EXHIBIT

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Table MP-1
Volumetric Calculations
Black Hills Bentonite, LLC
Permit to Mine No. 24BC
Murphy Creek Update Area

Mine Development Area Section Township Range	Disturbance	Acres	Year of Development or Construction	Topsoil Volume (Calculated) (Ave. Depth)	Segregated Overburden Volume (1.25 ft.)	Average Overburden Depth	Pit Area	Estimated Overburden Volume	Overburden Swell Volume (45% Factor)	Average Bentonite Thickness	Calculated Bentonite Volume	Total Pit Depth	Overburden Replacement Volume (Box Cut)
				(BCY)	(BCY)	(Feet)	(Acres)	(BCY)	(LCY)	(Feet)	(BCY)	(Feet)	(BCY)
Sec 35, T42N R83W	Access Road Segment A-A'	0.2	2025	349									
	Topsoil Stockpile #35-1	2.1	2023	0									
	Topsoil Stockpile #35-2	1.8	2025	0									
	Topsoil Stockpile #35-3	0.4	2024	0									
	Pit #35-1	0.8	2025	860	1,613	14.8	0.8	19,098	8,594	3.0	3,871	17.8	22,969
	Pit #35-2	0.8	2025	860	1,613	10.8	0.8	13,935	6,271	3.1	4,000	13.9	17,937
	Pit #35-3	4.0	2024	4,503	8,065	9.5	4.0	61,294	27,582	3.9	25,163	13.4	86,457
	Pit #35-4	4.0	2023	6,049	8,065	14.0	4.0	90,328	40,648	3.5	22,582	17.5	112,910
	Access Road Segment B-B'	0.5	2025	874									
	Pit #35-5	4.8	2025	7,581	9,678	5.0	4.8	38,712	17,420	2.8	21,679	7.8	60,391
	Topsoil Stockpile #35-4	1.7	2025	0									
Sec 36, T42N R83W	Access Road Segment B-B'	6.6	2014	8,872									
	Topsoil Stockpile #36-1	0.5	2014	0									
	Topsoil Stockpile #36-2	0.5	2014	0									
	Topsoil Stockpile #36-3	1.9	2014	0									
	Topsoil Stockpile #36-4	1.3	2014	0									
	Topsoil Stockpile #36-5	1.5	2014	0									
	Access Road Segment C-C'	0.2	2019	349									
	Topsoil Stockpile #36-6	1.2	2019	0									
	Topsoil Stockpile #36-7	1.2	2019	0									
	Pit #36-1	1.2	2026	1,492	2,420	5.0	1.2	9,678	4,355	2.8	5,420	7.8	15,098
	Access Road Segment D-D'	2.5	2021	3,522									
	Topsoil Stockpile #36-8	0.5	2021	0									
	Topsoil Stockpile #36-12	0.7	2021	0									
	Pit #36-2	3.4	2022	2,366	6,855	24.3	3.4	133,266	59,970	5.0	27,421	29.3	160,687
	Potential Disturbance Area #36-1	0.1	2022	148									
	Potential Disturbance Area #36-2	1.0	2022	1,479									
	Pit #36-3	4.9	2021	6,452	9,880	28.4	4.9	224,465	101,009	5.5	43,470	33.9	267,935
	Potential Disturbance Area #36-3	0.8	2021	867									
	Topsoil Stockpile #36-10	2.0	2021	0									
	Pit #36-4	3.0	2021	4,234	6,049	28.0	3.0	135,492	60,971	4.7	22,743	32.7	158,235
	Overburden Stockpile #36-2	5.8	2021	17,837									
	Topsoil Stockpile #36-11	2.7	2021	0									
	Pit #36-5	5.1	2021	25,055	10,263	22.4	5.1	184,269	82,921	2.8	23,034	25.2	207,303

Table MP-1
Volumetric Calculations
Black Hills Bentonite, LLC
Permit to Mine No. 248C
Murphy Creek Update Area

Mine Development Area Section Township Range	Disturbance	Acres	Year of Development or Construction	Topsoil Volume (Calculated) (Ave. Depth)	Segregated Overburden Volume (1.25 ft.)	Average Overburden Depth	Pit Area	Estimated Overburden Volume	Overburden Swell Volume (45% Factor)	Average Bentonite Thickness	Calculated Bentonite Volume	Total Pit Depth	Overburden Replacement Volume (Box Cut)
				(BCY)	(BCY)	(Feet)	(Acres)	(BCY)	(LCY)	(Feet)	(BCY)	(Feet)	(BCY)
	Overburden Stockpile #36-1	8.2	2021	58,028									
	Topsoil Stockpile #36-9	4.1	2021	0									
	Pit #36-6	5.2	2022	23,805	10,485	15.2	5.2	127,492	57,371	3.2	26,840	18.4	154,332
	Pit #36-7	5.2	2023	8,569	10,485	15.0	5.2	125,814	56,616	3.0	25,163	18.0	150,977
	Pit #36-8	5.7	2024	4,194	11,493	15.0	5.7	137,912	62,060	2.8	25,743	17.8	163,655
	Access Road Segment E-E'	0.3	2023	323									
	Pit #36-9	5.3	2023	19,961	10,686	16.5	5.3	141,057	63,476	2.9	24,792	19.4	165,849
	Overburden Stockpile #36-3	6.9	2023	19,638									
	Topsoil Stockpile #36-13	2.3	2023	0									
	Topsoil Stockpile #36-14	2.5	2023	0									
	Pit #36-10	5.3	2024	23,792	10,686	18.5	5.3	158,155	71,170	2.7	23,082	21.2	181,237
	Pit #36-11	5.3	2025	28,846	10,686	16.8	5.3	143,622	64,630	2.8	23,937	19.6	167,558
	Topsoil Stockpile #36-15	2.1	2025	0									
	Pit #36-12	5.2	2026	20,458	10,485	13.6	5.2	114,071	51,332	3.2	26,840	16.8	140,912
	Access Road Segment G-G'	1.1	2024	2,594									
	Topsoil Stockpile #36-16	3.2	2024	0									
	Pit #36-13	2.7	2024	8,334	5,444	13.5	2.7	58,794	26,457	3.0	13,065	16.5	71,859
	Potential Disturbance Area #36-4	0.4	2024	430									
	Overburden Stockpile #36-4	3.6	2024	4,395									
	Pit #36-14	2.5	2025	2,809	5,041	10.0	2.5	40,325	18,146	2.7	10,888	12.7	51,213
	Pit #36-15	4.3	2026	24,679	8,670	21.7	4.3	150,509	67,729	2.6	18,033	24.3	168,542
	Overburden Stockpile #36-7	5.9	2026	34,303									
	Pit #36-16	4.3	2027	13,831	8,670	18.6	4.3	129,008	58,053	2.7	18,727	21.3	147,735
	Pit #36-17	4.3	2028	6,640	8,670	15.2	4.3	105,426	47,442	3.1	21,501	18.3	126,927
	Pit #36-18	2.1	2029	2,379	4,234	6.5	2.1	22,017	9,908	2.9	9,823	9.4	31,841
	Overburden Stockpile #36-5	4.3	2029	4,624									
	Topsoil Stockpile #36-17	1.6	2029	0									
	Access Road Segment F-F'	2.8	2025	4,315									
	Topsoil Stockpile #36-18	1.7	2025	0									
	Topsoil Stockpile #36-19	0.5	2025	0									
	Topsoil Stockpile #36-20	0.6	2025	0									
	Topsoil Stockpile #36-21	2.4	2025	0									
	Topsoil Stockpile #36-22	2.5	2025	0									

Table MP-1
Volumetric Calculations
Black Hills Bentonite, LLC
Permit to Mine No. 248C
Murphy Creek Update Area

