



John Kells P.E.  
Mining Engineer  
(907) 683-9740

December 14, 2012

Usibelli Coal Mine  
PO Box 1000  
Healy, Alaska 99743

Russell Kirkham

Alaska Coal Program Manager  
State of Alaska Department of Natural Resources  
Division of Mining, Land and Water  
550 West 7<sup>th</sup> Avenue, Suite 900 D  
Anchorage, Alaska 99501-2650

RE: **Request for a major revision for Two Bull Ridge Permit S-0603 to include ash disposal**

UCM is currently using the Poker Flat landfill for disposal of ash from the GVEA Healy #1 power plant. Ash disposal is covered in the Solid Waste Disposal permit #SWZA046-15. Because Poker Flat is being phased out as a mining area UCM is seeking to move the ash dumping location to the Two Bull Ridge area within the current 5 year permit term. Supporting documents are attached and include:

- ADEC approved Solid Waste Disposal Plan
- TCLP results from testing done with ash from GVEA Healy 1
- Proposed Coal Ash Disposal Plan for Two Bull Ridge
- Generalized map of a typical Ash backfill site
- Proposed change to Part D 10.3 of the Two Bull Ridge SMCRA permit

Please let me know if you have any questions or need additional information.  
Thank you,

John Kells, P.E.

Attachments: UCM Solid Waste Disposal Plan, GVEA TCLP test results, Proposed Coal Ash Disposal Plan

Cc: Ken Spiers (ADEC), Fred Wallis, File

ALASKA DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINING, LAND AND WATER  
PERMIT APPLICATION  
TO CONDUCT SURFACE COAL MINING AND WATER  
INSTRUCTIONS

The Alaska Surface Coal Mining Control and Reclamation Act provides that all surface coal mining and reclamation operations that will disturb more than two acres will require a Surface Mining Permit from the Department of Natural Resources prior to initiation of the operation. The purpose of the permit is to assure that the mining operation and reclamation practices are consistent with the performance standards set forth in the Act and its regulations; that the rights of surface owners and others with an interest in the property are protected; that appropriate procedures for incorporating public participation are provided; and that a proper balance exists between the protection of the environment and the development of the State's coals resources.

Articles 3, 4, and 5 of the surface mining regulations identify the information to be included in a surface mining permit application. This form parallels the organization of these Articles and is intended to serve as a checklist to assist you in the preparation of a complete application. No attempt has been made, however, to present all of the specific regulatory requirements on this form. The applicant should refer to cited provisions of the regulations to ensure that information provided is responsive to the requirements of the regulations and the Act.

Information submitted must also show how the applicant intends to meet requirements of the Performance Standards in Article 11 of the regulations, and, if applicable, the requirements for special categories of mining in Article 7. All technical data included in the application must be accompanied by the names of persons or organizations that collected and analyzed the data, dates of collection and analysis, and descriptions of the methodology used. The names, addresses and positions of officials of public and private agencies consulted during preparation of the application should be specified.

Maps submitted with the application should be presented in a consolidated format (i.e. a single map may serve more than one purpose). Certain maps plan views and cross sections must be prepared by, or under the direction of, and certified by, a registered professional engineer (or, in some cases, a geologist). These are identified by an asterisk (\*) on this form.

**Please submit five reproducible copies of all application materials.**

**References: Alaska Statute 27.21; 11 AAC Chapter 90, Articles 3, 4, 5, 7 and 11.**

Application # \_\_\_\_\_.

Date Received \_\_\_\_\_.

**Permit Application to Conduct Surface Coal Mining**

CHECK ONE: // New Permit                      /√ / Major Revision of Existing Permit

Previous or current permit number       S-0603      .

Number of acres currently permitted       2522      .

Number of acres to be added/deleted       0      

**Part A: APPLICATION AND MINE SITE IDENTIFICATION**

a) Name of Operation (Pit, mine or site name) Two Bull Ridge Mine

b) Name of Applicant (Company name) Usibelli Coal Mine, Inc.

c) Address and Phone Number of Local Offices P.O. Box 1000

Healy, Alaska 99743 (907) 683-2226

d) Address and Phone Number of General Offices

N/A

e) Name and Phone Number of Contact Person

**John Kells 907/683-9740**

f) Name, Address and Phone Number of Operator

Same as Applicant

g) Name and Phone Number of Resident Agent

Fred Wallis (907) 683-2226 Ext. 749

h) Location of Proposed Operation

Township	Range	Sections	Meridian
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11 South	7 West	Portions of 26, 27, 28, 32, 33, 34, 35	Fairbanks
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Township	Range	Sections	Meridian
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12 South	7 West	Portions of 3, 4, 5	Fairbanks
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Latitude (Center Pt.) 63° 55' Longitude (Center Pt.) 148° 55'
i) USGS 1:63,360 Quadrangle(s) Healy D-4 Alaska
j) Distance and Direction to Nearest Community Healy - 4 Miles South West
k) Mine Safety & Health Administration I.D. Number 50-00030
l) Number of Disturbed acres under this permit <b>503</b>
m) Total permit area (acres) 2522
n) Permit fee (11 AAC 90.011)
o) Requested permit term 5 Years
p) Proposed initial bond amount \$708,180.00
q) Proposed total bond amount <b>\$5,842,902</b>
r) Surface land ownership (check one) <input checked="" type="checkbox"/> / State <input type="checkbox"/> / Federal <input type="checkbox"/> / Private <input checked="" type="checkbox"/> / Combination
s) List names and address of all owners, purchasers of record, or leaseholders of the surface of lands within the proposed permit area:
Name See Exhibit A
Address
Name
Address
Mineral estate ownership (check one) <input checked="" type="checkbox"/> / State <input type="checkbox"/> / Federal <input type="checkbox"/> / Private <input type="checkbox"/> / Combination
t) List names and addresses of all owners, purchases of record, or leaseholder of the mineral estate of lands within the proposed permit area.
Name See Exhibit A
Address
Name
Address
u) List names and addresses of every owner of record of the surface or mineral estates of lands adjacent to the proposed permit area:

