

APPENDIX C

Lease Stipulations

PRELIMINARY

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Stipulations Identified in the Unsuitability Criteria

Wild and Scenic River

- State-of-the-art mining techniques (pillar and panel widths, rate of coal development and extraction, mine method, determining angle of draw [angle between a vertical line drawn upward to the surface from the edge of the underground opening and a line drawn from the edge of the opening to the point of zero surface subsidence], etc.) shall be used to control subsidence.
- No surface developments would be allowed within the ½ mile wide river study corridor (i.e., 1/4 mile wide on each side of the West Fork of Terror Creek) on BLM surface lands.

Rights-of-Way

- Electrical safety clearances addressed in the Code of Federal Regulations, 29 CFR 1910.333(c) (3) must be maintained at all times.
- All vehicles, equipment, and/or machinery or other materials near the right-of-way must be properly grounded. In order to avoid static or induced electrical hazards no materials may be stored in the transmission line right-of-way.
- If future longwall mining would come within 100 feet of any transmission line tower foundation, a structural review and acceptance by WAPA would be required.
- Any drilling activities within WAPA's right-of-way must be approved by WAPA in advance. Safety provisions would be provided to ensure there are no conflicts with WAPA's transmission line or access.
- The lessee is required to coordinate with WAPA's operations center located in Western Rocky Mountain Region Office in Loveland, Colorado at least two weeks prior to commencement of any work beneath or adjacent to the transmission line.
- Roads used to provide personnel and equipment access to WAPA's facilities cannot be restricted or impaired in a way that denies access. Alternate access must be provided if an access road is blocked or damaged. Damage to WAPA's access roads must be repaired by the lessee or lessee's contractor.
- State-of-the-art mining techniques (pillar and panel widths, rate of coal development and extraction, mine method, determining angle of draw, etc.) would be used to control subsidence. No mining related surface disturbance would occur within 100 feet of the outside line of the power line right-of-way without a written finding from the Authorized Officer and consultation with the right-of-way holder. These techniques would provide for maximum coal removal while insuring that sufficient coal is left in place to prevent subsidence.

- The lessee/operator shall be required to perform the following with respect to monitoring, repairing, and/or mitigating subsidence effects on existing facilities under Special Use Permit with the Forest Service. Monitoring, repair and/or mitigation will be performed at the lessee's expense.
 - Baseline condition surveys of existing facilities will be completed the fall following award of lease. Reports of this survey will be deliverable to the Forest Service by December 1 of that same year.
 - A Surface Facility Monitoring and Mitigation Plan (Plan) will be submitted to the Forest Service for review and approval not later than 12 months prior to scheduled undermining. The Plan will detail measures to be taken to monitor, repair, and mitigate subsidence effects on the facilities during actual mining and for one year post mining.

Threatened and Endangered Species

- State-of-the-art mining techniques (pillar and panel widths, rate of coal development and extraction, mine method, determining angle of draw, etc.) would be used to control subsidence. No mining-related surface disturbance would occur within 200 feet of greenback cutthroat trout occupied habitat, as measured from the normal high water mark, without a written finding from the Authorized Officer. These techniques would provide for maximum coal removal while protecting the values associated with the threatened greenback cutthroat trout habitat.
- Sediment control measures, such as silt fences or straw wattles composed of native substances, would be placed down slope from the pads and access roads to prevent potential sedimentation effects to West Terror Creek.
- In order to ensure that BMPs relating to the control of sediment from disturbed sites are in place and functional, lessee shall, during major runoff periods, use an independent contractor to inspect the lessee's well pad sites and access roads within the Terror Creek watershed. The independent contractor shall contact lessee, USFS, and the BLM (970-240-5300), within two business days of discovering sediment control measures that are missing or non-functional. Lessee will have three business days to correct the problem. Ineffective measures would be redesigned and replaced after consultation with USFS and BLM. For each year that lessee operates under this BA, lessee shall submit the compiled monthly inspection reports to BLM UFO by September 30. In the event new sediment control methods are identified or current practices are not working as intended, adaptive management will be used to implement methods that are effective at eliminating offsite movement of soils and sedimentation into resident streams.
- At any time during drilling activities, until successful reclamation or continuing into the future, the point of access to temporary roads shall be blocked with gates to prevent vehicles, including Off-Highway Vehicles (OHVs), from using them. Signs identifying the road closure shall be placed at the barricades.
- In order to prevent increased risk of sediment being generated as a result of pumping related disturbance, pumping from East Terror Creek would not take place until after the April and May peak runoff period has past. Therefore, pumping from East Terror Creek

would not begin until June. The AO may grant an exception that would allow pumping in May if runoff flows have dropped to the normal mean monthly levels for June (6.9 cfs) and USFWS has concurred via informal consultation.