Mine Development Area Section Township Range	Disturbance	Acres	Year of Development or Construction	Topsoil Volume (Calculated) (Ave. Depth)	Segregated Overburden Volume (1.25 ft.)	Average Overburden Depth	Pit Area	Estimated Overburden Volume	Overburden Swell Volume (45% Factor)	Average Bentonite Thickness	Calculated Bentonite Volume	Total Pit Depth	Overburden Replacement Volume (Box Cut)
				(BCY)	(BCY)	(Feet)	(Acres)	(BCY)	(LCY)	(Feet)	(BCY)	(Feet)	(BCY)
	Pit #36-19	3.9	2025	5,766	7,663	12.2	3.9	76,747	34,536	3.6	22,647	15.8	99,393
	Overburden Stockpile #36-6	9.6	2025	52,974									
	Pit #36-20	4.0	2026	5,914	8,065	10.6	4.0	68,391	30,776	6.1	39,357	16.7	107,748
	Potential Disturbance Area #36-5	0.4	2026	591									
	Pit #36-21	4.1	2027	5,793	8,267	15.7	4.1	103,829	46,723	4.9	32,405	20.6	136,234
	Pit #36-22	3.4	2027	5,027	6,855	21.7	3.4	119,007	53,553	4.1	22,485	25.8	141,492
	Potential Disturbance Area #36-6	1.0	2027	1,479									
	Overburden Stockpile #36-8	6.0	2027	6,949									
	Topsoil Stockpile #36-26	3.4	2027	0									
	Pit #36-23	3.0	2028	739	6,049	20.5	3.0	99,200	44,640	4.4	21,292	24.9	120,491
	Potential Disturbance Area #36-9	0.4	2028	591									
	Topsoil Stockpile #36-25	3.7	2028	0									
	Pit #36-24	3.1	2029	1,183	6,250	25.0	3.1	125,008	56,253	3.4	17,001	28.4	142,009
	Potential Disturbance Area #36-7	1.0	2029	1,035									
	Topsoil Stockpile #36-24	3.4	2029	0									
	Pit #36-25	2.3	2029	591	4,637	21.0	2.3	77,908	35,059	3.3	12,243	24.3	90,151
	Potential Disturbance Area #36-8	1.3	2029	0									
	Topsoil Stockpile #36-23	1.3	2029	0									
Sec 1, T41N R63W	Access Road Segment A-A'	7.4	2014	9,947									
	Topsoil Stockpile #1-1	4.1	2014	0									
	Topsoil Stockpile #1-2	0.4	2014	0									
	Topsoil Stockpile #1-3	0.2	2014	0									
	Topsoil Stockpile #1-4	0.2	2014	0									
	Topsoil Stockpile #1-5	0.3	2014	0									
	Topsoil Stockpile #1-6	0.4	2014	0									
	Potential Disturbance Area #1-1	1.0	2028	1,075									
	Access Road Segment B-B'	0.3	2028	323									
	Pit #1-1	4.1	2028	5,761	8,267	33.0	4.1	218,239	98,208	4.3	28,437	37.3	246,676
	Overburden Stockpile #1-1	8.1	2028	6,116									
	Topsoil Stockpile #1-7	5.0	2028	0									
	Access Road Segment C-C'	1.3	2029	1,290									
	Topsoil Stockpile #1-8	0.6	2029	0									
	Topsoil Stockpile #1-9	6.0	2029	0									
	Pit #1-2	5.3	2029	2,258	10,686	21.8	5.3	186,366	83,865	4.4	37,615	26.2	223,981
	Highwall Reduction Area #1-1	1.0	2029	1,949									

Table MP-1
Volumetric Calculations
Black Hills Bentonite, LLC
Permit to Mine No. 248C
Murphy Creek Update Area

Mine Development Area Section Township Range	Disturbance	Acres	Year of Development or Construction	Topsoil Volume (Calculated) (Ave. Depth)	Segregated Overburden Volume (1.25 ft.)	Average Overburden Depth	Pit Area	Estimated Overburden Volume	Overburden Swell Volume (45% Factor)	Average Bentonite Thickness	Calculated Bentonite Volume	Total Pit Depth	Overburden Replacement Volume (Box Cut)
				(BCY)	(BCY)	(Feet)	(Acres)	(BCY)	(LCY)	(Feet)	(BCY)	(Feet)	(BCY)
	Pit #1-3	5.1	2028	2,661	10,283	19.5	5.1	160,413	72,186	3.5	28,792	23.0	189,205
	Overburden Stockpile #1-2	8.7	2028	5,323									
	Potential Disturbance Area #1-2	2.6	2028	0									
Sec 12, T41N R83W	Access Road Segment A-A'	6.8	2014	9,140									
	Topsoil Stockpile #12-1	0.5	2014	0									
	Topsoil Stockpile #12-2	0.3	2014	0									
	Topsoil Stockpile #12-3	0.3	2014	0									
	Topsoil Stockpile #12-4	0.2	2014	0									
	Topsoil Stockpile #12-5	0.2	2014	0									
	Topsoil Stockpile #12-6	0.3	2014	0									
	Topsoil Stockpile #12-7	0.3	2014	0									
Sec 13, T41N R83W	Access Road Segment A-A'	2.7	2014	3,629									
	Topsoil Stockpile #13-1	0.5	2014	0									
	Topsoil Stockpile #13-2	0.3	2014	0									
TOTAL		312.1		549,845	257,475		127.7	3,599,845	1,619,930		730,092		4,329,937

ABBREVIATIONS:
BCY = Bank Cubic Yards
LCY = Loose Cubic Yards

MINE PLAN
for
PERMIT TO MINE NO. 248C - MURPHY CREEK UPDATE AREA

1.0 GENERAL INFORMATION & DESCRIPTION OF THE MINING OPERATION

1.1 Mine Operator and Contact Information

The operator of the mining operation is Black Hills Bentonite, LLC, P.O. Box 9, Mills, Wyoming, 82644. The Federal Tax Identification Number for Black Hills Bentonite, LLC is 83-0295902. Contact information for BHB and this mine is: Doug Gibson, Environmental Technician, P.O. Box 9, Mills, Wyoming 82644. Office Phone: 307-234-6470.

1.2 Type of Mining Activities

The mining method used by Black Hills Bentonite, LLC (BHB) is surface mining, whereby a sequence of small excavated areas or pits, typically less than five acres in size, are developed to expose and remove the underlying bentonite deposit. Due to the shallow depth of the bentonite deposit, the deepest portion of the pits will typically not exceed fifty feet. No underground mining techniques will be utilized. No explosives or blasting agents will be used in the mining operation.

Typically, the pits are designed in a sequence where each pit is adjoining, allowing for a multiple-cut, direct-backfill sequence. As the excavation of each pit progresses through the sequence, overburden removed from each advancing pit is directly placed (direct-backfill) in the previous open pit. Mining in this sequence allows for reclamation to occur concurrent with each new pit being developed in the advancing sequence.

1.3 Life of Mining Activities

The life of the mining operation is expected to last approximately thirty years.

1.4 Equipment and Machinery Used for Mining & Reclamation Activities

Mining and reclamation activities will be conducted using the following equipment:

- Caterpillar 627G Push-Pull Scrapers
- Caterpillar D8R, D8T & D9 Dozers with three-shank rippers
- Caterpillar 966 Front-End Loaders
- Volvo L120 & L150 Front-End Loaders
- Caterpillar 140 Motor Graders
- Over-the-road trucks with belly-dump trailers
- John Deere 7800 Series Tractors
- John Deere 8000 Series Tractors
- John Deere Chisel Plows

- John Deere V-Rippers
- John Deere Disks
- Wishek Heavy Duty Disks
- Great Plains 1300 Series Grain Drill
- Great Plains NT 1006 No-Till Grain Drill

1.5 Type of Bentonite Mined - Nature of Ore

The bentonite layers to be mined on the update area include the Brown bed, the Clay Spur or Commercial layer, the First Lower layer, and the Double bed. These layers of bentonite range between twelve inches and four feet in thickness.

1.6 Existing Underground Mines and other Mining Activities

No existing surface or underground mining activities are located on the update area. Bentonite mining activities have been conducted on a continuous basis on the permit area since 1975. No mining activities for other minerals are located on the update area or in the immediate vicinity of the permit area.

1.7 Protection of Other Resources

No oil, natural gas, or other minerals are known to exist on the update area. Due to the shallow mining depths of less than fifty feet, it is not expected that oil or natural gas deposits would be encountered or impacted. Based on the geology of the area and the geologic formations encountered while mining, no other known mineral deposits exist within the strata where bentonite will be mined within this formation.