Name	See Exhibit A
Address	
Name	
Address	
Name	
Address	
v) Provide a map illustrating the surface and mineral ownership information requested under Part A Sections s), u), v) for the permit and adjacent area. See Plate A-1	
<b>PART B: LEGAL, FINANCIAL AND COMPLIANCE INFORMATION</b>	
<b>B1) IDENTIFICATION OF INTERESTS</b>	<b>Location</b>
a) For all businesses other than single proprietorships listed in Part A, b-g or Part A, s-t of this form, provide the names, addresses and telephone numbers of every officer, partner, director or other person performing a function similar to a director, and, for the applicant only, any person owning 10% or more of any class of voting stock. 11 AAC 90.023(b)(1)	Part B Section 1
b) List names under which the applicant, partner or principal shareholders previously conducted a surface coal mining operation in the United States within the five years preceding the date of this application. 11 AAC 90.023(b)(2)	Part B Section 1
c) List any current or previous coal mining permits in the United States held by the applicant after 1970 and by any person identified in B1(a) and any pending application to conduct operations in the United States. Identify the regulator authority for each operation. 11 AAC 90.023(c)	Part B Section 1
d) Describe all land, interests in land, options or pending bids on interest held or made by the applicant for land which is contiguous to the area to be covered by the permit. 11 AAC 90.023(e)	Part B Section 1
<b>B2) COMPLIANCE INFORMATION</b>	
a) Has the applicant, operator or any subsidiary affiliate or other business controlled by or under common control with the applicant or operator:	

b) Had a federal or state mining permit suspended or revoked in the last five years?, or	Yes___ No <u>X</u>
c) Forfeited a mining bond or similar security deposited in lieu of bond? 11 AAC 90.023(f)(1)(b)	Yes___ No <u>X</u>
d) If either question in B2(a) was answered yes, provide a statement of the facts involved in any suspension, revocation or forfeiture. 11 AAC 90.023(f)(2)	
e) List all federal or state violation notices or notices of non-compliance received by the applicant in connection with a surface coal mining operation during the three-year period before this application. Include notices pertaining to air or water quality. 11 AAC 90.023(f)(3)	<b>Part B Section 2</b>
<b>B3 AUTHORITY TO ENTER</b>	
a) Describe the legal authority for the applicant's right to enter the permit area and begin operations, and state whether that right is the subject of pending litigation. 11 AAC 90.025(a)	Part B Section 3
b) Identify relevant documents under B3a by type, date of execution, and the specific land to which they pertain. If these documents include state coal leases or coal prospecting permits, also list identifying numbers here ADL#21545, 20633, 16925	Part B Section 3
c) If the mineral state of the area to be mined has been legally separated from the private surface estate, provide a copy of the document of consent or conveyance granting the right to extract coal by surface mining methods or a determination by a court that the applicant is authorized to extract coal by surface mining methods. 11 AAC 90.025(b)	N/A
d) Show on a map the boundaries of land within the proposed permit area upon which the applicant has the legal right to enter and begin operations. 11 AAC 90.063(2)	Part A Plate A-1
<b>B4 AREAS UNSUITABLE FOR MINING</b>	
a) Is the proposed permit area within an area designated unsuitable for mining or under study for designation as such? 11 AAC 90.027(a)	No
b) If B4(a) was answered yes, provide the petition name and number.	N/A
c) Is mining proposed within any areas defined to be unsuitable for mining under AS 27.21.260(d)?	No

d) If B4(c) was answered “yes” provide, as appropriate:	
<ul style="list-style-type: none"> <li>A written waiver from the owner of any occupied dwelling within 300 feet of the mining operation 11 AAC 90.027(c)</li> </ul>	N/A
<ul style="list-style-type: none"> <li>A description with appropriate maps and cross sections, of measures to be used to ensure that the interests of the public and landowners are protected if relations of a public road or mining activities within 100 feet of the right-of-way line of any public road are proposed 11 AAC 90.093: or</li> </ul>	N/A
<ul style="list-style-type: none"> <li>Information demonstrating substantial financial and legal commitments prior to January 4, 1977, regarding the proposed operation, if an exception under AS 27.21.260(g) is sought. 11 AAC 90.027(b)</li> </ul>	N/A
<b>B5 PERMIT TERM INFORMATION</b>	
a) Specify the requested permit term	
b) If a permit term in excess of five years is requested, provide a demonstration that the longer term is necessary to allow the applicant to obtain financing for equipment or for the opening of the operation. Include written confirmation from your source of financing. 11 AAC 90.029(b)	N/A
c) Describe and show on a map the boundaries of all areas proposed to be affected over the estimated total life of the operation and the size, sequence and timing of the operation and the size, sequence and timing of areas for which it is anticipated that additional permits will be sought. 11 AAC 90.029(a), 11 AAC 90.063(3)	Part B Plate B-1
<b>B6 OTHER LICENSES AND PERMITS</b>	
a) Identify all other licenses and permits needed by the applicant to conduct the proposed operations. Include for each type, issuing authority, identification number and status. 11 AAC 90.031	<a href="#">Addendum to Part B Section 6.0</a>
<b>B7 LIABILITY INSURANCE</b>	
a) Provide certification from your insurance company that the applicant has a public liability insurance policy in force for the proposed operation, covering personal injuries or property damage resulting from the operation. 11 AAC 90.033	<a href="#">Part B Exhibit B-4</a>

