permanent erosion control mat and vegetation or with riprap depending upon the anticipated design flows and velocities. After grading is complete, “permanent” erosion control devices will be installed as shown on the plans.

The project will impact both isolated and jurisdictional wetlands. Field investigations conducted by the SMS indicated project activities would impact a total 0.1 permanent acres and 5.5 temporary acres. In order to compensate for the loss of waters of the United States, KDHE will mitigate with the replacement of the 5.5 acres of palustrine emergent wetlands. Mitigation will be completed on site concurrent with reclamation.

Sedimentation control may include silt fences, hay bale dikes, bio-logs or combination barriers consisting of a hay bale dike backed up by a silt fence. Riprap and revegetation mat will be installed to control erosion. Other construction includes fertilizing, liming, seeding, and mulching.

The surface material on some project areas, which is a combination of rock and silt/clay material mixed together from mining operations, will be tested and treated with lime to buffer any acid producing materials that would impede revegetation efforts. In the primary borrow area of the Anselmi Marsh, the material to be used will be clay subsoils. Topsoil was previously stripped is in the berm surrounding the marsh. This topsoil material will be replaced in the wetland for growth medium. For disturbed upland areas, an application of mulch will be applied with the lime to replace organic materials. All disturbed areas will be revegetated with warm season native species to help offset the loss of the variety of woody and herbaceous species that were present before reclamation. Erosion control fabric will be installed on erosion sensitive areas.

A USFWS IPaC consultation generated a list of six species to be considered on the project area. Of those species, the federally listed Northern long eared bat, *Myotis septentrionalis*, appeared to be the only species with potential habitat that will be disturbed. Construction work will eliminate existing trees including those with diameters greater than 9 inches. Dead trees with peeling bark are scattered throughout the area in addition to the living trees. Construction will be timed to avoid the period of April 1 to October 31. All tree clearing and stockpiling work will be performed between November 1 and March 31. This will avoid the time period for not only the Northern long eared bat, but also the gray bat and any migratory birds. Should timing allow, an acoustic bat survey will be conducted in consultation with the USFWS to ascertain presence or absence of the two *Myotis* species. The USFWS found this plan acceptable.

A review of the Kansas Department of Wildlife, Parks and Tourism website, Cherokee County list of Threatened and Endangered Species was conducted. All species with critical habitat in

Cherokee County were considered with the following species being considered as potentially present due to their wetland or upland nature: *Notophthalmus viridescens*, *Myotis grisescens*, *Gastrophryne carolinensis*, *Eurycea longicauda*, and *Lithobates clamitans*. Based on the description of the Designated Critical Habitats as listed by KDWPT, none of these species should be present on the project area. The KDWPT did not require any permit. Section 2 contains consultation documentation from both agencies.

Clearing and grubbing activities will be limited to the period of November 1 to March 31 to avoid Migratory Birds, northern long eared bat and the gray bat. Recommendations of the USFWS and the USACOE regarding equipment washing to prevent spread of invasive species will be implemented. Recommendations of the KDWPT including minimizing removal of native upland and riparian vegetation, implementation of standard erosion control best management practices and temporary weed-free seeding/mulching to protect water quality during construction and the use of warm season native species will be followed. There will be no in stream work so the recommendation for minimization of any in stream construction during the spawning dates of May 1 through July 31 is noted, but not applicable. The SMS worked with the MLWA Manager in the design of the project and will continue to work with them to coordinate construction activities.

Should construction work uncover any buried archeological materials, work will cease and the SHPO will be contacted. Documentation of consultation with those agencies which were contacted and did not require specific permits can be found in Section 2.

The reclamation plan discussed in Alternative 1 requires a Storm Water Pollution Prevention Plan. KDHE, Bureau of Water has issued a Stormwater Construction Permit for the project (KS Permit No. S-NE75-0010, Federal Permit No. KSR111716). Activities involving wetlands are authorized by a 404 permit issued by the U. S. Army Corps of Engineers (COE) (Authorization Permit # NWK-2016-00389. For work on floodplain areas in Cherokee County, a floodplain development permit was issued (Permit February 2015). Section 3 contains documentation of consultation with agencies where permits were required with maps included in Section 4.

Although most work is being done within the MLWA, construction access and traffic may require short term intermittent closure of NW Center Star road from the east. At this location, NW Center Star Road is a dead end which accesses a MLWA and no residences are present. The SMS will work with KDWPT to close this MLWA during the hours of active construction. Should access to the MLWA for emergency personnel be required, the county will be given direct contact information of the contractor. Use of NW Center Star Road will be for hauling of borrow materials only and with only minor excavation activities for the placement of a small culvert. Local authorities will be notified in advance to allow for rerouting of emergency vehicles. Site access is also available from the west on a KDWPT access road within the MLWA and just off of NW 110th Street. The contractor will be responsible to comply with all state and county traffic laws while construction of the project is in progress.

A Storm Water Pollution Prevention Plan will be kept on the project site. Runoff water from construction activities will be directed into existing strip pit ponds, or through filter fence, or grass filter strips. Any damage to vegetation inadvertently caused by construction vehicles will be repaired.

Upon SMS acceptance of the work, the contractor will receive final payment, and following a one year guarantee period, be released from further contractual obligations. However, the SMS will continue to monitor the site to ensure that all problems have been corrected and that the vegetation on the site has been sufficiently established to control erosion. The SMS will also complete the long term monitoring and reporting requirements of the Corps of Engineers 404 permit.

All areas except water surfaces and rock areas will be seeded. There are less than 80 acres in the project of which +/-25 acres will be seeded to a warm season native grass mix. The final land use will be warm season native grass habitat, wetland, water, and access roads.

All construction activities are expected to be completed within one year from the date of issuance of the Notice to Proceed. Some of the vegetation mitigation measures may be delayed to the appropriate seeding time frames dependent upon the completion date of construction activities. Mitigation for wetlands will take place on the project site. Much of the existing site which has been drastically altered by past mining will not be disturbed, thereby minimizing the overall impact to existing vegetation, wildlife and aquatic habitat.

Alternative 2: Do not issue an authorization to proceed with the proposed project [No Action].

Under this alternative, the OSM, Tulsa Field Office Director, would deny the use of Federal funds in the amount of \$800,000 to implement the abandoned mine land reclamation proposal described above under Alternative 1. As a result, the current conditions would remain uncorrected and the situation would worsen over time. Preliminary investigations conducted by the SMS indicate that the slurry material would continue to move and will remain a concern and a hazard to the general public. Above all, the potential for injury to the public would remain high.

Alternative 3: Other reasonable alternative(s)

No additional alternatives were considered.

D. Affected Environment

1. General Setting: The Unit 28 Slurry Stabilization Reclamation Project is an Abandoned Mine Land Reclamation Project located in Section 5, Township 33 South, Range 22 East with wetland mitigation activities planned in Section 32, Township 32 South, Range 22 East in Cherokee County, The land is publically owned and managed by the Kansas Department of Wildlife, Parks and Tourism for public recreation. The problem areas are the result of surface mining and processing of the Mineral, Fleming and possibly Croweburg coal seams in the mid 1950's through the early 1970's.

In Section 5, the abandoned mine land is used for recreational purposes, primarily hunting. Because of a previously active carbon recovery operation, the area was closed to all activities for a time, but has been reopened. Prior reclamation work included work being completed on the slurry cells in the problem area to curtail the discharge of coal slurry into the receiving system and the relocation of a portion of Deer Creek with the

adjacent embankment being stabilized. The tippie site was re-permitted as a carbon recovery facility and bond forfeiture reclamation continues on those areas that were covered by the bond for the coal processing permit CK-PF-1301.

The area is well vegetated with a diverse array of woody and herbaceous species and consists of rough, irregular piles of overburden, an embankment on the slurry impoundment and a portion of Deer Creek. The slurry cells have little to no vegetative cover over most areas. Previous attempts by P&M to cover the slurry resulted in some areas having enough growth medium present for the establishment of some native grasses and trees. Erosion on the slurry continues to be problematic and materials move through the system with rainfall events. The lower slurry cells hold water a sufficient period of time that cattails have formed in some areas.

A pit impoundment to the east of the lower slurry cell is water filled with tests showing the pH of the water to be above 6. To the north of this impoundment, the spoil ridge is comprised of mainly acid/toxic forming materials as shown by the lack of vegetation.

Water that leaves this impoundment flows to the west to Deer Creek. The current drainage is blocked by a rodent dam that slows the flow sufficiently for the slurry materials to drop out into the impoundment before entering the creek. Should this rodent dam fail, slurry will flow directly to Deer Creek. At the east end of this impoundment, there is an area adjacent to the spoil ridges where overland flow could be directed north to the riprap channel that drains Pond 1 on permit CK-PF-1301. This riprap channel flows into an existing pit impoundment which in turn drains to Deer Creek. Wetland areas are present along access roads and at the end of pit impoundments. The area designated for borrow is a wetland marsh constructed by KDWPT. Drainage from the site will directly enter Deer Creek which joins with Lightning Creek before flowing into the Neosho River to the southwest. A slurry release into the creek would affect downstream users of the public water supply.

Site hydrology, topography, and soil structure have been drastically altered by past mining activities. Most of the area has an irregular surface, not characteristic of the spoil ridges and valleys typical of area strip mining, but with rapid elevation changes and absence of surface soils. Surface runoff is rapid on the high areas and there are isolated pocket wetlands. The topography varies with the bottom of the existing stream channel being 15-20 feet lower than some of the adjacent spoil ridges. Geologic and geomorphic patterns within the area are characterized by early development that is advancing towards the formation of a stable landform. When the water level in Deer Creek decreases the slopes are lined with *Lippia lanceolata* and *Polygonum pensylvanicum*. Further up the banks can be found a variety of vegetation including *Salix nigra*, *Chasmanthium latifolium*, *Vitis riparia*, *Maclura pomifera*, *Fraxinus pennsylvanica*, *Ulmus americana*, *Celtis occidentalis*, and *Quercus palustris*. Common tree and shrub and herbaceous species on the spoil ridges include elm, dogwood, locust, cottonwood, poison ivy, snakeroot, goldenrod, thistle, indiagrass, big bluestem, as well as an abundance of sericea lespedeza.

About 50% of the total area in Section 5 has been affected by surface mining activities including the area permitted as CK-PF-1301 and now in bond forfeiture reclamation. The

remaining land includes pasture, cropland, residential, and wildlife habitat. Within about one-half mile to the northwest of the project location is an explosive underwater testing facility. About one mile to the southeast is a private hunting lodge specializing in skeet, trap and hunting. In Section 32, about 75% of the total area has been affected by surface mining activities. The remaining land includes cropland, residential, wildlife habitat and a cemetery. The Trout Pit and Seven Corners Abandoned Mine Land reclamation projects are located in this section.

The project site is located about two miles north and two miles west of Hallowell, Kansas. The areas are valued for the wildlife habitat land use and the attendant recreation use. Reclamation of the site will maintain the current land uses of public hunting and recreation. The area will be seeded to a warm season native grass and forbs mix on +/- 25 acres. Wetland vegetation will be allowed to propagate naturally from adjacent seed sources.

2. Other Affected Resource Values, including Special Areas of Consideration

a. Historic and Cultural Resources: The Kansas State Historical Society has reviewed the Unit 28 Slurry Stabilization project area for historic and cultural resources, and determined that there are no historic or archeological sites within the area.

b. Hydrology: Water exits the project site via Deer Creek to the west. It continues in a west/southwest direction entering additional abandoned mine land strip pit impoundments before joining with Lightning Creek. Lightning Creek eventually joins the Neosho River. The on-site water quality and quantity is good (pH range of 6.0 to 7.0).

