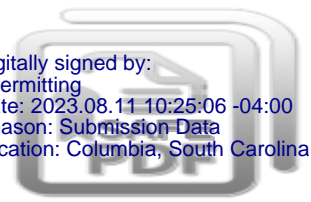


# Mines - Individual Operating Permit New

version 2.0

Digitally signed by:  
ePermitting  
Date: 2023.08.11 10:25:06 -04:00  
Reason: Submission Data  
Location: Columbia, South Carolina



(Submission #: HPW-JRQE-TA6ZX, version 2)

## Details

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Submission ID HPW-JRQE-TA6ZX

## Form Input

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### Form Instructions

The South Carolina Mining Act, Sections 48-20-10 through 48-20-310, Code of Laws of South Carolina, 1976, as amended provides in part: No operator may engage in mining without having first obtained from the Department an operating permit which covers the affected land and which has not been terminated, been revoked, suspended for the period in question, or otherwise become invalid. (Section 48-20-60)

### Applicant Information

How are you applying for this permit?

As a Business Entity

Type of Business Entity

Limited Liability Company (LLC)

Applicant (Business Entity)

Organization Name

Blue Water Industries LLC

| Phone Type | Number | Extension |
|------------|--------|-----------|
|------------|--------|-----------|

|          |              |  |
|----------|--------------|--|
| Business | 904-512-7706 |  |
|----------|--------------|--|

Fax

904-512-7707

Office Address

200 West Forsyth St., Suite 1200

Jacksonville, FL 32202

United States

### Additional Contact(s) (1 of 3)

Contact Roles

Mining Contact

Mining Billing

## Contact

**Prefix**

NONE PROVIDED

**First Name      Last Name**

Cliff                  Hicks

**Title**

Southeast Region Manager

**Organization Name**

Blue Water Industries LLC

**Phone Type      Number                  Extension**

Mobile              803-206-0248

**Email**

hicks@bluewaterindustries.com

**Address**

200 West Forsyth St., Suite 1200

Jacksonville, FL 32202

United States

## Additional Contact(s) (2 of 3)

**Contact Roles**

Additional Contact

## Contact

**Prefix**

NONE PROVIDED

**First Name      Last Name**

Steve                  Tillquist

**Title**

Manager

**Organization Name**

Blue Water Industries, LLC

**Phone Type      Number                  Extension**

Business            904-512-7706

**Email**

stillquist@bluewaterindustries.com

**Address**

200 West Forsyth St. Suite 1200

Jacksonville, FL 32202

United States

## Additional Contact(s) (3 of 3)

**Contact Roles**

Consultant

**Contact**

**Prefix**

NONE PROVIDED

**First Name      Last Name**

Craig              Kennedy

**Title**

Principal

**Organization Name**

Kennedy Consulting Services, LLC

**Phone Type    Number            Extension**

Mobile            803-960-2562

**Email**

craigkennedy.kcs@gmail.com

**Address**

PO Box 364

Irmo, SC 29063

United States

**Site Information**

**Name of Proposed Mine**

Blue Water Industries LLC/Salem Sand-Henry Tract Mine

**County**

Florence

**Proposed Mine Address**

331 E Hwy 378 Hanna

Pamplico, SC 29555

**Proposed Mine Physical Location**

33.88008474904242,-79.50001855947403

**Is the land to be mined owned or leased by the mine operator (both can be chosen, if applicable)?**

Leased

**Parcel(s) leased by mine operator:**

| Tax Map Parcel Number | Landowner name (as shown on county tax records) |
|-----------------------|---|
| 00418-02-006          | Henry Family Farm Properties, LLC               |

**Will river dredging take place under this permit?**

No

**MR-400 Application for a Mine Operating Permit**

**General Characteristics of Mine**

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**Materials to be mined:**

Sand


**Provide a detailed description of how the mine will be operated, including a list of equipment to be used.**

Sand will be mined with a hydraulic dredge. The pit is inundated with water and the dredge mines the sand under the water surface by extending a boom with a rotating cutter head. The cutter head dislodges the sand from the deposit, sucks it into the boom and pumps the loose sand from the dredge to the process plant as a water/sand slurry through a trailing pipe that connects the dredge to the process plant.

The mine site is prepared through timbering the mine area in approximately 35-acre blocks as mining advances. Typical earth moving equipment, trackhoe and endloaders will strip the topsoil, root mat, organics and any overburden ahead of the dredge. Topsoil will be stored in berms along perimeter of the pit. With groundwater averaging 10 feet below ground surface, the initial cut is excavated into the groundwater with a trackhoe to set the dredge. Once the dredge is set mining progresses as previously described.