Exploration drilling on the update area has not encountered groundwater due to the relatively shallow depth to which mining will occur (<50 feet). Groundwater will not be impacted by proposed mining activities. As no groundwater is present, no pit dewatering will be required which could potentially impact groundwater in the vicinity of the update area. Based on a records search of the Wyoming State Engineers database, there are no adjudicated ground water rights or surface water rights located within the update area.

No significant drainages will be affected by mining operations. Significant drainages are defined by WDEQ/LQD, District II, as those that are shown as a blue-line on U.S.G.S. topographic maps. Ephemeral channels which infrequently carry water in direct response to a significant rainfall event or rapid snowmelt will be affected by mining activities. These ephemeral drainages will be reestablished after mining is completed.

The Wyoming Department of Environmental Quality - Water Quality Division has issued BHB a Storm Water Discharge Permit, No. WYR320104, under the Mineral Mining General Permit for Permit to Mine No. 248C. The storm water pollution prevention plan (SWPPP) for this permit describes the best management practices that will be utilized to manage erosion and sedimentation on the update area.

Erosion will be kept at a minimum. If necessary, straw bales, sediment fences, rock check dams, and/or water bars will be used for erosion control.

BHB will conduct all mining activities in such a manner as to reduce the total area of disturbance and to prevent the undue and unnecessary degradation of the environment.

1.8 Quality Assurance Plans

The mine site will be inspected by BHB personnel at regular intervals. The mine foreman, as well as the mine development manager and environmental personnel, visit the site on a frequent basis. During periods when mining and hauling activities are occurring, heavy equipment operators and maintenance personnel visit the mine site on a daily basis. The mine development manager coordinates mining activities with the mine foreman, who is on the mine site on a daily basis when mining and reclamation activities are in progress, to ensure that proper operations and procedures are followed according to the plan and schedule. BHB mine site personnel such as heavy equipment operators and mine equipment maintenance personnel have been trained and educated by the mine development manager and the mine foreman to recognize potential problems, such as erosion problem areas or other unnecessary degradation of the resources. These personnel have been instructed to immediately report any potential problems or signs of undue degradation to the mine development manager, the mine site foreman or the environmental staff so that corrective actions can be implemented as soon as possible.

2.0 DESCRIPTION OF THE MINE FACILITIES

2.1 Buildings, Processing Plants, Staging Areas, Fueling Locations & Equipment Areas

No buildings, processing plants, or other facilities will be constructed in conjunction with mining activities on this update area. The bentonite produced from the update area will be transported to an existing bentonite processing plant located in Casper, Wyoming for processing, sale, and shipment to customers.

Staging areas which are utilized for equipment parking, repairs and fueling are situated throughout the permit area, generally in close proximity to active mining locations. Staging areas will be constructed within the update area.

2.2 Access and Haul Roads

Access to the update area from Casper, Wyoming is via the TTT Ranch exit onto the Lone Bear Road off of Interstate Highway 25, between Casper and Kaycee, Wyoming. From the Lone Bear Road, the update area can be accessed from the existing Murphy Creek haul road.

New roads constructed on the update area will typically have a top width of twenty feet and a total width of fifty feet. Road construction will consist of a crowned and ditched road. Typical cross sections for the construction of access roads, as well as drawings depicting typical culvert installations are presented in Figure MP-1 and Figure MP-2, respectively. These typical road construction cross sections and culvert installation drawings have been taken from an early version of the BLM publication referred to as *"The Gold Book - Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development"*.

In some instances, access to certain mining areas will be across proposed pit areas or through open pits or backfilled pits. In these instances, roads which may cross a proposed pit area are not necessarily illustrated or depicted on the mine plan maps.

Roads will be reclaimed once mining concludes in an area. No newly-developed haul road spurs will remain after mining is completed, unless desired by the landowners or the land managers in the case of state or federally managed property.

Properly sized culverts will be installed, as needed, during the construction of the access roads. The following criteria will be utilized in calculating peak storm water discharges for culvert sizing determinations. This method was provided by WDEQ/LQD District III as the recommended procedure for determining the volume and rate of runoff in small (<2,000 acre) watersheds. This method has also been approved for calculating peak storm water discharges in small watersheds by WDEQ/LQD Districts I, II and III.

Peak discharge information for proper culvert sizing is based on information presented in the U.S.D.A./Soil Conservation Service Publication SCS-TP-149, *"A Method for Estimating Volume and Rate of Runoff in Small Watersheds,"* January 1968.

Peak discharge rates are based on the following criteria:

Type II Storm Distribution
Land Use: Pasture or Range (No Mechanical Treatment)
Hydrologic Condition: Good
Hydrologic Soils Group: C (from SCS Handbook NEH-4)
Slopes: Moderate
Rainfall Event: 10 Year, 24 Hour, 2.2 inches based on Wyoming Isopluvials
Curve Number: 75

Culvert Sizing for Ephemeral Drainages

Fifty-four culverts will be placed in either ephemeral drainages, swales, or undefined drainage basins in conjunction with the construction of access roads associated with the proposed mining activities. The location of each culvert is illustrated on Mine Plan Map No. 1. The depth of cover over each culvert will be no less than twelve (12) inches or a minimum of one-half the diameter of the culvert, whichever is greater. The length of each culvert will be dependent on the geometry of the drainage channel and the culvert diameter. In all cases the culvert length will never be less than forty (40) feet. The size of each culvert (diameter of the culvert) is presented in the following table:

Culvert Sizing Information

Culvert Number	Drainage Area (Acres)	Peak Discharge (Cubic Feet Per Second)	Culvert Size (Inches)
#36-1	18.1	7	18
#36-2	744.3	90	36

Culvert Number	Drainage Area (Acres)	Peak Discharge (Cubic Feet Per Second)	Culvert Size (Inches)
#36-3	19.5	7	18
#36-4	21.8	8	18
#36-5	< 10	N/A*	18
#36-6	< 10	N/A*	18
#36-7	< 10	N/A*	18
#36-8	22.0	8	18
#36-9	126.0	30	24
#36-10	26.0	8	18
#36-11	54.5	15	18
#36-12	333.9	50	36
#1-1	< 10	N/A*	18
#1-2	36.5	12	18
#1-3	< 10	N/A*	18
#1-4	83.6	21	24
#1-5	142.1	31	24
#1-6	< 10	N/A*	18
#1-7	< 10	N/A*	18
#1-8	21.8	8	18
#1-9	< 10	N/A*	18
#1-10	< 10	N/A*	18
#1-11	< 10	N/A*	18
#1-12	< 10	N/A*	18
#1-13	< 10	N/A*	18
#1-14	128.2	30	24
#1-15	< 10	N/A*	18
#1-16	< 10	N/A*	18
#1-17	108.4	26	24
#1-18	< 10	N/A*	18
#1-19	< 10	N/A*	18
#1-20	< 10	N/A*	18
#1-21	92.4	23	24
#1-22	< 10	N/A*	18
#12-1	< 10	N/A*	18
#12-2	15.3	6	18
#12-3	< 10	N/A*	18
#12-4	200.5	40	30
#12-5	< 10	N/A*	18
#12-6	105.0	25	24
#12-7	< 10	N/A*	18
#12-8	< 10	N/A*	18
#12-9	< 10	N/A*	18

Culvert Number	Drainage Area (Acres)	Peak Discharge (Cubic Feet Per Second)	Culvert Size (Inches)
#12-10	< 10	N/A*	18
#12-11	< 10	N/A*	18
#12-12	< 10	N/A*	18
#12-13	< 10	N/A*	18
#12-14	244.8	45	30
#12-15	< 10	N/A*	18
#12-16	14.5	6	18
#13-1	189.1	40	30
#13-2	17.5	7	18
#13-3	89.9	23	24
#13-4	16.2	6	18

*N/A – Discharge not determined due to minimal or non-existent drainage area.

One concrete low-water crossing will be installed in conjunction with the construction of the Main Access Road. This low-water crossing will be installed where the Main Access Road crosses Murphy Creek, an ephemeral drainage. Figure MP-3 illustrates a typical concrete low-water road crossing design.

2.3 Power Transmission Lines, Communication Lines, and Pipelines

No power transmission lines or communication lines (above ground or below ground) or pipelines will be constructed, removed or rerouted in conjunction with bentonite mining activities on the update area.

2.4 Sedimentation and Treatment Ponds

No sedimentation or treatment ponds will be constructed, removed or relocated in conjunction with bentonite mining activities associated with this update. No sedimentation or treatment ponds currently exist on the update area.