<b>PART C: ENVIRONMENTAL RESOURCES INFORMATION</b>		
<b>C1) CULTURAL AND HISTORIC INFORMATION AND MAN-MADE FEATURES</b>		
a) Describe cultural and historic resources listed on the National Register of Historic Places and known archeological features within the permit area and adjacent area 11 AAC 90.041		Part C Chapter 1 Section 1.0
b) Provide a map of cultural or historic resources, known archeological sites and public parks within the permit or adjacent area. 11 AAC 90.063(9)		Part C Chapter 1 Section 5.0
c) Provide a map of all surface and subsurface man-made features within, passing through, or passing over the proposed permit area. Include the location and current use of all buildings on or within 1,000 feet of the proposed permit area: each cemetery or burial ground located in or within 100 feet of the proposed permit area. 11 AAC 90.063(4), (5), (8), (10); 11 AAC 90.065(10)		Part D Section 8
d) Show on a map any land within the proposed permit and adjacent area which is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System, including designate study rivers. 11 AAC 90.063(11)		N/A
<b>C2) HYDROLOGY AND GEOLOGY (GENERAL INFORMATION)</b>		
a) Describe the geology, hydrology and water quality and quantity of all land within permit area, adjacent area, and the general area. 11 AAC 90.043		Part C Chapter II
<b>C3) GEOLOGY DESCRIPTION</b>		
a) Provide a general statement of the geology within the proposed permit area down to and including the first aquifer to be affected below the lowest coal seam to be mined. 11 AAC 90.045(a)		Part C Chapter III
b) Provide cross sections, maps and plan view showing:		Plate C III-1
Elevations and locations of test boring and core samplings;		
All coal crop lines and the attitude of the coal to be mined within the permit area; and		
Nature, depth and thickness of the coal seams to be mined, any coal or rider seams above the seam to be mined, each stratum of the overburden and the stratum immediately below the lowest coal seam to be mined. 11 AAC 90.064(1), (3), (4)		
<b>C4) GROUND WATER INFORMATION</b>		

<p>a) Describe the ground water hydrology of the proposed permit and adjacent area. Include the depth, lithology, thickness and extent of the water table and aquifers; the quality and known uses of subsurface water; contributions of ground water to stream base flow; and if required, additional information describing recharge, storage and discharge characteristics of aquifers and water quality and quantity. 11 AAC 90.047</p>	<p>Part C Chapter IV Section 3.0</p>
<p>b) Provide cross sections, maps and plan views showing the location and extent of any subsurface water encountered, and the locations and elevation of monitoring stations used to gather data for water quality and quantity. 11 AAC 90.065(2), (6)</p>	<p>Part C Plates 1, 2, 3</p>
<p><b>C5) SURFACE WATER INFORMATION</b></p>	
<p>a) Identify the watershed, which will receive water discharges from the affected area, the location of any water discharge point into any surface body of water. 11 AAC 90.049</p>	<p>Part C Chapter V</p>
<p>b) Describe surface drainage systems, identifying seasonal variations in water quality and quantity within the proposed permit area and adjacent area. 11 AAC 90.049</p>	<p>Part C Chapter V Sections 3.4, 3.5</p>
<p>c) Provide a map showing the location of all surface water bodies within the proposed permit area and adjacent area, including those identified under 3.41. Show the elevations and locations of monitoring stations used to gather water quality and quantity data. 11 AAC 90.065(2), (7)</p>	<p>Part C Chapter V Section 3.3</p>
<p><b>C6) ALTERNATIVE WATER SUPPLY INFORMATION</b></p>	
<p>a) Identify the extent to which the proposed operations may result in contamination, diminution or interruption of a source of water within the proposed permit area or adjacent area for domestic, agricultural, fish and wildlife habitat or other legitimate use. 11 AAC 90.051</p>	<p>Part C Chapter VI</p>
<p>b) Provide a map showing the location of water supply intakes for current users of surface water flowing into, out of and within a hydrologic area. 11 AAC 90.063(7)</p>	<p>Part C Chapter VI Section 2.3</p>
<p>c) Provide a map showing the location and depth, if available, of water wells within the proposed permit area and adjacent area. 11 AAC 90.065(10)</p>	<p>N/A</p>
<p><b>C7) CLIMATOLOGICAL INFORMATION</b></p>	
<p>a) Provide a description of climatological factors of the proposed permit area, including precipitation, wind speed and direction, and seasonal temperature ranges, when requested by the Commissioner. 11 AAC 90.053</p>	<p>Part C Chapter VII</p>

b) Show on a map the elevation and location of monitoring stations used to gather data for air quality, if required. 11 AAC 90.065(2)	N/A
<b>C8) VEGETATION INFORMATION</b>	
a) Provide a description of vegetation types within the proposed permit area, adjacent area and any proposed reference area. Include information and quantitative measurements adequate to predict the potential for successful revegetation. 11 AAC 90.055	Part C Chapter VIII
b) Provide a map delineating existing vegetation types within the permit and adjacent area, and showing the location and boundaries of any proposed reference areas. 11 AAC 90.055; 11 AAC 90.063(6)	Part C Chapter VIII
<b>C9) FISH AND WILDLIFE INFORMATION</b>	
a) Provide a study of fish and wildlife, their habitats, and human use of these resources within the proposed permit area and portions of the adjacent area where effects on these resources may reasonably be expected to occur. Identify any threatened or endangered species and their critical habitats and fish and game of economic, recreational or subsistence importance. 11 AAC 90.057	Part C Chapter IX
b) Show on map the location and elevation of any monitoring stations used to gather fish and wildlife data 11 AAC 90.065(2)	Part C Chapter IX
<b>C10) SOIL RESOURCES INFORMATION</b>	
a) Identify and describe soils within the proposed permit area, and provide analyses of each soil type to be affected. 11 AAC 90.059(a)(2), (a)(3)	Part C Chapter X
b) Provide information regarding present and potential productivity of existing soils 11 AAC 90.059(a)(4)	Part C Chapter X
c) Provide a map delineating different soils within the proposed permit area. 11 AAC 90.059(a)(1)	Part C Chapter X
d) If the use of selected overburdened materials as a supplement or substitute for topsoil is proposed, provide results of analyses, trials and tests required under 11 AAC 90.311, 11 AAC 90.059(b)	N/A
<b>C11) LAND USE INFORMATION</b>	