Wetlands exist which are considered jurisdictional waters of the United States. The United States Army Corps of Engineers has authority over wetland/stream issues. The areas along Deer Creek and onto the project site are considered a part of Flood Zone A according to the Federal Emergency Management Agency (FEMA) flood map.

c. Vegetation: The project site is located in an area of abandoned mined land with much of the surrounding area also in unreclaimed spoil. The project site is vegetated with a variety of warm season native grasses, cool season introduced grasses and both desirable and undesirable forbs. There are jurisdictional wetlands and a perennial stream present. Water tolerant and hydrophytic plant species can be found adjacent to the water bodies and in low lying areas, while upland species grow on droughty spoil ridges. Slurry areas are devoid of vegetation for the most part.

When the water level in Deer Creek decreases the slopes are lined with *Lippia lanceolata* and *Polygonum pennsylvanicum*. Further up the banks can be found a variety of vegetation including *Salix nigra*, *Chasmanthium latifolium*, *Vitis riparia*, *Maclura pomifera*, *Fraxinus pennsylvanica*, *Ulmus americana*, *Celtis occidentalis*, and *Quercus palustris*. Common tree and shrub and herbaceous species on the spoil ridges include elm, dogwood, locust, cottonwood, poison ivy, snakeroot, goldenrod, thistle, indiagrass, big bluestem, as well as an abundance of sericea lespedeza.

d. Fish and Wildlife Resources:

1. **Threatened or endangered plant or animal species (Endangered Species Act):** The KDWPT and the USFWS have reviewed the site for potential effects to threatened or endangered species. The USFWS concurred with the determination made by KDWPT that the project will not likely significantly adversely affect any T&E species. Letters from both of these agencies are part of Section 2.
2. **Other wildlife in the area:** The area adjacent to the project is valued as wildlife habitat for whitetail deer, turkey, rabbits, as well as other mammals, birds, reptiles, and amphibians.

e. Soils: The site consists predominantly of the nonprime soil Kanima silty clay loam. Kanima soils are deep, moderately sloping to steep, well drained, moderately permeable soils on uplands that were formerly strip mined. These soils have a silty clay loam surface layer and a silty clay loam underlying layer. This map unit is classed by the NRCS as potential highly erodible (PHE). Kanima (8771) is the designation for Mine Dumps with 15-50% slope.

There is an area designated as Hepler silt loam (8101). This series is classed as being occasionally flooded. Field investigations do not show any significant areas with undisturbed soils and due to the scale of the soil survey, the actual lines may vary. The "A" Horizon Hepler soils in the Borrow 1 (Primary Borrow also known as the Anselmi Marsh) area were previously removed by KDWPT in the initial construction of the wetland and are contained in the adjacent berm. Reclamation will include replacing these soils in the wetland cell for use as a growth medium.

f. Recreational resource values: The site is used for public hunting. Portions of the area were previously closed to all activities due to the Carbon Recovery Project. The site is a part of KDWPT MLWA Units 28 and 30 and both are open as public use areas.

g. Air Quality (Clean Air Act): The project site is not in any State or locally designated special air quality zone. The primary sources that affect air quality are vehicle emissions. There are no gases or burning associated with the past mining activities. The overall air quality would be considered the same as the general region.

h. Noise: The project site is publically owned and used for recreation. The rural setting would be considered quiet. An adjacent underwater testing lab to the northwest routinely discharges explosives which can be heard on the site. Also a nearby hunting lodge provides opportunities for target shooting which can also be heard on site.

i. Topography: Cherokee County is in the Osage Plains land resource area. The geology is of the lower Pennsylvanian system. The coal beds that were mined in the area are part of the Cabaniss Formation of the Cherokee Group of rocks in southeastern Kansas. The land surface is a rolling plain and consists of low hills and broad flats. The project site was surface mined which left a number of mine dumps. A coal processing facility was later constructed with an impoundment for slurry waste from washing the

coal. There are no off-site borrows, disposals or accesses planned. The primary borrow area is part of the same overall MLWA system and as such is not considered off-site.

j. Other: Since the road immediately downstream of the dangerous pile or embankment is traveled by the general public, safety and welfare of these motorists is of utmost importance. The land being publicly owned does not affect the socioeconomic base of the surrounding community.

E. Environmental Impacts of the Proposed Alternatives

Alternative 1: Issue an authorization to proceed with the proposed project.

The proposed project would impact the following specific resource values present in and around the Unit 28 Slurry Stabilization Project:

1. Resource Values

a. Historic and Cultural Resources: The Kansas State Historical Society has reviewed the project area for historic and cultural resources, and determined that there are no historic or archeological sites within the area. Documentation is in Section 2.

b. Hydrology: The reclamation activities will not degrade the water resources of the area. During construction, sedimentation control measures will be in place. Surface stabilization of newly seeded areas will prevent adverse runoff. In order to compensate for the loss of waters of the United States, KDHE will mitigate with the creation of 5.5 acres of palustrine emergent wetland. Mitigation will be completed on site concurrent with reclamation. Activities involving wetlands are authorized by a 404 permit issued by the U. S. Army Corps of Engineers Authorization Permit # NWK-2016-00389 and found in Section 3. This permit addresses all jurisdictional water issues.

Authorization to discharge stormwater runoff from construction activities has been granted by the KDHE Bureau of Water (BOW) under KS Permit No. S-NE75-0010, Federal Permit No. KSR111716. For work on floodplain areas in Cherokee County, a floodplain development permit was issued (February 2015). Documentation is found in Section 3.

Impacts to the hydrology of the project area will be moderate in intensity, localized in context and short term in duration. Drainage and sedimentation control will be maintained throughout the project by proper sequencing of backfilling operations. All construction impacts will be temporary and short term in duration with the completion time for the project set at one year or less.

c. Vegetation: The project site is located in an area of abandoned mined land. It is surrounded by additional abandoned mined land, cropland, and a coal processing facility. Where necessary, existing vegetation will be cleared and grubbed to make grading activities possible. New vegetation on the area will include warm season native grasses that will aid in the control of sediment movement, and add to the diversity of the vegetation on site. Mitigation for wetland losses will take place on the project site. This

has been authorized by the COE under Permit # NWK-2016-00389 found in Section 3.

Existing vegetation, both desirable and noxious species, will be destroyed in the preparation of the site. Woody species will not be replaced, but will remain prevalent in the adjacent areas. Wetland species are expected to again colonize the moist areas. Seeding of desirable species will take place over the rest of the site with +/- 25 acres seeded to warm season native grasses. Impacts for all areas of vegetation will be localized in context and short term in duration with the completion within the year allowed for construction. Overall establishment of the vegetation may take up to three years on areas seeded to warm season native grasses as this is the typical establishment period. Vegetation monitoring will be a routine part of the site review for annual reporting to the Corps of Engineers. Maintenance will be on-going until the site is stable.

d. Fish and Wildlife Resources:

1. Threatened or endangered plant or animal species (Endangered Species Act): Clearing and grubbing will be done to minimize any impact to migratory birds according to the Migratory Bird Treaty Act following the recommendation of the USFWS and KDWPT. All impacts will be minor and of a short term in nature and the return of species to the site is anticipated to be non problematic. The KDWPT and the USFWS have reviewed the site for potential effects to threatened or endangered species. KDWPT did not believe that any federally or state listed T&E species occur within the project area. Letters from both of these agencies are part of Section 2. With regards to the Northern long eared bat, the USFWS made a not likely to adversely affect determination based upon the SMS limiting clearing and grubbing activities to the period of November 1 to March 31.

2. Other wildlife in the area: There will be a temporary displacement of other wildlife in the area which will be short term in duration, no longer than the anticipated one year construction period. Not all areas will be immediately disturbed, thus limiting somewhat the initial impact.

e. Soils: Grading that will be completed on the previously disturbed Coalvale and Kanima soils will result in lesser slopes with decreased tendency to erosion because of improved vegetative cover and flatter slopes. The area designated as Hepler silt loam was disturbed subsequent to the mapping of the area as topsoil was removed for the construction of the wetland berm. As part of the wetland construction, the soils in the berm will be replaced in the wetland for vegetative growth medium. Soil sampling will be completed so that the proper amendments may be applied for vegetative success on all disturbed areas. Impacts to the soils will be minor, local and short term in duration.

f. Recreational resource values: There will only be minor disruption in the use of the site which will be short in duration. Since much of the surrounding area, land and water, will be undisturbed, the effects to the fish and wildlife are expected to be of limited duration. The overall reclamation project will enhance the value for recreation by increasing the accessibility and safety of the area. Access to the public areas will be limited during only a portion of the anticipated one year construction period.

g. Air Quality (Clean Air Act): The U.S. Environmental Protection Agency established National Ambient Air Quality Standards in 1971. The KDHE, Bureau of Air, has adopted similar standards for statewide air quality protection. The legislation required air quality planning that classifies an area as “attainment” or “nonattainment”.

Nonattainment refers to those areas that do not currently meet the national air quality standards. Cherokee County is considered an attainment area meeting the national standards for appropriate air quality. The proposed reclamation site is located in a rural area dominated by unreclaimed abandoned mine lands. There may be a temporary increase in emissions on the project site due to the presence of construction equipment. This will be short term in nature and due to the limited amount of earthwork should not be noticeable. Contractors are required to keep equipment in good operating condition. Burning will not be allowed.

h. Noise: There will be a negligible increase in noise due to the presence of construction equipment, but this will be local and short term in duration.

i. Topography: There will be a minor local impact to the site topography. The backfill material that is placed will decrease the movement of the slurry material and maintain site stability. Disturbed areas will be regraded to slopes that can be seeded and maintained by mowing. Since the regrading is permanent, it is a long term, but beneficial, impact.

j. Other: The improvements to the site because of the reclamation will result in improved safety and prevention of slurry movement. This is a beneficial impact. Construction equipment will be working within close proximity to NW Center Star Road. At this location, NW Center Star Road is a dead end with no residential structures. Access to KDWPT fishing and hunting areas may be temporarily impacted however other recreational sites are located in close proximity. Temporary road closure may be required for site access. Proper signage will be placed according to Cherokee County requirements. This will be moderate in intensity, local in context and short term in duration. Emergency service response time should not be affected as adequate alternative routes are present in the area. Authorities will be contacted in advance of construction so that alternative routes, if required, may be posted.

2. Cumulative Impacts

There are no other ongoing or planned projects that conflict with the proposed action for the Unit 28 Slurry Stabilization Project site. The proposed project would be the only action impacting the resource values discussed above and these impacts will be short term.

Alternative 2: Do not issue an authorization to proceed with the proposed project (No Action):

The following resource values would be impacted if the Unit 28 Slurry Stabilization Project site is left in an unreclaimed condition:

1. Resource Values

a. Historic and Cultural Resources: No impact.

b. Hydrology: The movement of the slurry material will continue to fill up the lower impoundments with the eventual movement of the material offsite into the receiving system.

c. Vegetation: No impact.

d. Fish and Wildlife Resources: As slurry continues to move, any materials that travel into the receiving system will coat the bottom of the stream and impact the benthic community.

e. Soils: No impact.

f. Recreational resource values: The public would not benefit from the improved safety of the site. The movement of the slurry materials offsite would negatively impact the recreational resource values of the receiving system downstream.

g. Air Quality (Clean Air Act): No impact.

h. Noise: No impact.

i. Topography: No impact.

j. Other Socio-Economic: Since the area is open to the general public, their safety and welfare is of utmost importance.

2. Cumulative Impacts

Other than the proposed action, there are no ongoing or planned projects to remediate the adverse impacts of past mining at the Unit 28 Slurry Stabilization Reclamation Project site.

Alternative 3: No additional alternatives were considered.

F. Summary

The proposed Unit 28 Slurry Stabilization Reclamation Project would reclaim the public health and safety problems associated with clogged stream lands left from past surface mining at the project site. The adverse impacts from undertaking the proposed project are expected to be minimal and short-term in duration, lasting only during the twelve month reclamation period. These impacts would be mitigated as previously described. The No Action alternative would allow a continuation of a serious hazard to those using the area if allowed to go uncorrected. Therefore, it is recommended that the Tulsa Field Office issue a finding of no significant impact and an Authorization to Proceed with the Unit 28 Slurry Stabilization Reclamation Project.

