

APPENDIX D9
WILDLIFE INVENTORY
FOR
BLACK HILLS BENTONITE, LLC.

NORTH TEN SLEEP AMENDMENT NO. 7

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D9.1 INTRODUCTION

Specific wildlife surveys were completed on the Black Hills Bentonite North Ten Sleep Amendment No. 7. These surveys were conducted during April through September of 2003 April of 2004 and March through September of 2008. These surveys concentrated on threatened or endangered species (T&E), migratory birds of high federal interest (MBHFI), nesting raptors, sage grouse strutting grounds, big game, and wildlife habitats. Wildlife information included in this report was augmented by observations compiled during periodic site visits made by Black Hills Bentonite personnel, BLM data and Wyoming Game and Fish Department (WG&FD) information.

D9.2 LOCATION

The survey area is located approximately six miles west of Ten Sleep in Washakie County, Wyoming. The proposed amendment area encompasses about 155.0 acres and is located in Section 35 T48N, R90W and Sections 12 and 13 T47N R90W. The wildlife study area included the proposed amendment area and a minimum of a one to two mile perimeter surrounding this area. The specific location of the North Ten Sleep Amendment No. 7 area is shown on Map D9-1.

D9.3 METHODS

The specific surveys completed included ground field surveys and agency file searches. The field surveys were conducted for sage grouse strutting grounds, nesting raptors, prairie dog towns, T&E, MBHFI and big game animals.

The 2003 ground surveys were completed in April through September of 2003. The surveys were conducted by traversing suitable habitats for the species of concern using a four-wheel drive vehicle, ATV, and on foot. A spotting scope and binoculars were used for observations. Sage grouse lek surveys and mountain plover surveys were completed at dawn in April of 2003. Surveys for T&E, other MBHFI, prairie dog towns, big game animals and raptor nests were completed throughout the daylight hours. Additional surveys were completed in April of 2004 and March through September 2008 for grouse strutting grounds, nesting raptors, T&E and MBHFI species.

WG&FD files and publications were also reviewed for species occurrence, nest sites, strutting grounds, and important habitats. A computer printout was obtained for the area in 2005 from the WG&FD wildlife observation system.

Wildlife observations were also noted during specific wildlife surveys and periodic site visits completed by the Black Hills Bentonite environmental staff.

D9.4 RESULTS

Addendum D9A provides a list of wildlife species which could potentially occur on the study area and those species, or sign, which were actually observed. The following sections discuss the species of concern and habitat inventories.

D9.4.1 Big Game

Big game animals generally were common, but not abundant, on the study area. Observations or sign over the survey period documented three big game species (elk, mule deer and pronghorn antelope) on the study area. Mule deer and pronghorn were commonly observed while

their sign was commonly encountered. White-tailed deer are also known to be transients through the study area.

The pronghorn were primarily observed in sagebrush plant community types throughout the study area. The proposed amendment area is classified by the WG&FD as yearlong and winter-yearlong seasonal range for pronghorn. Crucial pronghorn winter range is not found within the proposed amendment area.

Mule deer were most common in sagebrush plant community types in the proposed amendment area. The proposed amendment area in Sections 12 and 13 is classified as yearlong seasonal range for mule deer by the WG&FD. Crucial mule deer winter range is located in Section 35 within the proposed amendment area.

The WG&FD has mapped the amendment area as generally out of white-tailed deer range. White-tailed deer are known to inhabit the study area as transients and none were observed during wildlife surveys. Crucial white-tailed deer winter range does not exist within the amendment area.

The study area is generally located out of the normal habitat use range for elk according to WG&FD range maps. However, elk sign was observed about one mile east of this amendment area during the 2008 surveys.

D9.4.2 Raptors

Several raptor species were observed flying or hunting in the area. No raptor nest sites were recorded in the proposed amendment area itself but several nest sites were within one mile of the amendment area.

These nest sites are shown on Map D9-1 and are presented in Table D9-1. Nest sites for six different raptor species were recorded during the 2003-2004 and 2008 surveys or during field surveys completed in 1993, 1994, 2003, 2004 or 2005 by Black Hills Bentonite personnel. Some nest sites recorded previously for the golden eagle (GE-6), Swainson's hawk (SH-1), red-tailed hawk (RTH) and ferruginous hawk (FH-1) were not intact in 2008, having been destroyed by natural attrition. Active nest sites were recorded for the red-tailed hawk, prairie falcon and great horned owl. Other raptors observed in the study area as transients include the bald eagle, golden eagle, Swainson's hawk, rough-legged hawk, ferruginous hawk, northern harrier and American kestrel.

D9.4.3 Upland game Birds

Species of upland game birds that have been documented using the study area include the chukar partridge, gray partridge, ring-necked pheasant, sage grouse and mourning dove. None of these species were abundant and only the mourning dove was common.

No sage grouse leks were identified on or within one mile of the proposed North Ten Sleep Amendment No. 7 area during the April 2003, April 2004 or March-April 2008 surveys. The BLM and the WG&FD had no records of sage grouse leks in the area either. Sage grouse were not encountered on the amendment area during the 2003-2008 surveys. A potential sage grouse lek was observed within two miles of the amendment area during the March and April 2008 surveys. This potential lek site is located in the NWSE4 Section 14 T47N, R90W. During the March 2008 survey a total of three males and three females were observed at this site. During the April 2008 survey a

Table D9-1. Raptor Nest Sites Located within One Mile of the Black Hills Bentonite Permit 281C Amendment No. 7 Area.

