

**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
RECOMMENDATION  
AMERICAN COLLOID COMPANY  
LARGE SCALE MINING PERMIT APPLICATION**

The Department of Environment and Natural Resources is recommending conditional approval of American Colloid Company's application for its Stateline large scale bentonite mining operation. The proposed bentonite mine is located in Portions of Sections 18, 19, and 20; T10N-R1E, Butte County. The general location is approximately 12 miles northwest of Belle Fourche, South Dakota.

The proposed project is along a ridgeline about 12 miles northwest of Belle Fourche and about 0.5 miles north of US Highway 212. A portion of the area was previously mined and reclaimed under Large Small Scale Mine Permit No. 6, with reclamation liability released in 1995. Approximately 332 acres of the 732-acre project area will be disturbed during the ten-year life of the permit. American Colloid will mine a series of pits using cut and fill mining methods in six separate mining sequences within the proposed permit boundary. At any one time, there will be no more than three pits open with a maximum disturbance of around 155 acres. During the operation, topsoil and overburden will be stripped and stockpiled or used to backfill and topsoil previously mined pits. The mined bentonite will be hauled on a road to be constructed in Wyoming to US Highway 212, and then to American Colloid's processing plant located about 10 miles northwest in Colony, Wyoming. The proposed postmine land uses are rangeland for livestock grazing and hay land.

**REASONS FOR APPROVAL**

The permit application addresses all of the requirements of SDCL 45-6B and ARSD 74:29. The application with the Department's recommended conditions (below) provides the necessary safeguards to protect the environment during and following operations and ensure that the land is reclaimed to a beneficial use following operations.

**RECOMMENDED CONDITIONS**

Technical Revisions

1. The Board of Minerals and Environment (board), pursuant to ARSD 74:29:03:16, authorizes the department to approve proposed technical revisions to American Colloid Company's (American Colloid) mining permit for the following:
  1. Seeding mixtures or rates;
  2. Topsoil stripping and borrow or storage piles;

3. Relocation or modification of roads within the permitted affected land;
4. Adding contiguous affected land within the permit boundary area for this permit with the total of such additions not to exceed 20 percent of the permitted affected land area of 332.0 acres for this permit. The maximum amount of expansion allowed (20% of 332.0 acres) is 66.4 acres;
5. Plans and specification for permitted facilities;
6. Modification or relocation of erosion, sedimentation, or drainage control including sediment control structures;
7. Implementing new and improved reclamation techniques as they are developed;
8. Modification of dust control measures;
9. Modification of the size of area to be worked at any one time;
10. Modification of operating time tables for proposed operation;
11. Location or modification of ancillary facilities within the permit boundary, including equipment storage areas, perimeter fencing, and stockpiles;
12. Modification of pit configuration within permitted pit limits consistent with geotechnical considerations;
13. Modification of monitoring systems;
14. Modification of the reclamation plan; and
15. Allow the construction of stock ponds as final reclamation features.

Technical revisions must comply with ARSD 74:29:03:03, as applicable, and must be submitted to the department in writing. The department shall approve, disapprove, conditionally approve, or request additional information deemed necessary to approve technical revisions within thirty days of receipt.

### General

1. The conditional approval of this permit application hereby incorporates by reference those representations made by American Colloid as to plans, specifications, operations, environmental impacts, and reclamation as contained in the permit application submitted May 5, 2017, and supplemental information submitted September 18 and 29, 2017. The representations contained in these documents are general conditions of the permit unless modified by the following conditions, modified by future technical revisions, amendments, or permits, or modified by other conditions as may be imposed by the board.
2. This permit and all rights under such are expressly conditioned on the truth of representations made by American Colloid, its officers, employees, and contractors in the application, supporting documentation related to the application, and evidence presented to the board. Should any such material representation prove to be false, this permit and all rights under such may be canceled upon such findings by the board.
3. This permit is conditioned upon compliance with all applicable laws and regulations.

4. All monitoring systems presented in the permit application or as modified by the board shall be followed. Any changes in these monitoring systems must be approved by the department through technical revisions.
5. American Colloid shall follow the recommendations made by the South Dakota Department of Education and Cultural Affairs, the South Dakota Department of Agriculture, the South Dakota Department of Game, Fish, and Parks, and the South Dakota Department of Health unless restated in these conditions.
6. In accordance with ARSD 74:29:07:02(2), affected lands shall be cleared in small sections or increments to reasonably match the needs of mine production and to reduce the amount of dust generated from the operation.
7. American Colloid is permitted to disturb only the lands shown in the Mine Sequence Maps submitted on September 18, 2017 during the mining and reclamation phases of the operation. American Colloid will be required to submit a technical revision or a permit amendment for any disturbance outside the areas shown on the map.
8. Should any cultural resources be unearthed during mining operations, mining operations in the area should immediately stop and the State Archaeologist shall be contacted.
9. If it becomes necessary to move the temporary haul roads, American Colloid shall submit a map to the department showing the new location of the haul road prior to construction.
10. American Colloid shall submit a map showing the location of the new underground water line in the third mining sequence at least 30 days prior to installation.
11. American Colloid shall notify the department when the Wyoming Department of Environmental Quality grants a permit for the haul road on the Wyoming side of the border.