- To prevent mortality of GBCT due to pumping from the East Fork of Terror Creek, the conservation measures are defined as: pumping during the June and July period would require the use of a screened pump intake, with a maximum ¼ inch size mesh. For the August through September period, when GBCT fry would be present in the stream, pump intakes would be screened with no larger than 1/16th mesh screen. The screen would not be confined to just the pump intake, but must cover a larger area, such as a cylinder or box design which has at least 5 times the surface area of the pump intake. Bowie must submit the final design for this screening fixture to the USFS and BLM fisheries biologists for their approval.
- During the June through September period, if the flows in East Terror Creek drop below the ten year mean monthly flow for October (1.0 cfs), lessee will not pump water from the East Fork of Terror Creek.
- To prevent impacts to GBCT fry and fingerlings, pumping would not take place during the base flow (low flow) periods of the year – October through March.
- If there are existing roads or disturbance features within the 200-foot buffer along GBCT habitat streams, then no additional surface disturbance will be permitted within those areas. Maintenance of roads or other existing features must remain within the existing road prism or footprint of the feature being maintained.
- The operator shall not store equipment, machinery, or construction materials in any locations that are 200 feet or less from the riparian zones of the streams within the Terror Creek watershed.
- No vegetation will be removed from the riparian zone of the streams in the Terror Creek watershed.
- During construction or maintenance activities in proximity to the 200-foot riparian buffer zone, the edge of the buffer zone shall be marked for avoidance by construction equipment and activities.
- Within the Terror Creek watershed, only fresh water, free of chemicals or other contaminants, may be used for dust abatement activities.
- Within the Terror Creek watershed, additional crossings of perennial streams will not be constructed
- The BLM or USFS hydrologist must approve, in advance, the size and composition of riprap material to be used in the East Fork of Terror Creek.
- Lessee must report their annual water depletions to the BLM UFO by September 30 each calendar year. This includes depletions that result from surface activities associated with coal mining related activities within the Action Area, regardless of surface ownership.
- No surface disturbance, such as road widening or upgrading would occur within 200 feet of GBCT occupied habitat, as measured from the normal high water mark, to protect

delineated wetlands or riparian areas and maintain riparian vegetation and eliminate potential effects to the greenback cutthroat trout, unless exceptions were approved by the Authorized Officer.

- Site-specific surveys for sensitive plants would be conducted onsite prior to the development of any surface facilities or to other soil-disturbance activities.
- There would be no surface occupancy or soil-disturbing activities within a 100-foot radius of sensitive plant locations unless exceptions were approved by the Authorized Officer.
- Application of herbicides, surfactants, and other weed control measures would avoid overspray or drift onto desirable species or sensitive plants.
- If subsidence adversely affects surface resources in any way (including, but not limited to a documented water loss), the coal lessee, at their expense, will be responsible to: restore stream channels, stock ponds, protect stream flow with earthwork or temporary culverts, restore affected roads, or provide other measures to repair damage or replace any surface water and/or developed groundwater source, water conveyance facilities, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, and wildlife use, as authorized by 36 CFR 251.
- The lessee/operator would design the layout of longwall panels to minimize impacts to West Fork Terror Creek. Primarily, this will consist of orienting panels approximately parallel with the creek as currently proposed and represented in the Subsidence Report (WWE, 2013a), thus reducing the number and severity of transitions from subsidence to non-subsidence zones.
- The lessee/operator would design and implement a stream flow measurement program. The program will consist of establishing monitoring stations upstream and downstream of the expected subsidence area on West Fork Terror Creek. Flow monitoring stations will be designed and calibrated by water resource engineers and will focus on consistent measurements of low and base flow conditions (i.e., summer through late fall). Lessee/operator staff will have trained staff available to record flow measurements on a minimum monthly schedule, weather permitting, with the ability to obtain measurements more frequently as deemed appropriate. Flow data will be compiled into an annual report that will include comparisons to previously collected data. This report will be submitted to the BLM, USFS and USFWS.
- The lessee/operator will conduct fish, sediment and macroinvertebrate sampling (as performed by WWE and MEC in 2012) on a biennial schedule during and twice following mining activities underneath West Fork Terror Creeks (at 12 months and 36 months following the termination of subsurface mining under West Fork Terror Report that will include comparisons to previously collected data. This report will be distributed to the BLM, USFS and USFWS.
- The lessee/operator will establish a minimum of two subsidence monitoring gridlines across the stream channel in areas of anticipated vertical displacement that will be surveyed prior to and following longwall mining beneath the area. These survey data will be used to confirm/refine the subsidence predictions for the area. The results of these

surveys, as available, will be included in the previously mentioned annual Monitoring Report and distributed accordingly.

