

**APPENDIX B**

**UNSUITABILITY CRITERIA FOR THE  
POWDER RIVER LBA TRACT AND THUNDERCLOUD LBA TRACT**

## Appendix B. Unsuitability Criteria for the Powder River LBA Tract and Thundercloud LBA Tract

UNSUITABILITY CRITERIA	FINDINGS FOR THUNDER BASIN NATIONAL GRASSLAND (TBNG) STUDY AREA (USFS, 1985)	VALIDATION FOR POWDER RIVER AND THUNDERCLOUD LBA TRACTS
1. Federal Land Systems. With certain exceptions that do not apply to these tracts, all federal lands included in the following systems are unsuitable for mining: National Parks, National Wildlife Refuges, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers, National Recreation Areas, Lands Acquired through the Land and Water Conservation Fund, National Forests and federal lands in incorporated cities, towns and villages.	TBNG is not part of a national forest and none of the other listed federal lands categories are present within the study area.	None of the listed federal lands are present on the Powder River or Thundercloud LBA tracts, and the tracts are therefore not unsuitable for mining.
2. Rights-Of-Way and Easements. Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial or other public purposes, on federally owned surface, are unsuitable for mining.	TBNG contains two rights-of-way that meet the intent of this criterion: BN railroad and the Tri-County 230 Kv transmission line.	The Tri-County 230 Kv transmission line is not on either of the LBA tracts. The BN/C & NW right-of-way is on a portion of the Thundercloud LBA tract. This right-of-way was designated unsuitable for mining in the TBNG Land and Resource Management Plan. The lease will be stipulated to exclude mining within the railroad right-of-way.
3. Dwellings, Roads, Cemeteries, and Public Buildings. Federal lands within 100 feet of a right-of-way of a public road or a cemetery; or within 300 feet of any public building, school, church, community or institutional building or public park; or within 300 feet of an occupied dwelling are unsuitable for mining.	Within TBNG, a school at Wilkinson Ranch headquarters, Wyoming State Highway 59, and 5 ranch headquarters were found to meet the intent of this criterion	None of the listed rights-of-way or buildings are on either LBA tract, and the Powder River and Thundercloud LBA tracts are therefore not unsuitable for mining.
4. Wilderness Study Areas. Federal lands designated as wilderness study areas are unsuitable for mining while under review for possible wilderness designation.	No lands within TBNG review area are within a wilderness study area.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
5. Lands with Outstanding Scenic Quality. Scenic federal lands designated by visual resource management analysis as Class I (outstanding visual quality or high visual sensitivity) but not currently on National Register of Natural Landmarks are unsuitable.	No lands on TBNG meet the scenic criteria as outlined.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
6. Land Used for Scientific Study. Federal lands under permit by the surface management agency and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments are unsuitable for the duration of the study except where mining would not jeopardize the purpose of the study.	No lands in the TBNG review area are under permit except small enclosures being used to gage reclamation success on existing mines.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
7. Historic Lands and Sites. All publicly or privately owned places which are included in or are eligible for inclusion in the National Register of Historic Places and an appropriate buffer zone are unsuitable.	On the basis of the consultation with the State Historic Preservation Office, there were no unsuitable findings under this criterion in the TBNG review area.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
8. Natural Areas. Federal lands designated as natural areas or National Natural Landmarks are unsuitable.	No lands in the TBNG are designated as natural areas or as National Natural Landmarks.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
9. Critical Habitat for Threatened or Endangered Plant and Animal Species. Federally designated critical habitat for T or E plant and animal species, and scientifically documented essential habitat for T or E species are unsuitable.	There is no habitat meeting federally designated criterion for T or E plant or animal species within the TBNG review area.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
10. State Listed Species. Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as T or E shall be considered unsuitable.	Wyoming does not maintain a state list of T or E species of plants or animals. Therefore, this criterion does not apply.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
11. Bald or Golden Eagle Nests. An active bald or golden eagle nest and appropriate buffer zone are unsuitable unless the lease can be conditioned so that eagles will not be disturbed during breeding season or unless golden eagle nests will be moved.	The USFS found numerous eagle nests, and buffer zones were established. It was determined that coal leasing can occur within the buffer zone if the nests are protected with stipulations and site mitigation plans. There were no unsuitable findings under this criterion, but lands involved in buffer zones are subject to special lease stipulations.	No active eagle nests are found on either tract. There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.

