



January 29, 2025

Martin Marietta Southeast Agg Operations, LLC
Attn: Ellen Price
3019 Riverwatch Pkwy
Augusta, GA 30907
ellen.price@martinmarietta.com

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Approval of Application and Reclamation Plan for a Mine Operating Permit
Issuance of an Individual Mine Operating Permit
Mine Permit #I-002403 | Henry Tract Mine | Florence County

Dear Mrs. Price:

The S.C. Department of Environmental Services (SCDES) has approved the application and reclamation plan for the Henry Tract Mine as of the date of this letter. SCDES has received the reclamation bond submitted in the amount of \$664,487.00.

With the receipt of the reclamation bond and the approval of the application and reclamation plan, this letter serves as official notification that the Individual Mine Operating Permit for the Henry Tract Mine is being issued as of the date of this letter. Enclosed are the permit document, reclamation plan, and mine and reclamation maps. Please note that Section 48-20-250 of the S.C. Mining Act states, "*No provision of this chapter supersedes, affects, or prevents the enforcement of a zoning regulation or ordinance within the jurisdiction of an incorporated municipality or county or by an agency or department of this State, except when a provision of the regulation or ordinance is in direct conflict with this chapter.*"

Should there be any questions or if we may be of further assistance, please do not hesitate to contact the project manager, Colby Myers, at 803-898-3079 or by e-mail at Colby.Myers@des.sc.gov. Colby is also the inspector for this site.

Respectfully,

A handwritten signature in blue ink that reads "Jeremy E. Eddy".

Jeremy E. Eddy, P.G.
Manager, Mining & Reclamation Program

Cc: Marty Lindler, Colby Myers, Brett Caswell, Kevin Yokim (Florence County), Craig Kennedy (Consultant), Jeffrey Phillips (MSHA)

Encl: Permit document, reclamation plan, and maps.



SC DEPARTMENT of
**ENVIRONMENTAL
SERVICES**

**INDIVIDUAL MINE
OPERATING PERMIT**

**Henry Tract Mine
Martin Marietta Southeast Agg Operations, LLC**

Martin Marietta Southeast Agg Operations, LLC, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002403, to operate the Henry Tract Mine in accordance with this Permit, the approved Reclamation Plan, the S.C. Mining Act (S.C. Code Sections 48-20-10 *et seq.*, 1976), and Regulations 89-10 *et seq.* The operator shall conduct this operation as represented in documents submitted to support the issuance of this permit.



JEREMY E. EDDY, P.C.

MANAGER - MINING AND RECLAMATION PROGRAM
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

PERMIT NUMBER: I-002403
ORIGINALLY ISSUED: January 29, 2025
MODIFIED: N/A



Part I: GENERAL INFORMATION

In accordance with Section 48-20-60 of the South Carolina Mining Act, this Mine Operating Permit will remain valid unless it terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation Plan*.

The approved *Permit Application, Reclamation Plan*, and all supplemental information referenced herein, are an integral part of this permit. *Land Entry Agreements and Mine Maps* as identified in Part II and Part V, respectively, are also a part of this permit.

CONTACT INFORMATION:

Home Office Address: Martin Marietta Southeast Agg Operations, LLC
3019 Riverwatch Parkway
Augusta, GA 30907

Local Office Address: Martin Marietta Southeast Agg Operations, LLC
3019 Riverwatch Parkway
Augusta, GA 30907

Address for Official Mail: Same as Home Office Address

Company personnel and title to be the contact for official business and correspondence [South Carolina Department of Environmental Services (SCDES) should be notified in writing immediately of any change in contact, address, telephone or e-mail]:

Ellen Price, P.G.
Manager, Environmental Engineering

Telephone: 706-691-8785
Email: Ellen.Price@martinmarietta.com

LOCATION: The mine is located on the Gresham Quadrangle, Pamplico South Quadrangle, Johnsonville Quadrangle, and Prospect Crossroads Quadrangle, SC U.S.G.S. 7.5' Topographic Maps. The approximate geographic coordinates for the site are:

Latitude: 33.880085

Longitude: -79.500019

LOCATION DESCRIPTION: The operation is located in Florence County, approximately 1 mile(s) southeast of Salem, S.C. Specifically, the site is located [Click here to enter text](#) approximately 500 feet west of the intersection of Hwy 378 and McArtor Lane.