#### Other Permits

1. American Colloid shall obtain, if necessary, a General Storm Water Construction permit from the department's Surface Water Program and a water right permit for any road water sources in South Dakota from the Water Rights Program.
2. These conditions do not change the requirements of other existing and future permits for the project.

## Reclamation

1. Before reclamation bond and liability release, reclaimed and revegetated areas must exhibit a vegetative cover that is capable of self-regeneration and at least equal in cover, density, and diversity to the existing vegetation in the extended comparison area.
2. Before final closure and reclamation bond release, American Colloid shall maintain sufficient access to reclaimed areas to allow for any necessary reclamation maintenance required. Roads which are not necessary for future use shall be reclaimed upon determination of the success of reclamation of all other affected and reclaimed areas.
3. American Colloid shall seed the affected area in such a manner to ensure species diversity and to avoid the establishment of monocultures.
4. American Colloid shall use the seed mix specified in the permit application during reclamation of the mine site. A technical revision shall be submitted to the department for any changes to the seed mix. The modified seed mix cannot be used until the department approves the technical revision.
5. American Colloid shall seed topsoil and subsoil stockpiles as required in the reclamation plan if they are in place for more than six months.

## Dust Control

1. American Colloid shall effectively control fugitive dust and other air emissions from the operation. Dust control measures may include using water trucks, dust filters on equipment, dust suppressants (such as magnesium chloride) on roads, and/or vegetating disturbed areas as soon as possible.
2. American Colloid shall notify the department within five working days of written complaints from adjacent landowners concerning dust. The department, upon finding that a complaint is based in fact on a potential permit violation, may require American Colloid to develop a mitigation plan to correct the potential violation. The completion date for the mitigation plan will be set at the time of the department request.

## Erosion and Sediment Control

1. American Colloid shall submit to the department for approval final plans and specifications for any additional sediment control structures that may be needed for the Stateline project. All surface water diversions and all final reclamation drainage channels must meet the requirements of ARSD 74:29:07:09.

The department shall not unreasonably withhold its final approval of the plans and specifications if they reflect the technical parameters specified in the permit application. Within 30 days of submittal, the department shall approve, disapprove, conditionally approve, and request additional information deemed necessary to approve the plans and specifications. If disapproved, the department shall identify those items necessary for approval. If plans and specifications are disapproved or a request of additional information is made, the department shall, within 30 days of receipt of the response, either approve, conditionally approve, or disapprove such plans and specifications.

Conditions placed on plans and specifications approval by the department shall be considered permit conditions. These conditions will not alter the conceptual design of the diversion ditches as permitted. American Colloid may request a hearing before the board to contest any conditions placed on plans and specifications.

3. If sediment from the operation migrates toward or enters Crow Creek and the unnamed tributary to the north, American Colloid shall install rock check dams, hay bales, additional diversion ditches, or other adequate structures to minimize channelization and erosion from surface runoff. American Colloid shall, as soon as possible, contact the Department of Environment and Natural Resources and the Department of Game, Fish, and Parks if any sediment from the operation begins migrating toward or enters the creeks.
4. Erosion and sediment control structures shall be in place where necessary and functional during all operational and reclamation phases. American Colloid shall perform periodic maintenance on all erosion and sediment control structures to ensure control effectiveness.
5. Interim sedimentation and erosion controls shall be used as necessary on disturbed land during mining and reclamation until these areas are stabilized by vegetation.

#### Water Quality

1. American Colloid shall conduct operational water quality monitoring during the life of the mine. The following locations shall be monitored during May, June, July, and October for pH (field), conductivity, TDS and TSS:

#### Crow Creek

- H1 – Baseline monitoring site located in upper Crow Creek near the WY/SD state line.
- H2a – New monitoring site located along Crow Creek in NE 1/4 NW 1/4 Section 19 T10N R1E, immediately downstream of permanent overburden stockpile and topsoil and subsoil stockpiles and upgradient of the mine permit boundary (See Figure 1).

### Unnamed Ephemeral Tributary to Ghost Creek

- H3, H4, and H5 - Baseline monitoring sites along the unnamed ephemeral tributary to Ghost Creek to the north of the mine.
2. The department reserves the right to modify the operational water quality monitoring plan if monitoring results or field inspections indicate a modification is warranted. Modifications may include adding or removing surface water monitoring sites, adding or removing parameters, changing sampling frequency, or changing sampling schedules.