- The lessee/operator will implement adaptive management to correct observed impacts to the stream. Potential impacts and their subsequent mitigation include:
 - Loss of Surface Water: In the event that this should occur, mitigation might include releasing water from available sources to the Terror Creek drainage to offset such depletions.
 - Fishery Impacts: If a statistically significant decline in the fishery within the subsidence area results from the Proposed Action (i.e., a decline at sites within the subsidence area does not correlate with a decline in the fishery outside the subsidence area), the lessee/operator will investigate the cause of the decline. If the decline is resulting from habitat changes as a result of longwall mining induced subsidence, the operator/lessee will engage a fish habitat ecologist to design habitat enhancement structures to mitigate the observed impacts. If a decline in fish numbers persists following mitigation of an observed physical or chemical impact, the lessee/operator will work with CPW to capture and grow out fish populations from appropriate breeding stock.

Bald and Golden Eagle Nest Sites

- No new permanent surface facilities or disturbance except subsidence would be located within a one-quarter mile radius buffer zone around each bald or golden eagle nest site.
- No surface activities would be allowed within a one-half mile radius buffer zone around each active eagle nest site from November 15 to July 30 for bald eagles and February 1 to July 15 for golden eagles. Any proposed surface facilities, disturbance, or activities (as noted above) in or adjacent to these buffer zones would require approval from the surface management agency on a site-specific basis, after consultation with the U.S. Fish and Wildlife Service.

Bald and Golden Eagle Roost Sites

- No surface activity, except subsidence, would occur within a one-quarter mile radius of winter roosts between November 15 and March 15. Development may be permitted at other periods. If periodic visits are required within the buffer zone after development, activity would be restricted to the hours of 10:00 a.m. and 2:00 p.m. from November 15 through March 15.

Peregrine Falcon Nest

- No new permanent surface facilities or disturbance would be located within a one-quarter mile radius buffer zone around each peregrine falcon nest site.
- No aboveground activities would be allowed within a one-half mile radius buffer zone around each active peregrine falcon nest site from February 1 to July 15.
- Any proposed surface facilities, disturbance, or activities in, or adjacent to, these buffer zones would require approval from the USFS or BLM on a site-specific basis, after

consultation with the U.S. Fish and Wildlife Service.

Migratory Birds

- For any future proposed disturbances on the lease, a qualified biologist would conduct pre-construction breeding bird and raptor surveys during the breeding period within 0.5 mile of the general disturbance area (drill pads and access roads) if activities would occur during the breeding season (generally May 15 to August 1, but varies by species). Surveys would document active nests and aspen snag reconnaissance prior to surface disturbance. If no active nests are found and a survey report is submitted to and approved by the USFS or BLM Biologist, activities may begin within the cleared areas. If active nests are found, development timing would be restricted during the breeding season, as per the USFS or BLM authorized officer.
- To minimize or avoid effects to nesting migratory birds, where practicable, the lessee will avoid vegetation removal during the migratory bird nesting period (May 15 to August 1), unless authorized after review by USFS and/or BLM. Nesting surveys conducted within 2 weeks of surface-disturbing activities that indicate no migratory bird species are nesting or otherwise present within the area to be disturbed may also be considered; however, consultation and approval by USFS or BLM would be required.
- If active nests were identified during mine permit related project disturbances, appropriate measures would be taken in order to reduce impacts to these species, including relocating overland access routes and drill-hole locations, and implementing disturbance-free buffer zones and timing limitations for active nests as recommended by the USFS or BLM.
- All unavoidable surface disturbances would require approval of the USFS or BLM Authorized Officer. The USFS or BLM would coordinate with USFWS to determine the type and extent of allowable variances. A site-specific examination would determine if this stipulation would apply.

State Priority Species

- Facility construction and major scheduled maintenance shall not be authorized within big game winter ranges from December 1 through April 15. All unavoidable surface disturbances within the winter ranges during these times would require approval of the USFS or BLM Authorized Officer and consultation with CPW. Monitoring and access to the sites by over-the-snow vehicles shall be permitted, but no snow plowing may occur.
- Bear-proof containers would be used and refuse collected frequently to minimize potential for human-bear conflicts at construction sites. Employee training would include information to reduce bear-human conflicts including not feeding bears.
- Noise reduction mitigation would be utilized on the individual MDW pumps to reduce impacts from their operation.

**NOTICE FOR LANDS OF THE NATIONAL FOREST SYSTEM
UNDER JURISDICTION OF
DEPARTMENT OF AGRICULTURE**

The permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of Interior in the permit. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of the Interior, (2) uses of all existing improvements, such as forest development roads, within and outside the area permitted by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by a permit/operation plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed to:

Foreset Supervisor, Grand Mesa-Uncompahgre-Gunnison NF
2250 Hwy 50, Delta, Colorado 81416
970-874-6600

who is the authorized representative of the Secretary of Agriculture.

