STORMWATER POLLUTION PREVENTION PLAN
BLACK HILLS BENTONITE, L.L.C.
PERMIT TO MINE NO. 339C
Johnson County, Wyoming

1.0 Storm water pollution prevention plan (SWPPP) implementation team:

1.1 The following personnel have responsibility for implementing the SWPPP:

Name	Title	Phone Number
Barbara Chase	SWPPP Administrator	307-234-6470 – office phone
		307-267-7897 – cell phone
Bruce Lawson	SWPPP Team Member	307-234-6470 – office phone
		307-267-7898 – cell phone
Bob Perry	Mine Foreman	307-267-2782 – cell phone
		307-738-2262 – home phone

1.2 The team's duties include:

a. Supervise implementation of the SWPPP.

b. Oversee maintenance of best management practices (BMP's) identified in the SWPPP.

c. Conduct or provide for inspection and monitoring activities as required by the permit.

d. Identify any deficiencies in the SWPPP and ensure they are addressed through changes or additions to site BMPs.

e. Ensure that changes in mine plans or changes on the mine site are addressed in the SWPPP and that the SWPPP is generally up to date with current mine site conditions.

f. Ensure that employees are trained, as appropriate, in the requirements of the Mineral Mining General Permit and this SWPPP.

2.0 Site Description:

2.1 Nature of the Activity

Black Hills Bentonite's Permit to Mine No. 339C is a Wyoming Department of Environmental Quality – Land Quality Division (WDEQ-LQD) approved open pit bentonite mine located in Johnson County, Wyoming.

Mining activities consist of a series of multiple cut, direct backfill open pit sequences. Topsoil from each pit, overburden stockpile area, equipment parking area and roadway is salvaged and stockpiled for use in the reclamation of the disturbances.

After topsoil removal, overburden is removed from the pit area with Caterpillar push-pull scrapers and is placed in the overburden stockpile area. Or, in the case of a direct backfill, the overburden may be directly backfilled into an adjacent open pit. Once the overburden is removed from the pit, the bentonite is removed from the pit and placed in a bentonite stockpile area.

As mining is completed in an area, the overburden will be returned to the pit, the area will be recontoured to establish approximate pre-mining contours. Topsoil will then be replaced on the area to the average pre-mining topsoil depth and the area will be seeded with the WDEQ-LQD approved seed mixture.

The attached Storm Water Pollution Prevention Plan (SWPPP) Map illustrates the mining activities on the project area and the year in which that activity was initiated. The SWPPP Map will be updated to illustrate existing mining activities and storm water control features as they are constructed on the project area.

In order to minimize storm water flow over disturbed ground, every effort will be made to divert storm water runoff around the disturbance areas.

2.2 Site Map, Sketch or Plan shall identify:

a. **Mine site boundaries** are illustrated on the attached SWPPP map for the project area.
b. **Access and haul roads** are illustrated on the attached SWPPP map for the project area.
c. **Each storm water outfall** that is within the facility boundaries is illustrated on the SWPPP map for the project area.
d. **Existing storm water control measures** will be illustrated on the SWPPP map asthe measures are constructed.
e. **Areas used for disposal or storage of overburden, materials, soils or wastes** will be illustrated on the SWPPP map as they are established.
f. **Areas used for mineral milling or** processing will not occur on this project site.
g. **Areas used for asphalt or concrete batch plants** will not be constructed on this project site.
h. **Locations where the following activities are exposed to precipitation:**
    1. **Fueling stations** are established on the equipment parking areas. The equipment parking areas are illustrated on the SWPPP map.
    2. **Vehicle and equipment maintenance and/or cleaning areas.** There are no equipment cleaning areas established on the project area. Minor equipment maintenance and repairs will occur on the equipment parking areas illustrated on the SWPPP map.

3. **Loading or unloading areas** will not be established on the project area.
4. There will not be any locations used for the **treatment or disposal of wastes**.
5. **Diesel fuel, lubricating oil and used lubricating oil** will be stored on site on the equipment parking areas illustrated on the SWPPP map.

3.0 Exposed Materials Inventory and Risk Potential:

3.1 Significant materials that may contribute significant pollutants to storm water discharges include stockpiled bentonite, stockpiled overburden and stockpiled topsoil, diesel fuel, lubricating oil and used lubricating oil.

