

APPENDIX D10  
WETLANDS AND OTHER WATERS OF  
THE U.S. INVENTORY

BLACK HILLS BENTONITE, LLC.  
PERMIT AREA 281C  
NORTH TEN SLEEP AMENDMENT NO. 7

Prepared By

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TABLE OF CONTENTS

	<u>Page</u>
D10.1 INTRODUCTION .....	D10-1
D10.2 METHODS .....	D10-1
D10.3 RESULTS .....	D10-2
D10.3.1 Wetlands .....	D10-3
D10.3.2 Ephemeral Streams .....	D10-3
D10.4 CONCLUSIONS .....	D10-5
D10.5 SOURCES .....	D10-6

LIST OF TABLES

Table D10-1	Wetlands Delineation Results for the Black Hills Bentonite North Ten Sleep Permit 281C Amendment No. 7, 2003. ....	D10-4
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LIST OF ADDENDA

Addendum D10A	Field Data Sheets
Addendum D10B	Photographs

LIST OF MAPS

Map D10-1	Wetlands and Other Waters of United States Inventory
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## D10.1 INTRODUCTION

The Black Hills Bentonite North Ten Sleep Amendment No. 7 Permit 281C 2003 wetland delineation area is located in Washakie County, Wyoming approximately six miles northwest of the town of Ten Sleep. Access to the site is made by traveling west from Ten Sleep on State Highway 16 to the Permit 281C mine access road. The study area encompasses the mine permit amendment area (No.7) of approximately 155.0 acres. The delineation area lies within portions of Section 35 of T48N R90W and Sections 12 and 13 T47N R90W. The permit area boundary is shown on the enclosed Map D10-1. The study area for this delineation represents all lands within the permit Amendment No. 7 area.

This report is a recommended determination of jurisdictional wetlands and other waters of the United States under authority of the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency under Section 404 of the Clean Water Act. The agencies retain the authority to amend or approve wetland delineations, and to make jurisdictional determinations on wetlands created by human activities.

## D10.2 METHODS

Wetlands were delineated according to the 1987 Corps of Engineers wetlands delineation Manual. Other "Waters of the United States" were determined according to definitions in 33 CFR 328.3. Observations of potential wetland sites were made throughout the 2003 growing season. Field sampling was completed in September of 2003.

Potential wetlands initially were identified by examining topographic maps and National Wetlands Inventory (NWI) maps. All potential wetlands identified through those reviews were surveyed in the field during July and September of 2003. Surveys were also conducted on the

remainder of the lands in traverses across the study area. Vegetation, hydrology, and soil characteristics of wetlands and other sample sites were recorded on field data sheets and locations of observation sites were plotted on topographic maps. Photographs were taken of many of the observation sites.

"Other waters of the United States" in this study area consisted of portions of ephemeral stream channels. These sites carried or ponded water without the frequency or duration during the growing season that is sufficient for wetland development. Stream channels with bed, bank and evidence of movement of water, soil and litter were delineated as other waters of the United States.

Recommendations for non-jurisdictional wetlands were made according to the following criteria:

- a. non-jurisdictional stockponds are those that are constructed in dry uplands and do not impound water flowing in ephemeral or intermittent streams classified as other waters of the United States.
- b. isolated wetlands or other waters are non-jurisdictional. These sites occur in uplands that are isolated from any connection to jurisdictional wetlands or jurisdictional Other Waters of the United States.
- c. Non-jurisdictional wetlands and other waters of the United States have been further identified as drainages that flow continuously for less than three consecutive months out of the year or sites that do not have a significant nexus to traditionally navigable waters as defined by the Corps.

Information from an order 1-3 soil survey completed for the mine permit area and the county soil survey were used in this survey where applicable. However, many of the soils encountered at sample sites were unmapped inclusions.

### D10.3 RESULTS

This section will discuss the results of the surveys for jurisdictional wetlands and other waters of the United States completed during the 2003 wetland delineations. Discussions include

vegetation, hydrology, and soils characteristics observed in the kinds of wetlands encountered within the study area.