NOTICE

CULTURAL AND PALEONTOLOGICAL RESOURCES - The FS is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the FS, shall:

1. Contact the BLM/FS to determine if a site specific cultural resource inventory is required. If a survey is required, then:
2. Engage the services of a cultural resource specialist acceptable to the BLM/FS to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the BLM/FS for review and approval at the time a surface disturbing plan of operation is submitted.
3. Implement mitigation measures required by the FS and BLM to preserve or avoid destruction of cultural resource values. Mitigation may include relocation of proposed facilities, testing, salvage, and recordation or other protective measures. All costs of the inventory and mitigation will be borne by the lessee or operator, and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

The lessee or operator shall immediately bring to the attention of the FS and BLM any cultural or paleontological resources or any other objects of scientific interest discovered as a result of surface operations under this lease, and shall leave such discoveries intact until directed to proceed by FS and BLM.

ENDANGERED OR THREATENED SPECIES - The FS is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine

effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.

The lessee/operator may, unless notified by the FS that the examination is not necessary, conduct the examination on the leased lands at his discretion and cost. This examination must be done by or under the supervision of a qualified resource specialist approved by the FS. An acceptable report must be provided to the FS identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats.

Stipulations Identified Through Resource Evaluations

Air Quality and Climate

- Fugitive emissions from all vehicles traveling on regularly-used non-paved surfaces during all project phases shall be controlled utilizing a variety of suppression techniques applied to the non-paved roads.
- Storage piles shall be watered or covered as necessary to limit wind erosion potential and reduce fugitive emissions.

Geology and Minerals

- No surface occupancy would be allowed in areas of high geologic hazard or high erosion potential or slopes greater than 60 percent.
- Special interdisciplinary team analysis and mitigation plans detailing construction and mitigation techniques may be required on areas where slopes range from 40-60 percent. The interdisciplinary team could include engineers, soil scientist, hydrologist, landscape architect, reclamation specialist and mining engineer.
- The operator/lessee would be required to perform adequate baseline studies to quantify existing surface and subsurface resources. Existing data can be used for baseline analyses provided that the data is adequate to locate, quantify, and demonstrate interrelationships between geology, topography, hydrogeology, and hydrology. The operator/lessee would be required to establish or amend a monitoring program to be used as a continuing record of change over time of area resources in order to assess mining induced impacts. The monitoring program shall provide the procedures and methodologies to adequately assess interrelationships between geology, topography, hydrogeology, and hydrology identified in the baseline assessment to mining activities. The monitoring program shall incorporate baseline data so as to provide a continuing record over time.

Vegetation - Invasive Plant Species

- An inventory shall be completed for noxious weeds within the LBA tract before construction begins in order to determine whether there is a need for pre-treatments (with results of the inventory shared with the USFS and BLM weed specialist).

Water Resources

- The lessee/operator shall design the layout of longwall panels such that sensitive structures (pipelines, springs, ponds) shall be within low permanent strain and/or tilt areas, such as the center of final subsidence basins.
- The lessee/operator shall design the layout of longwall panels such that the edges of subsidence basins occur under steep sections of streams to minimize overflow potential.

Access and Transportation

- No mining related disturbance would occur within 100 feet of the outside line of the right-of-way of Stevens Gulch Road. The angle of draw used to protect the road from subsidence would be dictated by the approved Colorado DMG Mining and Reclamation Plan (the estimated angle of draw is conservatively estimated to be 25 degrees). However, mining-related disturbance may occur if, after public notice and the opportunity for public hearing in the locality, a written finding is made by the Authorized Officer that the interests of the public and the landowners affected by mining within 100 feet of the public road would be protected.
- The lessee/operator shall be required to perform the following with respect to monitoring, repairing, and/or mitigating subsidence effects on existing facilities under Special Use Permit with the Forest Service. Monitoring, repair and/or mitigation shall be performed at the lessee's expense.
 - Baseline condition surveys of existing facilities shall be completed the fall following award of lease. Reports of this survey shall be deliverable to the Forest Service by December 1 of that same year.
 - A Surface Facility Monitoring and Mitigation Plan (Plan) shall be submitted to the Forest Service for review and approval not later than 12 months prior to scheduled undermining. The Plan shall detail measures to be taken to monitor, repair, and mitigate subsidence effects on the facilities during actual mining and for one year post mining.
- The lessee/operator shall schedule mining activities such that active subsidence of roads occurs during dormant winter months, unless no other practicable alternative exists.

Range Management

- Any construction/operation impacts man-made barriers to livestock movement shall be mitigated by replacing fences, gates, cattle guards, and gates to at least the same condition as they were found before construction, and installation of new fences where needed.