

## South Carolina Department of Environmental Services Summary Response to Comments

Adrian Sand, LLC | I-002411 | Adrian Sand/Clay Mine  
Horry County, South Carolina  
August 28, 2024

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 Adrian Sand/Clay Mine located along Adrian Highway in Conway, Horry County, S.C. Operation of this site mine site is to excavate sand and clay.

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 must follow in the environmental permitting process. The role of SCDES is to ensure that a proposed project meets all regulatory requirements that are protective of human health and the environment as well as to provide local communities with meaningful opportunities to participate in our permitting processes. If it is 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 on the proposed Adrian Sand/Clay Mine on May 07, 2024. A public hearing was also held on May 07, 2024. These events were conducted in person at Homewood Elementary School. SCDES also extended the period to accept written comments through May 22, 2024.

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 Adrian Sand/Clay 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://scdhec.gov/sites/default/files/Library/Regulations/R.89-10\\_89-350.pdf](https://scdhec.gov/sites/default/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 Adrian Sand/Clay 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-002411.

## 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. Spotted Turtles – Prior to mining-related activities, the operator shall install silt fencing from November 15th through January 15th. Silt fencing should include 45-degree arms to direct spotted turtles to the uplands and away from any mining-related disturbances. The silt fence arms should extend at least 50 feet in each direction so that the ends meet to form a triangle. The silt fencing shall be placed outside of the 50-foot wetland buffers. Silt fencing should be monitored on a monthly basis for integrity.
3. Rafinesque's Big Eared Bat – The site has been previously cleared of any trees that may be reasonably used as maternity roost trees. The applicant shall avoid any tree clearing in adjacent forested wetlands near Maple Swamp.
4. Tricolored Bat - If/when the Tricolored Bat is placed on the list of threatened and endangered species, the applicant shall comply with the U.S Fish and Wildlife Service's mitigation practices.
5. The operator shall employ the use of a water truck or automatic sprinklers for wet suppression of all roads at the site. Except for the days when there is measurable precipitation, the truck shall spray all roads at least once daily. The operator shall maintain a log documenting the date and times the truck was in operation and shall make this log available to SCDES officials upon request.
6. The operator shall comply with the approved Coastal Zone Consistency Determination issued under the SC Coastal Zone Management Program by SCDES's Bureau of Coastal Management (BCM). See Appendix B.
7. Prior to initiating mining operations in Segments 4 & 5, the operator shall submit an updated reclamation cost estimate to SCDES for approval and adjust the financial assurance mechanism, as appropriate.

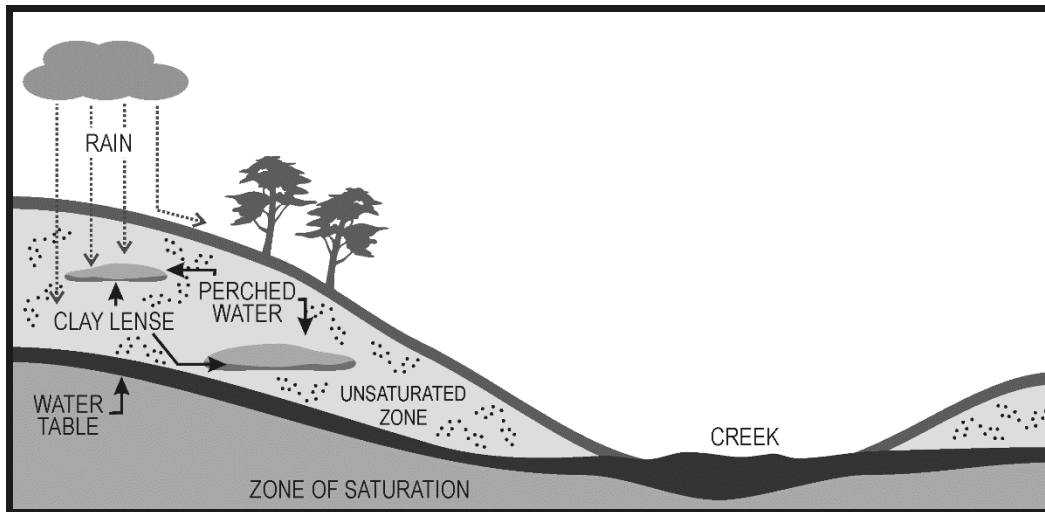
Some of these conditions are also detailed in subsequent sections.

## 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.



#### 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 (SCG731666)*. All discharges will be routed northeast into wetlands adjacent to Maple Swamp. 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.

Stormwater will be routed into the pit or the sediment basin, in order to capture sediment runoff. This sediment will be allowed settle out of the stormwater prior to being discharged offsite. 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 approved mine maps.