### Spill Contingency Plan

1. American Colloid employees at the mine site are required to become familiar with the spill contingency plan and the spill reporting requirements. Employees shall take all necessary steps to prevent spills from occurring. Any spills that occur that exceed the reporting requirements of SDCL 34A-12 and ARSD 74:34:01:04 must be reported to the department at (605) 773-3296 during normal business hours and (605) 773-3231 after business hours and holidays.

### Biological Monitoring

1. Each year by August 15<sup>th</sup>, American Colloid shall submit an annual monitoring report to the department and the Department of Game, Fish and Parks which describes methods and results from bald eagle winter roost and nesting raptors surveys within the permit area and 0.5-mile perimeter. The report will also provide details from agency coordination that result in modifications of US Fish and Wildlife Service (USFWS) recommended seasonal and/or spatial buffers around active raptor nests or physical mitigation actions taken for a given raptor pair within the survey area. Field observations will be conducted by a qualified individual approved by the Department of Game, Fish and Parks.
2. If active raptor nests are observed in or near the permit area, American Colloid will follow current USFWS recommended seasonal and spatial buffers for the applicable species. American Colloid will coordinate with USFWS and the Department of Game, Fish, and Parks if it decides to vary from these recommendations.
3. Upon discovering any state or federal listed rare, threatened, or endangered species, the critical habitat of such species, or nesting birds within or adjacent to the permitted affected area, American Colloid shall promptly notify the Department of Game, Fish, and Parks. Prior to proceeding with operations that may impact threatened or endangered species or their critical habitat, American Colloid shall consult with the department and the Department of Game, Fish and Parks for direction regarding how to avoid adverse impacts to such species and their critical habitat.

## Reclamation Surety

1. American Colloid shall submit a reclamation surety in the amount of \$1,300,000 before the permit is issued which will cover the first year of disturbance. After the initial year, American Colloid shall submit with the annual report for Large Scale Mine Permit 488 an update of the planned disturbance for that year. After the department reviews the plan, it reserves the right to adjust the bond based on the amount of new disturbance, the reclaimed acreage, and any changes to the original mine plan. The reclamation surety may also be decreased as reclamation work is completed.

## Postclosure

1. Before the start of the postclosure period, American Colloid shall submit an updated postclosure plan (if necessary) to the department for approval. The postclosure plan shall be updated to reflect actual site conditions at the time of mine closure, and shall include hydrologic monitoring, vegetation monitoring, sediment and erosion control, and miscellaneous maintenance and care. The department reserves the right to modify postclosure monitoring plans, schedules and parameters if monitoring results indicate a modification is warranted.
2. In accordance with SDCL 45-6B-91, American Colloid shall submit a postclosure financial assurance (if necessary) at the time of mine closure to cover postclosure care and maintenance costs for Mine Permit No. 488 as identified in the approved postclosure plan. The postclosure financial assurance will be calculated at the time of mine closure. The postclosure financial assurance will be used to carry out postclosure care activities if American Colloid fails to complete them.

The department and the board reserve the right to increase or reduce the amount of postclosure financial assurance based on site performance factors including site stability, presence of hazards, revegetation success, hydrologic impacts, the need for long-term surface or ground water mitigation, and releases of substances that adversely impact natural resources.

3. If necessary, the postclosure period shall begin at the time of reclamation surety release (mine closure) and shall last for a period of 30 years, unless the board determines that an alternative period is necessary to ensure compliance with all applicable performance standards or design and operating criteria. The postclosure financial assurance shall be held for the designated postclosure period to ensure that all established reclamation and performance standards are met and the site is maintenance free to the extent practicable.
4. In accordance with SDCL 45-6B-91, American Colloid's liability for the affected mine area shall continue (if necessary) until certification of the completion of the postclosure care plan is approved by the board. When American Colloid believes it is in full and continuing compliance with applicable performance standards, it may petition the board for release or

reduction of the postclosure financial assurance and by submitting certification that postclosure care is complete. Funds left at the end of the postclosure period will be released to American Colloid.

6. American Colloid grants to the board or its representatives permission to enter the reclaimed area to monitor reclamation success during the postclosure period. The department shall give American Colloid the opportunity to accompany any inspector from the department or other agent of the board during the postclosure period.

This recommendation is being mailed to you pursuant to ARSD 74:29:01:15. Petitions to intervene and become party to the proceedings pursuant to ARSD 74:29:01:09 must be filed with the Department of Environment and Natural Resources no later than December 26, 2017. The department will issue the permit on this date if no petitions to intervene are received.

Persons desiring further information concerning the permit application may contact Eric Holm of the Minerals and Mining Program, Joe Foss Building, 523 East Capitol, Pierre, South Dakota 57501 - (605) 773-4201.

Steven M. Pirner  
Secretary  
Department of Environment and Natural Resources

December 19, 2017