#### D10.3.1 Wetlands

No jurisdictional or non-jurisdictional wetlands were found on the Black Hills Bentonite Permit 281C Amendment No. 7 area.

#### D10.3.2 Ephemeral Stream Other Waters

Table D10-1 presents the ephemeral stream other waters of the U.S. acreage for the amendment area. Water is not present in these defined channels long enough during the growing season to develop hydric soils or defining hydrophytic vegetation.

Other waters of the U.S. in ephemeral streams consist of:

- a. segments of stream channels that are not wetlands, this includes some channel bottoms.
- b. other ephemeral streams in uplands that have carried sufficient water to create channels. These ephemeral streams are primarily identified as channels shown with intermittent stream symbols on USGS topographic maps and were verified in the field.

Although defined channels were present, the ephemeral streams within the study area were classified as non-jurisdictional since they do not flow continuously for three consecutive months out of the year and do not appear to have a significant nexus to traditionally navigable waters.

Table D10-1. Wetlands Delineation Results for the Black Hills Bentonite North Ten Sleep Permit 281C Amendment No. 7, 2003.

Site	Jurisdictional Wetland Acres	Non-jurisdictional Channel Other Waters of U.S. Acres	Non-Jurisdictional Wetland Acres
<u>Ephemeral Stream</u>			
ES1	-	0.83	-
ES2	-	0.06	-
Total	-	0.89	-

D10.4 CONCLUSIONS

This report provides the wetlands and other waters of the United States delineation for the Black Hills Bentonite Permit 281C North Ten Sleep Amendment No. 7 area. The amendment area does not contain jurisdictional wetlands or jurisdictional ephemeral stream channel Other Waters of the United States. Non-jurisdictional wetlands were not identified on this study area.

**DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)**

<b>Project/site:</b> <u>North Tensleep (281C)</u>	<b>Date:</b> <u>9/21/2003</u>
<b>Applicant/Owner:</b> <u>Black Hills Bentonite</u>	<b>County:</b> <u>Washakie</u>
<b>Investigator:</b> <u>Intermountain Resources - Jim Orpet</u>	<b>State:</b> <u>Wyoming</u>
<b>Do Normal Circumstances exist on the site?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Community ID:</b> <u>E. Stream</u>
<b>Is the site significantly disturbed (Atypical Situation)?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Transect ID:</b> <u>ES1 &amp; ES2</u>
<b>Is the area a potential Problem Area?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed explain on reverse.)	<b>Plot ID:</b> <u>ES1</u>

SESE4 Section 12, Township 47 North, Range 90 West

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Distichlis stricta</i>	h	15%	FAC <sup>+</sup>	9.	
2. <i>Sporobolus airoides</i>	h	15%	FAC <sup>-</sup>	10.	
3. <i>Poa juncifolia</i>	h	5%	FACU <sup>+</sup>	11.	
4. <i>Hordeum jubatum</i>	h	5%	FAC <sup>+</sup>	12.	
5. <i>Kochia scoparia</i>	h	5%	FAC	13.	
6.				14.	
7.				15.	
8.				16.	

Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC<sup>+</sup>) 55%

Remarks: *Distichlis* and *Kochia* are also found on adjacent uplands and are not good wetland indicators.

**HYDROLOGY**

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):  <input type="checkbox"/> Stream, Lake, or Tide Gauge  <input type="checkbox"/> Aerial Photographs  <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:                  Depth of Surface Water: <u>0</u> (In.)                  Depth to Free Water in Pit: <u>&gt;16</u> (In.)                  Depth to Saturated Soil: <u>&gt;16</u> (In.)</p>	<p><b>Wetland Hydrology Indicators:</b>  <b>Primary Indicators:</b>  <input type="checkbox"/> Inundated (Seasonally)  <input type="checkbox"/> Saturated In upper 12 inches (Seasonally)  <input type="checkbox"/> Water Marks  <input type="checkbox"/> Drift Lines  <input type="checkbox"/> Sediment Deposits  <input type="checkbox"/> Drainage Patterns in Wetlands  <b>Secondary Indicators (2 or more required):</b>  <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches  <input type="checkbox"/> Local Soil Survey Data  <input type="checkbox"/> Water-Stained Leaves  <input type="checkbox"/> FAC-Neutral Test  <input type="checkbox"/> Other (Explain In Remarks)</p>
<p>Remarks: Ephemeral stream channel.</p>	