**Will there be a process plant located at the mine site within the boundary of the permitted area?**

Yes

 An Air Construction permit may be required.

**Provide a brief description of the plant equipment and function of the plant.**

The plant will consist of screens, sand screw(s) in the wash plant to wash the fines from the sand, size the sand to commercial products and stockpiled with conveyors. The process plant receives the pumped mined sand/water slurry from hydraulic dredge and directs it through a grizzly to remove any debris, roots, etc. From there, the slurry will be dewatered and sand segregated into various sizes with screens and sand screws. Sand products will be moved by conveyors to stockpiles. The wash water from the plant will be initially directed to an excavated tailings pond in the early phases of mining. The tailings pond will capture the fines and the clarified water returned to the expanding pit. As mining in phase 1 creates an ever-expanding water filled pit, the plant return water will be eventually directed into phase 1 to store the fines and clarify the return water in the previously mined area.

**Do you anticipate blasting as part of the mining operation?**

No


**Has the site been mined in the past?**

No

**What is the expected maximum depth of this mine? Provide any additional information about the final depth of the mine that would be useful to the Department.**

50 feet BGS

**Determination of Permitted Acreage, Affected Acreage, & Reclamation Bond**


 Permitted acreage should include the following: 1) acres of land to be affected (excavation, processing plant, stockpiles, etc.); 2) future area(s) to be mined and 3) land to be used for buffer zones around the affected land. The permitted area should be the property described in the LAND ENTRY AGREEMENT(S) (FORMS MR-600 or MR-700).

**Total acres for which permit is being requested**

| Acres owned by the mine operator | Acres leased by the mine operator |
|----------------------------------|-----------------------------------|
|                                  | 260.7                             |

**Total Permitted Acres**

260.7

 Affected acreage may include: 1. Area used for sediment control ponds, 2. Area used for stockpiles of unprocessed minerals, 3. Area used for spoil (overburden) banks, topsoil and disposal refuse (exclusive of tailings impoundments), 4. Areas used for on-site processing facilities and stockpiles of processed minerals, 5. Areas used for tailings pond (waste material from mineral processing), 6. Area for access or haul roads, 7. Area for excavation during the period of this permit.

**Total Affected Acres**

189.2

**Will mining and reclamation be done in segments?**

Yes

**Please provide a detailed description of how the mine will be excavated and reclaimed in segments, including the size of the segments, the order in which they will be mined, and how many segments will be active at any one time.**

The mine is divided into 5 segments. Mining will begin in segment 1 and proceed into segments 2 & 3. Before mining can begin segments 4 & 5, the dredge will need to be relocated in a manner to be determined. Reclamation of the pit can only begin when mining is completed along a terminal wall. When mining has been completed along a maximum of 500 feet of terminal pit wall, the pit highwall will be sloped, topsoiled and revegetated according to the reclamation plan. Before mining begins in a new segment, all pit walls within the active segment will be reclaimed or reclamation will be underway.

**Bond Amount (based on total affected acreage above)**

See warning below

**A** Applicant may submit a reclamation cost estimate for mines that will affect greater than 25ac. Estimate should be based upon requirements in Regulation 89-200B. and accurately reflect the costs of an independent, third-party contractor.

**Reclamation Cost Estimate**

NONE PROVIDED

**Comment**

Reclamation bond estimate provided at the end of DHEC's technical review.

0.00 - 9.99 acres (bond amount - \$10,000)

10.00 -14.99 acres (bond amount - \$15,000)

15.00 - 24.99 acres (bond amount - \$25,000)

25.00 + acres (bond amount - \$25,000 or greater)

Applicant may submit a reclamation cost estimate for mines that will affect greater than 25 acres. Estimate should be based upon requirements in Regulation 89-200 B, and accurately reflect the costs of an independent, third-party contractor.

**Future Reserves Acreage**

0.0

**Buffer Acreage**

71.5

**Number of years for which this permit is requested:**

Life of Mine

**i** The requested number of years the permit is requested should coincide with the Schedule of Reclamation as proposed by the applicant in the RECLAMATION PLAN.

**Protection of Natural Resources**

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**Please describe how waste or process water will be treated.**

Process wastewater consist of pit water with the sand removed at the plant. Sand will be washed to remove fines and the fines (tailings) will be collected first in a tailings pond and later within the previously mined segment 1 area.