a) Describe the condition, capability and productivity of the land proposed to be affected by surface operations and facilities. Include a map, supporting narrative and analysis of the existing and, if applicable, the historic land uses. 11 AAC 90.061(a)	Part C Chapter XI
b) Provide a description of existing land use classifications or zoning, if any of the proposed permit area and adjacent area 11 AAC 90.061(c)	Part C Chapter XI
c) State whether the proposed permit area has been previously mined, and provide a description of the previous mining, including type, dates and extent of mining, and the uses of the land preceding mining. 11 AAC 90.061(b)	Part C Chapter XI
d) Show on a map the extent of existing or previously surface-mined areas within the proposed permit area, and the location and extent of known workings of active, inactive or abandoned underground mines, including mine openings to the surface within and adjacent to the proposed permit area. 11 AAC 90.065(8), 11 AAC 90.065(5).	Part C Chapter XI
<b>PART D: OPERATION AND RECLAMATION PLAN</b>	
<b>D1) OPERATION PLAN</b>	
a) Describe (in detail for the proposed permit area and in general for life of the operation) the type and method of coal mining procedures and proposed engineering techniques, anticipated annual and total production of coal and the major equipment to be used. 11 AAC 90.071(1) 11 AAC 90.071(1)	Part D Sections 2.0
b) Illustrate using maps and plan views, and cross sections where appropriate, the area of land to be affected and the sequence of mining and reclamation within the proposed permit area. 11 AAC 90.077(b)(2)	Part D Sections 2.0
c) Describe measure to be used to maximize the use and conservation of the coal resources. 11 AAC 90.083(b)(6)	Part D Section 6.0
d) Describe and illustrate using maps, plan views and cross sections where appropriate, any overburden storage area or structure. 11 AAC 90.071(2)(B); 11 AAC 90.077(b)(5)	Part D Section 5.0
<b>D2) EXISTING OPERATIONS, STRUCTURES AND FACILITIES</b>	
a) Provide a map identifying areas where operations were conducted (coal was removed or lands were otherwise used in connection with the operation):	
Before August 3, 1977;	N/A

After August 3, 1977 and before May 3, 1978;	N/A
After May 3, 1978 and before May 2, 1983 and	N/A
After the estimated date of Permit issuance 11 AAC 90.021(f)(2)	N/A
a) Provide cross sections, maps and plan views showing the location and dimensions of existing areas of spoil, waste, coal development waste, and non-coal waste disposal; dams, embankments, other impoundment's; and water treatment and air pollution control facilities within the proposed permit area. 11 AAC 90.065(9)	N/A
b) Identify and describe each existing structure proposed to be used in connection with the operation. Include its location, design, current condition and construction dates. Provide a showing of whether the structure meets applicable performance standard requirements. 11 AAC 90.073(a)	Part D Section 8.0
c) Provide a compliance plan for each existing structure to be modified or reconstructed for use in connection with the operation. Include design specifications, a construction schedule, provisions for monitoring the structure, and a showing that risk of harm to the environment or to public health and safety is not significant. 11 AAC 90.073(b)	Part D Sections 6.0 & 7.0
<b>D3) COAL TRANSPORTATION AND HANDLING</b>	
a) Describe the construction, modification, use, maintenance and removal of structures and facilities for coal removal, handling, storage, cleaning and transportation. 11 AAC 90.071(2)(c)	Part D Sections 6.0 & 7.0
b) Provide maps and plans and cross-sections where appropriate, showing each coal storage, cleaning and loading area. 11 AAC 90.077(b)(4)	Part D Section 6.0
<b>D4) BUILDINGS, ROADS AND OTHER FACILITIES</b>	
a) Describe construction, modification, use maintenance and removal of mine facilities 11 AAC 90.071(2)(E)	Part D Sections 6.0, 7.0, 8.0, & 9.0
b) Provide maps and plans and cross-sections where appropriate, showing buildings, utility corridors and other facilities to be used. 11 AAC 90.077(b)(1)	Part D Sections 6.0, 7.0, 8.0, & 9.0
c) Describe each road, conveyor or rail system to be constructed, used or maintained within the proposed permit area. Include a map, appropriate cross sections and specifications for each road width, road gradient, road surface, road cut, fill embankment, culvert, bridge, drainage ditch and drainage structure. 11 AAC 90.097.	Part D Sections 7.0, 8.0, 9.0, & 10.0

<b>D5) BLASTING PLAN</b>	
a) Provide a plan describing blasting operations. Include a description of types and amounts of explosives, procedures for recording and retention of blasting information, blasting warning and access control procedures, blast monitoring, preblasting surveys and procedures for unscheduled blasts 11 AAC 90.075	Part D Section 4.0
b) Provide a map showing the location of each explosive storage and handling facility. 11 AAC 90.077(b)(10)	Part D Section 8.0
<b>D6) AIR POLLUTION CONTROL PLAN</b>	
a) Provide a plan showing how all surface areas will be stabilized and protected to comply with applicable federal and state air quality regulations, including, if required by the Commissioner, an air quality monitoring program 11 AAC 90.079	Part D Section 13.0
b) Describe steps to be taken to comply with the requirements of the Clean Air Act (42 U.S.C. Section 7401, etc, seq.) and other applicable air quality laws and regulations. 11 AAC 90.083(b)(9)	Part D Section 13.0
c) Describe and show on a map each air pollution collection and control facility. 11 AAC 90.071(2)(F), 11 AAC 90.077(b)(7).	Part D Section 13.0
<b>D7) FISH AND WILDLIFE PROTECTION PLAN</b>	
a) Provide a plan describing impact control measures, management techniques and monitoring methods designed to prevent or minimize disturbance and adverse impacts on fish and wildlife and related environmental values. Include threatened or endangered species, important or protected species and habitats of unusually high value for fish and wildlife. 11 AAC 90.081	Part D Section 11.0
b) Provide maps and plan views and cross-sections where appropriate, showing each facility to be used to protect and enhance fish and wildlife and related environmental values. 11 AAC 90.077(b)(9)	Part D Section 11.0
<b>D8) RECLAMATION PLAN: GENERAL REQUIREMENTS AND BONDING</b>	
a) Provide a plan for reclamation of the proposed permit area. Show how the applicant will comply with the performance standards in 11 AAC 90.301 -- 11 AAC 90.501. 11 AAC 90.083(a)	Part D Section 10.0
b) Provide a detailed timetable for the completion of each major step in the reclamation	Part D Section 10.0