Nest Site	Location	Substrate	Activity	
			2003	2008
<u>Golden Eagle</u>				
GE-1a	NENW4, Sec. 35, T48N, R90W	Cliff	PF-1	PF-1
GE-1b	NENW4, Sec. 35, T48N, R90W	Cliff	I	I
GE-6a	SENE4, Sec. 18, T47N, R89W	Rock Outcrop	I	D-N
GE-6b	SENE4, Sec. 18, T47N, R89W	Rock Outcrop	I	I
<u>Prairie Falcon</u>				
PF-1	NENW4, Sec. 35, T48N, R90W	Cliff	A	A
<u>Swainson's Hawk</u>				
SH-1	NWNW4, Sec. 35, T48N, R90W	Juniper	D-N	-
<u>Ferruginous Hawk</u>				
FH-1	NESW4, Sec. 2, T47N, R90W	Rock Outcrop	D-N	-
<u>Red-tailed Hawk</u>				
RTH-1a	SWNE4, Sec. 11, T47N, R90W	Cottonwood	D-N	-
RTH-1b	NESE4, Sec. 11 T47N, R90W	Cottonwood	-	A
RTH-2a	SWNW4, Sec. 35, T48N, R90W	Cottonwood	I	D-N

Table D9-1. Raptor Nest Sites (Continued).

Nest Site	Location	Substrate	Activity	
			2003	2008
<u>Red-tailed Hawk (Continued)</u>				
RTH-2b	NWSW4, Sec. 35, T48N, R90W	Cottonwood	I	D-N
RTH-4	NENE4, Sec. 14, T47N, R90W	Cottonwood	A	D-N
RTH-5a	SWSW4, Sec. 26, T48N, R90W	Cliff	I	GHO-2b
RTH-5b	SWSW4, Sec. 26, T48N, R90W	Rock Outcrop	GHO-2a	Ravens
RTH-7	NWSE4, Sec. 27, T48N, R90W	Cottonwood	-	A
<u>Great Horned Owl</u>				
GHO-2a	SWSW4, Sec. 26, T48N, R90W	Rock Outcrop	A	Ravens
GHO-2b	SWSW4, Sec. 26, T48N, R90W	Cliff	I	A
GHO-3	NWSE4, Sec. 11 T47N, R90W	Cottonwood	-	A

- I = Inactive
 A = Active
 D-N = Destroyed by Natural Causes
 - = No Data, Not Present

total of six males were seen at this site. Further surveys will be needed to determine if this site should be considered a viable lek.

The chukar partridge, gray partridge and ring-necked pheasant were uncommonly encountered on the study area. The mourning dove is a seasonal inhabitant of the area and was common in spring and summer, nesting in the area.

D9.4.4 Migratory Birds of High Federal Interest (MBHFI)

The study area provides habitat for a limited number of MBHFI species. Recorded on site were the Swainson's hawk, sage grouse, ferruginous hawk, Brewer's sparrow and sage sparrow.

Bald eagles winter in the area and also migrate through the site. Bald eagles have been observed in the past but were not observed during the 2003-2004 or 2008 survey periods and roost or nesting habitat is not present on the Amendment No. 7 area. The Swainson's hawk and ferruginous hawk were uncommon. The Swainson's hawk and the ferruginous hawk were observed as transients and have not been recorded nesting on or within one mile of the amendment area for several years. The Brewer's sparrow was occasional to common and nests on the study area.

Specific surveys were completed for mountain plovers in late April of 2003, April of 2004 and April-June of 2008. The areas to be affected were surveyed and suitable habitats in the proposed amendment and adjacent areas were also surveyed by ATV. No mountain plovers were observed in the area and the site provides very little preferred habitat for this species.

Several other MBHFI species may occur within the area during various seasons. These species would probably only use the area during migration for resting and feeding and would not be

common. Table D9-2 provides a list of Level I MBHFI species and their expected occurrence on the study area.

D9.4.5 Threatened and Endangered Species (T&E)

The bald eagle was removed from the Threatened list in 2007 but may use the study area. This species winters in the region and migrates through the site. No roost sites have been identified on the study area and roost habitat is not present. Nesting habitat (large trees in proximity to water bodies containing a fisheries) for bald eagles does not exist within the study area. Bald eagle nests or winter concentration sites are not known to occur in adjacent areas.

Prairie dog towns do not exist within the proposed amendment area so black-footed ferrets would not be affected by this operation. White-tailed prairie dog towns can be found east of the Amendment area as shown on the attached map figure.

D9.4.6 Wildlife Habitats

Plant Community/Habitat types for the proposed amendment area are discussed in detail in the vegetation report (Appendix D8) for this proposed amendment area. Appendix D8 also includes a map showing the locations of the habitat types. Appendix D10 provides a wetland inventory for the area. The entire proposed amendment area is generally comprised of five Plant Community/map unit types as shown in Table D9-3. The types include the Sagebrush Shrubland, Outcrop Barrens, Bottomland Shrub, Rock Outcrop and Disturbed Land. The Sagebrush Shrubland type occupies the largest portion of the area and is vegetated by perennial grass and shrub species.