2.5 Mill and Tailings Disposal Sites

No mill or tailings disposal sites will be constructed or created in conjunction with bentonite mining activities associated with this update. No mill tailings are generated in the processing or the mining of bentonite.

2.6 Hydraulic Diversions, Retention Systems & Mining Hydrology

No perennial or intermittent streams will be disturbed by the mining activities within this update area. Only ephemeral channels which infrequently carry water in direct response to a significant rainfall event or the rapid melting of a significant accumulation of snow will be affected by mining activities. These channels will be re-established during the reclamation phase of the mining operations.

A potential impact of run-off from disturbed areas is sediment loading onto undisturbed lands or surface waters. This can be minimized by diverting storm water flows generated by significant rainfall events or rapid snow melt away from and around disturbed areas associated with the bentonite mining activities. Diversion ditches may be constructed to divert water away from mining activities. Given the small size of the affected watersheds in the update area, these diversion ditches may be constructed using the blade on a Caterpillar 140 motor grader or a Caterpillar D8R/D8T/D9 dozer. The diversion ditch will be cut to create a ditch which is triangular in shape and a minimum of 1.5 feet deep with 2:1 side slopes. Soil derived from the ditch cut will be "thrown" to the down slope side of the ditches, in essence creating a berm that will provide additional protection of the mine area.

If interceptor ditches remain in place for a significant period of time where down-cutting of the interceptor ditch or sedimentation may become an issue, a Caterpillar 627G scraper may be used to construct the ditch to ensure there is adequate available capacity. The scraper constructed ditch will have a bottom width of approximately ten feet with approximately 1:1 side slopes. In the event that down-cutting or erosion should develop in the interceptor ditches or diversions, straw bales, straw logs, rock check dams or other erosion control features may be installed to control down-cutting of the ditch or channel bottom. After mining is completed and as a part of reclamation, all interceptor ditches will be graded out and contoured to blend into the surrounding topography, topsoiled and seeded.

Overburden and topsoil stockpiles will be located and constructed so that they will not block drainages. Topsoil will be removed from the base of all overburden stockpiles in order to protect the topsoil resources from "sloughing" which may occur on the side slopes of the overburden stockpiles. This topsoil removal area, which is commonly referred to as a "topsoil buffer", surrounding the base of the overburden stockpiles also forms a basin which will collect and retain sediments originating from the overburden stockpiles as a result of storm water runoff.

2.7 Spill Contingency and Countermeasure Plan

If a fuel spill were to occur on the update area as a result of a mechanical failure, damage to a piece of heavy equipment, storage tank or a fuel delivery truck, mine personnel are instructed to make sure the site is safe, stop additional leakage or spillage, ensure the containment of any spilled fuels or oils, and immediately contact the company's environmental compliance personnel and/or mine manager.

Containment of a diesel fuel spill or a lubricating oil spill would most likely be contained utilizing the native earthen materials present at the site. Depending upon the size of the spill and the volume of contaminated earthen materials, the contaminated material would be removed with shovels or with the appropriate size of earth moving equipment. Disposal of the contaminated earthen material would be coordinated by BHB environmental personnel at an approved land farm in accordance with state and federal regulations.

In the event that the volume of a spill is greater than twenty-five gallons, BHB will report the spill to the Wyoming Department of Environmental Quality-Water Quality Division (WDEQ/WQD) within twenty-four hours of the spill and a written report will be submitted to the WDEQ/WQD within seven days of the spill.

Diesel fuel and lubricating oils are stored within secondary containment structures on staging areas located within the permit area. These containment structures have been constructed in order to sufficiently contain 110% of the volume of the fuel or oil storage container.

2.8 Solid Waste Disposal

Waste and trash which may be generated as a result of mining activities will be collected in custom made trash containers which are completely enclosed utilizing expanded metal. These enclosed trash containers prevent trash and waste from blowing in the wind. Trash and waste generated by the mining activities will be collected and stored on staging areas located within the permit area.

Trash and waste generated by the mining operations will be periodically transported to a municipal landfill for proper disposal. Large amounts of trash and other solid waste will not be allowed to accumulate at the site. Used lubricating oil and filters from heavy equipment will also be collected and properly disposed of, or recycled. No hazardous materials will be used, consumed, stored, generated or disposed of on the update area.

2.9 Railroads and Conveyor Systems

No railroad lines or conveyor systems will be constructed in conjunction with the bentonite mining activities associated with the update area.

2.10 Storage and/or Stockpile Sites

Overburden, bentonite and topsoil stockpiles will be constructed in conjunction with the mining activities conducted on the update area.

Overburden stockpiles are typically constructed in conjunction with the excavation and removal of the overburden from the first pit mined in an adjoining series of connected pits (multiple-cut sequence). These are commonly referred to as "out-of-pit" overburden stockpiles. Certain out-of-pit overburden stockpiles, in some instances, may remain as permanent reclamation features.

Bentonite stockpiles will be created and developed through the course of bentonite "field drying" activities. Bentonite stockpiles are normally placed on top of either the out-of-pit overburden stockpile, or on backfilled pits, or both, in order to reduce the surface disturbance area. Due to a limited area for storing and stockpiling field-dried bentonite at the processing plant located in Casper, Wyoming, bentonite stockpiles located on the mine site serve as inventory for the processing plant. Bentonite stockpiles may remain on the mine site for extended periods of time, depending on market conditions and the demand for a particular quality of stockpiled field-dried bentonite.

In order to prevent unnecessary and undue degradation of the environment in situations where bentonite stockpiles remain onsite for extended periods of time, containment berms or basins may be constructed around bentonite stockpiles in order to contain any storm water runoff which may originate from the bentonite stockpiles. Windblown particulates which could impact air quality, generally do not originate

from these bentonite stockpiles, due to the coarse size of the stockpiled bentonite, as well as the hydrophilic nature of the bentonite.

2.11 Access Control

Due to the remoteness of the area and the size of the update area, no access control features are planned. Any potential hazards to humans, livestock, or wildlife which may develop will be addressed on a site specific basis using fencing or other methods determined to be appropriate for the conditions. The mined lands will be completely reclaimed following the completion of mining, which will eliminate potential hazards such as highwalls and open pits.

2.12 Auger Mining

No bentonite auger mining will be conducted on the update area.

2.13 Underground Mining

No underground bentonite mining will be conducted on the update area.

3.0 MINING METHODS AND SCHEDULE

Bentonite mining on the update area will consist of mining a series of small pits arranged in a multiple-cut, direct backfill or "cut and fill" sequence. Topsoil, where present, will be removed from all affected areas utilizing Caterpillar 627G push-pull scrapers and Caterpillar D8R/D8T/D9 dozers. Topsoil will be placed in stockpiles for future use in the reclamation of the mined or disturbed lands. Topsoil stockpiles are generally located in close proximity to the mining feature where the topsoil was removed. Whenever possible or feasible, the topsoil may be spread directly onto previously backfilled areas, instead of being placed in stockpiles.

Following the removal of topsoil, the exposed overburden will be ripped using Caterpillar D8R/D8T/D9 dozers equipped with one to three ripper shanks. The overburden will then be removed from the pit using Caterpillar 627G push-pull scrapers.

Following the removal of the overburden from the pit, the exposed bentonite seam will be sun-dried or "field-dried" in the pit during the summer and early fall seasons. Field-dried bentonite stockpiles which are constructed on the mine site serve as feedstock for the bentonite processing plant located in Casper, Wyoming.

3.1 Topsoil Removal and Handling

Topsoil from all affected areas, except access roads, will be salvaged prior to disturbance according to the recommended salvage depths presented in *Appendix D7, Soils* and the *Supplemental Soil Survey*. Topsoil salvaged from the main access road will be salvaged according to the recommended salvage depths presented in *Addendum D7D.* Recommended salvage depths for topsoil salvaged from additional access roads constructed on the update area could come from either *Appendix D7, Soils*, the *Supplemental Soil*

Survey, or *Addendum D7D*, depending on the soil type. *Appendix D7, Soils,* the *Supplemental Soil Survey,* and *Addendum D7D* are all located in the *Soils Section* of the update application.

