



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
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SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
BUREAU OF LAND AND WASTE MANAGEMENT
DIVISION OF MINING AND SOLID WASTE MANAGEMENT
2600 Bull Street; Columbia, SC 29201

RECLAMATION PLAN
FORM MR-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: Soilutions, LLC

2. Name of Proposed Mine: Edge Road Mine County: Horry

3. Home Office Address: 255 Welcome Dr. 503-968-1637
(Street and P.O. Box) (Telephone No.)

Myrtle Beach SC 29573 None
(City) (State) (Zip Code) (Fax. No.)

4. Local Office Address: Same No office at mine
(Street and P.O. Box) (Telephone No.)

(City) (State) (Zip Code) (Fax. No.)

5. Designate to which office Official Mail is to be sent:

Home Office: x Local Office:

6. Name of company personnel and their title to be the contact for official business and

correspondence: Ethan Epps, Member

## II. ENVIRONMENTAL PROTECTION

### 1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.

During mining, wildlife areas, woodlands, cropland and residences will be protected with a variety of methods. Protection of these resources can be achieved in part by observing setbacks to property lines, conducting concurrent reclamation as feasible, using accepted agronomic practices to establish temporary and permanent vegetation. Wildlife may be temporarily displaced during mining; however, experience has shown once mining ceases and reclamation completed new wildlife habitats are formed and populated by indigenous animal species.

### 2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.

Additionally, all surface waters will be protected by complying with the NPDES permit requirements. Parameters are set to be protective of aquatic life in the receiving streams and human health and safety. Stormwater will be managed using best management practices and complying with SC DHEC's *NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining*. Furthermore, the operator will implement accepted soil and water conservation practices to stabilize disturbed soil. These practices include, at a minimum, proper soil preparation (e. g, grading, scarifying, fertilizing, etc.), seed selection, planting techniques and maintenance until vegetation becomes self sustaining.

Potential for groundwater contamination will be low to non-existent because mining will not use chemicals. Groundwater drawdown will be limited in area by pumping groundwater from active segments into previous mined segments. After mining, groundwater levels will rebound to approximate original elevations.

### 3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.

A cultural resources reconnaissance survey conducted by Terracon Consultants; Inc. determined no historic resources will be adversely affected. Terracon's report is being submitted with this application.

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

Proper reclamation of the mine site will include stabilizing all disturbed soils with vegetation, removal of mine equipment, cleanup of any spillage of petroleum products, and removal of scrap material. Buffer for active mine segments and sediment basin will provide protection to fisheries in nearby streams. Establishing 3:1 slopes around the pit edge will remove hazardous conditions for the public and indigenous animal populations.

### 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.

Site will not use a process plant. Fugitive dust emissions from mobile equipment will be controlled during active mining with use of water truck. Mine is in a rural area with significant buffers between mining and nearby homes or businesses. After mining, vegetation will be established to stabilize the soil and prevent windblown dust from occurring.

### III. RECLAMATION OF AFFECTED AREA

6. State useful purpose(s) the affected land is being proposed to be reclaimed to. 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 _____                                | g. Recreation _____                              |
| c. Woodlands _____                                  | h. Wetlands _____                                |
| d. Residential _____                                | i. Park _____                                    |
| e. Commercial _____                                 | j. Other _____                                   |

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.

Final maximum gradient for pit slopes to approximately 5 feet of pond depth will be 3:1. From approximately 5 feet of water depth to the pit floor, the slope will be 2:1.

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 bring 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 (ie. adequate distance between the property line and edge of highwall). Operator should show calculations or other appropriate information to demonstrate that there is adequate material in backfilling and grading to meet the requirements for final slope.

Backfilling will not be necessary to achieve the 3:1 slope. All required sloping can be achieved by grading or mining on a slope. Any overburden removed will be backfilled in the pit.

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.