**Which type of permit from the Bureau of Water will/have you applied for?**

NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities (SCG730000)

**Provide information as to how stormwater and groundwater will be managed.**

All stormwater from mine disturbed areas will be routed into the pit. Stormwater from the outside flanks of berms will be managed with brush barriers, diversion berms or silt fencing to control sediment until the soil can be stabilized with vegetation.

As mining progresses and the pit expands, the relatively high-water table creates an expanding pond. The pit will not be dewatered but groundwater is pumped to the plant as a transport medium to deliver the sand to the plant. There will be no appreciable reduction in groundwater levels.

It is anticipated that there will not be a need to discharge pit water or wastewater through the NPDES outfall. The outfall is permitted to provide flexibility to discharge water offsite in the event of an extreme storm event.

**Please provide any sediment & erosion control designs in support of your application.**

NONE PROVIDED

**Comment**

NONE PROVIDED

**Will there be air contaminant emissions from your plant or mine requiring an Air Quality Permit?**

No

**Do you anticipate pumping of groundwater?**

Yes

**Describe pumping of groundwater.**

Groundwater will be pumped but not for the purpose of dewatering the pit. The dredge will pump the pit water creating the water/sand slurry that will transport the mined sand to the process plant. Once the sand is removed from the slurry, the water is returned to the pit. There will be no appreciable reduction in groundwater levels.

**Please provide any groundwater modeling reports, groundwater monitoring plans, or groundwater contingency plans in support of your application.**

NONE PROVIDED

**Comment**

Not necessary ♦ As mentioned, the groundwater levels will not be lowered and there is no danger of impacting nearby drinking water wells.

**Will jurisdictional wetlands be affected, filled or altered in any fashion that will require a Section 404 Dredge and Fill Permit?**

No

**Please provide any wetland delineation and/or USACE jurisdictional determinations or other permits in support of your application.**

[TBC's revised wetland delineation for Salem-Henry.pdf - 08/08/2023 04:16 PM](#)

[Gmail - Fwd SAC-2023-00414 Blue Water .. April 17, 2023 Original ACE Concurrence & April 23, 2023 Revised ACE Concurrence.pdf - 08/08/2023 04:16 PM](#)

**Comment**

The original wetland delineation package submitted to the Corps was revised and the revised wetland delineation map is attached. The Corps' concurrence emails are attached.

**Are there any known cultural or historic sites located within the proposed area to be permitted?**

No

**Please provide any cultural or historic reports in support of your application.**

[73237047 Henry Tract Mine Cultural Resources Reconnaissance Survey Final Report 5-8-23 Signed.pdf - 08/08/2023 04:17 PM](#)

[FLOR Henry Tract Mining Site-Cultural Resources Reconnaissance Survey-Draft\\_23RL0100.pdf - 08/08/2023 04:20 PM](#)

**Comment**

Cultural and Historic report by Terracon and SHPO concurrence letter

**Will any part of the permitted area be used as a laydown yard to temporarily store equipment, such as spare parts, scrap metal, or other waste?**

Yes

**Describe how waste, trash, scrap metal material, or garbage will be handled.**

Scrap metal and used mine materials are typically stored on-site and reuse and recycling when the opportunity arises. Trash, garbage, and waste materials will be removed from mine and disposed of in appropriately permitted landfills.

**Describe the wildlife or freshwater, estuarine or marine fisheries in the area of the mining operation. Also provide information about any ponds and/or streams that may be located in the proposed permitted area.**

Wetlands and streams are located along the southern, southeast and southwest boundaries of the mine permit area. One stream with associated wetlands extends into the northern mid-section of the permit area. All jurisdictional wetlands and streams will be avoided and protected with 50-foot upland buffers.

**Please provide any threatened or endangered species reports in support of your application.**

NONE PROVIDED

**Comment**

The property was timbered in the 2008 ♦ 2011 time frame. Property primarily consists of former agricultural land that was converted to pine trees. Pines within the mine area are young, less than 20 years old. Considering the previously agricultural practices and young pine growth, it is not anticipated to be habitat for any threatened or endangered flora or fauna.

**State the land cover and land uses on the permitted land area and contiguous tracts of land to the permitted land area.**

The mine permit area is located along Hwy 378, a four-lane highway. Adjacent properties are primarily agricultural land. Residential trailers are located on properties northeast of the mine and along Hwy 378.

Land cover is primarily young pines and overgrown agricultural fields. Hardwood trees are in the wetlands.