**SOILS**

Plot ID: ES1

Map Unit Name (Series and Phase): <u>Youngston</u>		Drainage Class: <u>Well</u>			
Taxonomy (Subgroup): <u>Typic Torrifluvents</u>		Field Observations Confirm Mapped Type? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<u>Profile</u> Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture Concentrations, Structure, etc.
<u>0-2</u>	<u>A</u>	<u>10 YR 3/3</u>	<u>-</u>	<u>-</u>	<u>Loam</u>
<u>2-16+</u>	<u>B</u>	<u>10 YR 3/3</u>	<u>-</u>	<u>-</u>	<u>Loam</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Gleyed or Low-Chroma Colors
<input type="checkbox"/> Concentrations	<input type="checkbox"/> High Organic Content in Surface Layer In Sandy Soils	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Other (Explain In Remarks)
Remarks: Seasonally saturated.					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is This Sampling Point Within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Hydric Soils Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
ES1 = 5' channel other waters of US. (5' x 7200' = 0.83 acres)		
ES2 = 4' channel other waters of the US. (4' x 600' = 0.06 acres)		

Approved by HQUSACE 3/92

ADDENDUM D10B

REPRESENTATIVE PHOTOGRAPHS



Photo 1. Black Hills Bentonite Permit 281C Amendment No. 7 Ephemeral Stream ES1 Other Waters of the U.S. 2003.

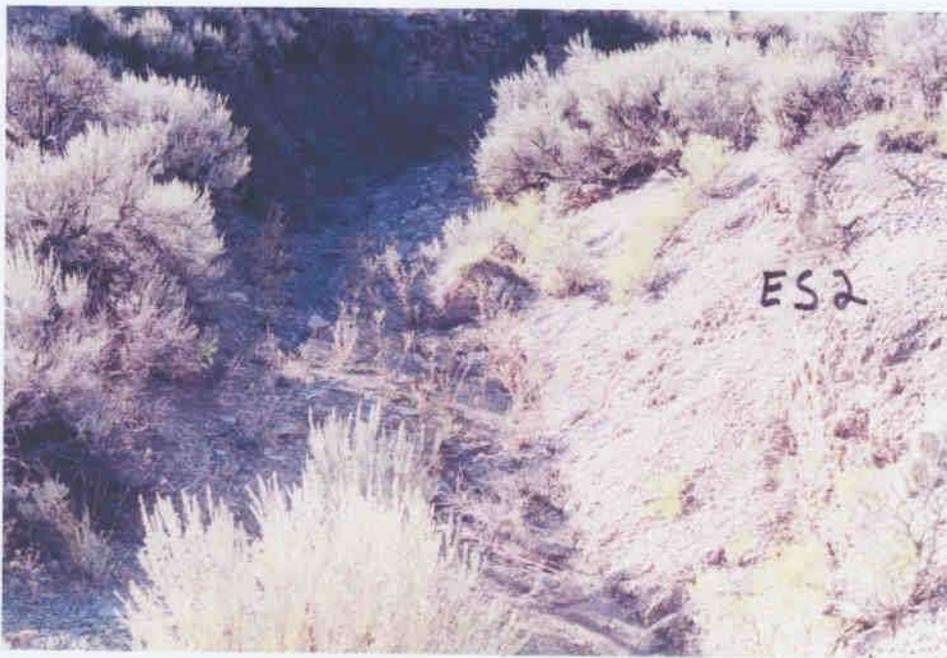


Photo 2. Ephemeral Stream ES2 Photographed in 2003.