plan 11 AAC 90.083(b)(1)	
c) Provide a detailed estimate, with supporting calculations, of the cost of the reclamation of all operations required to be covered by a performance bond. 11 AAC 90.083(b)(2)	Part D Section 10.0
d) Provide a map, showing each area of land for which a performance bond or other equivalent guarantee will be posted. If incremental or cumulative bonding is proposed, this map should identify initial and successive bonding areas. 11 AAC 90.077(b)(3)	Part D Section 10.0
<b>D9) BACKFILLING AND GRADING PLAN</b>	
a) Provide cross sections, maps and plan views adequate to portray the existing land surface configuration and slopes within the area to be affected. 11 AAC 90.065(11)	Part D Sections 2.0 & 10.0
b) Provide a plan for backfilling, soil stabilization and grading, with contour maps or cross sections that show the anticipated final surface configuration of the proposed permit area. 11 AAC 90.083(b)(3)	Part D Sections 2.0 & 10.0
c) Describe measures to be employed to ensure that all coal, acid-forming and toxic-forming materials, debris and materials constituting a fire hazard are covered, treated or otherwise properly disposed of. Include a contingency plan for preventing sustained combustion. 11 AAC 90.083(b)(7)	Part D Sections 2.0 & 10.0
<b>D10) TOPSOIL HANDLING PLAN</b>	
a) Provide a plan for removal, storage and redistribution of topsoil, subsoil and other substitute or supplemental material. 11 AAC 90.083(b)(4)	Part D Section 3.0
b) Provide a description of topsoil handling and storage areas and structures. Include; appropriate maps, plan views and cross sections. 11 AAC 90.071(2)(B); 11 AAC 90.077(b)(5)	Part D Section 3.0
c) Provide a soil-testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation. 11 AAC 90.083(b)(5)(H)	Part D Section 3.0
<b>D11) REVEGETATION PLAN</b>	
a) Provide a plan for revegetation, including a revegetation schedule, species and amounts per acre of seeds and seedlings, methods of planting, seeding and mulching and any planned irrigation or pest control measures. 11 AAC 90.083(b)(5)	Part D Section 10.0
b) Specify measures proposed to be used to determine the success of revegetation. 11 AAC 90.083(b)(5)	Part D Section 10.0

<b>D12) PROTECTION OF THE HYDROLOGIC BALANCE</b>	
a) Provide a detailed description, with appropriate maps and cross section drawings, of measures to be taken during and after the proposed operations to ensure the protection of the quality and quantity of surface and ground water, and the rights of present users. 11 AAC 90.085(a)	Part D Section 12.0
b) Provide a plan for the control of surface and ground water drainage into; through and out of the proposed permit area. 11 AAC 90.085(c)(1)	Part D Section 9.0
c) Provide a description with maps and plan views and cross sections where appropriate of each water diversion, collection, conveyance, 11 AAC 90.071(2)(F), 11 AAC 90.077(b)(6)	Part D Section 9.0
d) Provide a description, including maps and cross-sections of the design, construction and removal of stream channel diversions. 11 AAC 90.083 (b)(11)	Part D Section 10.0
e) Provide a plan for treatment of surface and ground water drainage from the area to be disturbed. Include proposed quantitative limits on pollutants in discharges. 11 AAC 90.085(c)(2)	Part D Section 12.0
f) Provide general design information, maps, plan views, descriptions, cross sections and other information for each proposed sedimentation pond, dam embankment or impoundment. Describe construction, modification, use, maintenance and removal. Include a schedule for submission of any detailed design plans. 11 AAC 90.071(2)(A); 11 AAC 90.077(b)(11); 11 AAC 90.089(a).	Part D Section 9.0
g) Provide detailed design information for all ponds, dams, embankments or impoundments for which specific approval is requested. 11 AAC 90.089(b)	Part D Section 9.0
h) For each structure 20 feet or higher or impounding more than 20-acre feet of water, include a stability analysis. 11 AAC 90.089(d)	N/A
i) Provide a plan for the collection, recording and reporting of ground and surface water quality and quantity data. 11 AAC 90.085(b)(4)	Part D Section 12.0
j) Provide a plan for the restoration of the approximate recharge capacity of the permit area and adjacent area. 11 AAC 90.085(b)(3)	Part D Section 12.0
k) Provide a description including appropriate cross sections and maps, of measures to be used to plug, case or manage exploration holes, other bore holes, wells and other openings within the proposed permit area. 11 AAC 90.083(b)(8)	Part D Section 12.0