3.2 Method and location for storage, processing and disposal:

a. **Stockpiled bentonite** is removed from the project area with 25 ton belly-dump haul trucks and delivered to Black Hills Bentonite's processing facility in Casper, Wyoming.

b. **Overburden** is stored on overburden stockpile areas as illustrated on the SWPPP map. The overburden is backfilled into depleted pit areas.

c. **Topsoil is** stored in topsoil stockpile areas as illustrated on the SWPPP map. Stockpiled topsoil is reapplied to backfilled pits, reclaimed overburden stockpile areas and reclaimed roads.

d. **Diesel fuel** is stored in an above ground 8,000 gallon tank.

e. **Lubricating oils** are stored outside in closed 55 gallon barrels or in an enclosed oil servicing trailer that contains four 400 gallon tanks.

f. **Used lubricating oils** will be stored outside in a 750 gallon tank. The used oil will be periodically removed from the site and properly disposed of.

3.3 Potential for each material to contribute pollutants to storm water:

a. **Bentonite:** The bentonite stockpile areas are exposed to direct precipitation and runoff. Pollution potential from the stockpiled bentonite is limited to suspended sediment during periods of high precipitation and runoff. Due to the high absorption rate of the bentonite and the bentonites' ability to bind and seal itself, significant precipitation and runoff may be absorbed in the stockpile. Additionally, runoff from the bentonite stockpile areas is contained and controlled through the use of constructed buffers areas around the stockpile areas. These buffers will be constructed by removing the topsoil in order to create a ditch around the bentonite stockpile that will contain direct precipitation and runoff from the stockpile area.

b. **Overburden:** The risk of pollution from the stockpiled overburden is low as runoff from the stockpiled overburden is contained and controlled through the use of berms and ditches, or other runoff control measures which will either contain the runoff or divert it into the pit area. Additionally, the overburden has no potential for forming acidic runoff. Potential pollutants from the exposed overburden will be limited to total suspended solids.

c. **Topsoil:** the potential pollutants from topsoil stockpiles will be limited to total suspended solids. In order to minimize erosion and sedimentation from topsoil stockpiles, any topsoil stockpiles that will remain in place for more than one year will be seeded in the fall with the permanent seed mixture that is approved for the project area. If fall seeding with the permanent seed mixture is not possible, the stockpiles will be seeded the following spring with an annual such as barley or millet. If erosion becomes a problem on a topsoil stockpile, berms, ditches or other runoff control measures will be implemented.

d. **Diesel fuel:** The diesel fuel is stored in an 8,000 gallon above ground storage tank on the equipment parking area. This tank is enclosed within an earthen berm large enough to contain any possible spill of diesel fuel.

e. **Lubricating oils:** Lubricating oils which are used at this location are stored in enclosed 55 gallon barrels. The barrels will be enclosed within an earthen berm or in galvanized stock watering tanks large enough to contain any possible spill of lubricating oils. Alternatively, the lubricating oils may be contained within an enclosed oil servicing trailer which will be located on the equipment parking areas. This trailer will be contained within a berm.

f. **Used lubricating oils:** Used lubricating oils that are removed during equipment servicing will be contained in a 750 storage tank located on the equipment parking area. This storage tank will be enclosed within an earthen berm large enough to contain any possible spill of used lubricating oil. The used oil will be periodically removed from the site and properly disposed of.

3.4 Management practices and structural controls employed to reduce pollutants in storm water runoff: Refer to Section 3.3

3.5 Significant spills and leaks have not occurred at this site. Any significant spills that do occur at this site will be reported to the WDEQ-Water Quality Division.

4.0 Sampling Data

No sampling has occurred on this site. Sampling and testing of storm water for specific parameters is not required on a routine basis under this permit.

5.0 Measures and controls

5.1 **Good housekeeping** will be required of all mine personnel in the maintenance of areas and materials which may contribute pollutants to storm water discharges.

5.2 **Preventive maintenance** includes the routine inspection and maintenance of storm water management devices such as berms, ditches, dikes and other runoff control features to insure proper function of these devices in the control and management of storm water discharges.

5.3 **Spill prevention and response procedures.** In the event of a spill of material which could contribute pollutants to storm water runoff, the spill will be immediately reported to the SWPPP administrator and/other team members in order that appropriate spill containment measures can be implemented. Potential spills are limited to the possibility of a diesel fuel spill or lubricating oil spill.