G. Persons and Agencies Contacted to Assist in the Preparation of the Environmental Assessment

William Joseph, Mitch Rollings, LaChelle Harris, Office of Surface Mining Tulsa Field Office, 645 South 101st East Avenue, Suite 145, Tulsa, Oklahoma 74128-4629 (918)581-6431

Art Mallory, Cherokee County Floodplain Manager, Cherokee County, Courthouse, Columbus, Kansas 66725

Sarah Reznicek, U. S. Army Corps of Engineers, Kansas State Regulatory Office, 2710 Northeast Shady Creek Access Road, El Dorado, Kansas 67042 (316)322-8247

Jason Luginbill, Michelle McNulty, John Miesner, U.S. Fish and Wildlife Service, 2609 Anderson Avenue, Manhattan, Kansas 66502 (785)539-3474

Larry Hook, Bureau of Water, Industrial Programs Section, Curtis State Office Building, 1000 SW Jackson Boulevard, Suite 420, Topeka, Kansas 66612 (785)296-5549

Daren Riedle, Kansas Department of Wildlife, Parks and Tourism, 512 SE 25th Ave., Pratt, Kansas 67124 (620)672-5911

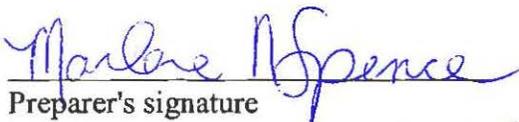
David Jenkins, Kansas Department of Wildlife, Parks and Tourism, 507 East 560th Avenue, Pittsburg, Kansas 66762 (620)231-3173

Jennie Chinn and Timothy Weston, Kansas State Historical Society, 6425 SW Sixth Avenue, Topeka, Kansas 66612 (785)272-8681

Lawrence L. Brady, Kansas Geological Survey, 1930 Constant Ave., Campus West, The University of Kansas, Lawrence, Kansas 66047 (785)864-3965

H. Preparer of the Environmental Assessment

Marlene N. Spence, Environmental Compliance and Regulatory Specialist, Kansas Department of Health and Environment, Surface Mining Section, 4033 Parkview Drive, Frontenac, Kansas 66763 (620)231-8540


Preparer's signature

4-1-16
Date


Murray J. Balk, Section Chief
Surface Mining Section

4/1/16
Date

Section 2: Consultation Letters/No Permit

December 30, 2014

KDHE
JAN 05 2015
Surface Mining Section

Mr. Murray J. Balk, Chief
Surface Mining Section
Kansas Department of Health and Environment
4033 Parkview Drive
Frontenac, KS 66763

Re: Unit 28 (Mine 19) Reclamation Project
Cherokee County, Kansas

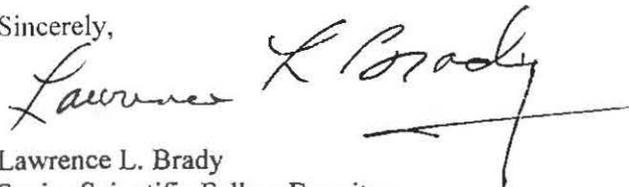
Dear Murray:

I have reviewed the information you recently sent to the Kansas Geological Survey in your letter of December 18, 2014 concerning Unit 28 (Mine 19) Reclamation Project that is located generally in the north half of Section 5, T.33S., R.22E. within west-central Cherokee County, Kansas. This project appears to be an important reclamation effort for controlling environmental hazards in a former major surface mining area of southeast Kansas.

This reclamation project is one that should be developed to help protect Deer Creek to the west. It is difficult to determine just which areas within the reclamation project might have existing shallow coal beds for future consideration for coal strip-mining. However, within most of the reclamation project the possible areas containing coal are covered with considerable wash materials that make future consideration of strip-mining uneconomic. The important local coal bed having mining potential is the Mineral coal that averages about 1.5 feet in thickness in this general area. Based on limited data that is available at the Kansas Geological Survey for this immediate area; it is my opinion that no mining company would consider mining the small areas having coal beds that might exist below the overlying washed materials from a former coal-processing plant.

The above information represents our best assessment based on the information that the Kansas Geological Survey has available about this locality at this time. Other geologic conditions, not discussed herein, or for which the Kansas Geological Survey has no knowledge, may affect the viability or safe operation of the reclamation of this property.

Sincerely,



Lawrence L. Brady
Senior Scientific Fellow Emeritus

Surface Mining Section
4033 Parkview Drive
Frontenac, Kansas 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining

Susan Mosier, MD, Interim Secretary

Department of Health & Environment

Sam Brownback, Governor

December 18, 2014

Mr. Rex Buchanan, Interim Director
Kansas Geological Survey
University of Kansas
1930 Constant Ave. - Campus West
Lawrence, Kansas 66047-3726

Re: Unit 28 (Mine 19) Reclamation Project
Cherokee County, Kansas

Dear Mr. Buchanan:

The Kansas Department of Health & Environment, Surface Mining Section, in conjunction with See-Kan RC&D Project, Inc., is currently performing design services for additional reclamation work on the Mine 19 project area (KS0218). The new project, Unit 28 Reclamation Project, will address problems associated with coal fines being carried by water. The project consists of one area located in Section 5, T33S, R22E in Cherokee County, Kansas. Please refer to the attached map for the site location.

Reclamation of the site is being considered by the Surface Mining Section to minimize the hazards typically associated with abandoned mining operations. Attached is a project description that briefly discusses the area. As required to meet National Environmental Policy Act (NEPA) requirements, we are again requesting a letter from the Kansas Geological Survey stating whether or not it is considered likely that the area of this project will be mined in the future.

We would appreciate a reply at your earliest convenience. If you have any questions, please feel free to contact us at (620) 231-8540.

Sincerely,


Murray J. Balk, Chief
Surface Mining Section

MNS:MJB

cc: Jessica Gordon, SEE-Kan RC&D Project, Inc. w/attachments

6425 SW 6th Avenue
Topeka, KS 66615



phone: 785-272-8681
fax: 785-272-8682
cultural_resources@kshs.org

Kansas Historical Society

Sam Brownback, Governor
Jennie Chinn, Executive Director

KSR&C No. 14-09-023

December 15, 2015

Murray J. Balk
Chief, Surface Mining Section
Kansas Department of Health & Environment
4033 Parkview Drive
Frontenac KS 66763

KDHE
DEC 16 2015
Surface Mining Section

Via E-Mail

RE: KDWPT Unit 28 Reclamation Project
Kansas Department of Health & Environment
Cherokee County

Dear Mr. Balk:

The Kansas State Historic Preservation Office has reviewed your letter and attached documentation regarding the above-referenced project dated December 7, 2015. According to our records, we reviewed and cleared an earlier version of this project in 2014. Since we do not see the additions to the project (consisting of three borrow areas) as significant from our perspective, the original clearance can stand. This office continues to have no objection to the Unit 28 Reclamation Project.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston at 785-272-8681 (ext. 214) or Sarah Hunter at 785-272-8681 ext. 225. Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,

Jennie Chinn
Executive Director and
State Historic Preservation Officer

Patrick Zollner
Deputy State Historic Preservation Officer

6425 SW 6th Avenue
Topeka, KS 66615



phone: 785-272-8681
fax: 785-272-8682
cultural_resources@kshs.org

Kansas Historical Society

Sam Brownback, Governor
Jennie Chinn, Executive Director

KSR&C No. 14-09-023

September 9, 2014

Murray J. Balk
Chief
Surface Mining Section
4033 Parkview Drive
Frontenac KS 66763

KDHE
SEP 10 2014
Surface Mining Section

Via E-mail

RE: Unit 28 Reclamation Project
Kansas Department of Health & Environment
Cherokee County

Dear Mr. Balk:

The Kansas State Historic Preservation Office has reviewed its cultural resources files for the area of the above-referenced project in accordance with 36 CFR 800. The project, as proposed, should have no effect on properties listed in the National Register of Historic Places or otherwise identified in our files. This office has no objection to implementation of the project.

Any changes to the project area that include additional ground disturbing activities will need to be reviewed by this office prior to beginning construction. If construction work uncovers buried archaeological materials, work should cease in the area of the discovery and this office should be notified immediately.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston 785-272-8681 (ex. 214). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,
Jennie Chinn
State Historic Preservation Officer

Patrick Zollner
Deputy State Historic Preservation Officer

Surface Mining Section
4033 Parkview Dr.
Frontenac, KS 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining/

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

December 7, 2015

Ms. Jennie Chinn, State Historical Preservation Officer
Historic Preservation Department, Kansas State Historical Society
6425 S.W. 6th Ave.
Topeka, Kansas 66615-1099

RE: KDWPT Unit 28 Reclamation Project
Cherokee County, Kansas

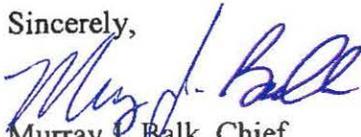
Dear Ms. Chinn:

In September 2014, the Kansas Department of Health & Environment, Surface Mining Section (SMS) sought clearance from the SHPO for the above project. Since that time, construction has not been initiated and the scope of the project has changed to include another area. The SMS, in conjunction with See-Kan RC&D Project, Inc., is performing design services for the reclamation work on the former Mine 19 tippel coal processing area (KS-0218). The project, being conducted in MLWA Unit 28, consists of the original area sought for clearance in Section 5 Township 33 S, Range 22 E and an area located in MLWA Unit 30 Section 32, Township 32 S, Range 22 E both are in Cherokee County, Kansas. Please refer to the attached map for the site location. Previous projects have been completed on both areas and this new project is a continuation of the work that is needed to stabilize the site.

Reclamation of the site is being considered by the Surface Mining Section to minimize the hazards typically associated with abandoned mining operations. Attached is a project description that briefly discusses the area. Total disturbance will be limited to as small an area as possible to complete the work. We are requesting a letter from the Historic Preservation Department stating whether or not this project will affect any property listed on the National Register of Historic Places or any historic or archeological site listed in the State inventory.

We would appreciate a reply at your earliest convenience. If you have any questions, please feel free to contact Marlene Spence or myself at (620) 231-8540. Thank you again for your continued assistance with our projects.

Sincerely,


Murray J. Balk, Chief
Surface Mining Section

MNS:MJB

C: Jessica Gordon, SEE-Kan RC&D Project, Inc. w/attachments



United States Department of the Interior



RECEIVED
FISH AND WILDLIFE SERVICE
Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, KS 66502-2801

FEB 16 2016

January 12, 2016

SURFACE MINING SECTION

Mr. Murray J. Balk
Kansas Department of Health and Environment
Surface Mining Section
4033 Parkview Drive
Frontenac, KS 66763

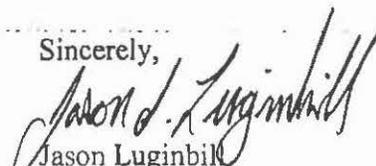
2016-CPA-0192

Dear Mr. Balk,

The Fish and Wildlife Service-Kansas Field Office has reviewed the Unit 28 Slurry Stabilization Reclamation Project KS-0218, as described in your letter of December 22, 2015. This project is intended to stabilize several coal slurry waste containment cells, and redirect the flow of surface waters through the site, with the goal of minimizing the transport of coal slurry waste off-site to Deer Creek. The project description includes several reasonable and prudent measures to avoid affects to both Northern long-eared (*Myotis septentrionalis*) and Gray (*Myotis grisescens*) bats. We concur that the project as described is not likely to adversely affect either Northern long-eared or gray bats.

Please contact Mr. John Miesner of my staff at (785) 537-3524 if you require any additional information.