The removal of topsoil will typically be accomplished using Caterpillar 627G push-pull scrapers. In some instances where the topography may be too steep for the safe operation of scrapers, topsoil will be removed and stockpiled using Caterpillar D8R/D8T/D9 dozers. In some circumstances, on steep topography, topsoil may be removed with Caterpillar D8R/D8T/D9 dozers by dozing the topsoil into a position where it can be safely loaded with a Caterpillar 627G scraper and then transported to a topsoil stockpile.

Topsoil salvage is conducted in the summer or fall season in order to avoid salvaging topsoil when it could be saturated by spring rains or snowmelt, or frozen during the winter months. Every attempt will be made to salvage topsoil with scrapers, as control of the depth of topsoil removal is greatly improved with the use of scrapers versus dozers. Typically, salvaged topsoil will be placed in stockpiles. If graded and contoured areas exist, the topsoil may be applied directly (haul back) instead of being stockpiled.

Topsoil will also be removed from the edges of all pits in order to create a topsoil "buffer area" ranging in width from ten to approximately thirty feet wide. This buffer is necessary in order to protect the topsoil resources from the possibility of sloughing of high-walls or low-walls on the edges of pits. These buffer areas also facilitate the safe and complete salvage of topsoil along the edges of advancing multiple-cut pit sequences. A wider topsoil buffer approximately thirty feet in width is typically developed along a pit highwall where the mining will advance. This wider topsoil buffer provides additional protection of the topsoil resources in the event that a highwall should fail. It also creates a greater margin of safety for heavy equipment operators when removing topsoil in conjunction with the development of the next pit to be mined in a multiple-cut pit sequence.

All topsoil stockpiles will be conspicuously identified with signs reading TOPSOIL. BHB utilizes highly visible, flat, flexible fiberglass posts for topsoil signs. These sign posts are typically red in color with black on white lettering. The flexible fiberglass posts are resistant to livestock knocking down the topsoil sign posts by rubbing on the posts.

BHB's topsoil stockpile conservation plan requires that all topsoil stockpiles which will remain in place for more than one year be seeded with the approved permanent seed mixture listed in the Reclamation Plan. Seeding of stockpiles will be conducted in the spring or fall, whichever season follows the placement of the stockpile, utilizing a grain drill. Topsoil stockpiles will be constructed in such a manner that the shape of the stockpile will resemble a "dome", which will facilitate the seeding of the entire topsoil stockpile using a tractor and grain drill. Temporary seeding of topsoil stockpiles using an annual sterile small grain such as triticale may also be conducted. The use of a small grain as a "cover crop" will provide for the rapid establishment of temporary vegetation to help hold the soil in place. This will protect the topsoil stockpiles from unnecessary or undue degradation due to wind or water erosion. Seeding of the topsoil stockpiles not only reduces the potential for erosion, it also significantly reduces the establishment of weeds, annual grasses and noxious weeds on the stockpiles.

Topsoil stockpiles will be located and constructed so that they will not block drainages or be impacted by potential storm water runoff from ephemeral drainages. At the discretion of BHB, berms may be

constructed around the base of topsoil stockpiles if it is determined that the topsoil stockpile is not adequately protected from erosion due to the poor establishment of vegetation.

3.2 Mine Pit Excavation, Backfilling and Contouring

The mining method used by BHB is surface mining, whereby a sequence of small excavated areas or pits, typically less than five acres in size, are developed to expose and remove the underlying bentonite deposit. Overburden depths range from one to fifty feet. Overburden removal and backfilling will occur almost exclusively during the winter and spring months, as the scrapers are used exclusively during the summer and fall for bentonite field-drying activities, reclamation activities, and topsoil removal.

Overburden will be excavated from the mine pit area utilizing Caterpillar 627G push-pull scrapers and Caterpillar D8R/D8T/D9 dozers equipped with one to three ripper shanks. The majority of the overburden will be excavated and backfilled utilizing the Caterpillar 627G push-pull scrapers. The Caterpillar D8R/D8T/D9 dozers will be utilized primarily to rip the overburden and to assist the scrapers.

Overburden removed from the pit will be placed immediately adjacent to the pit to form an out-of-pit overburden stockpile. No materials will be pushed or dumped over any steep escarpments during the mining process. The location of the proposed pits and overburden stockpile areas are illustrated on Mine Plan Map No. 1.

Replacement of overburden during the course of backfilling the open pit will be designed to create the most conducive reclamation substrate for revegetation as possible. Most often the most suitable overburden in terms of plant growth and desirable root zone material is found directly beneath the topsoil/subsoil strata.

Overburden suitability and rock characterizations, including the analytical protocols and criteria necessary to identify potential acidic and/or reactive conditions, or the generation of deleterious leachate were evaluated for the update area. Please refer to the *Overburden Section,* for a complete and detailed assessment of the overburden suitability and rock characterizations. BHB will utilize the data presented in the *Overburden Section*, in order to develop overburden handling and overburden replacement plans.

Generally, no special handling of overburden during pit excavation and backfilling is warranted, as a considerable amount of mixing of overburden occurs during the loading and unloading of the overburden using scrapers. This mixing effect should contribute to a blending of overburden materials, thus improving overall quality of the overburden.

Waste bentonite, which remains on the bentonite stockpile areas after the stockpiled bentonite has been removed for processing, will be disposed of by placing this material at the base of a highwall prior to backfilling. This is done to prevent this highly bentonitic material from being placed directly on the surface prior to the application of topsoil.

After the bentonite is removed from a pit, and as the mining sequence progresses, the open pit is backfilled and contoured to blend in with the surrounding topography and to restore the area to the approximate original contours (AOC). Post mining slopes will be graded to four horizontal feet to one vertical foot

(4H:1V) or flatter, with a straight slope profile, unless the pre-mine slopes were steeper. In those cases, post-mining slopes will approximate the pre-mining slopes in terms of magnitude, aspect and shape. Generally, there is enough "swell" in the volume of overburden being replaced to compensate for the overall volume of the bentonite which was removed from the area.

In general, most pits are completely backfilled and rough graded in order to establish AOC and the required slope angles utilizing Caterpillar 627G push-pull scrapers. In certain circumstances, both the Caterpillar 627G push-pull scrapers and the Caterpillar D8R/D8T/D9 dozers are utilized to backfill, grade and contour a pit in order to create the final surface configuration. At times, overburden may be placed in the pit and against the highwall utilizing the scrapers, to a point where the pit is not completely backfilled. This would create a partially backfilled pit with a section of the highwall remaining above the backfilled overburden. Caterpillar D8R/D8T/D9 dozers would then be used to push overburden from above and behind the remaining highwall, into the pit area, thus completing the backfilling of the pit. A schematic diagram of this backfill scenario is illustrated in Figure MP-4.

Any ephemeral drainages which may have existed pre-mining will also be reestablished in the process of rough grading and contouring. In general, the majority of this rough grading and contouring is done with Caterpillar 627G scrapers and Caterpillar D8R/D8T/D9 dozers. Final grading will be accomplished using a Caterpillar 140 motor grader. The haul back of topsoil will be conducted whenever possible in the mining process described above.

Out-of-pit overburden stockpiles or portions of these stockpiles which may remain as a final reclamation feature will be graded and contoured to blend with the existing topography. All slopes will be reduced to 4H:1V or less. Overburden stockpiles which will remain as a permanent reclamation feature will have a maximum height of ten feet and will be oriented in the same direction as nearby topographic features and will approximate the pre-mining topography in terms of magnitude, aspect and shape.

The outlines of the pits illustrated on Mine Plan Map No. 1 shows the location of the bentonite to be mined. However, because removal of the various grades of bentonite is subject to customer needs, weather conditions and mining efficiency, the mine plan details are subject to revision at the actual time of mining, i.e., one sequence may be mined before another, pit numbering may be changed, or the exact placement of stockpiles may vary.

3.3 Disposal of Combustible, Toxic, Acid-Forming or Radioactive Materials

With the exception of diesel fuel, no other combustible materials will be used, consumed, or stored on the update area. No toxic, acid-forming, hazardous or radioactive materials will used, consumed, stored, generated or disposed of on the update area. Due to the geology of the area, there is no reason to believe that any radioactive minerals or acid-forming materials would be encountered while conducting bentonite mining activities. Should any such substances be encountered or discovered, the appropriate state and federal agencies will be consulted concerning the handling and removal of such materials.

