

South Carolina Department of Environmental Services Summary Response to Comments

Henry Tract Mine | I-002403 | Martin Marietta Southeast Agg Operations, LLC
Florence County, South Carolina

This summary is being provided in conjunction with the South Carolina Department of Environmental Services (SCDES) decision to approve the permit application and issuance of a permit for the Martin Marietta Southeast Agg Operations, LLC's Henry Tract Mine located along Highway 378 in Pamplico, Florence County, S.C. Operation of this site mine site is to excavate sand via wet mining.

SCDES is committed to preserving South Carolina's air, land, water, and coast through science, service, and sustainability. Through the passage of environmental statutes and regulations, the S.C. General Assembly has established the conditions and criteria that SCDES follows in the permitting process. SCDES's role is to ensure that a proposed project meets all regulatory requirements that are protective of human health and the environment, and to provide local communities with meaningful opportunities to participate in our permitting process. If it has been determined that an applicant or application has met all applicable regulatory requirements, SCDES does not have the authority to withhold the issuance of a permit.

As part of the permitting process, SCDES engages other state and federal agencies, the surrounding communities, and the general public prior to making a final permit decision in order to:

- 1) Provide information about the proposed permitted activities in the communities;
- 2) Give agencies, community members, and other interested parties an opportunity to submit relevant information to SCDES for consideration prior to making a final permit decision; and,
- 3) Provide an opportunity to submit other concerns to the attention of SCDES and the applicant.

Public meetings and public hearings are methods SCDES uses to hear concerns and receive comments during the permitting process. A public meeting is an informal conversation with SCDES staff, to include questions and answers. A public hearing is a formal opportunity for comments to be stated and recorded by a court reporter for inclusion in the official file.

SCDES held a public meeting and hearing on the proposed Salem Sand-Henry Tract Mine on December 7, 2023. These events were conducted in person at the Hanna Pamplico Elementary and Middle School. SCDES also extended the period to accept written comments through December 22, 2023.

SCDES values all public comments received during the permitting process and is committed to addressing and considering all relevant information prior to making a final permit decision. Public input is an important part of the permitting process and can result in changes to permit conditions and operational practices if a permit is issued.

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The following responses are being provided in response to comments received during the public comment period, the public meeting, and the public hearing for Salem Sand-Henry Tract Mine.

Section 1: The South Carolina Mining Act

The principal law governing mining in this state is Title 48 Chapter 20: The South Carolina Mining Act. The legislative purpose of the Act is to provide that: (1) the usefulness, productivity, and scenic value of all lands and waters involved in mining within the state receive the greatest practical degree of protection and restoration; and that (2) no mining may be carried on in the state unless plans for the mining include reasonable provisions for protection of the surrounding environment and for reclamation of the area of land affected by mining. A complete copy of the Act can be found here:

<https://www.scstatehouse.gov/code/t48c020.php>

The Act provides specific criteria for review of mine permit applications by SCDES. The Act does not supersede local zoning ordinances. Issues related to zoning (i.e., property value and industrial development) are under the jurisdiction of county and municipal planning departments and governed by zoning and land use regulations. SCDES has not been given the authority to consider the effect of a mining operation on property values. SCDES is required to evaluate the application in a timely manner and to consider relevant environmental issues.

The Act allowed the development of regulations to establish minimum standards for mining operations. Regulations 89-10 through 89-350 became effective on June 24, 1983 and have been subsequently modified. These regulations outline the requirements for permitting the design, construction, operation, maintenance, reclamation, and closure of mine sites. The complete list of regulations can be found here:

https://des.sc.gov/sites/des/files/Library/Regulations/R.89-10_89-350.pdf

In reaching the decision to approve the permit application and issuance of a permit for the Henry Tract Mine, SCDES staff reviewed all information contained in the application, supplemental information submitted by the applicant, and all agency and public comments to ensure that the requirements of the Act and Regulations had been met. SCDES has determined that the applicant has met the applicable requirements and is approved to construct and operate the mine in accordance with the conditions and limits set forth in Permit No. I-002403.

