



**Mining  
Form  
MR-500**

S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
BUREAU OF LAND AND WASTE MANAGEMENT  
DIVISION OF MINING AND SOLID WASTE PERMITTING  
2600 Bull Street, Columbia, SC 29201  
Telephone Number: (803) 896-4261 Fax Number: (803) 896-4001

**RECLAMATION PLAN  
DHEC FORM 500 DATE VERSION ADOPTED 7/1/94**

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As required in Section 48-20-90 of the South Carolina Mining Act, "An operator shall submit with his application for an operating permit a proposed reclamation plan. The reclamation plan for an operating permit only must be furnished to the local soil and water conservation district in which the mining operation is to be conducted. The plan must include as a minimum each of the elements specified in the definition of 'reclamation plan' in Section 48-20-40 and information required by the department. The reclamation plan must provide that reclamation activities, particularly those relating to control of erosion, to the extent feasible, must be conducted simultaneously with mining operations and be initiated at the earliest practicable time after completion or termination of mining on a segment of the permitted land. The plan must provide that reclamation activities must be completed within two years after completion or termination of mining on each segment of the area for which an operation permit is requested unless a longer period specifically is permitted by the department."  
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**I. APPLICANT INFORMATION**

1. Name of Company: Sandridge Road Holdings LLC
2. Name of Proposed Mine: Pineland Mine County: Dorchester
3. Home Office Address: 1015 East Westinghouse Blvd 980-225-9944  
(Street and P.O. Box) (Telephone No.)  
Charlotte NC 28273  
(City) (State) (Zip Code) (Fax No.)
4. Local Office Address: 255 Farmington Road 980-225-9944  
(Street and P.O. Box) (Telephone No.)  
Summerville SC 29483  
(City) (State) (Zip Code) (Fax No.)
5. Name of company personnel and their title to be the contact for official business and correspondence: Chris Bauer, *Member Manager*
6. Location of Mine: S-18-247 Sandridge Road Dorchester SC  
State or County Hwy No. Nearest Town or City

**II. ENVIRONMENTAL PROTECTION**

1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.  
 Roads adjacent to the mine area will be used for ingress and egress and are private roads. Due to the size and nature of the surrounding property being largely managed for recreational uses and forestry, the wildlife on the property has habitat not affected by the mining activity. Sedimentation ponds and following best management practices will protect adjacent woodlands and cropland nearby. Also, most of the nearby cropland is owned by the applicant and is included in the individual mine permit.
2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.  
 No significant adverse effects on adjacent surface water are anticipated. Ground and storm water will collect within the mine excavation area and be pumped into adjacent wetlands after settling. Water resources will be held in mine area until water levels require pumping into an adjacent outfall ditch which would flow through wetlands associated with Halfway Gut Creek and eventually Four Holes Swamp.
3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.  
 Archsite and SHPO do not show any significant cultural or historic sites within the proposed mine area. Should any cultural resources be discovered during mining activities, all mining shall cease until further investigation is complete.

4. Describe method to prevent or eliminate conditions that could be hazardous to animal or fish life in or adjacent to the permitted area.

It is anticipated that no conditions that could be hazardous to animal or fish life will develop as a result of the mining activity. Current and recent mine sites in along Sandridge Road host several species of fish and wildlife. It is expected that this site, as other sites have, will provide foraging habitat for bald eagles, waterfowl, amphibians, and reptiles.

5. Describe how applicant will comply with State air quality and water quality standards as established by the S.C. Department of Health and Environmental Control.

Airborne dust is the only air quality control problem that may be associated with the proposed site. To alleviate this potential problem access roads will be watered down during dry periods to settle sand and dirt. These conditions will be monitored and treated as needed.

### III. RECLAMATION OF AFFECTED AREA

6. State useful purpose(s) the affected land is being proposed for reclamation. More than one purpose may be checked, but information should be submitted to support the feasibility for each proposed purpose.