Part II: PERMITTED LAND

This permit allows Martin Marietta Southeast Agg Operations, LLC, also referred to as the operator, to conduct mining operations within the permitted land as defined through the *Land Entry Agreement* submitted as part of the application. Permitted land as defined by Section 48-20-40(18) is "the affected land in addition to (a) lands identified for future mining to become affected land; (b) and undisturbed or buffer area that is or may become adjacent to the affected land." Therefore, this permit grants the operator the right to conduct active mining operations within the specified affected land, delineate land for future mine areas as future reserves, and to establish undisturbed buffer zones to mitigate any adverse effects to the surrounding environment.

AFFECTED LAND: 189.2 acres of land are to be affected by Martin Marietta Southeast Agg Operations, LLC under the current mine plan; 189.2 of the affected acres are currently bonded. The affected acres are derived from the operator's response in the *Application for a Mine Operating Permit* and are shown on the approved mine map(s).

FUTURE RESERVES: 0.0 acres are identified as future reserves and are specified on the mine site map. Prior to the initiation of activity in future reserves, the operator shall submit detailed mine and reclamation plans to SCDES for approval.

BUFFER AREAS: 71.5 acres are identified as buffer area, setbacks, or areas that will not be disturbed beyond the pre-mine natural state. These buffer areas are identified on the mine site map. Acres designated as buffer areas are not bonded under the reclamation bond. Any activity within the buffer areas (e.g. removal of timber) shall require **prior** notification and approval by SCDES.

TOTAL PERMITTED AREA: 260.7 acres as submitted on the *Land Entry Agreement(s)*.

LAND ENTRY AGREEMENTS: The operator is required to furnish and maintain up-to-date *Land Entry Agreements* on all lands covered under this permit. Any change in ownership on any portion of land covered by this permit, the operator is responsible for furnishing the appropriate and completed *Land Entry Agreements* (Forms MR-600 or MR-700) to SCDES within 30 days of the change of ownership.

Land Owner(s) as Listed on *Land Entry Agreement(s)*:

TMS #: 00418-02-006, Henry Family Farm Properties, LLC

Total acres of the contiguous tract(s) of land for which the permit is granted:

OWNED 0.0 LEASED 260.7 TOTAL 260.7

Part III: FINANCIAL ASSURANCE FOR RECLAMATION

The financial assurance for reclamation is based upon the total affected acres. Pursuant to Section 48-20-70 and R.89-200, the financial assurance for this mining permit is set at \$664,487.00. The financial assurance shall remain in force and continuous throughout the life of the mining operation and shall only be released, partially or in full, back to the operator after the operator has completed reclamation in accordance with the approved *Reclamation Plan* and the minimum standards in R.89-330.

Part IV: MINE OPERATIONS

Martin Marietta Southeast Agg Operations, LLC is permitted to mine sand at the Henry Tract Mine. The maximum depth to the pit floor shall not exceed ± 0 feet mean sea level (to an approximate elevation of 50 feet below ground surface as measured from the lowest ground surface elevation). Mining will take place on a tract of land leased by the referenced operator. This tract of land is identified in the submitted *Land Entry Agreement*.

MINE/PIT CHARACTERIZATION:

Sand, and possibly some gravel, will be removed from the bed of the pit using a hydraulic suction dredge. The dredge will pump the material to a processing plant on the bank, where it is screened, dewatered, and stockpiled. Excavators and loaders will be used to load material from the stockpiles onto trucks for transport offsite.

PROCESSING PLANT LOCATED ON MINE SITE:

The processing plant shall be centrally located, as designated by the mine map. The plant may consist of a grizzly, screens, and sand screws.

MINE DEWATERING:

The pit shall not be dewatered. If dewatering of the stockpile area becomes necessary due to heavy rains, water will be pumped into a sediment basin prior to discharge. Necessary discharge permits must be obtained prior to any discharge.

BLASTING:

Blasting operations are not permitted at this mine site.

NOISE MONITORING AND CONTROL:

The operator shall use Best Management Practices (BMPs) to minimize noise from the mine site. These noise BMPs shall include, at a minimum, proper maintenance of mufflers on equipment (trucks, trackhoes, pumps, etc.) and consideration of special buffering measures if planning to operate equipment during nighttime hours.

OTHER STATE OR FEDERAL PERMITS:

The operator must obtain, maintain, and update, as appropriate, all necessary State and Federal permits in order to construct and operate the mine.