Section 2: Additional Terms and Conditions

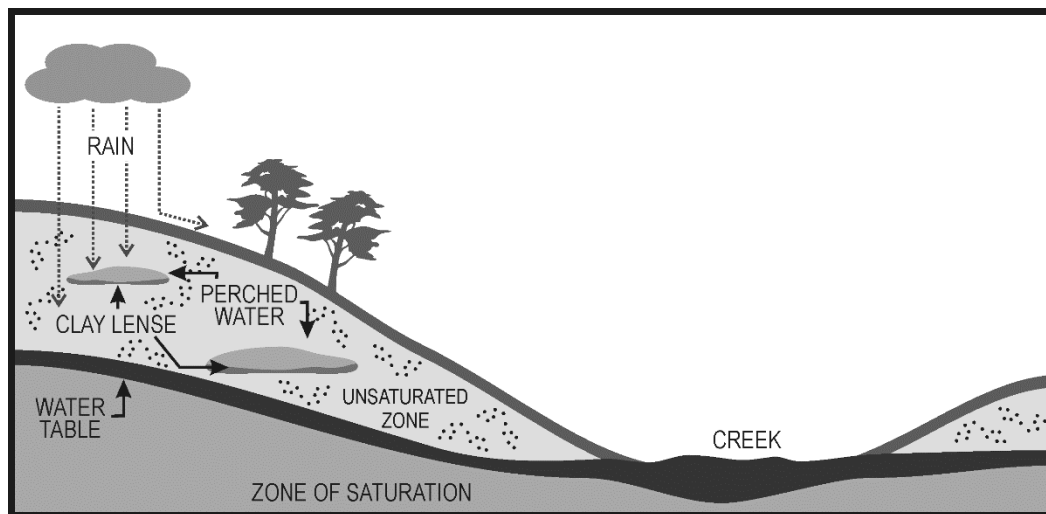
In response to information contained within the application, as well as by comments received by other agencies and the communities during the public comment period, SCDES incorporated additional terms and conditions in the final permit. These additional terms and conditions are as follows:

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. Some of these conditions are also detailed in subsequent sections.

Section 3: Groundwater

Groundwater is water that collects or flows below the soil surface. The main source for groundwater is rainfall. Runoff from rainwater can go directly into water bodies or seeps into the ground. When water soaks (infiltrates) into the ground, gravity pulls the water down through the spaces between the soil particles and rocks until it reaches a depth where all of the spaces are filled with water, or saturated. The water level where the soils are saturated is called the water table. The area above the water table is called the unsaturated zone, the area below the water table is the saturated zone.

As shown in the following diagram, the water table is not always at the same depth below the land surface - the level moves up or down depending on rainfall and the rate water is removed (e.g., irrigation, industry, well). The unsaturated zone may contain pockets (lenses) of tightly bound clayey soils that do not allow the water to infiltrate. In this situation, the water will collect (perch) on the top of these impermeable lenses. This is "perched water" and is not the true water table along the top of the saturated zone.



Many of the comments that SCDES has received mention concern regarding the reduction of the groundwater level due to dewatering. This site will be wet mining with a hydraulic dredge and the water/sediment slurry will be pumped to the plant and back into the pit in a closed-loop system. No other dewatering will occur due to normal mining activities. Therefore, no reduction in the groundwater level is expected to occur, and nearby wells are not anticipated to be affected.

Section 4: Surface Water

Discharge Monitoring and Sediment Control: The operator is permitted to discharge wastewater and stormwater through outfall 001 in accordance with the *NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities (SCG731687)*. All discharges will be routed northeast into Deep Creek. Discharges from the outfall will be subject to numeric effluent limits (total suspended solids and pH) and other permit requirements that are protective of human health and the environment. Should the operator be unable to meet the requirements of the NPDES permit, SCDES's Bureau of Water would initiate their compliance and/or enforcement procedures, accordingly.

The operator has indicated that during operations, water from the processing plant will be routed in a closed-circuit system through the collection pond where the clarified water is then routed into the Phase 1 pit. Under normal rainfall conditions, this closed-circuit system will operate without discharging into waters of the state. However, in extreme or prolonged rainfall events, there is a potential for the water volume to exceed the capacity of the site. Under these circumstances any excess water may be discharged into waters of the state through the regulated outfall.