Sincerely,


Jason Luginbill
Field Supervisor

Surface Mining Section
4033 Parkview Dr.
Frontenac, KS 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining/

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

December 22, 2015

Mr. Jason Luginbill
Field Supervisor
U.S. Fish and Wildlife Service
Kansas Ecological Field Services Office
2609 Anderson Avenue
Manhattan, Kansas 66502-2801

RE: Unit 28 Slurry Stabilization Reclamation Project KS-0218
Not Likely to Adversely Affect Northern long eared bat or Gray bat Concurrence Request
Consultation Code: 06E21000-2016-SLI-0070/Event Code: 06E21000-2016-E-00224

Dear Mr. Luginbill:

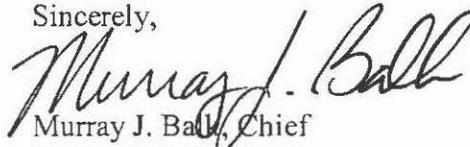
The US Department of Interior (DOI), Office of Surface Mining Reclamation and Enforcement (OSM) provides funding to the Kansas Department of Health and Environment (KDHE) Surface Mining Section (SMS) to complete reclamation of abandoned mined areas in Kansas. As the reclamation projects utilize federal funds, the SMS is tasked with obtaining National Environmental Policy Act (NEPA) clearance on behalf of OSM. The SMS is requesting concurrence from the U.S. Fish and Wildlife Service that the proposed Unit 28 Slurry Stabilization Abandoned Mine Land (AML) project is not likely to adversely affect the federally listed threatened Northern long eared bat (*Myotis septentrionalis*) nor the listed endangered gray bat (*Myotis grisescens*). The proposed project is located in Cherokee County Kansas-Section 32, Township 32 South, Range 22 East and Section 5, Township 33 South, Range 22 East. A general project location map has been included for your reference. The IPaC system was queried and the resulting Consultation Code and Event Code are provided above.

The purpose of the Unit 28 Slurry Stabilization project is discussed in the attached Project Description. The amount of disturbance in all areas has been kept to a minimum. Cherokee County is in the White-Nose Syndrome Buffer Zone area within the Northern long eared bat range according to the USFWS map of March 31, 2015. At this time there are no known infected hibernacula for the species within Cherokee County. Although some of the trees in the vicinity may be potential roosting trees, construction will occur after October when the bats have left to return to their hibernation sites. Based on the plan as discussed in the attached documentation, we conclude that our action is not likely to adversely affect the Northern long eared bat. We request, on behalf of U.S. DOI, OSMRE, your concurrence with our determination for both species.

Page 2
Unit 28-USFWS
December 28, 2015

Please let us know what, if any additional information you may need. Feel free to contact myself or Marlene Spence of my staff.

Sincerely,

A handwritten signature in black ink that reads "Murray J. Ball". The signature is written in a cursive style with a large, prominent "M" and "B".

Murray J. Ball, Chief
Surface Mining Section

MJB:MNS
Attachments

Ec: Elaine Ramsey/LaChelle Harris-OSMRE-Tulsa, Oklahoma
KDWPT, Ecological Services Section, Pratt, Kansas
Jessica Gordon, See-Kan RC&D

Marlene Spence

Subject: FW: KDWPT Unit 28 Reclamation Project, Cheorkee County: 2014-CPA-0633

From: John Miesner [mailto:john_miesner@fws.gov]
Sent: Thursday, December 18, 2014 9:15 AM
To: Murray Balk
Subject: KDWPT Unit 28 Reclamation Project, Cheorkee County: 2014-CPA-0633

Dear Mr. Balk,

The Fish and Wildlife Service-Kansas Field Office has reviewed your letter of September 5, 2014, which describes reclamation activities to be conducted at the KDWPT Unit 28 reclamation site. This project is to prevent the movement of impounded mine waste slurry from disposal cells into Deer Creek. We do not anticipate the presence of any species listed as threatened or endangered under the Endangered Species Act at this site, and therefore; do not believe this project will have any effect to listed species.

Please do not hesitate to contact me if you require any additional information. Thank you,

John F. Miesner
Senior Environmental Contaminants Specialist
U.S. Fish and Wildlife Service
Kansas Ecological Services Field Office
2609 Anderson Ave.
Manhattan, KS 66502
(785) 539-3474, ext. 103
(785) 539-8567 (FAX)

KDHE
DEC 18 2014
Surface Mining Section

There's a difference between living to work and working to live.

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'`.,.,.'`.,.,><(((e>'`.,.,.'`.,.,><(((e>

Marlene Spence

From: fwhq_ecos_support@fws.gov
Sent: Tuesday, December 08, 2015 10:41 AM
To: Marlene Spence
Subject: Official Species List for project: Unit 28 Slurry Stabilization
Attachments: Official_Species_List_KS ESFO_08_Dec_2015.pdf; ipacProjectShapefile.zip

This email contains a US Fish and Wildlife Service official species list for your project (Unit 28 Slurry Stabilization) from the following office:

Kansas Ecological Services Field Office
2609 ANDERSON AVENUE
MANHATTAN, KS 66502
(785) 539-3474

Also attached is a shapefile of the project boundary you defined in IPaC. If you wish to return to IPaC in the future and use the same project boundary for another project, when defining your project location, use the IPaC 'Upload shape file' feature and select this shapefile.

You may also view your official species list by returning to the IPaC project Regulatory Documents page at <http://ecos.fws.gov/ipac/project/FTZQON62XJCHFOABLMQWOD5MXM/regulatoryDocuments>.

If you have any problems opening the document, please contact the ECOS help desk at <http://ecos.fws.gov/ecp/help>.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Kansas Ecological Services Field Office
2609 ANDERSON AVENUE
MANHATTAN, KS 66502
PHONE: (785)539-3474 FAX: (785)539-8567

KDHE

DEC 08 2015

Surface Mining Section
December 08, 2015

Consultation Code: 06E21000-2016-SLI-0070

Event Code: 06E21000-2016-E-00224

Project Name: Unit 28 Slurry Stabilization

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Unit 28 Slurry Stabilization

Official Species List

Provided by:

Kansas Ecological Services Field Office
2609 ANDERSON AVENUE
MANHATTAN, KS 66502
(785) 539-3474

Consultation Code: 06E21000-2016-SLI-0070

Event Code: 06E21000-2016-E-00224

Project Type: LAND - RESTORATION / ENHANCEMENT

Project Name: Unit 28 Slurry Stabilization

Project Description: Portions of Section 5, T33S, R22E and Section 32, T32S, R22E in Cherokee County. Spring 2016 construction is anticipated. Project is funded by USDO-I-Office of Surface Mining Reclamation and Enforcement.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Unit 28 Slurry Stabilization

Endangered Species Act Species List

There are a total of 6 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Sprague's Pipit (<i>Anthus spragueii</i>)	Candidate		
Clams			
Neosho Mucket (<i>Lampsilis rafinesqueana</i>)	Endangered	Proposed	
rabbitsfoot (<i>Quadrula cylindrica ssp. cylindrica</i>)	Threatened	Final designated	
Fishes			
Arkansas darter (<i>Etheostoma cragini</i>)	Candidate		
Neosho madtom (<i>Noturus placidus</i>) Population: Entire	Threatened		
Mammals			
Northern long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Unit 28 Slurry Stabilization

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Marlene Spence

From: Riedle, Daren <daren.riedle@ksoutdoors.com>
Sent: Monday, January 04, 2016 4:05 PM
To: Marlene Spence
Cc: Murray Balk
Subject: KDWPT Project Review Slurry Stabilization Reclamation Project (KDWPT# 19940381-9)

RECEIVED

JAN 04 2016

SURFACE MINING SECTION

Ms. Spence,

The referenced project Slurry Stabilization Reclamation Project Mine 19 tipple coal processing area, Cherokee County was reviewed for potential impacts on crucial wildlife habitats, current State-listed Threatened and Endangered species and Species in Need of Conservation (SINC), and Kansas Department of Wildlife, Parks and Tourism managed areas for which this agency has administrative authority.

We provide the following general recommendations as applicable:

- **Implement and maintain standard erosion-control Best-Management-Practices during all aspects of construction by installing sediment barriers across the entire construction area to prevent sediment and spoil from entering aquatic systems. Silt fences used in conjunction with sandbags is the preferred barrier, but hay bales can be used if properly staked. Barriers should be maintained at high functioning capacity until construction is completed and vegetation is established.**
- **Reseed disturbed areas with native warm-season grasses, forbs, and trees.**

Results of our review indicate there will be no significant impacts to crucial wildlife habitats; therefore, no special mitigation measures are recommended. The project will not impact any public recreational areas, nor could we document any potential impacts to currently-listed Threatened or Endangered species or SINC. No Department of Wildlife, Parks and Tourism permits or special authorizations will be needed if construction is started within one year, and no design changes are made in the project plans.

Since the Department's recreational land obligations and the State's species listings periodically change, if construction has not started within one year of this date, or if design changes are made in the project plans, the project sponsor must contact this office to verify continued applicability of this assessment report. For our purposes, we consider construction started when advertisements for bids are distributed.

Consider this email our official project review. Contact me with any questions.

Daren Riedle

--

J. Daren Riedle, Ecologist
Ecological Services
Kansas Dept. of Wildlife, Parks, and Tourism
512 SE 25th Ave
Pratt, KS 67124
office: 620-672-0746
cell: 620-770-6628
fax: 620-672-2972

Surface Mining Section
4033 Parkview Dr.
Frontenac, KS 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining/

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

December 22, 2015

Ecological Services Section
Kansas Department of Wildlife, Parks and Tourism
512 SE 25th Ave
Pratt, KS 67124-8174

Re: KDWPT Unit 28 Slurry Stabilization Reclamation Project
Cherokee County, Kansas

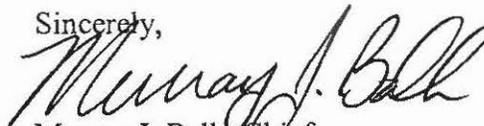
Greetings:

The Kansas Department of Health & Environment, Surface Mining Section, in conjunction with See-Kan RC&D, Inc., is currently performing design services for the reclamation work on the former Mine 19 tippel coal processing area (KS-0218). The project, being conducted in MLWA Unit 28, consists of one area located in Section 5, Township 33 S, Range 22 E, in Cherokee County, Kansas with a borrow area located in Section 32, Township 32 S, Range 22 E. Please refer to the attachments for the site location. Previous projects have been completed on the same area and this new project is a continuation of the work that is needed to stabilize the site.

Reclamation of the site is being considered by the Surface Mining Section to minimize the hazards typically associated with abandoned mining operations. Attached is a project description that discusses each area and consideration given to state listed threatened and endangered species. The current design addresses safety concerns while minimizing ecological impacts. Total disturbance will be limited to as small an area as possible to complete the work. We are requesting a letter from the Kansas Department of Wildlife, Parks and Tourism stating whether or not this project will affect any threatened or endangered species. A similar request is being made to the USFWS for federally listed species.

We would appreciate a reply at your earliest convenience. If you have any questions, please feel free to contact Marlene Spence or myself at (620) 231-8540.

Sincerely,



Murray J. Balk, Chief
Surface Mining Section

MNS:MJB

ec: Jessica Gordon, SEE-Kan RC&D Project, Inc. w/attachments

Marlene Spence

From: Berens, Chris <chris.berens@ksoutdoors.com>
Sent: Friday, October 03, 2014 7:43 AM
To: Marlene Spence
Subject: Fwd: NOI T&E; Proj: KDWPT Unit 28 Reclamation Project; CO: CK; LOC: 5-33S-22E (Track:19940381-4)

Dear Ms. Spence,

The referenced project was reviewed for potential impacts on crucial wildlife habitats, current state-listed threatened and endangered species and species in need of conservation, and Kansas Department of Wildlife, Parks and Tourism managed areas for which this agency has administrative authority.

No state-listed threatened or endangered species or crucial wildlife habitats should be significantly affected. No Department of Wildlife and Parks permits or special authorizations are needed. We simply recommend:

- to avoid impacts to existing wetlands, minimize the removal of native upland and riparian vegetation,
- implement standard erosion control BMP's and temporary weed-free seeding/mulching to protect water quality during construction
- minimize any / all further instream construction activities particularly during general spawning dates of May 1 through July 31
- use native grasses and forbs to permanently revegetate all areas disturbed by construction, we recommend you work with KDWPT Mined Lands Public Lands Manager David Jenkins on proper native grass and forb seed mixture or refer to NRCS practice 643 which is tailored to each ecoregion.