Table D9-2. MBHFI (USFWS, 2002, Level I) Species and Expected Occurrence on or near the Black Hills Bentonite North Ten Sleep Amendment No. 7.*

Species	Seasonal Status/Breeding Records in Central Wyoming	Documented on Amendment Area	Expected on Amendment Area
Mountain Plover	Summer/Breeder	No	Rare
Trumpeter Swan	Migrant	No	Rare
Sage Grouse	Resident/Breeder	Yes	Uncommon
McCown's Longspur	Summer/Breeder	No	Uncommon
Baird's Sparrow	Summer/Breeder	No	Rare
Ferruginous Hawk	Summer/Breeder	Yes	Occasional
Brewer's Sparrow	Summer/Breeder	Yes	Occasional
Wilson's Phalarope	Summer/Breeder	No	Uncommon
Franklin's Gull	Migrant	No	Rare
Sage Sparrow	Summer/Breeder	Yes	Uncommon
Swainson's Hawk	Summer/Breeder	Yes	Uncommon
Long-billed Curlew	Summer/Breeder	No	Uncommon
Short-eared owl	Summer/Breeder	No	Uncommon
Northern Goshawk	Summer/Breeder	No	Rare
Peregrine Falcon	Migrant	No	Rare
Burrowing Owl	Summer/Breeder	No	Rare
Forster's Tern	Migrant	No	Rare
Bald Eagle	Migrant/Winter	Yes	Uncommon
Upland Sandpiper	Summer/Breeder	No	Uncommon
Black Tern	Migrant	No	Rare
Whooping Crane	Migrant	No	Rare
Piping Plover	Migrant	No	Rare

* Based on 2003-2004 field surveys, other field surveys completed by Black Hills Bentonite, BLM and WG&FD data.

Table D9-3. Habitat Type Acreages for the Black Hills Bentonite North Ten Sleep Amendment No. 7, 2003.

Plant Community Type/ Map Unit	Amendment Area Acreage	Percent of Amendment Area
Sagebrush Shrubland (S)	82.2	53.0
Outcrop Barrens (O)	22.8	14.7
Bottomland Shrub (BS)	34.0	21.9
Rock Outcrop (RO)	15.3	9.9
Disturbed Land (DL)	0.7	0.5
TOTAL	155.0	100.0

The Outcrop Barrens habitat type was the third most common type on the proposed amendment area. This habitat type is typically found on areas with varied topography and typically has little to no soils. This habitat type was sparsely vegetated.

The Bottomland Shrub habitat is the second most common type makes up a small portion of the proposed amendment area. This type is typically found on gently rolling slopes and drainage bottoms with deep soils. Perennial grasses and shrub species were the dominant plants found on this type.

The Rock Outcrop habitat type occupies a small portion of the proposed amendment area. This type is typified by moderate to steep slopes and has little to no soil. This habitat type is dominated by annual grass, perennial grass and perennial forb species.

The Disturbed Land map unit occurs only on a small portion of the proposed amendment area (0.5 percent). This map unit is made up of the access road that goes into the original Permit 281C area.

D9.5 CONCLUSIONS

The nature of mining in the proposed amendment area will consist of small, widely scattered pits. This will minimize the impact on all wildlife species. Big game species were not abundant on the study area but were commonly observed. Most of the actual sites to be mined are sparsely to well vegetated and provide habitat for big game.

Raptor nests are present within one mile of the amendment area. Future mining will be conducted in order to minimize impacts to any nests that are currently present and any nests that may

become established during the breeding season of February through July. MBHFI species were not common on the study area but will be protected wherever they are found.

The bald eagle, formerly a T&E species, may seasonally use the study area. This species is a migrant and winter resident so mining may only minimally affect this bird.

Black Hills Bentonite personnel will continue to conduct observations for any activity of wildlife species of major concern. Proper mitigation or avoidance will be conducted for these species through the required coordination with the appropriate management agencies.

In the event that a threatened or endangered species should frequent or become established on or adjacent to the proposed amendment area, Black Hills Bentonite will contact the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department in order to develop and implement the necessary mitigation measures to prevent disturbance or impacts to any such species.

D9.6 SOURCES

Baxter, G.T. and J.R. Simon, 1970. Wyoming Fishes, Bulletin No. 4, Wyoming Game and Fish Department 168 pp.

Baxter, G.T. and M.D. Stone, 1980. Amphibians and Reptiles of Wyoming. Wyoming Game and Fish Department 137 pp.

Clark, T.W. and M.R. Stromberg, 1987. Mammals in Wyoming. Museum of Natural History, University of Kansas. 314 pp.

Wyoming Game and Fish Department, 2004 Atlas of Birds, Mammals, Reptiles and Amphibians. Wyoming Game and Fish Department.

Wyoming Game and Fish Department 2003. 2002 Annual Big Game Herd Unit Reports. Wyoming Game and Fish Department

Wyoming Game and Fish Department. 2004-2005. Personal Communication and Unpublished Data.

ADDENDUM D9A

List of wildlife species with the potential of occurring on or within several miles of the Black Hills Bentonite North Ten Sleep Amendment No. 7.