Stormwater will be routed into the pit in order to capture sediment runoff. This sediment will be allowed to settle out of the stormwater prior to being discharged offsite, if necessary. The NPDES permit requires the operator to have proper Best Management Practices (BMPs) and a Stormwater Pollution Prevention Plan (SWPPP) in place. Furthermore, the operator shall operate the site in accordance with the *Erosion and Sediment Control Plan* and the approved mine maps.

The NPDES general permit requires that stormwater outfalls have appropriate BMP's to minimize the discharge of pollutants. The permit also requires benchmark monitoring of stormwater discharges. Benchmark monitoring involves collecting a quarterly sample during the first 30 minutes of the stormwater discharge and analyzing it for Total Suspended Solids. If the average of the four quarterly benchmark samples is greater than 100 mg/l Total

Suspended Solids, then the operator must either improve their BMP's or document that it is not feasible to improve their BMP's. If the average of the four quarterly benchmark samples is less than 100 mg/l Total Suspended Solids, benchmark sampling is no longer required during this permit term for that outfall.

Potential for Flooding: The mine operating permit is conditioned such that "Active pumping and discharge of water shall cease if the dewatering discharge causes flooding conditions to property downstream of the mine site". At no time will the operator be allowed to flood neighboring properties.

Section 5: Wetlands

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 as well as silt fencing in order to prevent sedimentation. Wetland impacts due to dewatering are not anticipated since this site will be wet mined.

Section 6: Buffers, Setbacks, and Visual Impacts

Buffer areas are areas that will not be disturbed beyond the pre-mine natural state and provide distance between the mining operation and the neighboring properties and wetlands. The Act and Regulations do not have specific requirements for buffer areas, so they are developed on a case-by-case basis. The size of the buffer and setback from the permit boundary is dependent on the nature of the mine, the neighboring land use, and the purpose of the buffer area.

The operator has designated 71.5ac as buffer. The operator shall maintain a minimum 50ft undisturbed perimeter buffer between mining activity and all property lines for the majority of the site. Additionally, a minimum 50ft buffer will be maintained between mining activities and any wetlands.

The vegetation in the buffer will remain in its current state or be enhanced to provide for visual screening. Appropriate silviculture practices may be utilized to manage buffer areas that will allow thinning of timber under the direction of a S.C. licensed Professional Forester. Any land disturbance not consistent with accepted silviculture practices in the buffer areas will require the Mine Permit to be modified prior to such disturbances.

Section 7: Noise

The majority of noise generated with mining activity is associated with motorized vehicles and equipment. The level of noise perceived at residences is usually related to the distance from the source of the sound, weather conditions, topography, and the type and condition of the equipment. Equipment such as trucks, dozers, and loaders usually has an average noise level determined by the manufacturer. The majority of the equipment averages 75 to 90 decibels (db) at a distance of fifty feet. Sound decreases (attenuates) with distance at the rate of about 3 to 5 db each time the distance between the source and the person hearing it is doubled.

Another factor used to buffer noise is topography. Overburden will be used to construct berms to block the direct path of sound. Additionally, the mine operating permit requires the operator to maintain equipment (e.g., mufflers on trucks, trackhoes, pumps) to minimize noise from the site.

The combination of undisturbed vegetated buffers, earthen berms, maintenance of equipment, and distance from the operation will consequently reduce the potential for sound heard offsite. There may be instances when the sound of equipment (back up alarms, trucks, etc.) can be heard, but the decibel levels should not be excessive.

Although no state standards exist for noise emitted from this type of industry, the Mine Safety & Health Administration (MSHA) does have noise standards applicable for worker safety to protect hearing. Therefore noise, limited at the source to protect workers, has the added benefit of limiting noise beyond the permit area.