Part V: MAPS

The mine site map was prepared by Kennedy Consulting Services. This map is further identified with the following SCDES map number and is part of the operating permit:

SM-2403-1V1 Mine Map Dated: October 13, 2023

The reclamation map was prepared by Kennedy Consulting Services. This map is further identified with the following SCDES map number and is part of the operating permit:

RM-2403-1V1 Reclamation Map Dated: July 27, 2023

Part VI: PROTECTION OF NATURAL RESOURCES

MINE SITE AND SURROUNDING AREA:

Prior to mining activities, this site's land use type was undeveloped; the site has been logged. The immediate area around this site is mostly undeveloped and rural residential. The topography of this area is slightly variable (i.e., mostly flat), with surface elevation ranging from 50 - 60 ft. MSL. The site is located south of Hwy 378 and east of State Rd SC 21-225. There is a residential area to the northeast and a permitted mining site (I-002262) to the northwest of the site.

PUBLIC SAFETY:

A gate shall be installed at the entrance to the mine site and kept locked during inactive periods. *Warning* and/or *Danger* signs shall be posted around the perimeter of the property. In the future, if determined to be necessary by SCDES, an appropriate fence shall be installed around the affected area.

Operator shall use BMPs to prevent accumulation of sediment/soil on public roads carried by trucks and other vehicles exiting the mine site; any accumulations shall be removed by the operator on a daily basis or more frequently if needed. To reduce the potential of trackout on public roads, the operator shall construct a crushed stone "mud mat" that extends the width of the haul road and stretches a minimum of one hundred (100) feet in length.

The operator shall establish a protected area or establish procedures to minimize fuel spillage or incidental spillage of other petroleum products during storage, refueling of equipment or in the performance of routine maintenance on equipment. Contaminated materials resulting from contact with petroleum products shall be removed from the site and disposed of properly to prevent contamination to ground and surface water resources.

During times of inactivity or for final reclamation, slopes shall be constructed no steeper than a 3H:1V gradient in order to minimize the potential for landslides or unstable mine walls. The operator is responsible for maintaining stable mine walls and appropriate setbacks to prevent significant slumping that may encroach into non-permitted lands.

PUBLICLY-OWNED PARKS, FORESTS, OR RECREATION AREAS:

There are no publicly owned parks, forests, or recreation areas near this mine site.

WETLANDS AND SURFACE WATER AREAS:

Deep Creek runs to the east and several unnamed tributaries exist on the mine site, as shown on the mine map. Furthermore, there are wetlands to the west, south, and east of some parts of the mine site.

The operator shall maintain a minimum 50ft undisturbed buffer between all land disturbance activity and any wetlands shown on the mine map. This buffer shall be permanently flagged prior to the initiation of any mine activity. The flags shall be maintained throughout the active mine operation of the site. The operator is allowed to discharge accumulated stormwater—that meets NPDES permit limits—into wetlands through a regulated NPDES outfall.

The operator shall comply with the NPDES General Permit for Non-metallic Mineral Mining and Stormwater Pollution Prevention Plan developed for the mine.

SIGNIFICANT CULTURAL OR HISTORICAL SITES:

Per the *Cultural Resources Reconnaissance Survey of Approximately 365 Acres at the Proposed Henry Tract Mining Site* conducted by Terracon on May 8, 2023, no archaeological sites or isolated finds were identified on this site.

If archaeological materials are encountered prior to or during the construction of mine facilities or during mining, the S.C. Department of Archives and History and SCDES should be notified immediately. Archaeological materials consist of any items, fifty years or older, which were made or used by humans. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, oyster shell, worked wood, bone and stone, metal and glass objects, human skeletal remains, and concentrations of charcoal and stones below the ground surface. These materials may be present on the ground surface and/or under the surface of the ground.

WILDLIFE:

Common wildlife typical to this area can be found in and around this site; the Spotted Turtle (*Clemmys guttata*) and Northern Long-Eared Bat (*Myotis septentrionalis*) are threatened or endangered species believed to inhabit this area.

Potential habitat for spotted turtles was observed on the site and include shallow aquatic wetland habitats with abundant vegetation and perennial streams. See Part X: *Additional Terms and Conditions #3* for additional information related to the protection/relocation of this species.

Potential summer habitats for the Northern Long-eared Bat were observed within the pine-mixed hardwoods, forested wetlands, and some older planted pines. No suitable winter habitats were observed. See Part X: *Additional Terms and Conditions #4* for additional information related to the protection/relocation of this species.

VISUAL SCREEN:

To appropriately screen the operation from view, the operator shall maintain a minimum 50ft. undisturbed buffer between mining activity and all property lines, as shown on the mine map. A vegetated earthen berm shall be constructed and maintained on the mine side of this undisturbed buffer along Hwy 378.