3.4 Compaction of Backfilled Material

Past experience in conducting bentonite mining and reclamation activities over the last forty years has demonstrated that compaction created by passing over backfilled overburden materials with rubber-tired Caterpillar 627G push-pull scrapers is sufficient to provide stability of backfilled material and to prevent subsidence.

3.5 Bentonite Removal

Following the removal of the overburden from the pit, the exposed bentonite seam will be sun-dried or "field-dried" in the pit during the summer and early fall seasons. This drying process is conducted in order to reduce the amount of greenhouse gases produced by the combustion of fossil fuels. The drying process, utilizing the solar energy of the sun and warm air currents, reduces the natural moisture content of the bentonite by approximately ten to fifteen percent. This in turn reduces the amount of diesel fuel which is consumed when the bentonite is transported to Casper, Wyoming for processing. Additionally, reductions in greenhouse gases are achieved when the field-dried bentonite undergoes further drying in the processing plant, as the consumption of coal and/or natural gas is significantly reduced due to the field-drying techniques which take advantage of the natural solar radiation.

The effect of sun-drying the bentonite is further enhanced by tilling the exposed bentonite using John Deere 7800 and 8000 series tractors pulling an assortment of conventional agrarian tillage implements such as v-rippers, chisel plows and disks. Following several days of shallow tillage to a depth of approximately ten inches, the sun-dried layer of bentonite is removed from the exposed bentonite seam using Caterpillar 627G scrapers and transported to a bentonite stockpile area where a field-dried bentonite stockpile is constructed. Depending on climatic conditions, the size of a pit, and the thickness of the bentonite seam, the field-drying process typically lasts for two to three months.

The field-dried bentonite stockpiles which are constructed on the mine site serve as feedstock for the bentonite processing plant located in Casper, Wyoming. The bentonite from these stockpiles is loaded into over-the-road belly-dump trucks using either Caterpillar 966 front-end loaders or Volvo L120/L150 front-end loaders for transport to Casper, Wyoming for processing and sale. The over-the-road belly-dump trucks have a capacity of approximately twenty-five tons. If the over-the-road belly-dump trucks are equipped with a "pup" trailer, the hauling of the trucks capacity may reach approximately thirty-five tons.

3.6 Bentonite Handling and Processing

Once the bentonite is transported to the processing plant located in Casper, Wyoming, the bentonite is blended on the plant stockpile area by co-mingling different qualities of bentonite delivered by the over-the-road belly-dump trucks. The stockpiled bentonite is "fed" into the processing plant using either Caterpillar 966 front-end loaders or Volvo L120/L150 front-end loaders. After the bentonite enters the plant, additional drying takes place in a horizontal rotary dryer which is heated using coal and/or natural gas. Following the drying process, the bentonite undergoes a sizing process using a series of screens and classifiers. Some of the bentonite is milled into an extremely fine powder for use as drilling fluids, or classified into a granular product for clumping cat litter and other uses. The finished products are either bagged or shipped in bulk railcars or trucks to customers throughout the world.

3.7 Mining Sequence and Schedule

Reclamation of disturbed areas will begin as soon as possible, and all attempts will be made to assure that reclamation occurs concurrently with mining activities or at an increased pace. Field drying of bentonite will occur on this update area. Therefore, reclamation activities will begin within three years from the date a pit was developed, and reclamation (seeding) will be completed within five years from the date the pit was affected.

The following information describes the sequence for mining activities that are planned for development on the update area.

Mine Development Activities - Section 35, T42N, R83W

Access Road Segment A-A' - 0.2 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpile #35-2.

Access Road Segment B-B' - 0.5 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpile #35-2.

Pit #35-1 - 0.8 Acres
Topsoil salvaged from Pit #35-1 will be placed on Topsoil Stockpile #36-7. Overburden removed from Pit #35-1 will be directly backfilled into previously mined Pit #35-2. The exposed bentonite in Pit #35-1 will be field dried in the pit and stockpiled on Overburden Stockpile #25-1E.

Pit #35-2 - 0.8 Acres
Topsoil salvaged from Pit #35-2 will be placed on Topsoil Stockpile #36-7. Overburden removed from Pit #35-2 will be directly backfilled into previously mined Pit #35-3. The exposed bentonite in Pit #35-2 will be field dried in the pit and stockpiled on Overburden Stockpile #25-1E.

Pit #35-3 - 4.0 Acres
Topsoil salvaged from Pit #35-3 will be placed on Topsoil Stockpiles #35-1 and #35-3. Overburden removed from Pit #35-3 will be directly backfilled into previously mined Pit #35-4. The exposed bentonite in Pit #35-3 will be field dried in the pit and stockpiled on Overburden Stockpile #25-1E.

Pit #35-4 - 4.0 Acres
Topsoil salvaged from Pit #35-4 will be placed on Topsoil Stockpile #35-1. Overburden removed from Pit #35-4 will be directly backfilled into previously mined Pit #26-7E. The exposed bentonite in Pit #35-4 will be field dried in the pit and stockpiled on Overburden Stockpile #25-1E.

Pit #35-5 - 4.8 Acres
Topsoil salvaged from Pit #35-5 will be placed on Topsoil Stockpile #35-4. Overburden removed from Pit #35-5 will be directly backfilled into previously mined Pit #35-4. The exposed bentonite in Pit #35-5 will be field dried in the pit and stockpiled on Overburden Stockpile #25-1E.

Mine Development Activities - Section 36, T42N, R83W

Access Road Segment B-B' - 6.6 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #36-1 through #36-5.

Access Road Segment C-C' - 0.2 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpile #36-6.

Access Road Segment D-D' - 2.5 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #36-8 through #36-12.

Access Road Segment E-E' - 0.3 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpile #36-13.

Access Road Segment F-F' - 2.8 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #36-18 through #36-22.

Access Road Segment G-G' - 1.1 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #36-16 and #36-17.

Pit #36-1 - 1.2 Acres
Topsoil salvaged from Pit #36-1 will be placed on Topsoil Stockpile #35-4. Overburden removed from Pit #36-1 will be directly backfilled into previously mined Pit #35-5. The exposed bentonite in Pit #36-1 will be field dried in the pit and stockpiled on Overburden Stockpile #25-1E.

Pit #36-2 - 3.4 Acres
Topsoil salvaged from Pit #36-2 will be placed on Topsoil Stockpile #36-8. Overburden removed from Pit #36-2 will be directly backfilled into previously mined Pit #36-3. The exposed bentonite in Pit #36-2 will be field dried in the pit and stockpiled on Overburden Stockpile #36-1.

Pit #36-3 - 4.9 Acres
Topsoil salvaged from Pit #36-3 will be placed on Topsoil Stockpile #36-10. Overburden removed from Pit #36-3 will be placed on Overburden Stockpile #36-1. The exposed bentonite in Pit #36-3 will be field dried in the pit and stockpiled on Overburden Stockpile #36-1.

Pit #36-4 - 3.0 Acres
Topsoil salvaged from Pit #36-4 will be placed on Topsoil Stockpile #36-11. Overburden removed from Pit #36-4 will be placed on Overburden Stockpile #36-2. The exposed bentonite in Pit #36-4 will be field dried in the pit and stockpiled on Overburden Stockpile #36-2.

Pit #36-5 - 5.1 Acres
Topsoil salvaged from Pit #36-5 will be placed on Topsoil Stockpile #36-9. Overburden removed from Pit #36-5 will be placed on Overburden Stockpile #36-1. The exposed bentonite in Pit #36-5 will be field dried in the pit and stockpiled on Overburden Stockpile #36-1.

Pit #36-6 - 5.2 Acres
Topsoil salvaged from Pit #36-6 will be placed on Topsoil Stockpile #36-9. Overburden removed from Pit #36-6 will be directly backfilled into previously mined Pit #36-5. The exposed bentonite in Pit #36-6 will be field dried in the pit and stockpiled on Overburden Stockpile #36-1.

Pit #36-7 - 5.2 Acres
Topsoil salvaged from Pit #36-7 will be placed on Topsoil Stockpile #36-10. Overburden removed from Pit #36-7 will be directly backfilled into previously mined Pit #36-6. The exposed bentonite in Pit #36-7 will be field dried in the pit and stockpiled on Overburden Stockpile #36-1.