Section 8: Public Safety

Public safety around a mine site is always a concern. A primary method to ensure public safety is controlling access to the mine property. A gated entry and warning signs will minimize physical hazards to persons and adjoining land uses. Additionally, natural barriers (e.g., streams, wetlands, vegetation) and constructed berms provide a deterrent for accidental entry into a mine site. The combination of these barriers and site characteristics will limit public exposure to the operations at the site.

Section 9: Traffic

A common concern expressed is the increase of truck traffic hauling mined material. The SC Mining Act only authorizes SCDES to regulate truck traffic on roads *inside* the permit boundary. SCDES can only evaluate impacts to public roads as it pertains to the physical effects from the mining operation (e.g. blasting, undermining, etc.). It does not give SCDES the authority to regulate or restrict vehicle traffic outside the permit boundary or deny a permit based on the potential increased use of such roads.

Other concerns with road systems, including use of the roads or general wear-and-tear issues, are under the jurisdiction of S.C. Department of Transportation (SCDOT), S.C. Public Service Commission, or Florence County Department of Public Works.

Section 10: Blasting

Blasting is not permitted at this site.

Section 11: Air Quality

Dust: Fugitive dust emissions from the proposed mining activities has been a concern with this proposed mine. The Division of Mining and Solid Waste Management is responsible for regulating dust emissions from a mining site. Sources of dust include: moving equipment, handling of the mineral resource and overburden, truck traffic, and wind erosion.

At active sites, the major contributors of dust are equipment and truck traffic. Properly constructed access roads with dust suppression methods (e.g., water trucks, sprinklers) is the most effective way to manage dust from traffic. The operator will use a watering truck to prevent potential fugitive dust. The frequency of watering will depend on weather conditions and volume of traffic.

Due to the site operating via wet mining and processing the mined material while it is still wet, negligible fugitive dust is anticipated to occur.

Wind erosion of areas stripped of vegetation and material stockpiles are also sources for potential dust. 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. The combination of minimizing land disturbance and re-vegetation will lessen the potential for windblown dust.

Health Risks with Dust Exposure: Health risks are mitigated by controlling the dust at the source. Source control measures include best management practices, such as water trucks, dust suppressants, sprinklers, etc.

MSHA is responsible for protecting the health of workers at mine operations. As part of their duties, MSHA monitors exposure of workers to dust. Results from monitoring show the risk is greatest within work environments involving processing (crushing/grinding) and operating equipment. If a problem concerning overexposure exists, MSHA would require the company install some type of engineering control to eliminate the concern at the source.

Meeting MSHA requirements to control dust in the immediate work area will further minimize any exposure risk outside the permitted area. No elevated exposure risk is anticipated from the mine beyond the property line.

We are exposed on a daily basis to dust from non-industrial sources such as dirt roads, fields, and bare lots. Although the proposed mining operation does not add any new hazards, engineering and administrative controls have been designed to minimize the production of airborne dust. Based on the proposed controls at the mine (natural buffers, distance from property lines, controls on the haul road), an increase in the exposure to silica or other materials beyond the property line is not anticipated.

Information on air monitoring in South Carolina is available on SCDES's Bureau of Air Quality website at:

<https://des.sc.gov/programs/bureau-air-quality>

Section 12: Zoning

Appropriate or compatible land use is determined by local government. SCDES has no authority regarding zoning in Florence County. Specifically, the S.C. Mining Act states in Section 48-20-250, "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." SCDES recognizes that each county and municipality across the state has different priorities and unique requirements. SCDES relies on county and municipal governments, through zoning and other ordinances, to regulate where residential, commercial, and industrial zones may occur.

On November 16, 2023, Florence County passed a 60-day moratorium ordinance regarding sand mining. Furthermore, on March 22, 2024, Florence County amended their ordinances regarding mining. Information regarding these amendments can be found on Florence County's website at:

<https://www.florenceco.org>

SCDES's Individual Mine Operating Permit is issued separately from county ordinances and zoning regulations and does not supersede local ordinances as defined in Section 48-20-250 of the S.C Mining Act. Florence County enforces their local ordinances and zoning regulations.