ACID WATER GENERATION:

Acid water is not anticipated to be generated from the oxidation of existing minerals currently found on this site.

AIR QUALITY:

The mine operator will use appropriate measures (e.g. water truck, dust suppressants) to control fugitive dust created by moving equipment along haul roads. The operator, where feasible, shall establish vegetation in non-active mine areas barren of vegetation to stabilize the soil and reduce potential for wind erosion and dust emissions.

Part VII: STANDARD CONDITIONS OF MINE OPERATING PERMIT

SURVEY MONUMENTS:

In accordance to R.89-130, the operator shall install and maintain the two required permanent survey monuments, or control points, within the permitted area as shown on the mine site map. At the discretion of SCDES, the operator may be required to mark the area to be affected with flagging or other appropriate measures.

RIGHT OF ENTRY:

Pursuant to Section 48-20-130 and R.89-240, the operator shall grant SCDES and/or duly appointed representatives access to the permitted area for inspection to determine whether the operator has complied with the reclamation plan, the requirements of this chapter, rules and regulations promulgated hereunder, and any terms and conditions of this permit.

RECORDS RETENTION:

All records are to be maintained through additional terms and conditions of this permit or by regulations. Records shall be kept on site or at the office identified for receipt of official mail and open for inspection during normal business hours. The records shall be maintained for a minimum of three (3) years or as specified by SCDES. The operator shall furnish copies of the records upon request to SCDES.

PERMIT MODIFICATIONS:

Pursuant to Section 48-20-80, the operator may modify the permit and/or *Reclamation Plan* upon approval by SCDES. Requests for permit and/or *Reclamation Plan* modifications may be made to SCDES on Form MR-1300. The operator shall submit any requested supporting data for consideration during SCDES's evaluation of the modification request. If a modification request is determined to be substantial by SCDES, the modification request will be public noticed pursuant to R.89-100 and a modification fee will be required as specified in R.89-340. If SCDES determines activities proposed under the *Reclamation Plan* and other terms and conditions of the permit are failing to achieve the purpose and requirements of the S.C. Mining Act and Regulations, SCDES shall notify the operator of its intentions to modify the permit and/or *Reclamation Plan* pursuant to Section 48-20-150.

TRANSFER OF PERMIT:

Pursuant to Section 48-20-70, this permit may be transferred to another responsible party. The transfer of the permit must be conducted in accordance with R.89-230. The transferor of the permit will remain liable for all reclamation obligations until all required documents, plans, and the replacement reclamation bond have been submitted and approved by SCDES. The transfer will be considered complete when all parties have received notification by certified letters of the approval of the transfer by SCDES.

DURATION OF MINE OPERATING PERMIT:

In accordance with Section 48-20-60, this Mine Operating Permit will remain valid unless this permit terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The proposed anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation Plan*.

Pursuant to R.89-80(B), the operator shall conduct reclamation simultaneously with mining whenever feasible. Reclamation shall be initiated at the earliest practicable time, but no later than 180 days following termination of mining of any segment of the mine, and shall be completed within two years after completion or termination of mining on any segment of the mine.

Part VIII: ENFORCEMENT ACTIONS

Pursuant to Section 48-20-30 of the S.C. Mining Act, "SCDES has ultimate authority, subject to the appeal provisions of this chapter, over all mining, as defined in this chapter, and the provisions of the chapter regulating and controlling such activity." This allows SCDES to assist, cooperate with, or supersede other State agencies in taking

enforcement action on violations of the State Regulations or violations of the S.C. Mining Act to ensure the purposes of this Act are enforced.

The operator shall comply at all times with all conditions of this mine operating permit. Non-compliance with this mining permit, statute, or regulations could lead to permit revocation and bond forfeiture pursuant to Sections 48-20-160 and 48-20-170 or other enforcement action allowed by law.

Compliance with the Mine Operating Permit requires the operator to conduct the mining operation as described in the approved *Application for a Mine Operating Permit*. Variance from the *Application for a Mine Operating Permit*, this permit, statute or regulation, without first receiving SCDES approval, shall be deemed non-compliance with the permit.

An operator or official representative of the mine operator who willfully violates the provisions of the S.C. Mining Act, rules and regulations, or willfully misrepresents any fact in any action taken pursuant to this chapter or willfully gives false information in any application or report required by this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined not less than one hundred dollars nor more than one thousand dollars for each offense. Each day of continued violation after written notification shall be considered a separate offense.