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12. Bald and Golden Eagle Roost and Concentration Areas. Bald and golden eagle roost and concentration areas on federal lands used during migration and wintering are unsuitable unless mining can be conducted in such a way as to ensure that eagles shall not be adversely disturbed.	No golden eagle roost or concentration areas occur on the TBNG review area. Mining planned in the review area is not likely to jeopardize the continued existence of the bald eagle. Coal leasing can occur and adequate protection can be provided. There were no unsuitable findings in the TBNG review area.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
13. Federal lands containing active falcon (excluding kestrel) cliff nesting sites and a suitable buffer zone shall be considered unsuitable unless mining can be conducted in such a way as to ensure the falcons will not be adversely affected.	After consultation with the U.S. Fish and Wildlife Service (USFWS), it was determined that this criterion does not apply in TBNG.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
14. Habitat for Migratory Bird Species. Federal lands which are high priority habitat for migratory bird species of high federal interest shall be considered unsuitable unless mining can be conducted in such a way as to ensure that migratory bird habitat will not be adversely affected during the period it is in use.	After consultation with the USFWS, it was determined that this criterion does not apply in TBNG.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
15. Fish and Wildlife Habitat for Resident Species. Federal lands which the surface management agency and state jointly agree are fish and wildlife habitat of resident species of high interest to the state, and which are essential for maintaining these priority wildlife species, shall be considered unsuitable.	Sage grouse leks were found on and near the TBNG review area. However, methods of mining can be developed which will not have a significant long-term impact on the grouse or their habitat. Therefore, the areas involved in leks and buffer zones are not unsuitable.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
16. Floodplains. Federal lands in riverine, coastal, and special floodplains shall be considered unsuitable where it is determined that mining could not be undertaken without substantial threat of loss of life or property.	After consultation with the U.S. Geological Survey, it was determined that floodplains can be mined with site specific stipulations and resource protection safeguards to be developed during mining and reclamation planning. Therefore, all lands within the TBNG review area are not unsuitable for mining.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
17. Municipal Watersheds. Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.	There are no municipal watersheds in the TBNG review area.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
18. National Resource Waters. Federal lands with national resource waters, as identified by states in their water quality management plans, and 1/4-mile buffer zones shall be unsuitable.	There are no national resource waters within the TBNG review area.	There are no unsuitable findings, and the Powder River and Thundercloud LBA tracts are not unsuitable for mining.
19. Alluvial Valley Floors. All lands identified by the surface management agency, in consultation with the state, as AVFs where mining would interrupt, discontinue or preclude farming, are unsuitable. Additionally, when mining federal lands outside an AVF would materially damage the quality or quantity of water in surface or underground water systems that would supply AVFs, the land shall be considered unsuitable.	Lands along prominent drainages were considered potential AVFs pending a final determination by the state. These lands are placed in an "available pending further study" category and are not considered unsuitable.	The State will make a final determination during the mine permit application review process. No heretofore undisturbed stream valleys are included in either LBA tract, and there is no unsuitability finding.
20. State or Indian Tribe Criteria. Federal lands to which is applicable a criterion proposed by the state or Indian tribe located in the planning area and adopted by rulemaking by the Secretary are unsuitable.	The state has no applicable criteria and there is no Indian tribe located in or near the planning area. Therefore there is no unsuitability finding.	There are no unsuitable findings for this criterion on either LBA tract.