Surface Mining Section

Three Programs

• Administration and Enforcement (A & E)
• Abandoned Mined Land (AML)
• Emergency Program
A&E Program
Permit Application

- Legal and financial Interest
- Vegetation, landuse, wildlife accounting
- Hydrologic study of the permit and surrounding area
- NEPA compliance
  - Corp of Engineers (404 Permit)
  - Archeological and Historical
  - Threatened and Endangered Species
- Detailed Operation Plan
- Detailed Reclamation Plan
- Revegetation Plan, including how bond release will be done
Pre Law
Abandoned Mine Land Program (AML)
Highwall Hazards
Vertical Opening Hazard
Dangerous Drift Mine
Surface Burn
SMCRA

In an effort to protect the general public from the adverse impacts of past coal mining, the United States Congress passed the Surface Mining Control and Reclamation Act (P.L. 95-87)(SMCRA) on August 3, 1977. This act authorized the collection of fees from active coal companies, for every ton of coal mined in the US, to remediate the hazards associated with past coal mining. These fees are placed in the Abandoned Mine Reclamation Fund. With the 2006 amendment to SMCRA these fees were set at the following:

Surface Mining: 28 cents per ton or 10% of the value of the coal at the mine, whichever is less.

Underground Mining: 12 cents per ton or 10% of the value of the coal at the mine, whichever is less.

Lignite Coal: 8 cents per ton or 2% of the value of the coal at the mine, whichever is less.
Presently, these fees are distributed to the State of Kansas in three ways, these are:

State Share: 50% of the fees collected in the State are returned to that State.

Historic Share: These fees are given to the State through a complex formula based on historic coal production within the State.

Federal Share: In accordance with the 2006 Amendment to SMCRA every state or tribe is to receive a minimum funding level of $3,000,000. Since we have diminished coal mining within the State, we are considered a minimum program state. Therefore, federal share are those funds given to the State that will bring us up to the minimum level of $3,000,000.
To obtain reclamation funds the State had to create an inventory of hazards associated with past coal mining and these hazards had to be prioritized and ranked based on severity. The inventory of hazards associated with past coal mining in Kansas was placed in the Federal Governments Abandoned Mine Land Inventory System (AMLIS)
# KANSAS
Abandoned Mine Land Inventory System (AMLIS)

<table>
<thead>
<tr>
<th>AML Type</th>
<th>Unfunded Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clogged Stream Lands</td>
<td>34 acres</td>
</tr>
<tr>
<td>Clogged Streams</td>
<td>2.2 miles</td>
</tr>
<tr>
<td>Dangerous Highwalls</td>
<td>142,468 linear feet</td>
</tr>
<tr>
<td>Dangerous Piles &amp; Embankments</td>
<td>256.7 acres</td>
</tr>
<tr>
<td>Gases: Hazardous/Explosive</td>
<td>1 count</td>
</tr>
<tr>
<td>Hazardous Equipment &amp; Facilitates</td>
<td>32 count</td>
</tr>
<tr>
<td>Industrial/Residential Waste</td>
<td>12 acres</td>
</tr>
<tr>
<td>Polluted Water: Agricultural &amp; Industrial</td>
<td>10 count</td>
</tr>
<tr>
<td>Polluted Water: Human Consumption</td>
<td>1 count</td>
</tr>
<tr>
<td>Subsidence</td>
<td>1,419.8 acres</td>
</tr>
<tr>
<td>Surface Burning</td>
<td>0.10 acres</td>
</tr>
<tr>
<td>Vertical Openings</td>
<td>220 count</td>
</tr>
</tbody>
</table>
NEPA Compliance

To obtain Authorization to Proceed on a project we have to obtain approval from the Federal Government’s, Office of Surface Mining. This includes complying with the National Environmental Policy Act. To do this we must obtain clearance from the following federal and State Agencies:

- Kansas Dept. of Wildlife, Parks & Tourism
- Action Permit for T&E Species may be required.
- U.S. Fish and Wildlife Service
- Corp of Engineers – 404 Permit
- Kansas Historical Society
- Division of Water Resources
- Floodplain Permits
- KDHE-Bureau of Water – SWPPP or NPDES Permit, if necessary
Foxtown South
AML Project
Gray Bat Protection