ADDENDUM D9A**POTENTIAL MAMMALIAN INHABITANTS LIKELY TO OCCUR ON
OR NEAR THE PERMIT NO. 281C - NORTH TEN SLEEP AMENDMENT NO. 7 AREA**

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>INSECTIVORA</u>		
Soricidae		
Sorex cinereus	Masked shrew	L
Sorex merriami	Merriam's shrew	L
Sorex monticolus	Dusky shrew	U
Sorex vagrans	Vagrant shrew	L
<u>CHIROPTERA</u>		
Vespertilionidae		
Plecotus townsendii	Townsend's big eared bat	L
Lasiurus cinereus	Hoary bat	L
Eptesicus fuscus	Big brown bat	L
Euderma maculatum	Spotted bat	L
Myotis californicus	California myotis	L
Myotis yumanensis	Yuma myotis	U
Myotis ciliolabrum	Western small footed myotis	U
Myotis volans	Long-legged myotis	L
Myotis lucifugus	Little brown myotis	L
Myotis evotis	Long-eared myotis	U
Lasionycteris noctivagans	Silver-haired bat	U
Antrozous pallidus	Pallid bat	L
<u>LAGOMORPHA</u>		
Leporidae		
Lepus townsendii	White tailed jack rabbit	O
Sylvilagus audubonii	Desert cottontail	O
Sylvilagus nuttallii	Nuttall's cottontail	L
<u>RODENTIA</u>		
Sciuridae		
Cynomys leucurus	White-tailed prairie dog	O
Cynomys ludoviciana	Black-tailed prairie dog	U
Eutamias minimum	Least chipmunk	O
Spermophilus elegans	Wyoming ground squirrel	L
Spermophilus tridecemlineatus	Thirteen-lined ground squirrel	O
Sciurus niger	Fox squirrel	L
Marmota flaviventris	Yellow-bellied marmot	L

ADDENDUM D9A
POTENTIAL MAMMALIAN INHABITANTS
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>RODENTIA (continued)</u>		
Geomyidae		
Thomomys talpoides	Northern pocket gopher	O
Heteromyidae		
Perognathus fasciatus	Olive-backed pocket mouse	L
Dipodomys ordii	Ord's kangaroo rat	L
Castoridae		
Castor canadensis	Beaver	L
Cricetidae		
Lemmyscus curtatus	Sagebrush vole	L
Microtus longicaudus	Long-tailed vole	L
Microtus montanus	Montane vole	L
Neotoma cinerea	Bushy-tailed wood rat	O
Onychomys leucogaster	Northern grasshopper mouse	L
Peromyscus maniculatus	Deer mouse	O
Reithrodontomys megalotis	Western harvest mouse	L
Ondatra zibethicus	Muskrat	L
Microtus ochrogaster	Prairie vole	L
Microtus pennsylvanicus	Meadow vole	L
Zapodidae		
Zapus princeps	Western jumping mouse	L
Erethizontidae		
Erethizon dorsatum	Porcupine	O
<u>CARNIVORA</u>		
Canidae		
Canis latrans	Coyote	O
Vulpes vulpes	Red fox	O
Canis lupus	Gray wolf	U
Mustelidae		
Mephitis mephitis	Stripped skunk	O
Spilogale gracilis	Western spotted skunk	L
Mustela nigripes	Black footed ferret	U
Taxidea taxus	Badger	O
Mustela frenata	Long-tailed weasel	L

ADDENDUM D9A
POTENTIAL MAMMALIAN INHABITANTS
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>CARNIVORA (continued)</u>		
Felidae		
Felis rufus	Bobcat	O
Felis concolor	Mountain lion	L
Procyonidae		
Procyon lotor	Raccoon	O
<u>ARTIODACTYLA</u>		
Antilocapridae		
Antilocapra americana	Pronghorn	O
Cervidae		
Odocoileus hemionus	Mule deer	O
Cervus canadensis	Elk	O
Odocoileus virginianus	White-tailed deer	U
Alces alces	Moose	U

1 Nomenclature from Clark and Stromberg (1987).

2 Status

- O - Observed on the study area
- L - Likely to occur on the study area
- U - Unlikely to occur on the study area

ADDENDUM D9A**POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR ON
OR NEAR THE PERMIT NO. 281C - NORTH TEN SLEEP AMENDMENT NO. 7 AREA**

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>ARDEIDAE</u>		
<i>Ardea herodias</i>	Great blue heron	O, S
<i>Nycticorax nycticorax</i>	Black-crowned night heron	U, S
<u>ANATIDAE</u>		
<i>Branta canadensis</i>	Canada goose	O, M
<i>Anas platyrhynchos</i>	Mallard	O, B
<i>Anas strepera</i>	Gadwall	O, B
<i>Anas acuta</i>	Pintail	O, M
<i>Anas crecca</i>	Green-winged teal	L, M
<i>Anas discors</i>	Blue-winged teal	O, B
<i>Anas cyanoptera</i>	Cinnamon teal	L, B
<i>Anas americana</i>	American widgeon	O, M
<i>Anas clypeata</i>	Northern shoveler	O, M
<i>Aythya americana</i>	Redhead	L, M
<i>Aythya valisineria</i>	Canvasback	L, M
<i>Aythya collaris</i>	Ring-necked duck	U, M
<i>Aythya affinis</i>	Lesser scaup	L, M
<i>Bucephala albeola</i>	Bufflehead	U, M
<i>Oxyura jamaicensis</i>	Ruddy duck	L, M
<i>Mergus merganser</i>	Common merganser	L, R
<u>PHALACROCORACIDAE</u>		
<i>Phalacrocorax auritus</i>	Double-crested cormorant	U, S
<u>CATHARTIDAE</u>		
<i>Cathartes aura</i>	Turkey vulture	O, S
<u>ACCIPITRIDAE</u>		
<i>Accipiter striatus</i>	Sharp-shinned hawk	L, M
<i>Accipiter cooperii</i>	Cooper's hawk	L, M
<i>Accipiter gentilis</i>	Goshawk	U, M
<i>Buteo jamaicensis</i>	Red-tailed hawk	O, R
<i>Buteo swainsoni</i>	Swainson's hawk	O, B

