



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

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."

I. APPLICANT INFORMATION

- 1. Name of Company: King Tract, LLC
2. Name of Proposed Mine: Southern Mine - King Tract County: Charleston
3. Home Office Address: 270 Carpenter Drive, Suite 520
Atlanta GA 30328 (770) 457-1611
4. Local Office Address: (same as above)
5. Name of company personnel and their title to be the contact for official business and correspondence: Jason A. Smithgall, VP
6. Location of Mine: S-10-584 (Seewee Road) Awendaw

II. ENVIRONMENTAL PROTECTION

- 1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.
BMPs will be initiated prior to and maintained for the duration of mining and reclamation activities. Mine areas are separated from adjacent resources by a forested buffer. In addition, a temporary earthen (overburden storage for reclamation) will be in place during active mining activities. Affected area will continually be graded to direct runoff to active mine pit for treatment.
2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.
In addition to the measures described above, silt fencing will be utilized to protect against runoff and sedimentation of adjacent areas. The detention system will be properly maintained throughout duration of mining activities along with adherence to BMPs. Dewatering will only occur when necessary and water sampling will continue.
3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.
There are no known significant cultural or historical sites located within the boundaries of the proposed permitted area. Proposed permitted area and future reserves consist of existing, mechanically prepped loblolly pine plantation.

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

Forested buffer zone will remain in place for the duration of mining and reclamation activities. The temporary overburden berm will also be in place during active mining activities. The detention system within the mine area will be properly maintained as well as sampling for Total Suspended Solids (TSS) and pH.

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.

Fuel storage for mining equipment will be properly operated and maintained. Surface water management will be properly maintained and monitoring of discharge from mining area will continue for the duration of mining activities.

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
- b. Agriculture
- c. Woodlands
- d. Residential
- e. Commercial
- f. Grassland
- g. Recreation
- h. Wetlands
- i. Park
- 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 slopes will not exceed gradients of 3:1. These areas will initially be temporarily grassed to be followed by permanent vegetated means following extraction.

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 slopes in unconsolidated material will be accomplished by backfill and grading of overburden berm surrounding mine area during active mining activities. Dozer and Excavator equipment will be utilized for achieving final slopes (26,400 yards of overburden). In addition, off-site clay, sand clay and topsoil will be available for final slope grades in the event of a shortfall of on-site overburden. A 50-foot wide clear zone for berm along margin of active mine area will allow for implementation of final slope grading activities. (50ac x 1600cy per acre X 4in depth =26,400cy berm)

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.

Following grading activities for final slopes, the affected area will be disked with drag harrow equipment. Upon completion a seed/fertilizer application will be applied at the rate of Bahia - 25lbs per acre, Clover - 25lbs per acre, Brown Top Millet - 50lbs per acre, rye 50lbs per acre / Fertilizer 10-10-10 @ 350lbs per acre & Lime 2,000lbs per acre. This application rate is based on soil sampling, etc. from existing, on-site GP-1 active mine area.

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).

The resulting mine area open water pond will be utilized for recreational purposes only. The potential for acid rock drainage is not present. The existing NPDES requirements for the existing on-site GP-1 mine area are for pH and TSS only. Chemically treated tailings or stockpiles will not be a part of the proposed mining operation.

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.

Screened topsoil and overburden will be stockpiled on-site and utilized for construction of temporary berm around margin of active mine area for duration of mining activities. The mine area will be graded to direct runoff to the active mine and integrated detention system. Trash and other debris will be transported to County landfill for disposal or contracted for collection and disposal.

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

The integrated detention system and sediment pond will be integrated into the resultant open water pond following the completion of mining and reclamation activities. The separation of mine area and detention/sediment pond will be excavated. The existing GP-1 area and proposed expanded mine area will be one open water pond.

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

Following active extraction activities, the level of discharge from the integrated detention system will be drastically reduced to small volumes. Existing BMPs (i.e. sediment traps, rock check dams, etc.) will be maintained until reclaimed mine area has stabilized.

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?

Site will be continually monitored and any required maintenance grading will be performed to protect against erosion and sedimentation prior to stabilization of mine area. Non-vegetated areas will be re-seeded and fertilized as needed to ensure stabilization and vegetative coverage.

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,

The site will be permanently posted with no trespassing signage and access roadway will be secured by locked gates. Existing forested buffers will remain. Final slopes will not exceed 3:1.

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.

Bottom of mine area will be appropriately graded to provide consistent pond bottom. Mine area will be graded to prevent ponding outside of and adjacent to resulting open water pond. Per required dewatering protocol for existing GP-1 area, a minimum water depth of 4' for at least 50% of the pond surface will be maintained following extraction activities.

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 associated with mining activities will remain following extraction and reclamation activities. The access roadway for existing GP-1 area and the proposed mine area will remain for access to mine area residual (future mine reserves and silvicultural management area).

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.
- The berm to be constructed with overburden material will be constructed/maintained to coincide with extraction activities. Mine will remain as open water pond following cessation of extraction. Final slope preparation will be on-going were practicable.

20. Section 48-20-40(16)(l) 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

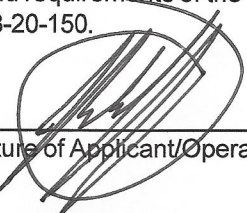
Conservation & Reclamation Practices	Segment # or Area	Planned		*Applied		Notes
		Amount	Year	Amount	Month/Year	
Wetland Delineation	Permit Area	59.47 ac	Completed			Completed. USACE JD is attached.
Buffer Zone & Berm	Mine Area	11.06 ac	2019			Maintained for duration of extraction
Detent./Sediment Pond	Mine Area	0.2 ac	2019			Maintained for duration of extraction
Est. Final Slopes	GP-1 Area	?	2019			Monitoring and maintenance of slopes
Est. Final Slopes	Mine Area	?	2024			Monitoring and maintenance of slopes

* 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



Judson Goff - Red Bay Environmental
Printed Name of Applicant/Operator or his Authorized Representative

CONSULTANT TO KING TRACT, LLC
Title

09/24/19
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: _____