- |   |  |
|---|--|
| a. Lake or pond <input checked="" type="checkbox"/> | f. Grassland <input checked="" type="checkbox"/> |
| b. Agriculture <input type="checkbox"/>             | g. Recreation <input type="checkbox"/>           |
| c. Woodlands <input type="checkbox"/>               | h. Wetlands <input type="checkbox"/>             |
| d. Residential <input type="checkbox"/>             | i. Park <input type="checkbox"/>                 |
| e. Commercial <input type="checkbox"/>              | j. Other <input type="checkbox"/>                |

7. State the final maximum surface gradient(s) (slope) in soil, sand, or other unconsolidated materials on reclaimed land. Surface gradients steeper than 3H:1V (18 degrees or 33 percent) may be required to submit geotechnical data and studies to demonstrate that the steeper slopes will remain stable following final reclamation.

3H:1V

8. How will the final slopes in unconsolidated material be accomplished? If the slope will be by backfilling, demonstrate that there is adequate material to accomplish the stated final gradient. If gradient is to be achieved by bringing in material from outside the permitted area, state the nature of the material and approximate quantities. If the gradient is to be achieved by grading, show that there is adequate area for grading to achieve gradient (i.e., adequate distance between the property line and edge of highwall). Operator should show calculations or other appropriate information to demonstrate that there is adequate materials in backfilling and grading to meet the requirements for final slope.

Final grading will be accomplished using the on-site overburden along pond edges. The overburden location will be located adjacent to the mine.

9. Describe the plan for revegetation or other surface treatment of affected area(s). The revegetation plan shall include but not be limited to the following: (a) planned soil test; (b) site preparation and fertilization; (c) seed or plant selection; (d) rate of seeding or amount of planting per acre; (e) maintenance.

(a) This proposed site is located in proximity to other past mine/pond sites. This site is very similar to other sites in elevation, soil type and sand deposits.

No formal testing is planned because we anticipate a soil pH of approximately 7 as occurred on other sites.

(b) Site preparation will consist mainly of grading and dragging along the pond edge. No additional fertilization is planned due to expected pH and lime content of the soil.

(c) Other reclaimed mine sites in the area have re-vegetated naturally. Local indigenous plant species provide an excellent ground cover with reclamation time-tables. Sparse growth areas will be planted with acceptable reclamation species such as rye grass and brown top millet

(d) Abruzzi rye grass= 1.1 lbs/ft<sup>2</sup>, brown top milled 10 lbs/acre (e) No specific maintenance expected

(e). No specific maintenance expected

10. Provide, as a separate document, a closure plan of the mine and permitted facilities to prevent a release of contaminants from being harmful to the environment. A closure plan is not necessary for all mines, but is required where the possibility exists for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes).

N/A

11. Method of control of contaminants and disposal of mine waste soil, rock, mineral, scrap, tailings, slimes, and other material directly connected with the mining, cleaning, and preparation of mineral substances mined and includes all waste materials deposited on or in the permit area from any source.

There will be no contaminants, waste soil, rock, minerals, scrap or slime produced that will necessitate disposal.

12. Method of reclaiming settling and/or sediment ponds.

The sediment pond will be reclaimed at the completion of mining operations following the same parameters listed in this document for the mine.

13. Describe method of restoration or establishment of stream channels, stream banks and site drainage to a condition minimizing erosion, siltation and other pollution.

Water will be pumped from the sedimentation pond into the adjacent wetland. Rip-rap will be placed at the outfall pipe and a forebay will be constructed as well. Silt fencing layers will be established between the sediment pond and wetland in order to prevent erosion and sediment deposit associated with the flow. Rip rap and forebay will slow the velocity of water during precipitation events and pumping.

14. What are the maintenance plans to insure that the reclamation practices established on the affected land will not deteriorate before released by the Department?

Natural vegetation will be used as primary ground cover with additional planting in sparse growth areas. With this planting/reclamation scheme it is unlikely that there will be any deterioration before release.