Section 13: Threatened or Endangered Species

The S.C. Mining Act and Regulations do not allow an undue adverse effect on wildlife or freshwater, estuarine, or marine fisheries. SCDES has interpreted an "undue" effect as an effect on a federally recognized endangered or threatened species that cannot be properly mitigated for.

Potential habitat for spotted turtle was observed on the site and included shallow aquatic wetland habitats with abundant vegetation and perennial streams. In order to prevent undue adverse effects on the spotted turtle, Part X: *Additional Terms and Conditions*, number 3, of the approved permit states:

"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 will be monitored weekly for the integrity of the fencing and the presence of spotted turtles or other herpetofauna or small

wildlife species. If spotted turtles are encountered, the SCDNR state herpetologist will be notified by the operator immediately."

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. In order to prevent undue adverse effects on the Northern Long-eared Bat, Part X: *Additional Terms and Conditions*, number 4, of the approved permit states:

"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 will be conducted during the inactive season (November 1 through March 15) for northern long-eared bat and Tricolored bat. Provided tree clearing can be conducted during these times, proposed development of the site may affect, but is not likely to adversely affect this species".

Section 14: Cultural and Historic Sites

A cultural reconnaissance survey was conducted on May 8, 2023. According to this survey, this project area has low potential for containing significant cultural resources and no historic properties will be affected by the proposed mine site. No Further resource investigations were recommended.

Furthermore, should any archaeological materials be uncovered by operations of this mine site, Part VI: *Protection of Natural Resources* of the approved permit for this site states:

"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".

Section 15: Land and Property Value/Economic Impact

Comments were received regarding the impact to property values and possible economic impacts. All zoning decisions are made at the local level by a city or county zoning authority, usually before a permit request is received. SCDES cannot dictate where a facility locates or factor property value impacts into our permitting decision. We encourage residents to contact their local city or county council representatives for more information on how to get involved in local zoning and planning issues.

Section 16: Community/Quality of Life

Comments were received regarding the potential impacts of the proposed mine on the local community's way of life. SCDES is committed to fulfilling the agency's responsibilities to protect and promote the health of the public and the environment. Through the exercise of those responsibilities, SCDES works to improve the quality of life of individuals and communities. However, the agency may only act within the limits of its statutory and regulatory authority. Through statutes and regulations, the General Assembly has established conditions and criteria the agency uses to ensure public health and environmental protection. SCDES is required to make its permit decision based only on technical review of the permit application and the Act and Regulations in place at the time of SCDES's review.

Section 17: Operating Hours

SCDES does not have the authority to regulate operating hours at mine sites. Hours of operation may be regulated by Florence County.

Section 18: Inspections

S.C. Mining Act 48-20-130 and Regulation 89-240 allow SCDES to conduct inspections and investigations of the permitted area at any reasonable time for the purposes of determining whether the operator has complied with the reclamation plan, requirements of the Mining Act, any rules and regulations promulgated thereunder, or the terms and conditions of the operating permit. The Mining Program will conduct routine site inspections and compliance inspections, as needed.

The Bureau of Water's monitoring program includes documentation of quarterly visual inspections, an annual comprehensive site inspection, quarterly benchmark sampling, an impaired waters assessment (TMDL sampling if discharging to an impaired water), monthly effluent limitations monitoring (if required), and other aspects like employee training, spill/leak assessments and documentation, and a Best Management Practices Plan. Compliance Evaluation Inspections (CEIs) are randomly conducted at permitted facilities approximately once every 5 years, unless a follow up is needed at a particular facility due to non-compliance with permit guidelines; in such cases, a facility may be inspected at the Departments discretion in order to assess and/or enforce permit compliance. SCDES staff may also respond to complaints about a facility.

Section 19: General Opposition

SCDES received several comments requesting denial of a permit. While SCDES appreciates all comments received, it is important to recognize that we do not have the authority to make permitting decisions based on community, business, employee, or customer approval or disapproval of a proposed operation. SCDES is required by law to make a decision based only on the technical review of an application and the regulatory requirements in place at the time of that review. In 48-20-70 of the Act, SCDES is required to grant an operating permit to the applicant if there are no technical reasons to deny the permit.