• Construction cannot begin between April 1 and October 1
• Preconstruction surface area of water has to be returned
• Linear feet of preconstruction shoreline has to be replaced
• Trees have to be planted in a 100 ft. buffer zone around the replaced water
Handling Mud
Spoil Coffer Dam
Southside of Project
Handling Mud
Rock Coffer Dam
6,000 trees planted
Highwall Accomplishments

- 197,030 feet or 37.32 miles
- Cost of $15,447,183
Vertical opening (VO) Abatement Programs

- Coal Vertical Opening Project
- Emergency Backfilling Project
- Emergency Drilling & Grouting Project
- Lead & Zinc Vertical Opening Project
**VO Accomplishments:**

<table>
<thead>
<tr>
<th>Project</th>
<th>VO’s Filled</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal VO</td>
<td>1,145</td>
<td>$2,099,326</td>
</tr>
<tr>
<td>Pb &amp; Zn VO</td>
<td>245</td>
<td>$1,424,224</td>
</tr>
<tr>
<td>Emergency Backfilling</td>
<td>970</td>
<td>$2,013,671</td>
</tr>
<tr>
<td>Emergency Drilling &amp; Grouting</td>
<td>281</td>
<td>$6,472,638</td>
</tr>
</tbody>
</table>
Coal VO Project

• Subsidence usually occurs in areas where mining was less than 40 feet from surface with unconsolidated geology for overburden.
• Subsidence generally no larger than a few feet to 25 feet in diameter and less than 15 to 20 feet in depth.
• Most subsidences are relatively small with minor deflection at the surface.
COAL MINE SUBSIDENCE

• These subsidences can occur anywhere within the boundary of the Weir-Pittsburg Coal Seam.
• Many of which affect city streets, county roads and state and federal highways.
• Emergency Hazards are remediated with two different methods: Backfilling, and Drilling and Grouting.
• Non Emergencies are handled under the Vertical Opening AML Project. About $150,000 spent a year to remediate hazards associated with non-emergency subsidence from past coal mining.
TYPICAL SLUMPED AREA

OVERBURDEN

FRACTURE ZONE

OVERBURDEN

COAL

COAL

Kansas Department of Health and Environment
Emergency & VO Project

Backfilling

Projects remediated under the Emergency Program Backfilling Contract and the Coal Vertical Opening Project are remediate in the same way. The subsidence material is removed with a backhoe and the void is filled with rock to within two feet of the surface. Then clay or topsoil is placed to the ground surface and the disturbed area is seeded.
Emergency & VO Project

Backfilling with Grout

If the void is clear to the mine opening the hazard is abated by backfilling with grout. Then clay or topsoil is placed to the ground surface and the disturbed area is seeded.
Drilling & Grouting

Projects remediated by drilling and grouting are first drilled. Then cement is pumped into the drill holes.
Lead and Zinc VO Project

- Shafts and Subsidences vary from 30 to 200+ feet in depth with multiple levels
- Room height varies from 30 to 100 feet
- Room Lengths take up city blocks
- Approximately $150,000 a year is spent abating hazards associated with lead and zinc shafts and subsidences.
• Methods for sealing Lead and Zinc VO’s:

  – Completely fill shaft (Shallow shafts and subsidences are fill with large Rock or foundation materials to within 2-3 feet of ground surface then grout. Then they are capped with soils).
  – Capping (Deep Shafts are capped with Steel reinforced concrete)
  – Puff (Polyurethane Foam)
  – Bat Gates (If necessary)
Lead and Zinc Shafts
SUBSIDENCE USED FOR ILLEGAL DUMPING
Lead & Zinc Subsidence

• 1993 Cumulative Supplement to the Kansas Statutes Annotated, Volume 4 Chapters 48 to 59, Volume 4A Chapters 60 to 64.

• Kansas Surface Mining Section, http://www.kdheks.gov/mining/
204 S. Olive
Pittsburg, Kansas
A Very Unique Case
To much structural damage not to repair foundation.

• 1993 Cumulative Supplement to the Kansas Statutes Annotated, Volume 4 Chapters 48 to 59, Volume 4A Chapters 60 to 64.

• Kansas Surface Mining Section, http://www.kdheks.gov/mining/