15. For final reclamation, submit information about practices to provide for safety to persons and to adjoining property in all excavations. Identify areas of potential danger (vertical walls, unstable slopes, unstable surface on clay slimes, etc.) and provide appropriate safety provisions. These provisions can include but are not limited to setbacks, fencing,

There are a few directly adjacent residential properties that will be buffered. A berm will be constructed to screen the mine from adjacent properties. If required, a fence could be constructed between the mine site and the adjacent property. The proposed site is bounded by forested tracts on other sides. The only public exposure to the site is along Sandridge Road where the trucks will be entering and leaving the property. Public access to the site will be restricted by a buffer and screening where needed as well as a locked gate.

16. What provisions will be taken to prevent noxious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or ponds, provide supporting information that a minimum water depth of four (4) feet on at least fifty percent (50%) of the pond surface area can be maintained.

The applicant proposed to mine to the maximum allowable depth of 30'. Deposition depth within the proposed mine site will be greater than or equal to eight feet. During the mining activity, stormwater and groundwater will setting within the mine pit and be pumped out through erosion control measures into wetlands associated with Halfway Gut Creek and eventually Four Holes Swamp. Nearby properties with similar soils do not have any water quality issues or odor issues. If water quality issues arise, additional testing of upstream waters will take place and lime could be added to buffer low pH.

17. Identify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclamation. Provide justification for leaving any structures.

Existing roads will remain, however no structures associated with the mineral extraction will remain.

18. Attach two (2) copies of a map of the area (referred to as the RECLAMATION MAP) that shows the reclamation practices and conservation practices to be implemented. The following should be shown:

- A. The outline of the proposed final limits of the excavation during the number of years for which the permit is requested.
- B. The approximate final surface gradient(s) and contour(s) of the area to be reclaimed. This would include the sides and bottoms of mines reclaimed ponds and lakes.
- C. The outline of the tailings disposal area.
- D. The outline of disposal areas for spoil and refuse (exclusive of tailings ponds).
- E. The approximate location of the mean shore line of any impoundment or water body and inlet and/or outlet structures which will remain upon final reclamation.
- F. The approximate locations of access roads, haul roads, ramps or buildings which will remain upon final reclamation.
- G. The approximate locations of various vegetative treatments.
- H. The proposed locations of re-established streams, ditches or drainage channels to provide for site drainage.
- I. The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Management Practices to be used for preventing or controlling erosion and off-site siltation.
- J. Proposed locations of the measures to provide safety to persons and adjoining property.
- K. Segments of the mine that can be mined and reclaimed as an ongoing basis.
- L. The boundaries of the permitted area.
- M. The boundaries of the affected area for the anticipated life of the mine.
- N. The boundaries of the 100-year floodplain, where appropriate.
- O. Identify sections of mine where the final surface gradient will be achieved by grading and/or backfilling.
- P. A legend showing the name of the applicant, the name of the proposed mine, the north arrow, the county, the scale, the date of preparation and the name and title of the person who prepared the map.

THE REQUIRED RECLAMATION MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT. RECLAMATION MAP SHOULD BE THE SAME SCALE USED FOR THE SITE MAP.

#### IV. SCHEDULE FOR IMPLEMENTATION OF CONSERVATION AND RECLAMATION PRACTICES

19. As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas. Reclamation activities will be conducted simultaneously with mining operations.

20. Section 48-20-40(16)(1) of the S.C. Mining Act requires a time schedule, including the anticipated years for completion of reclamation by segments. This time schedule should meet the requirements of Section 48-20-90 of the Mining Act.