Please consider this email our official review of this project.

Thank you,

Chris Berens, Ecologist
Ecological Services Section, KDWPT
512 SE 25th Ave.
Pratt KS 67124
o: 620-672-0771
c: 620-770-9158

KDHE
OCT 03 2014
Surface Mining Section

Surface Mining Section
4033 Parkview Dr.
Frontenac, KS 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining/

Robert Moser, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

September 4, 2014

Ecological Services Section
Kansas Department of Wildlife, Parks and Tourism
512 SE 25th Ave
Pratt, KS 67124-8174

Re: KDWPT Unit 28 Reclamation Project
Cherokee County, Kansas

Greetings:

The Kansas Department of Health & Environment, Surface Mining Section, in conjunction with See-Kan RC&D Project, Inc., is currently performing design services for the reclamation work on the former Mine 19 tippie coal processing area (KS-0218). The project, being conducted in MLWA Unit 28, consists of one area located in Section 5, Township 33 S, Range 22 E, in Cherokee County, Kansas. Please refer to the attached map for the site location. Previous projects have been completed on the same area and this new project is a continuation of the work that is needed to stabilize the site.

Reclamation of the site is being considered by the Surface Mining Section to minimize the hazards typically associated with abandoned mining operations. Attached is a project description that discusses each area and plan sheets depicting the proposed work. The current design addresses safety concerns while minimizing ecological impacts. Total disturbance will be limited to as small an area as possible to complete the work. We are requesting a letter from the Kansas Department of Wildlife, Parks and Tourism stating whether or not this project will affect any threatened or endangered species.

We would appreciate a reply at your earliest convenience. If you have any questions, please feel free to contact Marlene Spence or myself at (620) 231-8540.

Sincerely,

A handwritten signature in black ink that reads "Murray J. Balk".

Murray J. Balk, Chief
Surface Mining Section

MNS:MJB

C: Jessica Gordon, SEE-Kan RC&D Project, Inc. w/attachments

Section 3: Consultation Letters/Permit

FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION

Community Name: Cherokee County Date: 02-18-2015 Application # N/A

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such shall be done in accordance with the Floodplain Management Ordinance and applicable Cherokee County ordinances and the State of Kansas requirements as contained in K.S.A. 12-766, and K.A.R. 5-44-1 through 5-44-6.

-----Section A-----

Name of Owner or Developer/Contractor or Builder Date
Kansas Department of Health and Environment
Surface Mining Section 12/19/14

Address
4033 Parkview Drive
Frontenac, Kansas 66763
Phone 620.231.8540

-----Section B-----

Location Information Street Address: Center Star Road between NW 100th and NW 110th Street, Rural Cherokee County near Hallowell, Kansas KDWPT MLWA Unit 28 (Mine 19)
Legal Description: Section 5, Township 33S, Range 22E
Other Locator: See Attached Map

-----Section C-----

Check One:
*New Construction Filling ... **Other X Reclamation Project/Coal Slurry Stabilization**
*Substantial Improvement..... Grading.....
Minimum Improvement Excavation... *Finished Elevation Certificates Required.

-----Section D-----

Description: Abandoned mine land reclamation project
Value of Improvement (fair market): \$ 0 Pre-Improved Value \$ Unknown

-----Section E-----

FEMA Flood Map Panel Number 20021C0150C Effective Date November 19, 2008 Zone A & X

Is development in a floodway? Yes No if yes, is No-Rise Certification attached? Yes No

-----Section F-----

Elevation: NGVD NAVD Elevation certificate attached to this application? Yes No
Base Flood Elevation, BFE, at development site..... NA Feet
Elevation at development site..... NA Feet
**Elevation of lowest floor of residential development.... NA Feet
**Elevation of flood proofing for non-residential structure..... NA Feet
Source of elevation information _____

-----Section G-----

List required permits from other agencies. Attach copies.
USACE-404 Permit Application Pending
KDHE-BOW-SWPPP Application Pending

Notice: Read Carefully. This permit is issued with the condition that the lowest floor (including basement) of any new or substantially-improved (over 50% current market value) residential structure will be elevated at least one (1) foot above the base flood elevation. If the proposed development is a non-residential structure, this permit is issued with the condition that the lowest floor (including basement) of any new or substantially improved non-residential structure will be elevated or flood proofed at least one (1) foot above the Base Flood Elevation. This permit is issued with the condition that the owner/developer will provide a FEMA elevation certificate completed by a licensed land surveyor or professional engineer certifying the "as-built" lowest floor elevation of any new or substantially improved structure covered by this permit.

Permit: Approved Denied (attach explanation) Date: 02-18-2015

Murray J. Ball for
Signature Owner/Developer *KDHE*

Art Mallory
Signature of Community Official

Print Name Owner/Developer

Art Mallory Floodplain Manager
Print Name and Title Community Official

INSTRUCTIONS

Section A: Complete name and contact information of applicant. It is preferred that this be the information of the property owner. Circle owner or builder depending on applicant.

Section B: Complete information in this section describing location of the development. Space is provided for other locator such as parcel identification number or name of subdivision. For a long legal description the information could be attached separately and noted here. It is also suggested to attach a FIRMette of the location.

Section C: *For new construction and substantial improvements an elevation certificate is required. An elevation certificate based on construction drawings can be used at the start of construction. A finished construction elevation certificate is required when the project is complete. Minor projects may not require an elevation certificate. For example: a new culvert.

Section D: Describe the development. Is this a substantial improvement? Substantial improvement will require that the entire structure be brought up to current standards and that the lowest floor (including basement) be elevated one (1) foot above the base flood elevation.

Section E: Flood map information. For a project in a designated floodway a no-rise certificate is required. In an area of detailed study when a floodway has not been designated it must be determined that development will not cause more than one (1) foot of rise.

Section F: Specify if National Geodetic Vertical Datum of 1929 or North American Vertical Datum of 1988 was used for the elevation information in this section. **Lowest floor of a residential structure (including basement) and level of flood proofing for a non-residential structure must be one (1) foot above the base flood elevation. If a house has a basement the lowest floor is the floor of the basement. This information will be on an elevation certificate. There should be an elevation certificate for every post-FIRM structure. If other sources of elevation information were used please specify where that information came from. For certain types of projects the elevation information may not apply. For example: excavation of a borrow pit. In those situations use N/A in the blanks for elevation information.

Section G: The Kansas Department of Agriculture, Division of Water Resources requires permits for fill placed in floodplains. Permits are also required for levees, stream obstructions, and dams. Some minor projects are exempt based on the amount of fill, upstream drainage, or the size of the dam. US Army Corps of Engineers may require permits involving wetlands or projects that could alter the course of a navigable water way.

Surface Mining Section
4033 Parkview Drive
Frontenac, Kansas 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining

Susan Mosier, MD, Interim Secretary

Department of Health & Environment

Sam Brownback, Governor

December 29, 2014

Dustin Groves, Floodplain Manager
Cherokee County Emergency Management
PO Box 143
Columbus, KS 66725

RE: Floodplain Development Permit/Application
Unit 28 (Mine 19) Abandoned Mine Land Reclamation Project

Dear Mr. Groves:

Enclosed for your review and action is the floodplain development application for the above referenced project. This project area, located in Section 5, T33S, R22E, includes areas designated as both Zone A and Zone X. This is within KDWPT MLWA Unit 28 and part of the former P&M Mine 19 area.

A Stormwater Construction permit application and a Corps of Engineers 404 permit application are being prepared and will be submitted in the near future. A copy of the FIRMette and a description of the project are attached for your reference. The project is being designed to prevent additional slurry from moving off the area into Deer Creek.

Should you determine that a floodplain development permit is required; arrangements for payment of the \$10 fee will be made upon our receipt of your billing. Should you need any additional information or require a field visit, please feel free to contact Marvin Barnaby or Marlene Spence at (620)231-8540 or mbarnaby@kdheks.gov or mspence@kdheks.gov. Thank you for your timely assistance in this matter.

Sincerely,

Murray J. Balk, Chief
Surface Mining Section

MJB/MNS

C: Unit 28 File w/attachments
Ec: Jessica Gordon, SEE-KAN RCD



Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

RE: Authorization to Discharge Construction Stormwater Runoff
Kansas Water Pollution Control General Permit No. S-MCST-0312-1

RECEIVED

JAN 29 2016

Dear Permittee:

SURFACE MINING SECTION

Enclosed is the authorization to discharge stormwater runoff under the referenced construction stormwater general permit at the construction site described therein. Please retain a copy of the authorization at the project site or at the records address identified on the Notice of Intent (NOI) form.

A new construction stormwater general permit was issued March 2, 2012 which includes significant changes in stormwater management requirements. Permittees whose projects are authorized to discharge stormwater from construction activities after March 2, 2012 must meet the requirements of the new General Permit. Because this authorization to discharge obligates the permittee to meet permit requirements, we ask that you review the new permit carefully. Additional information, instructions and forms relating to the new general permit are available on the KDHE Stormwater Website at www.kdheks.gov/stormwater. Paper copies are also available by written request.

A \$60 annual permit fee will be due each year for the duration of the project. In accordance with K.A.R. 28-16-56(b)(5) the general permit fee must be paid annually to maintain coverage under the construction stormwater general NPDES permit. You will receive an invoice approximately 30 days prior to the anniversary date of your permit. When submitting the annual permit fee, please reference the permit number and include the invoice so that we can apply it to the appropriate permit. Checks for the annual fees should be made payable to KDHE. In order to ensure that the appropriate person is notified of the annual permit fee, please notify KDHE of any change in address or contact information.

Once the construction has been completed and final stabilization has been achieved, please submit a Notice of Termination (NOT). After KDHE has accepted the NOT, permit coverage is terminated and the annual general permit fee is no longer required.

For projects with multiple phases, only those included on the NOI addressed by this authorization will be covered. Additional phases will need to have an NOI submitted and authorized.

If you have any questions regarding the enclosed authorization to discharge, or coverage under the general permit, please contact me at (785) 296-5549 or by email at: stormwater@kdheks.gov

Enclosure: Authorized NOI



NOTICE OF INTENT (NOI)

For Authorization to Discharge Stormwater Runoff from Construction Activities
 In accordance with the Kansas Water Pollution Control General Permit
 Under the National Pollutant Discharge Elimination System (NPDES)

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form requests authorization for coverage under the Kansas Water Pollution Control general permit, or KDHE issued successor permits, issued for stormwater runoff from construction activities in the State of Kansas. Becoming a permittee obligates the discharger to comply with the terms and conditions of the general permit. Completion of this NOI does not provide automatic coverage under the general permit. Coverage is provided and discharge permitted when the Kansas Department of Health and Environment (KDHE) authorizes the discharge of stormwater runoff from the construction activities identified on the NOI and supporting documentation. A signed and dated copy of the first page of the NOI indicating the Authorization will be provided to the owner or operator, or all three pages for Conditional Authorizations. Upon authorization of the construction activity discharge, a Kansas permit number and a Federal permit number will be assigned to the construction project. A complete request for Authorization for coverage under the general permit must be submitted or the request will not be processed (see listing on Page 3 of this NOI). KDHE will notify owners or operators whose Notice of Intent (NOI) and supporting documentation for Authorization of stormwater runoff associated with construction activities are incomplete, deficient, or denied.
 Please Print or Type.