ADDENDUM D9A
POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>ACCIPITRIDAE</u>		
Buteo lagopus	Rough-legged hawk	L, W
Buteo regalis	Ferruginous hawk	O,R
Aquila chysaetos	Golden eagle	O, R
Haliaeetus leucocephalus	Bald eagle	O,W,M
Circus cyaneus	Marsh hawk	O, R
<u>FALCONIAE</u>		
Falco mexicanus	Prairie falcon	O, R
Falco peregrinus	Peregrine falcon	L, M
Falco columbarius	Merlin	L, M
Falco sparverius	American kestrel	O, R
Pandion haliaetus	Osprey	U, S
<u>TETRAONIDAE</u>		
Cantocercus urophasianus	Sage grouse	O, R
Alectroris chukar	Chukar	O, R
Phasianus colchicus	Ring-necked pheasant	O, R
Perdix perdix	Gray partridge	O, R
<u>RALLIDAE</u>		
Fulica americana	American coot	O, S
Rallus limicola	Virginia rail	U, B
Porzana carolina	Sora	U, B
<u>RECURVIROSTRIDE</u>		
Recurvirostra americana	American Avocet	L, M
<u>CHARADRIUS</u>		
Charadrius vociferous	Killdeer	O, B
Charadrius montana	Mountain plover	U, B

ADDENDUM D9A
POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>SCOLOPACIDAE</u>		
<i>Numenius americanus</i>	Long-billed curlew	L, B
<i>Limosa fedoa</i>	Marbled godwit	U, M
<i>Actitis maculata</i>	Spotted sandpiper	L, B
<i>Tringa solitaria</i>	Solitary sandpiper	L, M
<i>Tringa melanoleucus</i>	Greater yellowlegs	L, M
<i>Tringa flavipes</i>	Lesser yellowlegs	L, M
<i>Catoptrophorus semipalmatus</i>	Willet	U, M
<i>Limnodromus scolopaceus</i>	Long-billed dowitcher	U, M
<i>Calidris minutilla</i>	Least sandpiper	U, M
<i>Bartramia longicauda</i>	Upland sandpiper	U, S
<i>Capella gallinago</i>	Common snipe	L, S
<u>PHALAROPODIDAE</u>		
<i>Steganopus tricolor</i>	Wilson's phalarope	L, M
<u>LARIDAE</u>		
<i>Larus californicus</i>	California gull	L, M
<i>Larus delawarensis</i>	Ring-billed gull	U, M
<u>COLUMBIDAE</u>		
<i>Columba livia</i>	Rock dove	O, R
<i>Zenaida macroura</i>	Mourning dove	O, R
<u>CUCULIDAE</u>		
<i>Coccyzus erythrophthalmus</i>	Black billed cuckoo	L, S
<u>STRIGIDAE</u>		
<i>Otus asio</i>	Screech owl	U, R
<i>Bubo virginianus</i>	Great horned owl	O, R
<i>Athene cunicularia</i>	Burrowing owl	L, B
<i>Asio flammeus</i>	Short-eared owl	L, W

ADDENDUM D9A
POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>CAPRIMULGIDAE</u>		
Phalaenoptilus nuttalli	Poor-will	I, B
Chordeiles minor	Common nighthawk	O, B
<u>APODIDAE</u>		
Acronautes saxatalis	White-throated swift	L, S
<u>TROCHILIDAE</u>		
Selasphorus platycercus	Broad-tailed hummingbird	I, S
Stellula calliope	Calliope Hummingbird	L, S
<u>ALCEDINIDAE</u>		
Ceryle alcyon	Belted kingfisher	L, R
<u>PICIDAE</u>		
Colaptes auratus	Common flicker	O, R
Melanerpes erythrocephalus	Red-headed woodpecker	L, B
Melanerpes lewis	Lewis's woodpecker	U, B
Sphyrapicus varius	Yellow-bellied sapsucker	I, B
Picoides villosus	Hairy woodpecker	O, R
Picoides pubescens	Downy woodpecker	L, R
Sphyrapicus thyroideus	Williamson's sapsucker	L, S
<u>TYRANNIDAE</u>		
Tyrannus tyrannus	Eastern kingbird	L, B
Tyrannus verticalis	Western kingbird	I, B
Sayornis saya	Say's phoebe	O, B
Empidonax traillii	Willow flycatcher	L, B
Empidonax difficilis	Western flycatcher	I, B
Contopus sordidulus	Western wood peewee	L, B
Empidonax oberholseri	Dusky flycatcher	L, B
Contopus borealis	Olive-sided flycatcher	L, B
<u>ALAUDIDAE</u>		
Eremophila alpestris	Horned lark	O, R