Pit #36-8 - 5.7 Acres
Topsoil salvaged from Pit #36-8 will be placed on Topsoil Stockpile #36-6. Overburden removed from Pit #36-8 will be directly backfilled into previously mined Pit #36-7. The exposed bentonite in Pit #36-8 will be field dried in the pit and stockpiled on Overburden Stockpile #36-1.

Pit #36-9 - 5.3 Acres
Topsoil salvaged from Pit #36-9 will be placed on Topsoil Stockpile #36-13. Overburden removed from Pit #36-9 will be placed on Overburden Stockpile #36-3. The exposed bentonite in Pit #36-9 will be field dried in the pit and stockpiled on Overburden Stockpile #36-3.

Pit #36-10 - 5.3 Acres
Topsoil salvaged from Pit #36-10 will be placed on Topsoil Stockpile #36-13. Overburden removed from Pit #36-10 will be directly backfilled into previously mined Pit #36-9. The exposed bentonite in Pit #36-10 will be field dried in the pit and stockpiled on Overburden Stockpile #36-3.

Pit #36-11 - 5.3 Acres
Topsoil salvaged from Pit #36-11 will be placed on Topsoil Stockpile #36-14. Overburden removed from Pit #36-11 will be directly backfilled into previously mined Pit #36-10. The exposed bentonite in Pit #36-11 will be field dried in the pit and stockpiled on Overburden Stockpile #36-3.

Pit #36-12 - 5.2 Acres
Topsoil salvaged from Pit #36-12 will be placed on Topsoil Stockpile #36-15. Overburden removed from Pit #36-12 will be directly backfilled into previously mined Pit #36-11. The exposed bentonite in Pit #36-12 will be field dried in the pit and stockpiled on Overburden Stockpile #36-3.

Pit #36-13 - 2.7 Acres
Topsoil salvaged from Pit #36-13 will be placed on Topsoil Stockpile #36-16. Overburden removed from Pit #36-13 will be placed on Overburden Stockpile #36-4. The exposed bentonite in Pit #36-13 will be field dried in the pit and stockpiled on Overburden Stockpile #36-4.

Pit #36-14 - 2.5 Acres
Topsoil salvaged from Pit #36-14 will be placed on Topsoil Stockpile #36-16. Overburden removed from Pit #36-14 will be directly backfilled into previously mined Pit #36-13. The exposed bentonite in Pit #36-14 will be field dried in the pit and stockpiled on Overburden Stockpile #36-4.

Pit #36-15 - 4.3 Acres
Topsoil salvaged from Pit #36-15 will be placed on Topsoil Stockpile #36-5. Overburden removed from Pit #36-15 will be placed on Overburden Stockpile #36-7. The exposed bentonite in Pit #36-15 will be field dried in the pit and stockpiled on Overburden Stockpile #36-7.

Pit #36-16 - 4.3 Acres
Topsoil salvaged from Pit #36-16 will be placed on Topsoil Stockpile #1-1. Overburden removed from Pit #36-16 will be directly backfilled into previously mined Pit #36-15. The exposed bentonite in Pit #36-16 will be field dried in the pit and stockpiled on Overburden Stockpile #36-7.

Pit #36-17 - 4.3 Acres
Topsoil salvaged from Pit #36-17 will be placed on Topsoil Stockpile #1-1. Overburden removed from Pit #36-17 will be directly backfilled into previously mined Pit #36-16. The exposed bentonite in Pit #36-17 will be field dried in the pit and stockpiled on Overburden Stockpile #36-7.

Pit #36-18 - 2.1 Acres
Topsoil salvaged from Pit #36-18 will be placed on Topsoil Stockpile #36-17. Overburden removed from Pit #36-18 will be placed on Overburden Stockpile #36-5. The exposed bentonite in Pit #36-18 will be field dried in the pit and stockpiled on Overburden Stockpile #36-5.

Pit #36-19 - 3.9 Acres
Topsoil salvaged from Pit #36-19 will be placed on Topsoil Stockpile #36-3. Overburden removed from Pit #36-19 will be placed on Overburden Stockpile #36-6. The exposed bentonite in Pit #36-19 will be field dried in the pit and stockpiled on Overburden Stockpile #36-6.

Pit #36-20 - 4.0 Acres
Topsoil salvaged from Pit #36-20 will be placed on Topsoil Stockpile #36-18. Overburden removed from Pit #36-20 will be directly backfilled into previously mined Pit #36-19. The exposed bentonite in Pit #36-20 will be field dried in the pit and stockpiled on Overburden Stockpile #36-6.

Pit #36-21 - 4.1 Acres
Topsoil salvaged from Pit #36-21 will be placed on Topsoil Stockpile #1-7. Overburden removed from Pit #36-21 will be directly backfilled into previously mined Pit #36-20. The exposed bentonite in Pit #36-21 will be field dried in the pit and stockpiled on Overburden Stockpile #36-6.

Pit #36-22 - 3.4 Acres
Topsoil salvaged from Pit #36-22 will be placed on Topsoil Stockpile #36-26. Overburden removed from Pit #36-22 will be placed on Overburden Stockpile #36-8. The exposed bentonite in Pit #36-22 will be field dried in the pit and stockpiled on Overburden Stockpile #36-8.

Pit #36-23 - 3.0 Acres
Topsoil salvaged from Pit #36-23 will be placed on Topsoil Stockpile #36-25. Overburden removed from Pit #36-23 will be directly backfilled into previously mined Pit #36-22. The exposed bentonite in Pit #36-23 will be field dried in the pit and stockpiled on Overburden Stockpile #36-8.

Pit #36-24 - 3.1 Acres
Topsoil salvaged from Pit #36-24 will be placed on Topsoil Stockpile #36-24. Overburden removed from Pit #36-24 will be directly backfilled into previously mined Pit #36-23. The exposed bentonite in Pit #36-24 will be field dried in the pit and stockpiled on Overburden Stockpile #36-8.

Pit #36-25 - 2.3 Acres
Topsoil salvaged from Pit #36-25 will be placed on Topsoil Stockpile #36-23. Overburden removed from Pit #36-25 will be directly backfilled into previously mined Pit #36-24. The exposed bentonite in Pit #36-25 will be field dried in the pit and stockpiled on Overburden Stockpile #36-8.

Mine Development Activities - Section 1, T41N, R83W

Access Road Segment A-A' - 7.4 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #1-1 through #1-6.

Access Road Segment B-B' - 0.3 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpile #1-7.

Access Road Segment C-C' - 1.3 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #1-8 and #1-9.

Pit #1-1 - 4.1 Acres
Topsoil salvaged from Pit #1-1 will be placed on Topsoil Stockpile #1-7. Overburden removed from Pit #1-1 will be directly backfilled into previously mined Pit #36-21. The exposed bentonite in Pit #1-1 will be field dried in the pit and stockpiled on Overburden Stockpile #36-6.

Pit #1-2 - 5.3 Acres
Topsoil salvaged from Pit #1-2 will be placed on Topsoil Stockpile #1-9. Overburden removed from Pit #1-2 will be placed on Overburden Stockpile #1-2. The exposed bentonite in Pit #1-2 will be field dried in the pit and stockpiled on Overburden Stockpile #1-2.

Pit #1-3 - 5.1 Acres
Topsoil salvaged from Pit #1-3 will be placed on Topsoil Stockpile #1-9. Overburden removed from Pit #1-3 will be placed on Overburden Stockpile #1-2. The exposed bentonite in Pit #1-3 will be field dried in the pit and stockpiled on Overburden Stockpile #1-2.

Mine Development Activities - Section 12, T41N, R83W

Access Road Segment A-A' - 6.8 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #12-1 through #12-7.

Mine Development Activities - Section 13, T41N, R83W

Access Road Segment A-A' - 2.7 Acres
Topsoil salvaged from this area will be placed on Topsoil Stockpiles #13-1 and #13-2.

4.0 MINING HYDROLOGY

4.1 Surface Drainage Plan

No perennial streams will be disturbed by mining activities on the update area. Only ephemeral channels which infrequently carry water in direct response to a significant rainfall event or the rapid melting of a significant accumulation of snow, will be affected by mining activities. These channels will be re-established during the reclamation phase of the mining operations.