The NPDES general permit requires that stormwater outfalls have appropriate BMPs 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

Maple Swamp is located approximately 500ft north of the mine permit area. Wetlands are located to the east of segments 2 and 3 as well as to the north and west of segments 4 and 5. All wetland shall be surveyed and flagged; all flagging shall remain for the duration of mining activities. All jurisdictional wetlands will be protected with a 50-foot buffer. Silt fencing will line all wetland buffers to prevent any sedimentation and off-site impacts.

### 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 23.0 ac 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. A minimum 40-foot berm will also be constructed on the mine side of the 50ft perimeter buffer behind the residences on Dotts Court. The berm shall be approximately 10ft in height and vegetated at the earliest practicable time in order to enhance visual screening and noise attenuation.

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 have 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 a berm 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. SCDES can only evaluate impacts to public roads as it pertains to the physical effects from the mining operation (e.g. blasting, undermining, etc.). The S.C. Mining Act 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 Horry County Department of Public Works.

## Section 10: 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. The frequency of watering will depend on weather conditions and volume of traffic.

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.

Additional Term & Condition #5 of the mine permit further addresses this concern by stating, *"The operator shall employ the use of a water truck or automatic sprinklers for wet suppression of all roads at the site. Except for the days when there is measurable precipitation, the truck shall spray all roads at least once daily. The operator shall maintain a log documenting the date and times the truck was in operation and shall make this log available to SCDES officials upon request."*

**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: <http://www.scdhec.gov/HomeAndEnvironment/Air/AmbientAir/>.

### Section 11: Zoning

Appropriate or compatible land use is determined by local government. SCDES has no authority regarding zoning in Horry 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.

### Section 12: 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. The Mining and Reclamation program has interpreted an "undue" effect as an effect on a federally or state-recognized endangered or threatened species that cannot be properly mitigated for. The S. C. Department of Natural Resources (DNR) provided comments that showed interest in three threatened or endangered species: the Spotted Turtle, the Rafinesque's big-eared Bat, and the Tricolored Bat.

The habitat for the Rafinesque's big-eared bat is defined as swamp forests, hardwood or mixed mature bottomlands, maritime forests and black gum (*Nyssa sylvatica*) water tupelo (*Nyssa aquatica*) strands. The site was timbered in October of 2018, leaving sparse tree coverage in the uplands and no coverage in the wetlands. Therefore, suitable habitat for the Rafinesque's big-eared bat no longer exists within the permitted area. However, the mine permit is conditioned to disallow disturbances within the wetlands; over time, these trees may grow back and offer suitable habitat for this species.

The Tricolored bat is currently not a recognized threatened or endangered species. However, it is proposed for listing as a federally-threatened species. Part X: Additional Terms and Conditions #4 states, "*Tricolored Bat - If/when the Tricolored Bat is placed on the list of threatened and endangered species, the applicant shall comply with the U.S Fish and Wildlife Service's mitigation practices.*"

Habitat for the Spotted turtle include slow moving water or perennial streams, muddy soil with sedges (*Carex spp.*), cattails (*Typha spp.*) and sphagnum moss (*Sphagnum spp.*). The area to be affected does not contain any wetlands and the operator is required to maintain at least 50 ft away from any jurisdictional wetlands within the parcel. To prevent any undue effects on the spotted turtle, the operator will install silt fencing from November 15<sup>th</sup> to January 15<sup>th</sup> along the mine side of all wetlands. The silt fencing will include 45-degree arms to redirect any spotted turtles away from any mining-related activities. The silt fencing will be monitored on a monthly basis for integrity.

SCDES received comments regarding the credentials of the company hired by Adrian Sand LLC to perform the Biological Assessment. The Brigman Company, a third part consulting group from Conway, S.C, was hired by the operator to perform the Biological Assessment, which included a literature review, habitat assessment, pedestrian site survey, and consultation of agencies such as the Department of Natural Resources and U.S Fish and Wildlife Service. Mr. Jeffery Vereen of the Brigman Company was selected to perform the biological assessment for this site due to his experience in performing Threatened and Endangered Species Assessments since 1991.

### Section 13: Cultural and Historic Sites

A Phase I archaeological survey was conducted March 7, 2024 by S&ME Inc. The survey observed one account of prehistoric ceramic scatter and determined the archaeological site is not eligible for listing in the National Register of Historic Places. According to the survey, the project area will have no effect on historic properties and further cultural resource management is not required. If further archaeological material is uncovered during the mining process, the operator is required to notify the S.C. Department of Archived and History, the S.C. Department of Anthropology and Archaeology, and SCDES immediately.

### Section 14: 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 15: 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 16: Operating Hours

SCDES does not have the authority to regulate operating hours at mine sites.

### Section 17: 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 18: 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.