ADDENDUM D9A
POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>HIRUNDINIDAE</u>		
<i>Tachycineta thalassina</i>	Violet-green swallow	L, S
<i>Iridoprocne bicolor</i>	Tree swallow	L, B
<i>Riparia riparia</i>	Bank swallow	L, B
<i>Stelgidopteryx ruficollis</i>	Northern rough-winged swallow	O, B
<i>Hirundo rustica</i>	Barn swallow	L, B
<i>Hirundo pyrrhonota</i>	Cliff swallow	O, B
<u>CORVIDAE</u>		
<i>Perisoreus canadensis</i>	Gray jay	L, R
<i>Cyanocitta stelleri</i>	Stellar's jay	L, R
<i>Gymnorhinus cyanocephalus</i>	Pinyon jay	O, R
<i>Pica pica</i>	Black-billed magpie	O, R
<i>Corvus corax</i>	Common raven	O, R
<i>Corvus brachyrhynchos</i>	Common crow	O, R
<i>Nucifraga columbiana</i>	Clark's nutcracker	O, R
<u>PARIDAE</u>		
<i>Parus atricapillus</i>	Black-capped chickadee	L, R
<i>Parus gambeli</i>	Mountain chickadee	L, W
<u>SITTIDAE</u>		
<i>Sitta carolinensis</i>	White-breasted nuthatch	L, R
<i>Sitta canadensis</i>	Red-breasted nuthatch	L, R
<u>CERTHIDAE</u>		
<i>Certhia americana</i>	Brown creeper	U, R
<u>CINCLIDAE</u>		
<i>Cinclus mexicanus</i>	American dipper	U, R
<u>TROGLODYTIDAE</u>		
<i>Troglodytes aedon</i>	House wren	L, B
<i>Salpinctes obsoletus</i>	Rock wren	O, B
<i>Cistothorus palustris</i>	Marsh wren	L, B

ADDENDUM D9A
POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>MIMIDAE</u>		
Mimus polyglottos	Mockingbird	U, S
Dumetella carolinensis	Gray catbird	U, B
Toxostoma rufum	Brown thrasher	U, B
Oreoscoptes montanus	Sage thrasher	O, B
<u>TURDIDAE</u>		
Turdus migratorius	American robin	O, B
Sialia sialis	Eastern bluebird	L, B
Sialia mexicana	Western bluebird	L, B
Sialia currucoides	Mountain bluebird	O, B
Catharus fuscescens	Veery	L, S
Myadestes townsendi	Townsend's solitaire	L, S
<u>SYLVIIDAE</u>		
Regulus calendula	Ruby-crowned kinglet	U, M
<u>MOTACILLIDAE</u>		
Anthus rubescens	American pipit	U, B
<u>BOMBYCILLIDAE</u>		
Bombycilla garrulus	Bohemian waxwing	U, W
Bombycilla cedrorum	Cedar waxwing	U, M
<u>LANIIDAE</u>		
Lanius excubitor	Northern shrike	U, W
Lanius ludovicianus	Loggerhead shrike	O, B
<u>STURNIDAE</u>		
Sturnus vulgaris	Starling	O, R
<u>VIREONIDAE</u>		
Vireo solitarius	Solitary vireo	U, M
Vireo gilvus	Warbling vireo	U, B

ADDENDUM D9A
POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<u>PARULIDAE</u>		
<i>Vermivora celata</i>	Orange-crowned warbler	U, M
<i>Dendroica petechia</i>	Yellow warbler	U, B
<i>Dendroica coronata</i>	Yellow rumped warbler	U, S
<i>Geothlypis trichas</i>	Common yellowthroat	U, B
<i>Icteria virens</i>	Yellow-breasted chat	U, B
<i>Oporornis tolmiei</i>	MacGillivray's warbler	U, M
<i>Wilsonia pusilla</i>	Wilson's warbler	U, M
<i>Setophaga ruticilla</i>	American redstart	U, B
<i>Seiurus aurocapillus</i>	Ovenbird	U, S
<u>PARULIDAE</u>		
<i>Passer domesticus</i>	House sparrow	L, R
<u>ICTERIDAE</u>		
<i>Dolichonyx oryzivorus</i>	Bobolink	L, S
<i>Sturnella neglecta</i>	Western meadowlark	O, R
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed blackbird	L, B
<i>Agelaius phoeniceus</i>	Red-winged blackbird	O, B
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	O, B
<i>Quiscalus quiscula</i>	Common grackle	L, B
<i>Molothrus ater</i>	Brown-headed cowbird	L, B
<i>Icterus galbula</i>	Northern oriole	L, B
<u>THRAUPIDAE</u>		
<i>Piranga ludoviciana</i>	Western tanager	L, B
<u>FRINGILLIDAE</u>		
<i>Pheucticus meloncephalus</i>	Black-headed grosbeak	U, B
<i>Hesperiphona vespertinus</i>	Evening grosbeak	U, W
<i>Passerina amoena</i>	Lazuli bunting	L, B
<i>Carpodacus cassinii</i>	Cassin's finch	L, W
<i>Carpodacus mexicanus</i>	House finch	U, R
<i>Leucosticte tephrocotis</i>	Gray-crowned rosy finch	L, W
<i>Carduelis flammea</i>	Common redpoll	U, W
<i>Carduelis pinus</i>	Pine siskin	L, R