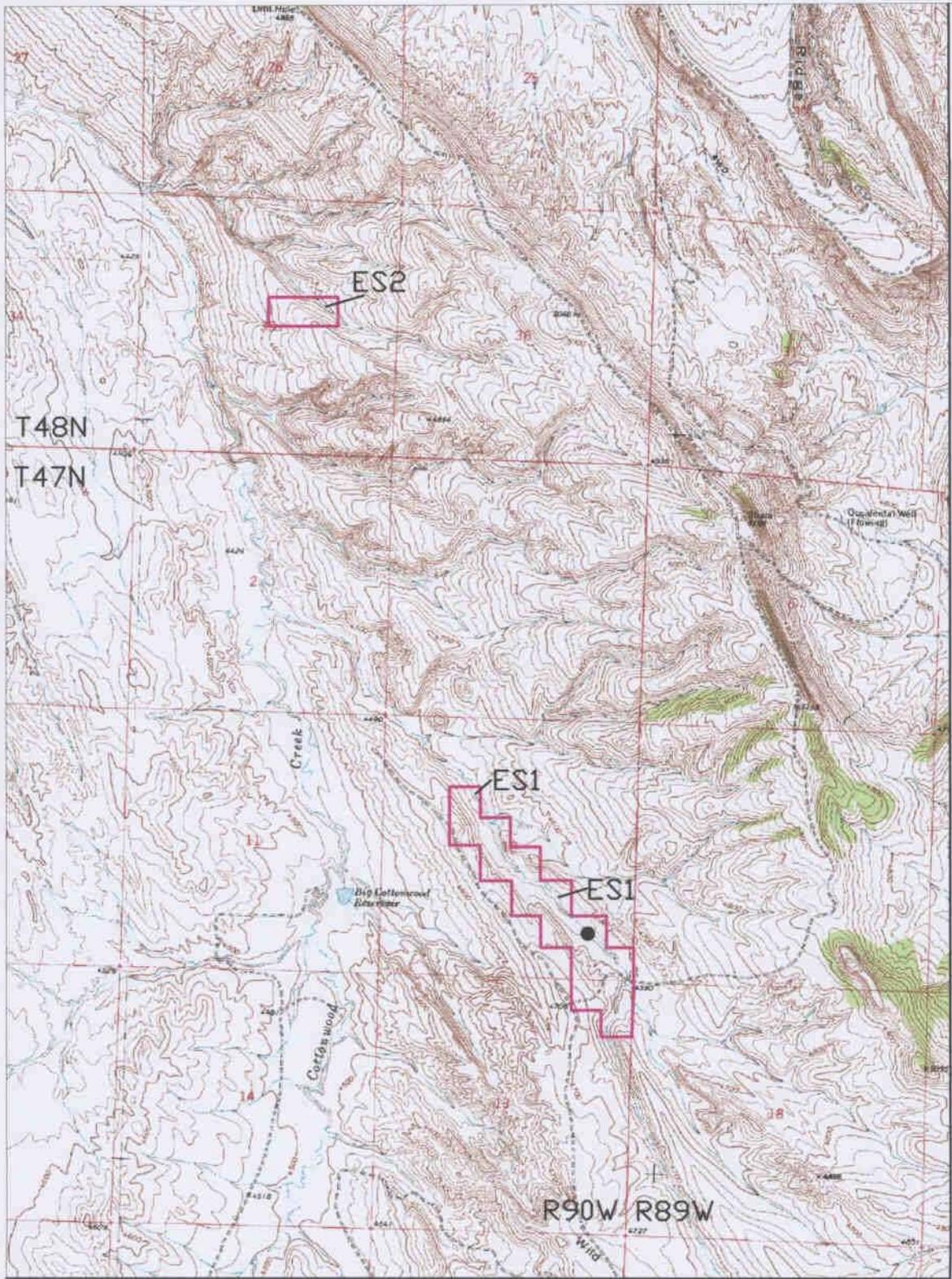


Figure D10-1. Permit 281C Amendment No. 7  
 Black Hills Bentonite Wetlands and  
 Other Waters of the U.S. Inventory

Scale = 1" = 3000'

December 15, 2005  
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Legend

□ - Amendment Area No. 7

● - Sample Site

ES1 - Ephemeral Stream