In the event of such a spill or leak, the spill area will be immediately diked in order to contain and minimize the extent of the spilled or leaking material. Containment will be accomplished using either commercially available spill control materials or earthen material. Once containment is achieved, the spill material will be appropriately removed and disposed of by approved methods.

5.4 **Sediment and erosion control** will be obtained through the measures described in Section 3.3 of this SWPPP. The measures that may be utilized in order control erosion and sedimentation on this project area include structural measures such as ditches, berms, check dams and straw wattles as well as non structural methods such as revegetation.

During the course on routine inspections and the implementation of this SWPPP, the administrator or other members of the SWPPP team will attempt to identify any areas which, due to topography or other factors, have a high potential for significant soil erosion. If such features are identified, structure, vegetative and/or other stabilization measures may be implemented to limit erosion.

5.5 **Management of Runoff:** Black Hills Bentonite will use measures such as simple berms, ditches, dikes or runoff control straw wattles to control and divert storm water runoff from bentonite stockpiles, overburden stockpiles, topsoil stockpiles, roads, pits and any other disturbed areas. These measures are intended to prevent storm water flowing over disturbed areas from entering ephemeral drainages which may reach perennial streams. Rock check dams and vegetative swales may also be incorporated into the storm water management plan to reduce suspended solids in the storm water runoff.

Whenever possible, Black Hills Bentonite will construct overburden stockpiles and bentonite stockpiles in such a manner that storm water runoff from these features will drain into depleted bentonite pits, thus containing the storm water runoff. This will also allow the settling of suspended solids from the storm water which collects in the pit areas.

Revegetation of disturbed lands will be one of the most effective measures taken in order to reduce and control storm water runoff and silt loads. Revegetation of affected lands will be performed as soon as possible during the course of the mining operation in order to stabilize affected lands. Revegetation will increase infiltration of storm waters, stabilize the exposed surface, and contribute to entrapment of suspended solids in overland flows of storm water runoff.

6.0 Comprehensive Site Compliance Inspection

Qualified personnel (members of the SWPPP team) will conduct site compliance evaluations at a minimum of once per year. The evaluation shall provide the following:

6.1 **Inspection of the site** for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce sediment loading will be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures and other structural pollution control measures will be observed to ensure they are operating correctly.

6.2 **A report** summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken shall be made and retained as part of the storm water pollution prevention plan for at least three years. The report shall be signed in accordance with Section 9.8 of this permit.

6.3 **If the inspection report describes deficiencies** in pollution control structures or procedures, such deficiencies shall be corrected and the SWPPP shall be modified to reflect the required changes.

6.4 **If the site becomes inactive** and an employee does not routinely visit, inspections shall be conducted at appropriate intervals but never less than once in two years.

7.0 Record Keeping and Internal Reporting Procedures

7.1 **A description of spills or other discharges,** along with other information describing the quality and quantity of storm water discharges shall be included in the SWPPP.

7.2 **Inspections and maintenance activities** shall be documented and records of such activities shall be incorporated into the SWPPP. The inspections and maintenance activities will be documented in writing and filed at the offices of Black Hills Bentonite, L.L.C., 302A Hudson Street, Mills, Wyoming 82644.

8.0 Non-Storm Water Discharges will be limited to the pumping of storm water that has accumulated in pit areas. It may be necessary to pump the collected storm water from these pits in order to facilitate the backfilling and reclamation of the pit areas. Prior to pumping storm water from pits, sufficient time will be taken to allow the settling of solids from the storm water. Discharge points will be selected which are relatively flat and well-vegetated which will increase the infiltration rate of the discharged water. Devices such as perforated pipe or sprinkler heads may also be used at the discharge point in order to increase infiltration and to spread the water over a large surface area. Non-storm water discharges will be closely monitored to ensure that turbid discharges do not reach defined drainages.

Discharge water will be evaluated for the presence of any waters other than storm water or "related effluents" such as uncontaminated ground water. This evaluation shall contain include the identification of potential significant sources of non-storm water discharges at the site, a description of any test and/or evaluation for the presence of non-storm water discharges and the evaluation criteria or testing method used, the date of any testing and/or evaluation and the on-site drainage points that were directly observed during the test.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Thomas A. Thorson, President and General Manager Date