The operator is responsible for all mining activity on the permitted mine site.

Part IX: REPORTS

ANNUAL RECLAMATION REPORTS:

The operator shall comply with Section 48-20-120 and Regulation 89-210 and submit an *Annual Reclamation Report* on Form MR-1100 as supplied by SCDES. The form for the report will be made available to the operator electronically. The operator should receive access to the report form from SCDES by July 1 of each year; however, the operator is ultimately responsible for obtaining the *Annual Reclamation Report* form and is not excused from penalty fees for failure to submit the report on time.

The Annual Operating Fee is a part of the *Annual Reclamation Report*. Failure to submit a complete *Annual Reclamation Report* and fee, in accordance with Section 48-20-120 and R.89-340, will result in a late penalty payment. The *Annual Reclamation Report* and Annual Operating Fee are required if there is any permitted land not fully reclaimed and released by SCDES by June 30 of *each* year.

SPECIAL REPORTS:

SCDES may at any time request information, data, or explanations from the operator as to conditions relating to the permitted mine site. Such requests from SCDES shall be made in writing to the operator with an appropriate time frame stated for the submittal of the requested information to SCDES. The operator must produce the information requested within the timeframe specified by SCDES.

Part X: ADDITIONAL TERMS AND CONDITIONS

1. Temporary or permanent placement of refuse and debris (e.g., concrete, brick, asphalt) from off-site locations is prohibited without approval by SCDES. Topsoil fill approved by SCDES may be brought in from off-site sources only for the purposes of mine land reclamation.

2. County National Floodplain Insurance Program Manager: A permit from the County National Floodplain Insurance Program Manager is to be obtained if deemed necessary before impacts occur to the FEMA special flood hazard area located on this site.

3. Spotted Turtles: The operator will avoid construction in areas within or adjacent to aquatic resources from January 15th through May 31st. Prior to any construction activity, the operator will install silt fencing from November 15th

through January 15th adjacent to all aquatic resources onsite. Silt fencing will include 45-degree arms to direct spotted turtles to the uplands adjacent to the waterbody and away from the construction site. The 45-degree arms will be placed outside of the 50ft wetland buffers. Additionally, silt fence arms should extend at least 50 feet and extend in each direction so that the ends of each 45-degree angle to the fence meet to form a triangle. Silt fencing will remain in place throughout the duration of the proposed construction activities. Prior to construction, the operator will monitor the silt fencing to ensure it is effectively working properly on a monthly basis. This should effectively exclude the species from the project area prior to construction activities. Once construction activities begin, the silt fence shall be monitored weekly for the integrity of the fencing and the presence of spotted turtles. If spotted turtles are encountered, the SCDNR state herpetologist shall be notified by the operator immediately.

4. Northern Long-Eared Bat: A majority of the potential habitat is within the forested wetlands and immediately adjacent buffer area. These areas are not to be impacted as part of the overall site plan. As a conservation measure, all tree clearing activities shall be conducted during the inactive season (November 1 through March 15) for northern long-eared bat.

APPENDIX A

MODIFICATIONS TO MINE PERMIT I-002403

NUMBER	DATE	DESCRIPTION OF MODIFICATION (PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Issued	1/29/25	PA = 260.7ac., AA = 189.2ac., FR = 0.0ac., B = 71.5ac. Permit issued.

MR-500 Reclamation Plan for an Individual Mine Operating Permit

Environmental Protection

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.

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

Mining will not create a pit water discharge. In mining with a dredge, the water used by the dredge to transport the sand in a slurry to the plant is returned to the pit without discharging to the outside environment. Stormwater within the permit area can be routed to the pit and retained in the permit area without discharge. Minor stormwater runoff from the outside flanks of berms will be controlled with silt fencing, brush barriers or diversion berms.

Potential for groundwater contamination will be low to non-existent because mining will not use chemicals.

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 will remove hazardous conditions for the public and indigenous animal populations.

Describe how applicant will comply with State air quality and water quality standards as established by the South Carolina Department of Environmental Services.

Mining, transporting, and processing the sand uses water with a dredging operation. The pit is inundated with water, the mined sand is transported to the plant as a slurry. The process plant uses water to screen and wash the sand. These practices eliminate fugitive dust. The 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.

Reclamation of Affected Area

State useful purpose(s) the affected land is being proposed for reclamation.