Mine operator will follow soil test, seed bed preparation, seed mix selection, soil amendments (fertilizer, lime, growth stimulants, etc.), cover and seeding rates based upon SC DOT's *Supplemental Technical Specification (SC-M-810-4 (07/17)) for Seeding*.

Revegetated site will be maintained with periodic inspections to detect areas with significant erosion, seed germination failure or significant plant die off. Site will be inspected after significant storm events to detect wash outs or gullies in planted areas. Damaged areas will be repaired where necessary by fixing erosion damage and reseeding as necessary.

- 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 exist for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit have discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes).**

Reclamation will not require a closure plan. A) The sand and clay are chemically inert and will not generate acid waters. B) This mine qualifies for coverage under the *NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities (SCG731593)* with no additional parameters other than pH and TSS. C) No chemicals will be used in the mining process.

- 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.**

A process plant will not be a part of this mine. No mine waste will be generated.

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

At the end of mining, the sediment pond will remain. The berm between sediment pond and segment 2 will be below the anticipated pool level and allow the pond to extend throughout the full mined area.

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

Not applicable - no streams will be diverted or relocated by mining. All streams and surface drainages and delineated wetlands will be protected by minimum 50-foot upland buffers.

- 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?**

Areas that have undergone final reclamation practices will be maintained through periodic inspections and conducting any necessary repairs in a timely manner.

- 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, signs, benching, guardrails and boulders.**

The upper 10 feet of the mine highwall will be graded to 3:1 slope. This slope will extend below the anticipated pond level. From 10 feet down, the mine wall will be mined at a 2:1 slope and will remain to ensure slope stability. By extending the 3:1 slope beneath the water and also constructing shallow littoral zones at various locations, it provide gentler slopes that would allow for exiting the pond should someone fall in.

- 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.**

Areas of the affected land will be properly graded to prevent unwanted pools of water from collecting and prevent foul water from forming. The pond created by mining will comply with the required depth of a minimum of 4 feet over 50% of the pond surface area.

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

No structures will remain after mining is terminated.

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 of 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 cannot proceed simultaneously with mining in these areas.

Not applicable

### Edge Road Mine

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	
Mark 50' wetland and property line buffers	WB-1, WB-2 & all property line buffers	6,050 lf	2022			
Establish silt fence/brush barriers	Seg 1	1,800 lf				
Establish pit sump for pit dewatering and sediment control during construction of sediment pond	Seg 1	1	2022			
Grade pond slopes to 3:1 grade, topsoil revegetate	Seg 1	1.1 ac	2023			
Establish littoral shelves	Seg 1	0.7 ac	2023			
Establish silt fence/brush barriers	Seg 2	1,700 lf	2023/24			
Grade pond slopes to 3:1 grade, topsoil revegetate	Seg 2	0.8 acs	2026/27			
Establish littoral shelves	Seg 2	0.9 ac	2027			
Establish silt fence/brush barriers	Seg 3	900 lf	TBD			
Grade pond slopes to 3:1 grade, topsoil revegetate	Seg 3	0.4 ac	TBD			
Establish littoral shelves	Seg 3	0.2 ac	TBD			
Establish silt fence/brush barriers	Seg 4	1,350 lf	TBD			
Grade pond slopes to 3:1 grade, topsoil revegetate	Seg 4	1.1ac	TBD			
Establish littoral shelves	Seg 4	0.8 ac	TBD			
End of mining, remove equipment	All		End of Mining			
Allow Pit to fill with water to create pond	Pit	+/- 23 ac				
Monitor for stable slopes and vegetation establishment and sustainability	All	2 growing seasons				

AA – Affected Area    BMPs – Best Management Practices    Fert. – Fertilize    LOM – Life of Mine    MW - Monitoring Well    PA – Permitted Area  
 PL – Property Line    SB – Sediment Basin    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.



Signature of Applicant/Operator or his Authorized Representative

JOSHUA K. EPPS

Printed Name of Applicant/Operator or his Authorized Representative

MEMBER & MANAGER

Title

1/12/2022

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: \_\_\_\_\_