A potential impact of run-off from disturbed areas is sediment loading onto undisturbed lands or surface waters. This can be minimized by diverting storm water flows generated by significant rainfall events or rapid snow melt away from and around disturbed areas associated with the bentonite mining activities. Diversion ditches may be constructed to divert water away from mining activities. Given the small size of the affected watersheds in the update area, these diversion ditches may be constructed using the blade on a Caterpillar 140 motor grader or a Caterpillar D8R/D8T/D9 dozer. The diversion ditch will be cut to create a ditch which is triangular in shape and a minimum of 1.5 feet deep with 2:1 side slopes. Soil derived from the ditch cut will be "thrown" to the down slope side of the ditches, in essence creating a berm that will provide additional protection of the mine area.

If interceptor ditches remain in place for a significant period of time where down-cutting of the interceptor ditch or sedimentation may become an issue, a Caterpillar 627G scraper may be used to construct the ditch to ensure there is adequate available capacity. The scraper constructed ditch will have a bottom width of approximately ten feet with approximately 1:1 side slopes. In the event that down-cutting or erosion should develop in the interceptor ditches or diversions, straw bales, straw logs, rock check dams or other erosion control features may be installed to control down-cutting of the ditch or channel bottom. After mining is completed, and as a part of reclamation, all interceptor ditches will be graded out and contoured to blend into the surrounding topography, topsoiled and seeded.

Overburden and topsoil stockpiles will be located and constructed so that they will not block drainages. Topsoil and subsoil will be removed from the base of all overburden stockpiles in order to protect the topsoil resources from "sloughing" which may occur on the side slopes of the overburden stockpiles. This topsoil removal area, which is commonly referred to as a "topsoil buffer", surrounding the base of the overburden stockpiles also forms a "sump" or "moat" which collects and retains sediments originating from the overburden stockpiles as a result of storm water runoff.

4.2 Water Treatment Plans

No water treatment plan is required. While exploration drilling was conducted on the update area, no groundwater was encountered. Due to the relatively shallow depth to which mining will occur (<50 feet),

groundwater is not expected to be impacted. As no groundwater is present, no pit dewatering will be required which could require the development of a water treatment plan.

4.3 Quantity and Quality of Groundwater Discharged into Pits

No groundwater will be discharged into pits. Groundwater has not been encountered on the update area during the course of exploration drilling, and, due to the relatively shallow depth to which mining will occur (<50 feet), it is not anticipated that groundwater will be encountered. BHB has been mining bentonite on the permit area for over forty years, and has never encountered groundwater.

4.4 Source, Quantity and Quality of Water to be Used

No water will be used in the mining or reclamation activities on the update area. Should it become necessary to use water for dust control on access roads, BHB will utilize storm water which has accumulated in open pits located on the permit area.

4.5 Design Details for Sediment Ponds and Treatment Systems

No sediment ponds or treatment systems will be constructed in conjunction with the update area. Therefore, no design details are provided.

5.0 REFUSE DISPOSAL

5.1 Plans for Disposal of Waste Materials or Solid Wastes

Waste and trash which may be generated as a result of mining activities will be collected in custom made trash containers which are completely enclosed utilizing expanded metal. These enclosed trash containers prevent trash and waste from blowing in the wind. Trash and waste generated by the mining activities will be collected on staging areas located at various sites on the permit area.

Trash and waste generated by the mining operations will be periodically transported to a municipal landfill for proper disposal. Large amounts of trash and other solid waste will not be allowed to accumulate at the site. Used lubricating oil and filters from heavy equipment will also be collected and properly disposed of, or recycled. No hazardous materials will be used, consumed, stored, generated or disposed of on the update area. Under no circumstances will trash or waste be buried on the update area.

6.0 PUBLIC NUISANCE AND SAFETY

6.1 Procedures to Avoid Public Nuisance and Endangerment

Mining activities will not result in a public nuisance or endangerment to public safety, human or animal life, or property. BHB has been conducting ongoing bentonite mining operations on Permit to Mine No. 248C since 1975, and has no knowledge of any instances where its mining activities have resulted in a public nuisance or an endangerment to the public, human life, or property. This is primarily due to the rural setting and the remoteness of the site, coupled with the small size and scope of the mining operation.

The closest incorporated community or subdivision to the update area is the town of Kaycee, Wyoming, located approximately fifteen miles from the update area.

The development of additional mining activities on the update area will not change the number of workers on the operation, nor will the size of the mining operation increase significantly. The number of vehicles entering and exiting the mine site, as well as the amount of machinery operating on the site will not change.

Access to the active mining areas can be restricted due to private land ownership in the area. The main access roads can be posted as "No Trespassing" where private property is located along the access roads. Additionally, if necessary, locked gates and other barriers could be constructed at key points on private lands to restrict the public from entering the mining operations. Where deemed necessary by BHB, fences may be constructed above highwalls in order to protect wildlife or livestock from the dangers of a fall. No conflicts with grazing are expected to result in conjunction with the development of mining activities.

6.2 Occupied Dwellings, Homes, Public Buildings, Churches within 300 Feet of Affected Lands

No occupied dwellings, homes, public buildings, churches, community or institutional buildings, parks or cemeteries are located within three hundred feet of land which will be affected by mining activities. The nearest occupied dwelling is located over 5.2 miles from the nearest active mining area on the update area.

6.3 Hours of Operation, Routes of Haulage, Access Routes, and Estimated Truck Traffic

Mining and reclamation activities will be conducted Monday through Friday from 7:00 A.M. until 5:00 P.M. Overburden removal usually occurs from November through June. Once the overburden is removed and the bentonite is exposed, the heavy equipment fleet will conduct bentonite field-drying activities within the permit area. This "field-drying" fleet of equipment generally consists of two to four Caterpillar 627G push-pull scrapers; a Caterpillar D8R dozer; a Caterpillar 140 motor grader and a John Deere 8000 series tractor with various tillage implements. Field-drying will be conducted for approximately three months, from June through early September.

Following the completion of bentonite field-drying activities around the early part of September, reclamation activities generally begin, lasting approximately two months. During the reclamation phase, areas where the overburden has been previously backfilled will undergo final grading and contouring, ripping or scarification (if required), topsoil application, topsoil tillage, and seeding.

Estimating the potential number of over-the-road, belly-dump trucks which will be transporting field-dried bentonite from the update area on a daily basis is somewhat problematic. Customer demands for various grades and quantities of bentonite varies greatly over the course of a year. At any one time, BHB may be hauling various grades of bentonite from at least a dozen different bentonite stockpiles located on the permit area.

BHB estimates that approximately 54,000 tons of bentonite will be hauled from the update area on an annual basis using over-the-road, belly-dump trucks with a capacity of thirty-five tons. This would result in a total of 1,543 trucks entering and leaving the update area annually. It is estimated, based on a hauling schedule of six days per week, that approximately five truckloads per day would be required in order to

transport 54,000 tons per year from the update area to the processing plant. The over-the-road, belly-dump trucks typically operate during the daylight hours.

7.0 INTERIM MANAGEMENT PLANS

7.1 Management During Periods of Temporary Closure or Temporary Inactivity

As described in detail in Section 6.3 above, periods of inactivity will occur on various areas within the permit area. BHB's heavy equipment fleet is highly mobile and moves among the various mining operations within the permit area in order to meet the demands of customers for a wide variety of bentonite clay qualities. This results in periods of inactivity on all of BHB's mining operations at various times of the year. Periods of inactivity may also result due to inclement weather, particularly during and immediately following significant rainfall events. Periods of inactivity due to inclement weather rarely last more than a few days. Temporary closure and temporary inactivity is considered to be a period of time lasting more than twelve consecutive months when no mining, hauling or reclamation activities occur.

Prior to moving mining equipment from an active mine site, a thorough inspection will be conducted to ensure that all berms and ditches constructed to divert runoff around the active mine area are in place and functional. Containment basins will also be inspected to ensure functionality. Berms would be constructed along pit highwalls, as well as at the entrance to any open pit areas. These procedures will be implemented in order to prevent unnecessary and undue degradation of the environment, as well as ensuring the safety of the public. The area would be periodically inspected and monitored, generally on a weekly basis, by BHB's mine and environmental personnel.