l) Provide a determination of the probable hydrologic consequences of the operation on the proposed permit area and adjacent area with respect to the hydrologic regime and the quantity and quality of water in surface and ground water systems under all seasonal conditions. 11 AAC 90.085(c)	Part D Section 12.0
m) Describe steps to be taken to comply with the Clean Water Act and other applicable water quality laws and regulations. 11 AAC 90.083(b)(9)	Part D Section 11.0
<b>D13) POST MINING LAND USE</b>	
a) Provide a detailed description of the proposed use, following reclamation of the land to be affected. Include a discussion of how this use is to be achieved and the utility and capacity of the reclaimed land to support a variety of alternative uses. 11 AAC 90.087(a)	Part D Section 10.0
b) If the proposed post mining land use differs from the pre-mining land use, attached all documentation needed to satisfy applicable criteria contained in 11 AAC 90.481, 11 AAC 90.087(a)	N/A
c) Describe the relationship of the proposed land use to applicable state and local land use policies and plans, and to surface owner plans. Include comments concerning the proposed use by the legal or equitable surface owner and the appropriate state and local government agencies. 11 AAC 90.087(b)	Part D Section 10.0
<b>D14) PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES</b>	
a) Describe measures to be used to prevent or minimize impacts to any public park or historic place that may be adversely affected by the proposed operations. 11 AAC 90.091	Part D Section 14.0
<b>D15) EXCESS SPOIL AND UNDERGROUND DEVELOPMENT WASTE</b>	
a) Describe the design, construction, operation, maintenance and removal if appropriate of all excess spoil or mine development waste disposal areas and structures. 11 AAC 90.071(2)(b); 11 AAC 90.095(a)	Part D Section 5.0
b) Provide appropriate maps, plan views and cross sections drawings illustrating the proposed disposal site and the design of the spoil disposal structures. 11 AAC 90.077(b)(11); 11 AAC 90.095(a)	Part D Section 5.0
c) Provide the results of a geotechnical investigation of the proposed disposal site. Include bedrock characteristics, a survey of springs and seeps, an analysis of potential effects of underground mine subsidence, a geotechnical description of rock materials to be	Part D Section 5.0

used in any rock chimney cores or drainage blankets and a stability analysis of the fill. 11 AAC 90.095(b)	
d) Provide engineering specifications utilized to design any rock-toe buttress or key-way cuts. Include the number, location and depth of borings or test pits. 11 AAC 90.095(c)	Part D Section 5.0
<b>D16) HAZARDOUS COAL PROCESSING WASTE</b>	
a) Describe the design, construction, modification, use, maintenance and removal of any hazardous coal processing waste disposal areas and structures. Explain how the structure complies with 11 AAC 90.391; 11 AAC 90.409; 11 AAC 90.071(2)(D)	N/A
b) Provide maps and plan views, and cross sections where appropriate of each hazardous coal processing waste storage area, disposal area, dam or embankment. 11 AAC 90.077(b)(11)	N/A
c) Provide maps, plan views and cross sections as appropriate to illustrate the sources of the coal processing waste. 11 AAC 90.077(b)(8)	N/A
d) For each hazardous coal processing waste dam or embankment, provide the results of a geotechnical investigation of the foundation area to determine structural competence of the foundation to support the dam or embankment and the impounded material. 11 AAC 90.089(c)	N/A
e) Describe the design, operation, and maintenance of any proposed facility to return hazardous coal processing waste to underground workings, including flow diagrams and appropriate drawings and maps. 11 AAC 90.099	N/A
<b>D17) NON-COAL WASTE</b>	
a) Describe and illustrate using appropriate maps, plan views and cross sections, the removal handling, storage and disposal of non-coal wastes. 11 AAC 90.071(2)(D) 11 AAC 90.077(b)(5)	Part D Section 5.0
<b>D18) UNDERGROUND MINING: SUBSIDENCE</b>	
a) Provide the results of a survey, which shows whether structures of renewable resource lands exist within the proposed permit and adjacent area, and a determination as to whether subsidence may cause material damage or affect the use of the structures or resources. 11 AAC 90.101(a)	N/A
b) If the subsidence may cause material damage or affect the use of structures or renewable resources, describe methods of operation which may affect subsidence,	N/A

measures to be taken to prevent or reduce damage due to subsidence, a subsidence monitoring plan (including the location of subsidence monitoring points), and measures to determine the degree of damage or diminution of value or use. 11 AAC 90.077(c)(2); 11 AAC 90.101(c)	
<b>D19) UNDERGROUND MINING: RECLAMATION</b>	
a) Provide a description, including appropriate cross sections, drawings and maps of measures to be used to seal or manage mine openings. Include a detailed description of permanent entry seals and down-slope barriers designed to ensure stability under anticipated hydraulic heads developed while promoting mine inundation after mine closure. 11 AAC 90.083(b)(8); 11 AAC 90.085(d)	N/A
b) Provide maps, plan views and cross sections illustrating the anticipated final surface configurations and profile to be achieved for the affected area, including the locations of each permanent facility. 11 AAC 90.077(c)	N/A
c) If operations are planned closer than 500 feet to an active or abandoned underground mine, describe measures to be used to comply with 11 AAC 90.393, 11 AAC 90.083(b)(10)	N/A
<b>PART E: SPECIAL CATEGORIES OF MINING</b>	
1) Does the proposed operation include:	
Mountaintop removal?	Yes ___ No <u>X</u>
Steep Slope Mining?	Yes ___ No <u>X</u>
Alluvial Valley Floors?	Yes ___ No <u>X</u>
In Situ Processing?	Yes ___ No <u>X</u>
Experimental Practices?	Yes ___ No <u>X</u>
Important Farmlands?	Yes ___ No <u>X</u>
2) Are you requesting a variance:	
From contour restoration requirements for steep slopes?	Yes ___ No <u>X</u>
For combined surface and underground mining?	Yes ___ No <u>X</u>
3) If any part of Part E 1 or 2 was answered "yes" provide documentation addressing	

relevant requirements of 11 AAC 90.141 -- 11 AAC 90.157	
4) Will facilities such as roads, transportation, support facilities, and utility installations be constructed outside the permit area?	No
5) If number four above, was answered "yes" either attach a finding by the Commissioner that a permit is not required or provide information addressing the requirements of 11 AAC 90.155.	

The applicant, being first duly sworn, states to the best of his knowledge and belief that all statements and representations made in this application are true and correct.

Title Chief Engineer.

Applicant's Name Fred Wallis Telephone # (907) 683-2226

Applicant's Signature \_\_\_\_\_ Date \_\_\_\_\_  
\_\_\_\_\_.

Subscribed and sworn to before me by \_\_\_\_\_ this the \_\_\_\_ day of 20\_\_\_\_  
\_\_\_\_\_.

Notary Public \_\_\_\_\_ My commission expires \_\_\_\_\_  
\_\_\_\_\_.