ADDENDUM D9A
POTENTIAL BIRD SPECIES OBSERVED OR LIKELY TO OCCUR
 (continued)

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
FRINGILLIDAE (Continued)		
<i>Spinus tristis</i>	American goldfinch	L, R
<i>Pipilo chlorurus</i>	Green-tailed towhee	L, B
<i>Pipilo erythrophthalmus</i>	Rufous-sided towhee	O, B
<i>Calamospiza melanocorys</i>	Lark bunting	L, B
<i>Passerculus sandwichensis</i>	Savannah sparrow	L, B
<i>Poocetes gramineus</i>	Vesper sparrow	O, B
<i>Chondestes grammacus</i>	Lark sparrow	O, B
<i>Junco hyemalis</i>	Dark-eyed junco	O, W
<i>Spizella arborea</i>	Tree sparrow	U, W
<i>Spizella passerina</i>	Chipping sparrow	L, B
<i>Spizella pallida</i>	Clay-colored sparrow	U, S
<i>Spizella breweri</i>	Brewer's sparrow	O, B
<i>Spiza americana</i>	Dickcissel	U, S
<i>Ammodramus savannarum</i>	Grasshopper sparrow	L, S
<i>Amphispiza belli</i>	Sage sparrow	O, S
<i>Zonotrichia leucophrys</i>	White-crowned sparrow	L, M
<i>Melospiza lincolni</i>	Lincoln's sparrow	L, B
<i>Melospiza melodia</i>	Song sparrow	L, B
<i>Calcarius mccownii</i>	McCown's longspur	L, B
<i>Calcarius lapponicus</i>	Lapland longspur	U, W
<i>Calcarius ornatus</i>	Chestnut-collard longspur	L, B
<i>Plectrophenax nivalis</i>	Snow bunting	L, W

1 Scientific Nomenclature name based on AOU (1957, 1973, 1976)

2 Status

O - Observed

L - Likely

U - Unlikely, but possible; either this area is peripheral range or no suitable habitat is found on the site.

B - Breeder

M - Migrant

W - Winter visitor

R - Year-round resident

S - Summer resident

ADDENDUM D9A
POTENTIAL HERPTILE INHABITANTS
PERMIT NO. 281C - NORTH TEN SLEEP AMENDMENT NO. 7 AREA

<u>SCIENTIFIC NOMENCLATURE</u> ¹	<u>COMMON NAME</u>	<u>STATUS</u> ²
<i>Crotalus viridis viridis</i>	Prairie rattlesnake	O
<i>Pituophis melanoleucus</i>	Bullsnake	O
<i>Phrynosoma douglassi brevirostre</i>	Eastern short-horned lizard	O
<i>Sceloporus graciosus graciosus</i>	Northern sagebrush lizard	O
<i>Ambystoma tigrinum</i>	Tiger salamander	L
<i>Scaphiopus bombifrons</i>	Plains spadefoot	L
<i>Bufo woodhousei</i>	Woodhouse's Toad	L
<i>Rana pipiens</i>	Leopard frog	O
<i>Pseudacris triseriata</i>	Boreal chorus frog	L
<i>Coluber constrictor flaviventris</i>	Eastern yellowbelly racer	L
<i>Thamnophis elegans</i>	Wandering garter snake	L

1. Nomenclature based on Baxter and Stone (1980).
2. Status -
 - O - Observed on the study area
 - L - Likely to occur on the study area
 - U - Unlikely to occur on the study area

ADDENDUM D9B

Correspondence



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4000 Airport Parkway
Cheyenne, Wyoming 82001

In Reply Refer to:
ES-61411/Mines/WY10054

JAN 20 2006

Russell Tait
Intermountain Resources
P.O. Box 1589
Laramie, Wyoming 82073

Dear Mr. Tait:

Thank you for your letter of December 16, 2005 received in our office on December 22, transmitting the wildlife inventory for the Black Hills Bentonite, Permit 281C, Amendment No. 7 Area and the North Ten Sleep Update Area. You also submitted an analysis of potential impacts to threatened and endangered species from the proposed bentonite mining and associated activities. The Amendment No. 7 area comprises approximately 95 acres in Section 35 T 48N/R 90W and Section 12 T 47N/R 90W. The update area comprises approximately 220 acres in Sections 17-20 in T 47N/R 90W. The Black Hills Bentonite Permit 281C is located in Washakie County, Wyoming.

The U.S. Fish and Wildlife Service (Service) has reviewed the wildlife surveys and analysis of impacts to threatened and endangered species, for the Amendment No. 7 Area and the North Ten Sleep Update Area, pursuant to the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq.*, Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, and Bald and Golden Eagle Protection Act, 16 U.S.C. 668, and finds them to be satisfactory. Please be aware that the Service recommends maintaining disturbance-free zones around nesting raptors to avoid the possibility of 'take' under the MBTA. The Service recommends a buffer zone of 0.5 mile around raptor nests during the nesting season (February 1 - August 15) for all species except ferruginous hawk, and bald eagle, which should be protected by a 1-mile, disturbance-free buffer. Work that could lead to the take of a migratory bird including an eagle, their young, eggs, or nests should be coordinated with our office before any actions are taken. Removal, destruction, or causing abandonment of a nest could constitute violation of the above statutes. Permits for nest manipulation, including removal or relocation may be issued under certain circumstances. Mitigation, as determined by our office, may be required for loss of nests.