Grassland
Lake or Pond

Feasibility Documentation Attachment

NONE PROVIDED

Comment

NONE PROVIDED

Will the final maximum surface gradient (slope) in soil, sand, or other unconsolidated materials be steeper than 3 Horizontal : 1 Vertical (18 degrees or 33 percent)?

No

How will the final slopes in unconsolidated material be accomplished?

All slopes above normal pool level of the pond will be accomplished by grading to final 3:1 grade.

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).

Final slopes calculations or other supporting information attachment(s)

NONE PROVIDED

Comment

NONE PROVIDED

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) Planned Soil Test

Soil analysis will be performed to determine the need for pH adjustment and nutrients. Different soils will be sampled separately. Soil samples will be taken in advance of planting. Soil samples will be submitted to the cooperative NRCS or Clemson extension services or commercial lab for analysis.

(b) Site Preparation & fertilization

Grading, shaping, and other earth moving will be completed to the extent necessary to permit seeding or planting. Tillage shall be the minimum needed to break compaction; incorporate fertilizers when incorporation of them is required; and provide enough loose soil to cover the seed when seed are to be drilled or covered by harrowing or cultipacking.

Soil amendments will be added as necessary to promote conditions suitable for plant growth (i.e., organic matter). Agricultural limestone will be uniformly spread and incorporated as soon as possible to allow for the pH adjustment. Incorporation also benefits relatively immobile nutrients such as phosphorus when needed. Type and rate of fertilization will be determined bases upon soil analysis.

(c) & (d) Seed or Plant Selection and Seeding Rates

Plants shall be selected based on species characteristics, site and soil conditions, the planned land use and maintenance of the area, the time of year the planting is made, and the needs and desires of the land user. Availability of seed will be one of the criteria for plant selection.

Coastal Plain

Spring Seeding Mix

Grass or legume Optimum

Planting Date Seeding Rate

(# per acre) Comments

Browntop millet April- August 10 Serve as short term cover

Bermudagrass (common)

or

Coastal Panicgrass March-June

March-May 4

20 broadcast, 12 drilled Hulled (chaff removed)

Pure Live Seed (PLS)

Annual lespedeza (Kobe) Feb. - April 10 Use scarified seed and inoculate

Coastal Plain

Fall Seeding Mix

Grass or legume Optimum

Planting Date Seeding Rate

(# per acre) Comments

Rye (Abruzzi) or Oats Sept-Nov. 10 Serve as short term cover

Bermudagrass (common)

or

Switchgrass Aug-Oct

Oct-May 8

10 Unhulled (in chaff)

Crimson clover (optional) Sept-Oct 10 Serve as short term cover, inoculate

(e) Maintenance

The revegetated site will be maintained through periodic inspections to detect areas with significant erosion, seed germination failure or significant plant die off. Additionally, 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 reseeded as necessary.

Does the possibility exist 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)?

No

Describe the methods to control contaminants and permanently dispose any mine waste. This includes any soil, rock (overburden), mineral, scrap, tailings, fines, slimes, or other material directly connected with the mining, cleaning, and preparation of mineral substances mined. It also includes all waste material deposited on or in the permit area from any source.

The mine waste generated will be silt and clay sized particles (◆fines◆) that will be removed from the sand product and deposited in the tailings pond and segment 1 of the mine. The fines will be allowed to dewater and will be revegetated to stabilize.

Describe the method of reclaiming settling and/or sediment ponds.

Sediment ponds will not be necessary in this mining operation.

Describe the method of restoring or establishing stream channels, stream banks, and site drainage to a condition to minimize erosion, siltation, and other pollution.

Not applicable - no streams will be diverted or relocated by mining. Streams and wetlands will be protected with a minimum 50-foot buffer.

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.

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.

All slopes above normal pool level of the pond will be graded to a maximum of 3:1 slope to ensure slope stability and remove the danger of accidental falls.

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 ponds created by mining will meet the criteria for ◆pond◆ reclamation. Proper grading on other areas not mined will ensure foul pools of water will not form.

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.

Attach a copy 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 through P - see below):

Salem Sand-Henry Tract RECLAMATION MAP-(4)-24X36 200 sht 3 of 3.pdf - 11/05/2024 02:22 PM

Comment

NONE PROVIDED

- 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.