**SCHEDULE FOR IMPLEMENTING CONSERVATION AND RECLAMATION PRACTICES**

Conservation & Reclamation Practices	Segment # or Area	Planned		*Applied		Notes
		Amount	Year	Amount	Month/Year	
Establish Mine areas and flag buffer area	PA					See Note 2, maintain LOM
Install survey control markers and clear mine area if necessary	PA					See Note 1, maintain LOM
Post Warning signs	PA					Maintain LOM
Install stormwater BMPs; maintain sediment basin	AA					See Note 3, maintain LOM
Maintain haul roads, gate	AA					Maintain LOM
Excavate rim ditch/ dewater	by segment					constructed as needed when segments are opened
Clear/ stockpile topsoil	1	17.3	2019			See Note 4
Remove/ stockpile overburden	1	0.3	2019			See Note 5
Excavate/ grade outer slopes	1	1.2	2019-2022			See Note 6
Clear/ stockpile topsoil	2	27	2020			See Note 4
Remove/ stockpile overburden	2	0.3	2020			See Note 5
Topsoil, fertilize, seed final slopes	1	1.2	2020-2023			See Note 7
Excavate/ grade outer slopes	2	1.2	2020-2023			See Note 6
Inspect, repair, maintain	1	17.3	2019-release			See Note 8
Clear/ stockpile topsoil	2	0.6	2021			See Note 4
Remove/ stockpile overburden	2	0.3	2021			See Note 5
Topsoil, fertilize, seed final slopes	2	1.2	2020-2023			See Note 7
Excavate/ grade outer slopes	3	0.6	2020 - 2025			See Note 6
Inspect, repair, maintain	2	27	2023-release			See Note 8
Submit reclamation schedule for future reserves			2020			See Note 9
Topsoil, fertilize, seed final slopes	3	0.8	2020 - 2025			
Inspect, repair, maintain	3	5.1	2020 - 2025			


Notes:

1. Two permanent survey markers within the permitted area shall be located at least 100 feet apart as required in R.89-130.
2. Markers should be located prior to the start of mining. Permanently flag buffers associated with wetlands.
3. Best Management Practices shall be installed and maintained as necessary to ensure stormwater is retained on site. Sediment basin shall be cleaned of sediment as necessary to ensure basin is functioning properly.
4. Enough topsoil for reclamation must be stockpiled at the site.
5. Minimize the amount of disturbed acreage to reduce the potential for offsite sediment and erosion control concerns.
6. Slopes shall be graded as excavations progress.
7. Reclamation of mined out areas should be initiated within 180 days of termination of mining in those areas or earlier if grading/ soil preparation/ seeding is feasible.
8. Reclamation/ vegetation shall be inspected on a regular basis and corrective measures taken to prevent erosion of final slopes until the area is released by the Department as meeting reclamation standards
- 9. Reclamation schedule must be revised, submitted to DHEC and approved prior to initiating activity in future reserves**

AA – Affected Area    BMPs – Best Management Practices    LOM – Life of Mine    PA – Permitted Area    PL – Property Line    ST – Sediment Traps  
 SW – Stormwater    TS – Topsoil    WL - Wetlands

\* Completed by the Department

YOU ARE NOTIFIED THAT:

- 1) You, the operator, must file an application to modify the reclamation plan in the event actual reclamation varies from the set forth hereinabove; *and*
- 2) If at any time it appears to the Department that the activities under the reclamation plan are failing to achieve the purposes and requirements of the S.C. Mining Act, the Department may modify the RECLAMATION PLAN in accordance to Section 48-20-150.

*Chris Bauer, Member/Manager*

Signature of Applicant/Operator or his Authorized Representative

*Chris Bauer, Member/Manager*

Printed Name of Applicant/Operator or his Authorized Representative

*Member/Manager*

Title

*8/23/2019*

Date

**Department Use Only**

Permit No.: \_\_\_\_\_ Date Application Approved: \_\_\_\_\_ Date Bond Rec'd: \_\_\_\_\_

Bond Amount: \_\_\_\_\_ Blanket or Single Bond: \_\_\_\_\_ Permit Issuance Date: \_\_\_\_\_

**ACTION TAKEN ON THIS RECLAMATION PLAN**

\_\_\_\_\_ Approved \_\_\_\_\_ Denied \_\_\_\_\_ Approved with Additional Terms and Conditions

By: \_\_\_\_\_  
DIVISION DIRECTOR

Date: \_\_\_\_\_