I. OWNER OR OPERATOR ADDRESS, BILLING, CONTACT & RECORDS LOCATION INFORMATION

A. Owner or Operator's Name: Murray J. Balk, Chief C. Contact Name: Marvin Barnaby
 Company Name: KDHE-Surface Mining Section Company Name: Same as left
 Owner or Operator's Phone: 620.231.8540 Contact Phone: _____
 Mailing Address: 4033 Parkview Drive Mailing Address: _____
 City: Frontenac State: KS Zip: 66763 City: _____ State: _____ Zip: _____
 E-mail Address (optional): mbarnaby@kdheks.gov

B. Billing Contact Name: Murray J. Balk D. Address where records will be kept (if not on-site):
 Billing Contact Address (if different): _____ Records Address: 4033 Parkview Dr.
 City: _____ State: _____ Zip: _____ City: Frontenac State: KS Zip: 66763

II. SITE INFORMATION

A. Project Name: Unit 28 Slurry Stabilization Project B. LEGAL SITE DESCRIPTION: Portions of S32/T32S and
 Site Address: NW 110th between Lawton Rd and Bethlehem Rd ~~XXXX@TR~~ Section: 5
 City: Hallowell State: KS Zip: _____ Township: 33 South; Range: 22 E W
 (Nearest City to Project) County: Cherokee Latitude: 37 12'23.62 Longitude: - 95 1'39.30
 Deg. Min. Sec. Deg. Min. Sec.

For Official Use Only:

Received RECEIVED JAN 13 2016 BUREAU OF WATER	Amount Paid:	Authorized: <input checked="" type="checkbox"/> Y; <input type="checkbox"/> N
	Date:	Is Authorization Conditional? <input type="checkbox"/> Y; <input checked="" type="checkbox"/> N (if yes, see page 3 of NOI for conditions)
	Initials:	[Signature] Reviewed: _____ Date: <u>1/22/16</u>
	Check No.:	
[Signature] Secretary, Kansas Department of Health and Environment		
KS Permit No.: <u>S-NE75-0010</u>		Federal Permit No.: <u>KSRI11716</u>

Send completed 3 page NOI form with original signature and all appropriate submittals (see page 3 of NOI) to:

Note: A copy of the permit can be obtained at: www.kdheks.gov/stormwater or by submitting a written request to KDHE.

Kansas Department of Health and Environment
 Bureau of Water, Industrial Programs Section
 1000 SW Jackson, Suite 420
 Topeka, KS 66612-1367

KDHE Contact Information:
 Phone: (785) 296-5545
 E-mail: stormwater@kdheks.gov

RECEIVED
 JAN 29 2016

Surface Mining Section
4033 Parkview Dr.
Frontenac, KS 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining/

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

January 12, 2015

Mr. Larry Hook
Kansas Department of Health and Environment
Bureau of Water, Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, Kansas 66612-1367

RE: Unit 28 Slurry Stabilization Project (KS-0218)
SWPPP

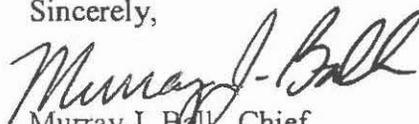
Dear Mr. Hook:

Enclosed please find a Stormwater Runoff From Construction Activities, Notice of Intent form, Storm Water Pollution Prevention Plan, and Construction Specifications Section 2301-Temporary Sediment Control Measures for the Unit 28 Slurry Stabilization Project. This is an entire replacement for the submittal made in October 2015. Please review the information and, upon approval, forward an 'Authorization to Discharge Permit' to this office. Construction of the project is expected to begin in the spring of 2016. An application to the Corps of Engineers for a 404 Permit is being made concurrent to this application. Due to the recent listing of the Northern long eared bat to the federal threatened species list, clearance requests from USFWS has been resubmitted.

Previous reclamation has been completed on this project site to contain the coal slurry waste. As time progresses, additional work has been identified that will prevent contribution of the slurry material to the receiving system. As there has been expressed a potential for remining the slurry on site, the project has been modified to the extent that the resource could be recovered without extensively disturbing the work proposed under this project.

The payment of the annual permit fee for the first year (\$60) which is to accompany this application will be coordinated with your office. Thank you for your assistance in this matter. If you have any questions, please contact myself or Marvin Barnaby of my staff at (620) 231-8540.

Sincerely,


Murray J. Balk, Chief
Surface Mining Section

MNS:MJB

C: Jessica Gordon, SeeKan RC&D Project, Inc.

Encls.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
KANSAS STATE REGULATORY OFFICE
2710 NE SHADY CREEK ACCESS ROAD
EL DORADO, KANSAS 67042

April 1, 2016

RECEIVED

Kansas State Regulatory Office
(NWK-2016-00389)
(Cherokee, KS, GP-31K)

APR 01 2016

SURFACE MINING SECTION

KDHE-Surface Mining Section
ATTN: Murray Balk
4033 Parkview Drive
Frontenac, Kansas 66763

Dear Mr. Balk:

This letter pertains to an application received on January 28, 2016 for a Department of the Army (DA) permit to conduct reclamation activities to stabilize and contain coal mine slurry within the Mined Land Wildlife Area Unit 28. The proposed work associated with the Unit 28 Slurry Stabilization Abandoned Mine Land Reclamation Project will involve: the installation of vegetated filter strips with spillways in Cells A, B, D & E using borrow material from designated areas; reroute discharge from the settling pond by installing a vegetated earthen plug at the west end and a new spillway at the east end; and vegetate disturbed upland areas to warm season native grasses and forbs. The project will result in 0.1 acres of permanent wetland impacts and approximately 5.5 acres of temporary wetland impacts. The project is located in Section 5, T33S-R23E and in Section 32, T32S-R22E, in Cherokee County, Kansas [Lat. 37.2060, Long. .95.0272].

Based upon a review of the information furnished, we have made a preliminary jurisdictional determination that Deer Creek and the adjacent wetlands are jurisdictional waters of the United States. Therefore, the placement of dredged or fill material below the ordinary high water elevation, or within the wetlands, as proposed by the project requires permit authorization from this office. The Corps of Engineers has jurisdiction over all waters of the United States. Discharges of dredged or fill material in waters of the United States, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 C.F.R. 320-332.

This letter contains a preliminary jurisdictional determination (PJD) of the waters of the United States on the project site which was completed in accordance with Corps regulations at 33 C.F.R. Part 331. PJD's, while sufficient for permit determinations, are not appealable. If you wish, you may request an Approved Jurisdictional Determination (which may be appealed) by contacting our office for further instructions. The PJD is described in the enclosed Preliminary Jurisdictional Determination Form. We request that you sign the signature block, and return the form to our office. If you do not concur with the jurisdictional determination, then you will need to obtain an Approved Jurisdictional Determination from our office prior to impacting any waters identified in the PJD.

We have reviewed the information furnished and have determined that the proposed project is authorized by General Permit No. 31K (GP-31K), provided you ensure that the general and special conditions listed in the permit are met. These general and special conditions may be downloaded from the following location: [http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/permits/2016-01-27/GP31K Permit Document.pdf](http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/permits/2016-01-27/GP31K%20Permit%20Document.pdf). In addition, the following special condition applies to this project:

- In order to ensure that impacts associated with Borrow Area 1, located within the Anselmi Marsh, are temporary in nature, KDHE must monitor this site for a period of up to 5 years to ensure that wetland characteristics return once construction is complete.

The Kansas Department of Health and Environment (KDHE) has certified that this general permit will not violate existing state water quality standards provided you comply with the conditions included in their attached water quality certification. All conditions included in the water quality certification become conditions of this GP-31K verification, please carefully review all conditions associated with this permit. If you have any questions concerning state water quality standards or compliance issues with the associated certification conditions, please contact KDHE at 785-296-5573, Bureau of Water - NPS Section, 1000 SW Jackson Street, Suite 420, Topeka, Kansas 66612-1367.

Special condition "a" of GP-31K requires you to sign and submit the enclosed "Compliance Certification" upon completion of the authorized work and any required mitigation.

This GP verification is valid until January 27, 2021. Should your project plans change or if your activity is not complete within the specified verification term, you must contact this office for another permit determination.

Although an individual DA permit is not required, other Federal, state and/or local permits may be required. You should verify this yourself.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. Please feel free to complete our Customer Service Survey form on our website at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. You may also call and request a paper copy of the survey which you may complete and return to us by mail or fax.

Sarah Reznicek, Regulatory Project Manager, reviewed the information furnished and made this determination. If you have any questions concerning this matter, please feel free to contact Ms. Reznicek at (816) 389-3741 or email sarah.m.reznicek@usace.army.mil. Please reference Permit No. NWK-2016-00389 in all comments and/or inquiries relating to this project.

Enclosure

Copies Furnished (electronically w/o enclosures):

Environmental Protection Agency,
Watershed Planning and Implementation Branch
U.S. Fish and Wildlife Service, Manhattan, Kansas
Kansas Department of Wildlife, Parks and Tourism
Kansas Department of Health and Environment
Kansas Department of Agriculture

COMPLIANCE CERTIFICATION

Special condition "a" of this permit document requires that you submit a signed certification regarding the completed work and any required mitigation. This certification page satisfies this condition if it is provided to the Kansas City District at the address shown at this bottom of this page upon completion of the project.

APPLICATION NUMBER: NWK-2016-00389

APPLICANT: Kansas Department of Health and Environment,
Bureau of Environmental Remediation, Surface Mining Section
4033 Parkview Drive
Frontenac, Kansas 66763-4033

PROJECT LOCATION: In wetlands associated with the Unit 28 Slurry Stabilization Abandoned Mine Land Reclamation Project in Section 5, T33S-R22E and Section 32, T32S-R22E, Cherokee County, Kansas.

- a. I certify that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions.
- b. I certify that any required mitigation was completed in accordance with the permit conditions.
- c. Your signature below, as permittee, indicates that you have completed the authorized project as certified in paragraphs a and b above.

(Permittee)

(Date)

Return this certification to:

U.S. Army Corps of Engineers
Kansas State Regulatory Office (Reznicek)
2710 NE Shady Creek Access Road
El Dorado, KS 67042

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office: Kansas City File/ORM #: NWK-2016-00389 PJD Date: Apr 1, 2016

State: <u>KS</u>	City/County: <u>Cherokee County</u>	Name/Address of Person Requesting PJD: <u>KDHE - Surface Mining Section Attn: Murray Balk or Marlene Spence Frontenac, KS</u>
Nearest Waterbody: <u>Deer Creek & Wetlands</u>		
Location: TRS, Lat/Long or UTM: <u>Sec. 5-33s-22e & Sec. 32-32s-22e Lat. 37.2060, Long. -95.0272</u>		

Identify (Estimate) Amount of Waters in the Review Area: <u>Non-Wetland Waters:</u> <u>4500</u> linear ft <u> </u> width <u> </u> acres <u> </u> Stream Flow: <u> </u> Per. (seasonal) <u>Wetlands:</u> <u>65</u> acre(s) Cowardin Class: <u>Palustrine, emergent</u>	Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: <u> </u> Non-Tidal: <u> </u> <input checked="" type="checkbox"/> Office (Desk) Determination <input type="checkbox"/> Field Determination: Date of Field Trip: <u> </u>
---	---

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Provided by KDHE-SMS
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite quad name: 1 24K Oswego
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name: USFWS
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is:
- Photographs:
 - Aerial (Name & Date): Google Earth Imagery 1991-2015
 - Other (Name & Date): Oct 2016 Site photos by KDHE
- Previous determination(s). File no. and date of response letter: NWK-2011-01157; 13-Sep-2011
- Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

REZNICEK.SARAH.M.1
257725428

Digitally signed by REZNICEK.SARAH.M.1257725428
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=USA, cn=REZNICEK.SARAH.M.1257725428
Date: 2016.04.01 08:59:40 -05:00

Signature and Date of Regulatory Project Manager
(REQUIRED)

Signature and Date of Person Requesting Preliminary JD
(REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office Kansas City File/ORM # NWK-2016-00389 PJD Date: Apr 1, 2016
State KS City/County Cherokee County, KS Person Requesting PJD KDHE - SMS

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
1	37.2085	-95.0249	Riverine	4500 ft	Non-Section 10 non-wetland
2	37.2066	-95.0252	Palustrine, emergent	3 acres	Non-Section 10 wetland
3	37.2041	-95.0251	Palustrine, emergent	16 acres	Non-Section 10 wetland
4	37.2020	-95.0262	Lacustrine	24 acres	Non-Section 10 wetland
5	37.2022	-95.0300	Palustrine, emergent	8 acres	Non-Section 10 wetland
6	37.2041	-95.0296	Palustrine, emergent	3 acres	Non-Section 10 wetland

Notes:

8 total waters on site; however not all waters will be impacted by the project. Wetlands are considered adjacent to Deer Creek.