**Describe measures to be taken to insure against (1) substantial deposits of sediment in neighboring streams, rivers lakes or ponds; (2) landslides; (3) acid water formation and discharge.**

- 1) All stormwaters will be routed from mine disturbed areas into the pit.
- 2) The mined face will be beneath the water surface at an approximate 1:1 slope. At final reclamation, the banks of the pond above the groundwater level will be graded to 3:1 slope and revegetated.
- 3) Not applicable

**Safety**

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**Describe methods to be used during the time the mine operating permit is active to prevent physical hazards to persons and to any neighboring dwelling, house, school, church, hospital, commercial or industrial building or public road. If applicable, provide the zoning designation for the property to permitted.**

The area is not zoned in Florence County. The mine is in a rural agricultural area with limited rural residences adjacent to the mine permit area. US Hwy 378, a four-lane highway, is located along the northern permit boundary. A minimum 50-foot undisturbed buffer from the highway right-of-way and property boundaries will be observed. Along Hwy 378, a 6- to 8-foot-high vegetated earthen berm will be constructed. Extensive wetlands are located along the southern portion of the permit boundary that provide natural barriers and extensive buffers. An extensive vegetated earthen berm will be along the northeastern corner of the permit area where the nearest resident is located.

**Are there any publicly-owned parks, publicly-owned forests, or publicly-owned recreation areas within one (1) mile of the proposed affected area?**

No

**Describe measures to be taken for screening the operation from view from public highways, public parks or residential areas.**

The plant will be situated approximately 1,800 feet south of Hwy 378 and not visible due to berm, natural vegetation left as a buffer and distance. At its closest, the plant will be 800 feet to the southwest property boundary. However, extensive wetlands and buffers in this area will visually screen the plant from properties west and south of the permit area. Properties on the east side will be screened with extensive wetlands and buffers. Residential properties on the northeast corner of the permit area will be screened by a vegetated earthen berm.

**Mine Map**

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**Attach a copy of a map of the site (referred to as the MINE MAP) that shows A through P, if applicable (see below):**

[Salem Sand-Henry Tract MINE MAP--\(9\)- 24X36 200.pdf - 08/08/2023 04:22 PM](#)

**Comment**

NONE PROVIDED

A. Outline of the area to be affected by mining during the number of years for which the permit is requested. See Section III, Question 1 on page 3 of this application form.

B. Outline of the permitted area that shows the buffers zones, future mine areas and areas to be affected by mining.

C. Outline of the planned pits or excavations for which your company has detailed plans. If your company has reason to believe that additional land may be mined in the future within the permitted area but is not feasible to show as planned excavations; indicate these areas as FUTURE RESERVES on this site map.

D. Outline of areas for the storage of naturally occurring soil that will be suitable for the establishment of vegetation in final reclamation.

E. Outline of planned areas for disposal of refuse, exclusive of tailings ponds.

F. Outline of planned spoil, overburden or other similar waste material disposal areas.

G. Locations of planned access and haul roads on the area to be affected.

H. Outline of planned tailings ponds.

I. Locations of sediment control pond(s) and other sediment control structures within the affected area. Outline of areas on which temporary or permanent vegetation will be established to control erosion during the mine operation.

J. Location and name (if appropriate) of streams, lakes, wetlands and existing drainage ditches within the area to be permitted. Use arrows to indicate direction of water flow in such streams and drainage ditches.

K. Boundary for the 100 year floodplain, where appropriate.

L. Outline of areas for stockpiles of unprocessed minerals.

M. Outline of area of previously mined land that will not be affected.

N. Outline of the area to be occupied by processing facilities including stockpiles of processed minerals if such facilities are to be an integral on-site part of the mining operation.

O. Show location of the two permanent survey control points.

P. A legend showing the name of applicant, name of the proposed mine, north arrow, county, scale, date of preparation and name and title of person who prepared the site map. THE REQUIRED SITE 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.

### Adjacent Land Owner List Template

Please download the excel spreadsheet, fill out and resubmit on the attachment below.

[Adjacent Land Owner List Template](#)

**Attach the most recent county tax map that shows all adjacent land owners of the permitted mine site. Provide name and addresses of all land owners contiguous to the proposed permitted mine site.**

[Salem Sand-Henry Tract Mine - Adjacent Landowners List w-Tax Map.pdf - 08/08/2023 04:31 PM](#)

[DHEC Spreadsheet - Salem Sand-Henry Tract Adjacent Landowners list.xlsx - 08/08/2023 04:36 PM](#)

#### Comment

Spreadsheet with landowners included

**Attach letter from an attorney attesting to (1) the ownership of the property, (2) ownership of the mineral rights and (3) that the applicant has the legal right to mine the proposed mineral resource on the property as described in this application.**