We appreciate the commitment of the Department of Environmental Quality and the Black Hills Bentonite LLC to ensure the conservation of Wyoming's threatened and endangered species and

migratory birds. If you have any questions or comments regarding this letter please contact Trish Sweanor at the letterhead address or phone (307) 772-2374, extension 39.

Sincerely,



Brian T. Kelly
Field Supervisor
Wyoming Field Office

cc: WDEQ, Land Quality Division, Lander, District Supervisor (M. Moxley)
WDEQ, Land Quality Division, Cheyenne, WY, Records Analyst (R. Christensen)
WGFD, Cheyenne, WY, Statewide Habitat Protection Coordinator (V. Steiter)
WGFD, Lander, WY, Non-game Coordinator (B. Oakleaf)

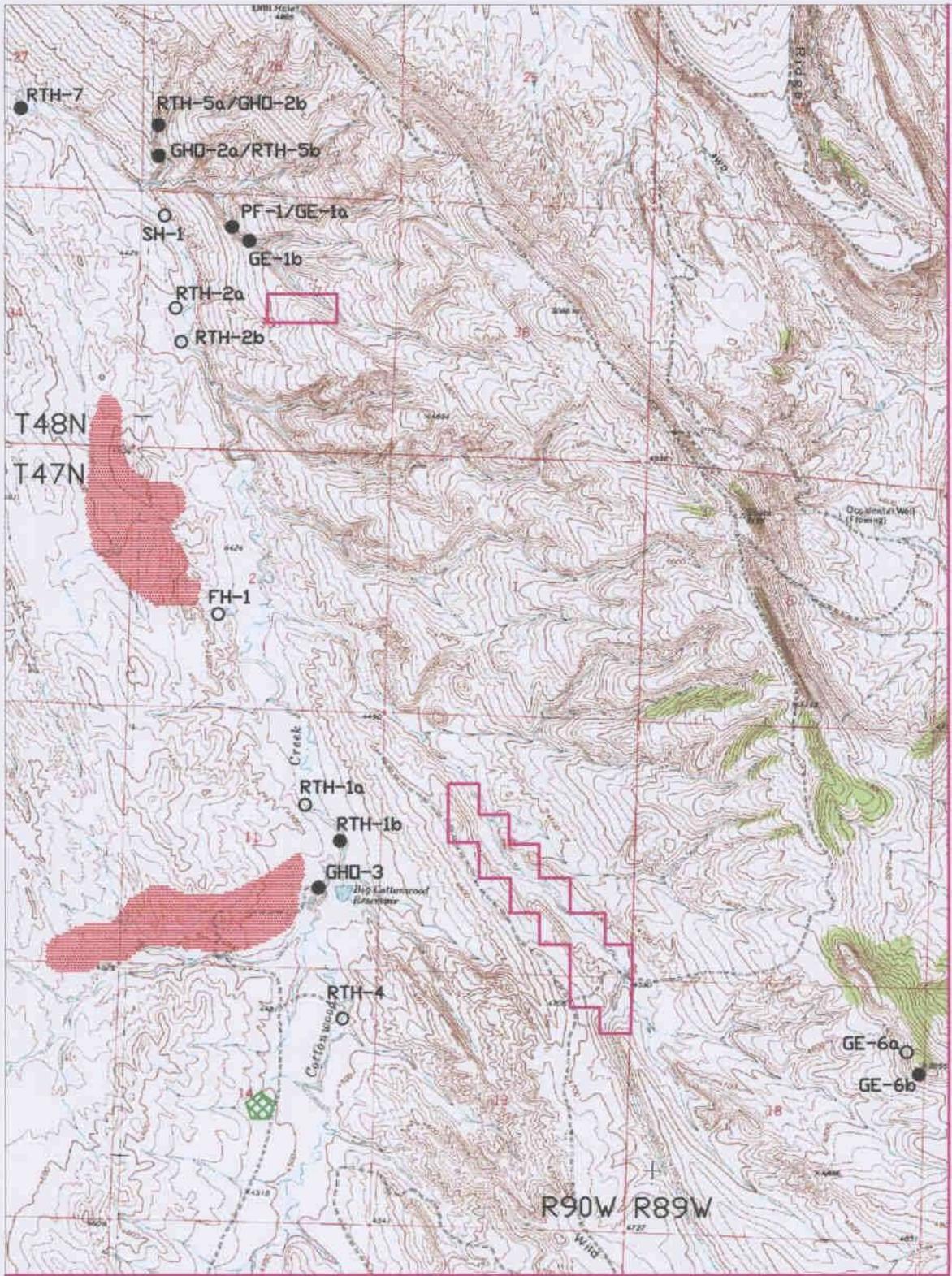


Figure D9-1. Permit 281C Amendment No. 7
Black Hills Bentonite

Scale = 1" = 3000'	December 15, 2005 Revised: October 15, 2008
Legend	
- Amendment Area No. 7	Raptor Nest Sites
- Intact Nest Site	GE - Golden Eagle
- Nest No Longer Present	FH - Ferruginous Hawk
- White-tailed Prairie Dog Town	PF - Prairie Falcon
- Potential Sage Grouse Lek	GHO - Great Horned Owl
	RTH - Red-tailed Hawk
	SH - Swainson's Hawk