List of all sites:

- 1 - Deer Creek (no impacts)
- 2 - Settling Pond (plug and spillway)
- 3 - Cell A (filter strips)
- 4 - Cell B (filter strips)
- 5 - Cell C (no impacts)
- 6 - Cell D (filter strips)
- 7 - Cell E (filter strips)
- 8 - Anselmi Marsh (borrow area 1, temporary impacts)



Photo 1 General Reclamation Layout

Surface Mining Section
4033 Parkview Dr.
Frontenac, KS 66763



Phone: 620-231-8540
Fax: 620-231-0753
mbalk@kdheks.gov
www.kdheks.gov/mining/

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

January 26, 2016

Ms. Sarah Reznicek
U. S. Army Corps of Engineers
Kansas State Regulatory Office
2710 Northeast Shady Creek Access Road
El Dorado, Kansas 67042

RE: Request for Authorization under General Permit GP31K to conduct reclamation activities on the
Unit 28 Slurry Stabilization Abandoned Mine Land Reclamation Project (Preliminary Jurisdictional
Determination)

Dear Ms. Reznicek:

The Kansas Department of Health and Environment, Surface Mining Section is providing for your review an application (Form 4345) and supporting materials for the purpose of obtaining authorization to conduct reclamation activities on abandoned mine land. The **Unit 28 Slurry Stabilization Abandoned Mine Land Reclamation Project** is located in Section 5, T33S, R22E and Section 32, T32S, R22E of Cherokee County, Kansas. The site is owned by the State of Kansas and maintained by the Kansas Department of Wildlife Parks and Tourism. The application delineates and assesses all adverse impacts to the waters of the United States and adjacent wetlands within the project area. A compensatory mitigation plan is included as part of the application package.

As is shown in the project description, the completion of this project is vital to prevent the flow of coal mine slurry from Mined Land Wildlife Area Unit 28 from entering into Deer Creek. Previous work has been completed in this area under NWK-2011-1157. Your prompt attention to this request would be greatly appreciated. If you have any questions regarding this proposed project, or would like to make an onsite assessment, please contact myself or Marlene Spence of my staff at (620) 231-8540. Thank you for your continued cooperation in reclamation efforts in Kansas.