[Attorney Letter - Salem Sand-Henry Tract Mine - Certification re HFF-BWI Mining App \(00568540xAF098\).PDF - 08/08/2023 04:23 PM](#)

#### Comment

NONE PROVIDED

### Additional Information for consideration

NONE PROVIDED

#### Comment

NONE PROVIDED

## MR-500 Reclamation Plan for an Individual Mine Operating Permit

### Environmental Protection

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**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 S.C. Department of Health and Environmental Control.**

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**

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**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

**CORRECTION REQUEST (CORRECTED)**  
**Final Maximum Surface Gradient**

Based on the reclamation map as well as other provided information within this application, the final maximum surface gradient is indicated to be no steeper than 3:1. If so, this answer should be "No". Please change accordingly.  
Created on 8/9/2023 2:42 PM by **Colby Myers**

**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.

**i** 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 reseeding 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-\(1\)-24X36 200.pdf - 08/08/2023 03:04 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   |
|--|------------------------------------|-----------------|--------------|-----------------|---------------|---|
| MARK WETLAND BUFFERS   | PROCESSING PLANT; SEG 1 & TAILINGS | 4,200 FT        | 2024         |                 |               | Where wetlands buffers are adjacent to these facilities   |
| Construct Berm 2; slope and revegetate   | Shop and Process plant             | 1.7 acres       | 2024         |                 |               | NONE PROVIDED   |
| Establish stormwater diversions along WB-11 near shop area and plant   | Shop & Process Plant               | 1,500 ft        | 2024         |                 |               | NONE PROVIDED   |
| Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet. | Seg 1                              | 2.1 acres       | 2024-2027    |                 |               | Portions of seg 1 adjacent to plant may not be feasible until end of mining. Seg 1 ♦ tailings overflow 3,100 ft is total length of pit wall |
| Mark wetland buffer and property line buffers  | Seg 2                              | 4,200 feet      | 2027         |                 |               | Wetland buffer ♦ 300 ft<br>Property line buffer ♦ 3,900 ft  |
| Construct Berm 1; Berm constructed when tree removal is within 200 feet of the north pit wall                | Seg 2                              | 3.6 acres total | TBD          |                 |               | NONE PROVIDED   |
| Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet. | Seg 2                              | 3.3 acres       | TBD          |                 |               | 4,800 ft is total length of pit wall  |

| Conservation & Reclamation Practices   | Segment # or Area      | Planned Amount | Planned Year  | *Applied Amount | *Applied Year | Notes  |
|--|------------------------|----------------|---------------|-----------------|---------------|--|
| Mark wetland buffer and property line buffers  | Seg 3                  | 3,400 feet     | TBD           |                 |               | Wetland buffer ♦ 2,500 ft<br>Property line buffer ♦ 900 ft |
| Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet. | Seg 3                  | 2.7 acres      | TBD           |                 |               | 3,400 ft is total length of pit wall                       |
| Mark wetland buffer  | Seg 4                  | 5,600 feet     | TBD           |                 |               | NONE PROVIDED  |
| Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet  | Seg 4                  | 3.9 acres      | TBD           |                 |               | 5,600 ft is total length of pit wall                       |
| Mark wetland buffer  | Seg 5                  | 3,200 feet     | TBD           |                 |               | NONE PROVIDED  |
| Slope and revegetate terminal pit wall as feasible ♦ maximum unreclaim pit wall before reclamation 500 feet  | Seg 5                  | 2.2 acres      | TBD           |                 |               | 3,200 ft is total length of pit wall                       |
| Remove all equipment and stockpiles, regrade and revegetate  | Plant, shop & entrance | 26.8 acres     | TBD           |                 |               | NONE PROVIDED  |
| Monitor reclamation until DHEC approves and releases from bond   | All segments           | NONE PROVIDED  | NONE PROVIDED |                 |               | NONE PROVIDED  |

**i** \*Applied fields to be completed by department

## **MR-700 Land Entry Agreement for Land Leased by Mine Operator**

[MR-700 Document Link](#)

### **MR-700 Signatures Attachment**

[Executed MR700 LEA for Salem Sand-Henry Tract Mine.pdf - 08/08/2023 03:00 PM](#)  
[2217817 Hannah Pamplico SS Survey 4-20-23.pdf - 08/08/2023 03:01 PM](#)

#### **Comment**

Survey is included with he LEA.

## **Revisions**

| Revision   | Revision Date      | Revision By   |
|------------|--------------------|---------------|
| Revision 1 | 8/1/2023 3:31 PM   | Craig Kennedy |
| Revision 2 | 8/11/2023 10:19 AM | Craig Kennedy |