

SUMMARY DOCUMENT
FOR LARGE SCALE PERMIT APPLICATION
BENTONITE PERFORMANCE MINERALS LLC. – SECURITY PROJECT

Applicant: Bentonite Performance Minerals LLC.
554 US Highway 212
Belle Fourche, South Dakota 57717

Type of Mining: Large scale mining operation for bentonite

Legal Description: Portions of Sections 31 and 32; T9N-R2E, Butte County

General Location: Approximately two miles northwest of Belle Fourche, South Dakota

Local Contact: Michael Barr
Senior Project Coordinator
Phone (307) 896-2596

Description:

On October 17, 2022, the Minerals, Mining, and Superfund Program of the Department of Agriculture and Natural Resources received a large scale mine permit application from Bentonite Performance Minerals LLC (BPM) for the proposed Security project. The application was resubmitted with additional information requested by the department on February 28, 2024. Additional information was submitted by BPM on April 11, 2024. The proposed operation will involve surface mining for bentonite on land approximately two miles northwest of Belle Fourche, South Dakota.

BPM plans to use cut and fill mining procedures to mine pits ranging in depth up to 40 feet. Scrapers and/or excavators will strip topsoil pit by pit to reduce surface disturbance. Overburden will be ripped with bulldozers and graders and stripped with scrapers. Scrapers will remove bentonite from each pit, and front end loaders will load it onto haul trucks. The bentonite will be hauled on Butte County 3 View Road and US Highway 212 or on a bentonite haul road to BPM's processing plant in Colony, Wyoming.

BPM plans to mine a series of several small pits (2 to 10 acres) in linear sequences. About 57.3 acres will be mined and a total of approximately 83 acres will be affected during the five to eight year life of the operation. Mining is expected to start during the third or fourth quarter of 2024 or after the mine permit is issued and will occur annually. Prior to mining, topsoil and subsoil will be removed and stockpiled or applied directly onto previously backfilled pits. BPM plans to remove about 200,000 tons of bentonite during the mining operation. One permanent overburden stockpile may be constructed during the operation. Otherwise,

overburden will be used to backfill each pit. The last pit in the sequence will either be backfilled with overburden or the pit highwall will be reduced to a 3:1 (H:V) slope.

A Petroleum Contaminated Soils Land Farm (PCS Farm), which was permitted by DANR's Solid Waste Program, is located within the proposed mine permit boundary. DANR approved closure of the facility in 2008. Any topsoil and subsoil stripped from any disturbance in the PCS Farm area will be stockpiled separately from other stripped soils. These soils will be placed onto any disturbance within the PCS Farm footprint during final reclamation.

A permitted solid waste facility for construction and demolition debris, which was also permitted by DANR's Solid Waste Program, is located within the southwest corner of the proposed mine permit boundary. DANR approved closure of this facility in 2003. BPM does not plan to disturb the closed solid waste facility during mining.

Reclamation:

The proposed future use of the affected area is rangeland for livestock grazing which is the present use of the proposed area. BPM and American Colloid have been successful reclaiming other mines in the area back to rangeland. BPM will backfill pits with overburden removed from each pit during mining. Each pit will be backfilled as mining is completed. The resulting postmine topography will be approximately the same as the current pre-mine topography. BPM will replace subsoil and topsoil before seeding. A spring-tooth chisel plow seeder will be used to seed the area with the seed mixture recommended by the Butte County Natural Resources Conservation Service. If necessary, BPM will place a fence around the area until a self-sustaining vegetative cover is established.

Environmental Concerns:

Potential environmental impacts from the operation appear to be minimal. The area in and around the proposed operation has already been affected by cattle grazing, mining, and solid waste and petroleum contaminated soil land farm facilities. The proposed mine area is currently used for cattle grazing. American Colloid conducted mining operations just to the east of the proposed mining area under Small Scale Mine Permit 459 and Large Scale Mine Permit 461. It successfully reclaimed the mined area to rangeland, and its reclamation liability was released by the Board of Minerals and Environment in January 2000. A solid waste facility for construction and demolition debris and a Petroleum Contaminated Soils Land Farm were permitted by DANR. DANR approved closure of the facilities in 2003 and 2008, respectively.

There will be no impacts to surface water. No intermittent or perennial drainages are located within the proposed affected area, but there are a few weakly defined ephemeral drainages. The Belle Fourche River is located south of the proposed mine area, approximately 600 feet from the proposed mine permit boundary at its closest point. It is classified as warm water permanent fish life propagation waters, immersion recreation waters, limited contact recreation waters, stock watering, recreation, and fish and wildlife propagation waters, and irrigation waters. No impacts to the Belle Fourche River are anticipated since the 3 View Road to the

south of the proposed operation acts as a ridge or topographic high and serves as a physical barrier between the operation and the river. Also, drainage in the proposed mine area flows from the southwest to the northeast and away from the river.

Middle Creek is located north and northwest of the proposed mine area, approximately 650 feet from the proposed mine permit boundary at its closest point. It is classified as stock watering, recreation, and fish and wildlife propagation waters, and irrigation waters. There are several dry ephemeral drainages that flow to the north and northeast toward Middle Creek. However, no impacts to Middle Creek are anticipated. All disturbance will be confined to the south of the American Colloid haul road, and the road will act as a berm between the operation and the creek.

Also, BPM plans to take steps to prevent sediment from migrating toward Middle Creek. Areas around stockpiles will be graded and cupped to collect runoff and prevent discharge. Earthen berms will be constructed around pits to divert surface runoff and retain it on site and/or direct it to sumps outside of the pits to settle out sediment. Also, water from the pits will be pumped into the sumps to allow sediments to settle before flowing into swales and vegetated buffer zones. In addition, BPM will comply with the storm water pollution prevention plan in its Surface Water Discharge Permit. Finally, due to the distance between the affected area and Middle Creek, any sediment that does escape containment will settle out before reaching the streams. If BPM follows these procedures, erosion and sedimentation should not be a problem.

The US Army Corps of Engineers determined there are no jurisdictional wetlands within the mine permit boundary. As a result, no Section 404 permit is required.

There should be no impacts to ground water. Since no ground water was encountered during test drilling, it is not expected to be encountered during mining.

Impacts from noise and dust appear to be minimal since the nearest residence is approximately 0.2 mile southeast of the proposed mining area. The residence is owned by Harvey Garr who operates a ranch and is an adjacent surface owner of the proposed mine area. BPM has notified Mr. Garr of the mine permit application. There should be no substantial increase in fugitive dust from the proposed operation since BPM will apply water to haul roads during the life of the project. The department has not received any complaints about dust or noise from past BPM operations in the area.

No significant impacts to wildlife in the area are anticipated. No federal or state threatened, endangered, or rare plant or animal species were noted in the proposed mining area. No bald eagle roosts or raptor nests were noted within the mining area. However, potential bald eagle habitat is located within 0.5 mile of the survey area. Four raptor species were noted flying over the site. BPM will avoid activities within 0.5 mile of any raptor nests that become established prior to the initiation of mining.

Current Status – April 11, 2024:

The department is reviewing Bentonite Performance Minerals' response to our March 6, 2024, comments on the mine permit application. For more information, contact the Minerals and Mining Program, Joe Foss Building, 523 East Capitol, Pierre, South Dakota, or call (605) 773-4201.