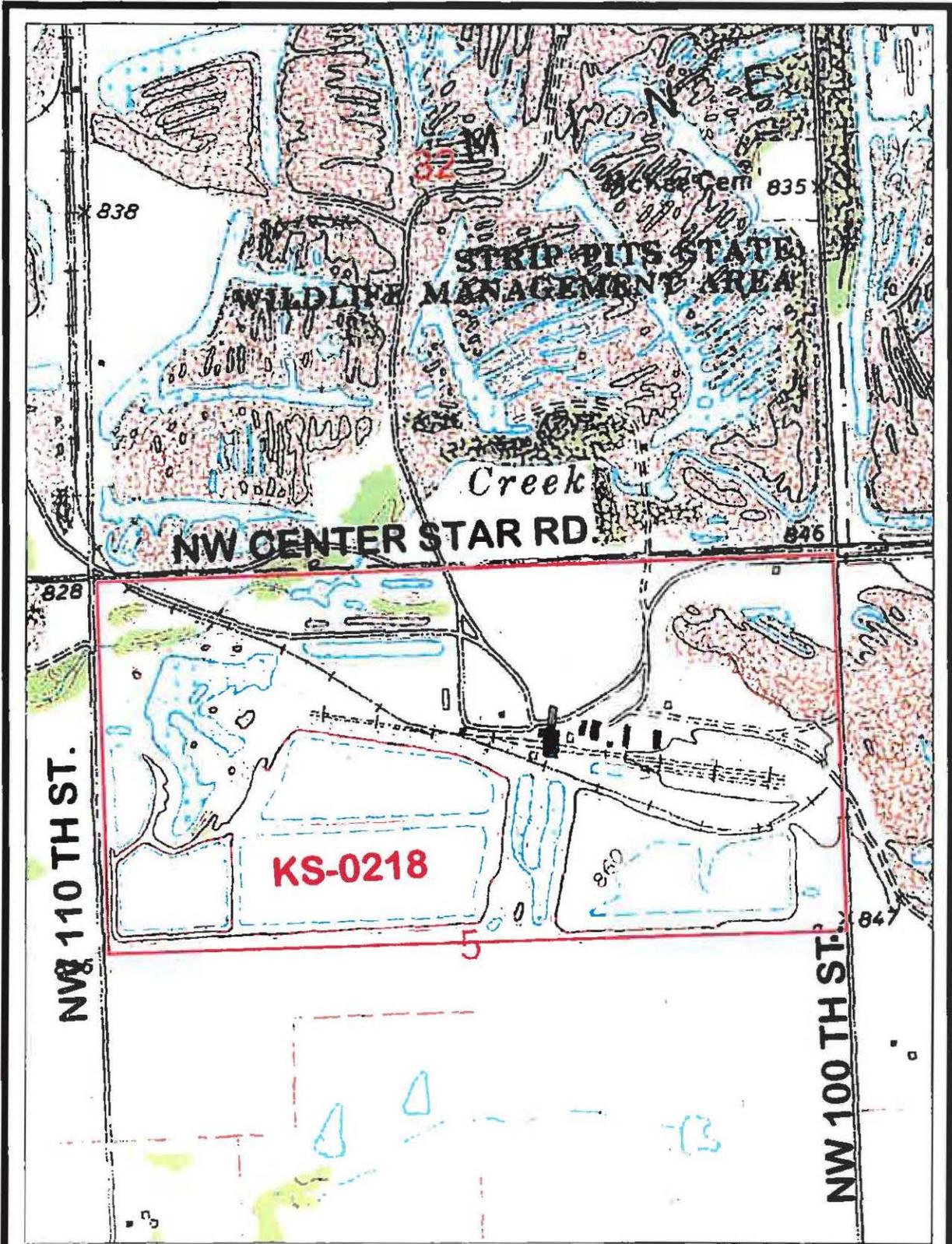
Sincerely,

Murray J. Balk, Chief
Surface Mining Section

Encl.
MJB:MNS

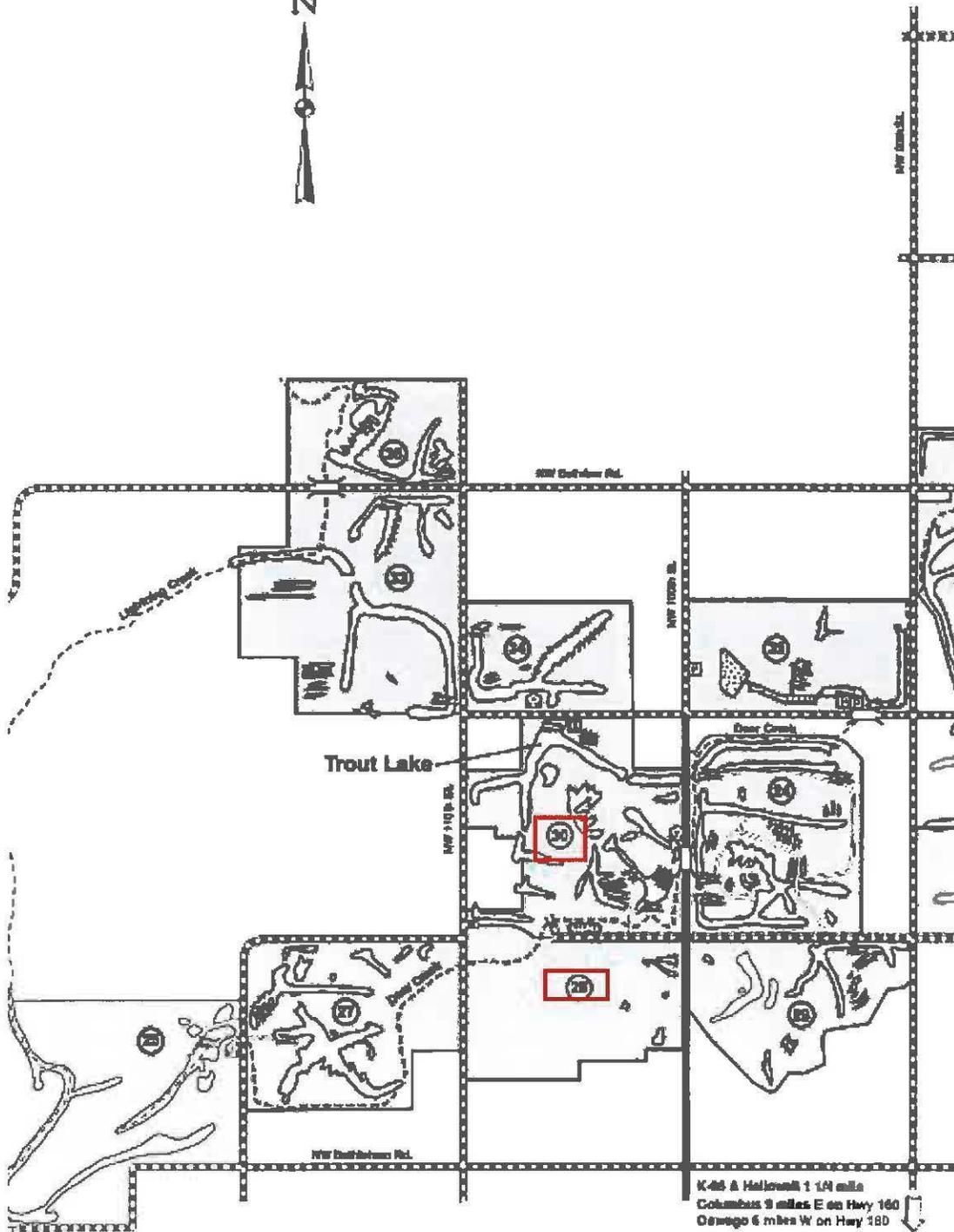
C: Jessica Gordon, SEE-Kan RC&D

Section 4: Location Maps

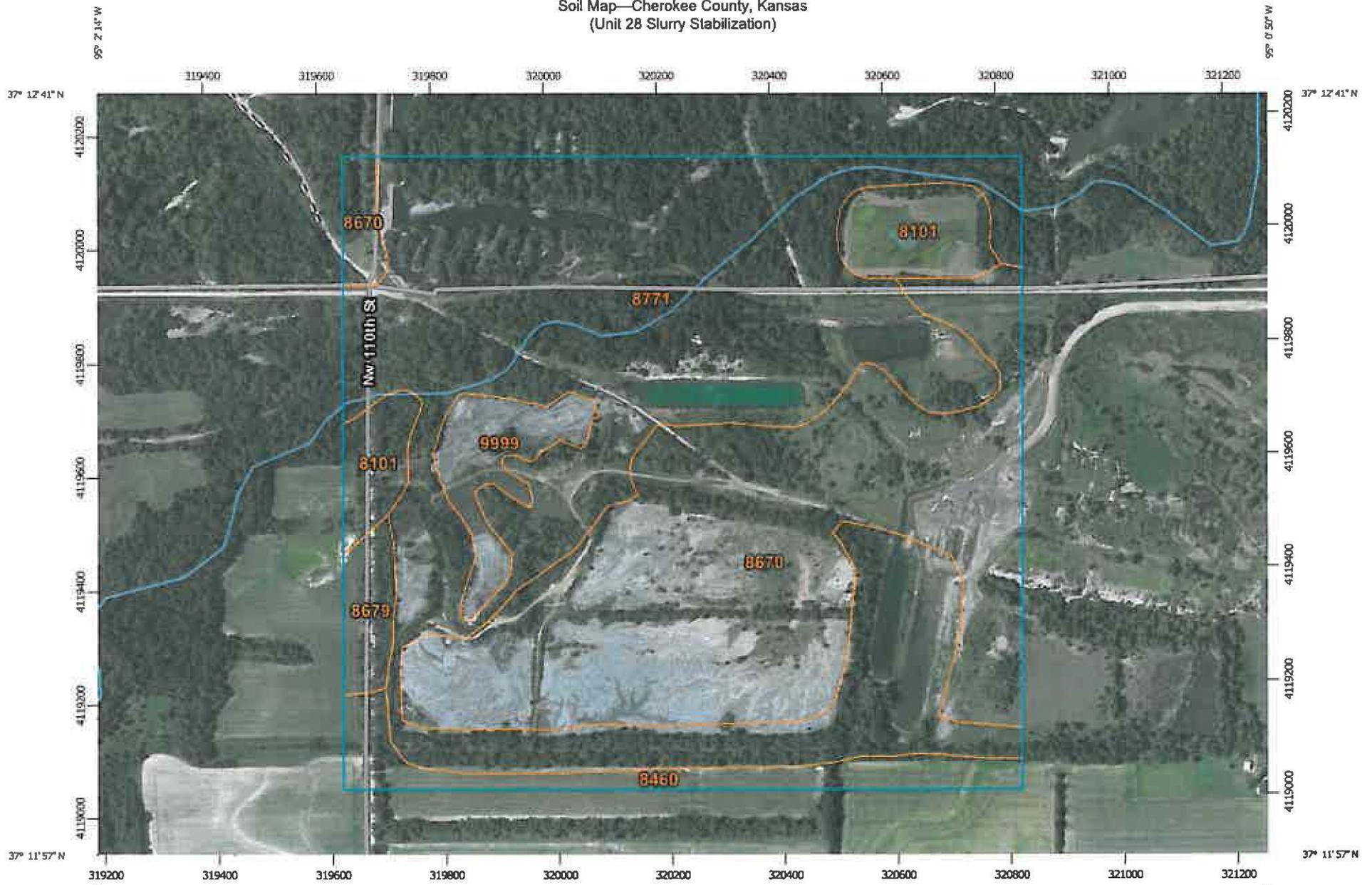


County: Cherokee	PAD NUMBER: KS-0218
Quad: Oswego	Date: 05/20/2011
Location: S5,T33S,R22E	Problems: CSL, DPE

MINED LAND WILDLIFE AREA (WEST MINERAL UNITS)



Soil Map—Cherokee County, Kansas
(Unit 28 Slurry Stabilization)



Map Scale: 1:9,450 if printed on A landscape (11" x 8.5") sheet.
0 100 200 400 600 Meters
0 450 900 1800 2700 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 15N WGS84

Soil Map—Cherokee County, Kansas
(Unit 28 Slurry Stabilization)

MAP LEGEND

Area of Interest (AOI)		 Spoil Area	
	Area of Interest (AOI)	 Stony Spot	
Soils		 Very Stony Spot	
	Soil Map Unit Polygons	 Wet Spot	
	Soil Map Unit Lines	 Other	
	Soil Map Unit Points	 Special Line Features	
Special Point Features		Water Features	
	Blowout	 Streams and Canals	
	Borrow Pit	Transportation	
	Clay Spot	 Rails	
	Closed Depression	 Interstate Highways	
	Gravel Pit	 US Routes	
	Gravelly Spot	 Major Roads	
	Landfill	 Local Roads	
	Lava Flow	Background	
	Marsh or swamp	 Aerial Photography	
	Mine or Quarry		
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cherokee County, Kansas
Survey Area Data: Version 15, Sep 9, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 23, 2010—Aug 3, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cherokee County, Kansas (KS021)			
Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
8101	Hepler silt loam, 0 to 2 percent slopes, occasionally flooded	16.8	5.1%
8460	Cherokee silt loam, 0 to 1 percent slopes	15.0	4.5%
8670	Coalvale silty clay, 1 to 5 percent slopes	113.7	34.3%
8679	Dennis silt loam, 1 to 3 percent slopes	6.0	1.8%
8771	Kanima silty clay loam, 15 to 50 percent slopes	169.2	51.0%
9999	Water	11.4	3.4%
Totals for Area of Interest		332.0	100.0%

Section 5: Site Photographs



No surface mining had taken place on the project site in 1938. There is evidence of the original location of Deer Creek in the upper left hand corner of the photo.



By 1956, the Mine 19 tipple was in operation and the first slurry cells were to the south of the plant.



By 1963, slurry was being introduced into what is now being referred to as Cell A.



In 1978, Cells A, B and C appear to be full of slurry and an erosional feature is seen from Cell A to Cell C. The lower Cell E is a water filled impoundment. The tipple stands abandoned.



The 1986 photo shows the deep erosional features in slurry Cells A and C.



In 1991, the site does not appear to have drastically changed but material is moving from Cell C into Cell D.



By 2002, the embankment between Cell B and C has failed and material is accumulating in Cell E as shown by the decrease in water area. Watco permits the old tippie site as CK-PF-1301 and carbon recovery is undertaken. The slurry cells were not bonded.



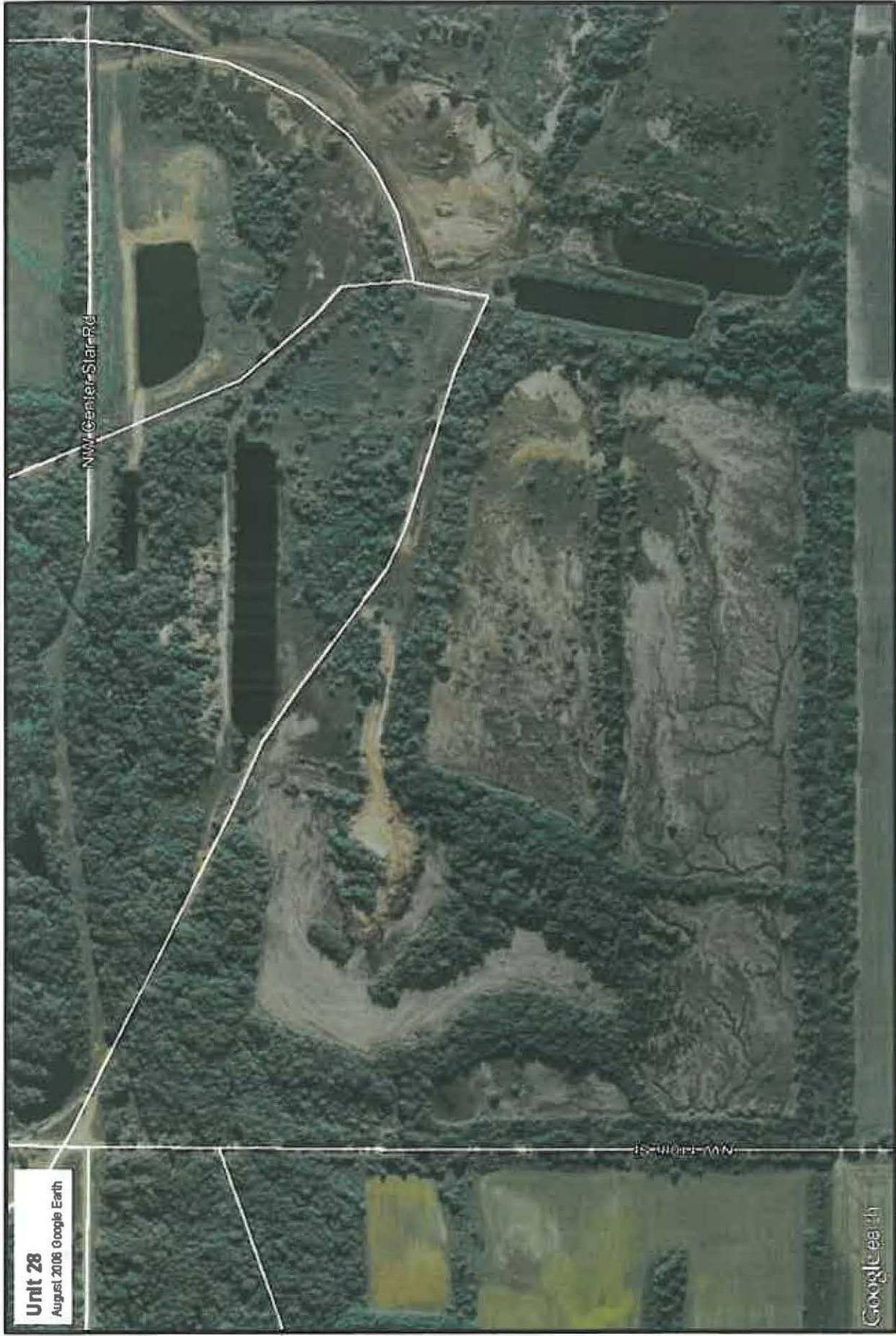
Material continues to accumulate in Cell E.



By 2004, Cell E is filled with slurry and reports of material entering Deer Creek are filed.



The 2005 photo clearly shows how small the areas are that are vegetated in Cells A and B.



2006, Watco transfers CK-PF-1301 to Ricci Mining.



By 2008, two chimney drains had been installed in Cells B and C and the embankments repaired. A new spillway was constructed from Cell A to Cell C and a filter strip had been installed defining Cell D from Cell E. The Anselmi Marsh has been built.



The slurry movement has been slowed by the chimney drains. In 2009 Ricci Mining forfeits the bond on CK-PF-1301.



Slurry movement continues in Cell E. Bond Forfeiture reclamation is underway on the tipple. The slurry has moved into the existing impoundment east of Cell E.



Unit 28
April 2013 Google Earth

NW Center Star Rd

NW 1st St

Google earth

2013, the slurry plume in the existing impoundment is still visible. Major reclamation on CK-PF-1301 is complete. Deer Creek relocation away from slurry cells has been completed.



Unit 28
March 2015 Google Earth

Site conditions as of March 2015.



Slurry from Cell E moves into the existing impoundment through a culvert under the road. The plume is clearly visible. Water in Cell E is very shallow.



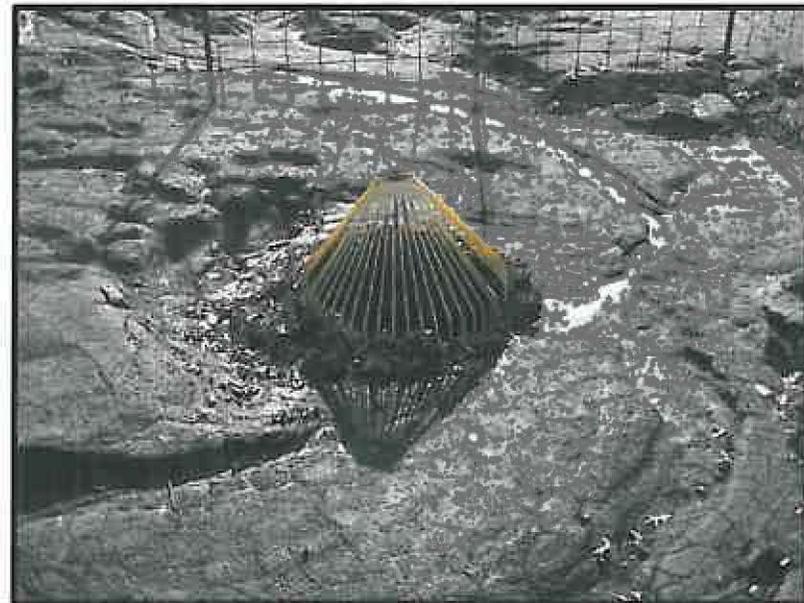
The channel from the existing impoundment has slopes vegetated with switchgrass.

Acid spoil is adjacent to the existing impoundment.





Portions of Cells A and B have some remaining vegetative cover, but it is limited. Erosive forces have left islands of vegetation. Both chimney drains have captured much of the slurry, but material is now spilling through the system.





The Anselmi Marsh is functional but does not meet the current needs of KDWPT for a deeper wetland area. Borrow from this site will be used to build filter strips.

Section 6: Construction Drawings (half scale)