Note: Attach a copy of power of attorney, or resolution of Board of Directors that grants signature authority)

**6.0 OTHER LICENSES AND PERMITS**  
**ADDENDUM FOR DECEMBER 2012 MAJOR REVISION**

**State of Alaska**  
**Department of Environmental Conservation**  
**Division of Environmental Health**  
**Solid Waste and Pesticides Program**

**Type of Permit:** Solid Waste Disposal

**Identification No:** SWZA046-15

**Status:** This permit expires March 1, 2015



## COMMENTS/REMARKS

### Gold Run Pass Mine

Original permit issued under # 02-83-796

Major revision approved & issued under # S-602-A

### Rosalie Mine

Original permit issued under # S-0604

### Wishbone Hill Mine

Original permit issued under # 01-89-796 &

# 02-89-796

### Two Bull Ridge Mine

Original permit issued under # S-0603

Major Revision A issued November 30, 1999

### Jumbo Dome Mine Road Corridor

Original permit issued under # S-0605

## **2.0 COMPLIANCE INFORMATION**

The applicant, nor its operator, nor any subsidiary, affiliate, or other business controlled by the applicant has ever had a federal or state mining permit suspended or revoked, or forfeited a mining bond or similar security deposited in lieu of bond.

Violations received by UCM in connection with its existing surface coal mining operation during the past three years are outlined below.

<b>LIST OF VIOLATIONS</b>				
<b>Date</b>	<b>Agency</b>	<b>Violation #</b>	<b>Permit #</b>	<b>Status</b>
07/03/2012	DMLW	N-S0602-06272012	S-0602	Terminated
07/03/2012	DMLW	N-S0603-06272012	S-0603	Terminated
07/03/2012	DMLW	N-S0603-06272012-1	S-0603	Terminated
07/03/2012	DMLW	N-S0605-06272012	S-0605	Terminated

## **PROPOSED COAL ASH DISPOSAL PLAN WITHIN TWO BULL MINE**

Currently UCM disposes of Coal Combustion Wastes (CCW) from GVEA's Healy #1 power plant in the Poker Flats Mine. This disposal is permitted under SMCRA 01-83-796, Vol. V, sec. 2.10, and ADEC Solid Waste Permit SWZA046-15. Mining in the Poker Flats area is coming to an end. Continued disposal of CCW in this area would inhibit final reclamation as well as cause considerable expense to maintain access and haul in cover material to cover the ash. This revision request only addresses specific concerns surrounding disposal of CCW by land filling. UCM expects to investigate beneficial uses for the CCW in their future reclamation plans.

### **Quantity of CCW:**

Approximately 30,000 cubic yards of CCW is produced annually from the Healy #1 power plant. An additional 45,000 cubic yards per year could be added when the Healy Clean Coal Plant (HCCP) begins operations. Additionally, UCM would like to reserve the option of disposing of the CCW from the Aurora power plant in Fairbanks should that become advantageous. The Aurora plant produces roughly 50,000 cubic yards of CCW annually.

### **Construction and Operation Plan for CCW Placement at Two Bull Ridge During Active Mining:**

In order to prevent disruption of the mining and reclamation sequence, UCM is proposing to utilize multiple small disposal sites rather than a single large one. Each disposal site will be closed as the active mining area moves away from it and the next one will be opened closer to the mining face. This allows the sites to be incorporated into the contemporaneous reclamation program and minimizes amount of ash exposed to the environment during operation. All sites will be located above the groundwater table and below the final reclaimed surface in order to permanently isolate the ash from the environment. UCM will track and record the locations of all CCW sites to insure that any future operations will not disrupt this isolation. The typical disposal site will be 300 feet long, 200 feet wide and 9 feet deep and is shown on the enclosed map. These sites will be located throughout the active mining area of the Two Bull permit boundary, including the Badlands Extension and the Francis Ridge. The sites will have an active period from 2 to 6 months depending on how many power plants were using it. Each site will be covered by several lifts of clean spoils when it is closed. Due to the small quantity of ash relative to the large quantity of spoil and the characteristics of ash as a soil stabilizer, there should be no slope stability issue related to disposal of the ash in the Two Bull Mine. This active mine effort is anticipated to last for the next 10-years.

