How Coal Mine Projects are Permitted and Regulated in Alaska

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Introduction

- History of Coal Regulations
- Permitting Process
- Coal Mining Operations
- Reclamation Techniques
- Inspection and Enforcement Procedures
Surface Mining Control and Reclamation Act

- Regulatory requirements for coal mines are different than for other types of mines. Spurred by major environmental impacts from coal mining in the 1960's and 1970's, the U.S. Congress passed the Surface Mining Control and Reclamation Act (SMCRA) in 1977.
Making sure that SMCRA’s goal are met is the responsibility of the Department of the Interior’s Office of Surface Mining (OSM).

Two major programs were created by the Surface Mining Law

- A reclamation program for abandoned mine lands.
- A regulatory program for active coal mining and reclamation operations.
Alaska Coal Program

- The federal Act also allowed individual states to develop coal regulatory program consistent with the federal legislation, and assume control (primacy) over the federal program.
- Because of Alaska’s vast coal resources and unique conditions the State developed its own regulatory program, and enacted the Alaska Surface Coal Mining Control and Reclamation Act on May 2, 1983.
Purpose of the Act

- To assure that coal mines are operated in a manner that protects citizens and the environment during mining.

- Assure that the land is restored to stable and productive use following mining.

- Mitigate the effects of past mining by aggressively pursuing reclamation of abandoned mine lands (AML Program).
Abandoned Mine Land

- A reclamation program for abandoned mine lands, funded by 35¢ fees that operators pay on each ton of coal mined, to reclaim land and water resources adversely affected by pre-1977 coal mining.
Closure of Hazardous Openings
Elimination of Dangerous Highwalls
Reclaimed Mine Pits
Administration and Enforcement

- **Essential elements of the Alaska Coal Regulatory Program:**
  - Exploration and baseline studies of the site are required before any activity occurs.
  - Permitting system is to make expectations known to and binding on the operator, including public participation.
  - 65 separate performance standards for a variety of coal mining activities - everything from the placement of signs to statistical requirements for measuring revegetation success.
  - Reclamation performance bonds.
  - Monthly inspections of each active mine site.
  - Criminal and civil penalties for violation of the Act.
Baseline Studies

- Cultural & History Resources
- Geology
- Surface Water Quality & Quantity
- Groundwater Quality & Quantity
- Meteorology/ Air Quality
- Vegetation
- Fish and Wildlife
- Soils
- Wetlands
- Land Uses
Operation and Reclamation Plans

- Operations Plan
- Blasting Plan
- Air pollution control
- Fish and Wildlife protection plan
- Reclamation plan
- Post mining land use
- Protection of the hydrologic balance
- Protection of public parks and historic places
- Relocation or use of public roads
- Transportation facilities
State Agencies

- Department of Natural Resources (DNR)
- Department of Environmental Conservation (DEC)
- Department of Fish and Game (DF&G)
- Department of Transportation & Public Facilities (DOT&PF)
- Department of Commerce, Community and Economic Development (DCCED)
- Department of Law (DOL)
State of Alaska Regulatory Requirements

- Surface Coal Mining Permit (DNR)
- Dam Safety Certification (DNR)
- Fish Habitat and Fishway Permits (DNR)
- Water Rights (DNR)
- Cultural Resource Protection (DNR)
- Coastal Zone Consistency Determination (DNR)
- Right of Way/Access (DNR/DOT)
- Sewage Treatment System Approval (DEC)
- Solid Waste Disposal Permit (DEC)
- Air Quality Permits (DEC)
- Drinking Water Supply (DEC)
Federal Agencies

- US Environmental Protection Agency
- US Army Corps of Engineers
- US Fish and Wildlife Service
- National Marine Fisheries Service
- Mine Health and Safety Administration
- Office of Surface Mining
Public Participation

- Informal Public Process
  - Pre-Application meetings and outreach
  - Attend local community meetings

- Formal Public Process
  - Public notice
  - Public Meetings
  - Hearings

- NEPA public participation

* Comments and questions are always welcome!
Operation and Reclamation
Typical Surface Coal Mining Methods
<table>
<thead>
<tr>
<th>Reclamation</th>
<th>Active Mining</th>
<th>Pre-Mining</th>
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<tbody>
<tr>
<td>Topsoil Replaced/Revegetation</td>
<td>Regrade</td>
<td>Backfilling</td>
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<tr>
<td>Prestripping/Topsoil removal</td>
<td>Direction of Mining</td>
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- **Surface Coal Mining**
- **Distance ~1 mile**
- **Topsoil**
- **Regraded Area**
- **Spoils**
- **Over and Inter Burden**
- **Coal Seams**

Two Bull Ridge, Usibelli Coal Mine, Healy Alaska
Truck / Shovel Operation
Dragline Operation
Drilling and Blasting
Coal Haulage and Stockpiles
Conveyor
Conveyor
Port Facilities
Reclamation

Mining and reclamation

September 1991  May 1993
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**Distance ~1 mile**

- **Topsoil**
- **Regraded Area**
- **Over and Inter Burden**
- **Coal Seams**
- **Spoils**

Two Bull Ridge, Usibelli Coal Mine, Healy Alaska
Backfilling and Regrading
Seeding
Reclamation Bonding

- The amount of the bond shall reflect the probable difficulty of the reclamation.

- Bond Release
  - Phase I – Completion of backfilling, grading, and drainage control
  - Phase II – Replacement of topsoil and the establishment of vegetation
  - Phase III – 10 years after final completion of all surface coal mining and reclamation activities.
Red Pit – 1983
Red Pit – 2006

It’s Here!
Red Pit – 2006
Blue Pit – 2002
Inspection and Enforcement
Evaluate Permit Conditions

Soil Depth

- **<12"**
- **>12"**
Conduct Monitoring
Address Operational Challenges
Evaluate Reclamation Success
Enforcement Actions
Questions