Schedule for Implementation of Conservation and Reclamation Practices

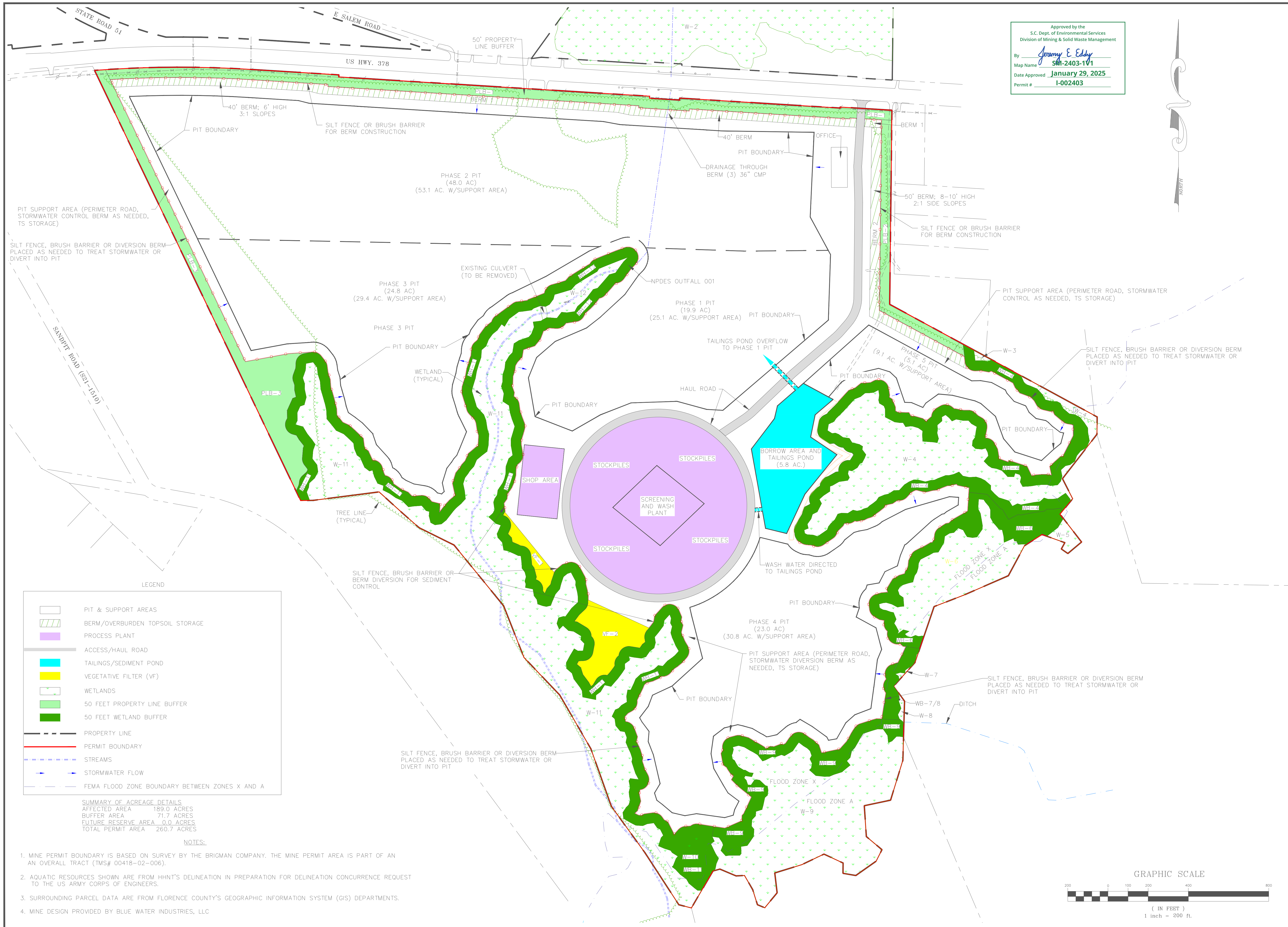
As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed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