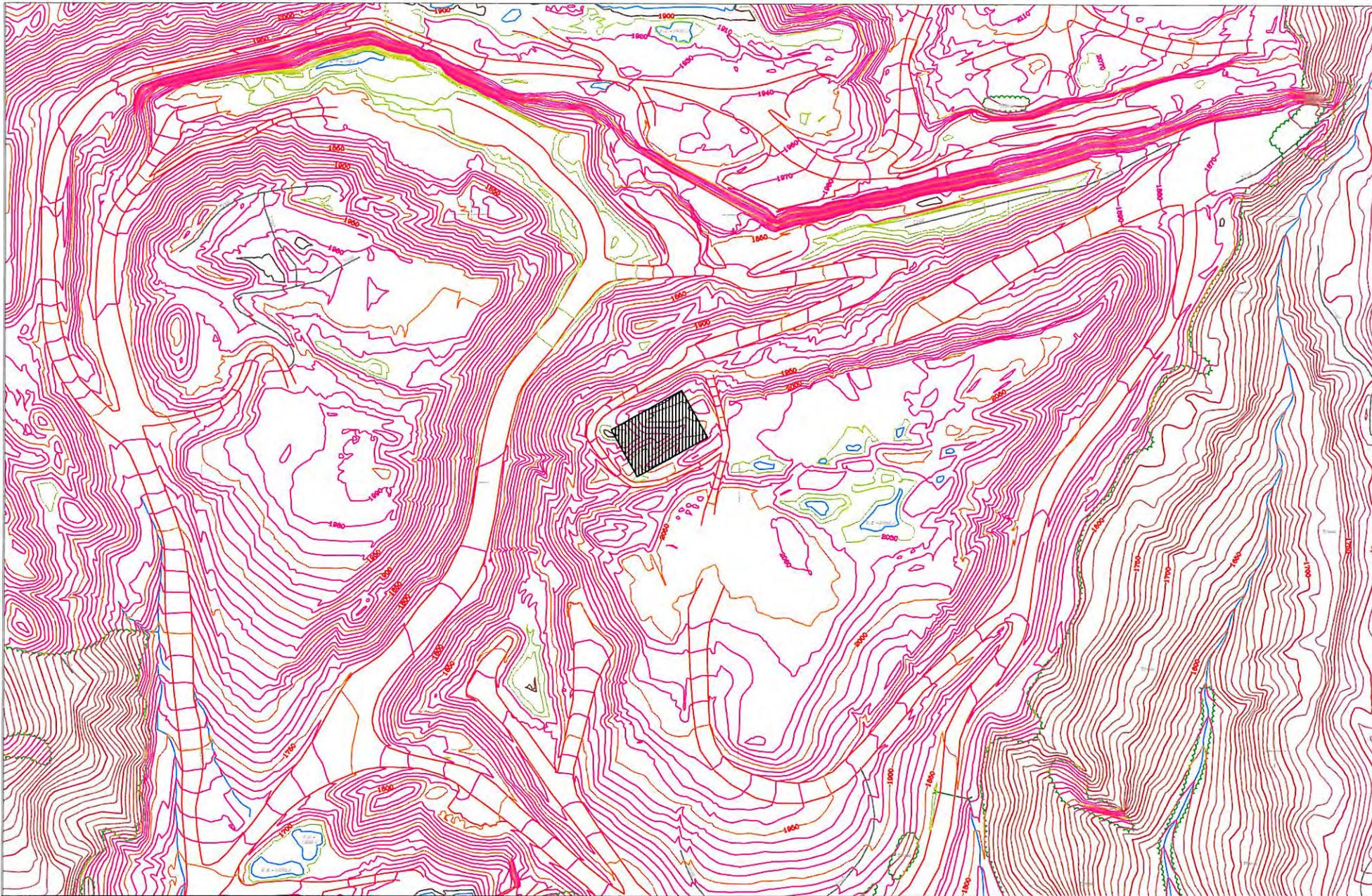
**Anticipated Effects to the Hydrologic Balance:**

Even with CCWs from all three power plants reporting to TBR, it would only comprise 2% of the total of the spoil material currently being moved. By utilizing small disposal sites and incorporating them into the reslope and reclamation program in short time intervals, it is not anticipated to have any effect on either the final contours or the hydrologic balance. Additionally, UCM has conducted extensive Toxicity Characteristic Leaching Procedure (TCLP) tests on the Healy # 1 Power Plant ash and the Aurora Power Plant ash. All results were non-detect except for a small amount of barium leaching through. The result was two orders of magnitude less than the ADEC/RCRA maximum allowable concentration (MAC) limit of 100 mg/L. The Healy #1 ash had one detectable result for the leaching of vanadium. The result was 0.2 mg/L and there is no published MAC for vanadium. Therefore, there will be no anticipated impact to groundwater quality from incorporating the coal ash in the Two Bull Mine backfill.

**Unsuitability of using an impervious liner under the Ash Backfill:**

UCM's experience is that there is not a lot of infiltration through the reclaimed spoil piles. The minimal infiltration combined with the lack of reactivity of the ash present very little potential to affect the groundwater under the Ash backfill areas. Groundwater monitoring in the vicinity of the Poker Flat Ash Dump has shown no effect to the water chemistry.

The Ash Backfills will be placed within spoil piles that ultimately follow 'Approximate Original Contour' that include slopes of 3 to 1. An impervious liner would serve as a discontinuity and over a long period of time could retain water above it which would create both a sliding surface and a pressure differential within the final slopes that would decrease the stability of the final slopes.



P.O. Box 1000, Healy, Alaska 99743

## Two Bull Ridge Mine

### Typical Placement of Ash Disposal Site

200' x 300'

Date: November 3, 2011

Scale: 1" = 500'

By: JK

Rev:

use of wildlife habitat. Public recreation will be a related secondary land use. These proposed primary and secondary postmining uses are consistent with the Tanana Basin Area Plan for State Lands.

To address the secondary land use component of public recreation, UCM is proposing to leave the TBR Long Term Haul Road in place after mining has been completed. This road will provide long term public access to both State land and lands administered by the Mental Health Trust Land Office (TLO). A letter expressing the Department of Natural Resources' desire to retain UCM's primary mine roads for future public access is contained in Exhibit D10-1. In discussions relative to a lease, the TLO has also expressed interest in retaining the main TBR haul road for access after the mining operations have been completed. The portions of the main TBR haul road system that will be incorporated into the postmining land use are depicted on Plate D10-1.

### **10.3 BACKFILLING OPERATIONS**

Backfilling operations will generally occur concurrently with ongoing mine development and advance. Mine development and production spoil materials will be placed as backfill in excavated pit areas to achieve the final design postmining configuration as shown on Plate D10-1, Approximate Final Reclamation Contours and Postmining Drainage Control Plan. Initial box cut spoil will be placed in the permanent out-of-pit spoil dumps depicted on Plate D2-1, General Facility Arrangement. A detailed discussion of overburden and interburden excavation and disposal, including out-of-pit spoil placement, is presented in Section 5.0, Pit Excavation Plan.

#### **10.3.1 COAL ASH DISPOSAL WITHIN BACKFILL (MAJOR REVISION 2012)**

Coal Combustion Wastes (CCW) will be incorporated with normal backfill operations to provide for their safe and stable long term storage. The storage sites within the spoils will be approximately 300' long, 200' wide and 9' deep. The sites will be covered during normal backfilling operation after placement of the CCW is complete. The sites will be chosen to be above the groundwater and below the final regrade surface to insure the CCW remains isolated from the environment. UCM will track and record the locations of all CCW disposal sites.