Not applicable

Schedule for Implementing Conservation and Reclamation Practices

Conservation & Reclamation Practices	Segment # or Area	Planned Amount	Planned Year	*Applied Amount	*Applied Year	Notes
1. Mark Wetland & Property Line Buffers	Process Plant, Shop, Plant, Tailings & HR/Office	5,600 FT	2025			Where wetlands buffers are adjacent to these facilities
2. Construct and vegetate earthen berm 2 along PLB 2	Office, Haul Rd & Process Plant	1.7 acres	2025/26			1,400' x 50'
3. Establish stormwater diversions along WB-11 near shop area and plant	Shop & Process Plant	1,500 ft	2025/26			NONE PROVIDED
4. Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet.	Ph 1	2.2 acres	2027/28			Portions of seg 1 adjacent to plant may not be feasible until end of mining. Seg 1 ♦ tailings overflow;
5. Mark wetland buffer and property line buffers	Ph 2	4,600 feet	2028/29			Wetland buffer ♦ 300 ft Property line buffer ♦ 4,300 ft
6. Construct Berm 1; Berm constructed when tree removal is within 200 feet of the north pit wall	Ph 2	3.5 acres total	TBD			NONE PROVIDED
7. Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet.	Ph 2	5.1 acres	TBD			NONE PROVIDED
8. Mark wetland buffer and property line buffers	Ph 3	3,800 feet	TBD			Wetland buffer ♦ 2,900 ft Property line buffer ♦ 900 ft
9. Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet.	Ph 3	4.6 acres	TBD			NONE PROVIDED
10. Mark wetland & PL buffer	Ph 4	5,600 feet	TBD			NONE PROVIDED
11. Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet	Ph 4	7.9 acres	TBD			NONE PROVIDED
12. Mark wetland & PL buffer	Ph 5	1,200 feet	TBD			NONE PROVIDED
13. Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet	Ph 5	3.9 acres	NONE PROVIDED			NONE PROVIDED
14. Remove all equipment and stockpiles, regrade and revegetate	Plant, shop & entrance	25.7 acres	TBD			NONE PROVIDED
15. Monitor reclamation until DHEC approves and releases from bond	All phases	NONE PROVIDED	NONE PROVIDED			NONE PROVIDED

*Applied fields to be completed by department



Approved by the
S.C. Dept. of Environmental Services
Division of Mining & Solid Waste Management

By: *Jeremy E. Eddy*
Map Name: **SM-2403-101**
Date Approved: **January 29, 2025**
Permit #: **I-002403**

LEGEND

[Symbol]	PIT & SUPPORT AREAS
[Symbol]	BERM/OVERBURDEN TOPSOIL STORAGE
[Symbol]	PROCESS PLANT
[Symbol]	ACCESS/HAUL ROAD
[Symbol]	TAILINGS/SEDIMENT POND
[Symbol]	VEGETATIVE FILTER (VF)
[Symbol]	WETLANDS
[Symbol]	50 FEET PROPERTY LINE BUFFER
[Symbol]	50 FEET WETLAND BUFFER
[Symbol]	PROPERTY LINE
[Symbol]	PERMIT BOUNDARY
[Symbol]	STREAMS
[Symbol]	STORMWATER FLOW
[Symbol]	FEMA FLOOD ZONE BOUNDARY BETWEEN ZONES X AND A

SUMMARY OF ACREAGE DETAILS

AFFECTED AREA	189.0 ACRES
BUFFER AREA	71.7 ACRES
FUTURE RESERVE AREA	0.0 ACRES
TOTAL PERMIT AREA	260.7 ACRES

NOTES:

- MINE PERMIT BOUNDARY IS BASED ON SURVEY BY THE BRIGMAN COMPANY. THE MINE PERMIT AREA IS PART OF AN OVERALL TRACT (TMS# 00418-02-006).
- AQUATIC RESOURCES SHOWN ARE FROM HNT'S DELINEATION IN PREPARATION FOR DELINEATION CONCURRENCE REQUEST TO THE US ARMY CORPS OF ENGINEERS.
- SURROUNDING PARCEL DATA ARE FROM FLORENCE COUNTY'S GEOGRAPHIC INFORMATION SYSTEM (GIS) DEPARTMENTS.
- MINE DESIGN PROVIDED BY BLUE WATER INDUSTRIES, LLC

REVISIONS

Date	Description
10-13-23	ENHANCED SEDIMENT CONTROL PRACTICES
10-13-23	REMOVED MINING FROM FEMA FLOOD ZONE A
10-13-23	SHOW NPDES OUTFALL 001
10-13-23	REMOVED EXISTING CULVERT FROM STREAM

Kennedy Consulting Services, LLC
Craig Kennedy, P.G.
KCS
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P.O. Box 364, Irmo, SC 29063
Mail: craigkennedy.kcs@gmail.com
Call: 803.960.2562

Salem Sand-Henry Tract Mine
Mine Map
Prepared for
Blue Water Industries, LLC
Florence County - South Carolina

Project No.: KCS 22-174
Date: 07-27-23
Approved by: RCK
Drawn by: B.C.
Scale: 1"=200'

Sheet No.
1
of
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