



South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
Division of Mining and Solid Waste Management

Summary Response to Comments and Questions on Modification Request

DLI Plantation Egeria Mine/ Mine Operating Permit I-002170

Dorchester Logistics, Inc.

Dorchester County, South Carolina

December 2, 2021

This summary is being provided in conjunction with the decision of the South Carolina Department of Health and Environmental Control (DHEC) to approve the modification requested for mine permit I-002170 issued to Dorchester Logistics, Inc. (DLI). The DLI Plantation Egeria Mine (Egeria Mine) is located in Dorchester County, SC (TMS# 051-00-00-003.000). This Summary Response outlines specific issues DHEC considered in review of the modification and is being provided to address many of the issues raised in response to DHEC's public notice initiated on November 4, 2020, and the public hearing held on June 3, 2021. DHEC accepted comments on the requested modification through June 15, 2021. This Summary Response is specific to DHEC's technical review for the modification to the mine operating permit under the authority of the South Carolina Mining Act (Act).

DHEC's mission is to protect and promote the health of the public and the environment. Through the passage of environmental statutes and regulations, the SC General Assembly has established conditions and criteria DHEC follows in the permitting process. DHEC's role is to ensure a proposed project meets all regulatory requirements established to be protective of human health and the environment. If it has been determined that an applicant or application has met all applicable regulatory requirements, DHEC does not have the authority to withhold a decision on a requested modification to a permit.

As part of the process for a requested substantial modification, DHEC engages surrounding communities and the general public prior to making a final decision in order to:

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

Public meetings and public hearings are methods DHEC uses to hear concerns and receive comments during the technical review process. A public meeting is an informal conversation with DHEC staff to include questions and answers. A public hearing is a formal opportunity for comments to be stated and recorded by a court reporter.

On June 3, 2021 DHEC held a virtual public hearing to accept comments concerning the proposed modification of the Egeria Mine. The hearing was conducted using a virtual platform in a live-event setting to promote social distancing and the avoidance of group gatherings during the COVID-19 pandemic. A recording of the public hearing was posted on DHEC's webpage at www.scdhec.gov/EgeriaMine prior to the end of the public comment period. DHEC also extended the period to accept written comments through June 15, 2021.

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

In addition to the mine operating permit, the associated National Pollutant Discharge Elimination System (NPDES) Permit must be modified. The NPDES permit regulates water discharges from the mine. The Egeria Mine was granted coverage under the NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities (SCG731020) on April 29, 2008. The modification to the mine permit and NPDES permit was reviewed and approved by DHEC's Bureau of Water.

Projects in the coastal counties are subject to review by DHEC's Office of Ocean and Coastal Resource Management (OCRM) for consistency with the S.C. Coastal Zone Management Program. OCRM deemed the original application was consistent with the Guidelines for Evaluation of All Projects on December 20, 2017 (CZC-17-1313). The modification was granted certification on October 21, 2021.

General Overview

DHEC's Division of Mining and Solid Waste Management has approved the modification to Mine Operating Permit I-002170 after careful review of all information submitted by the applicant, as well as comments received from governmental agencies and interested persons. The permit will require the mine operator to comply with the South Carolina Mining Act and the South Carolina Code of Regulations.

The revised mine permit with Coastal Zone Consistency Certification, maps, reclamation plan, and this Summary Response are available on DHEC's website at www.scdhec.gov/EgeriaMine.

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.

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

Application to Modify the Mine Operating Permit: DHEC received the requested modification to the Egeria Mine from DLI on October 7, 2020. A Notice of Intent to Modify a Mine Operating was published in *The Post and Courier* on November 4, 2021 and November 11, 2021. The notice was mailed to adjacent landowners, government and regulatory agencies, and other interested parties; the request was posted on the DHEC webpage.

In response to the modification notice, DHEC received a request to hold a public hearing. DHEC acknowledged the request stating the hearing would be held at a later date and notice would be provided at least thirty (30) days prior to the hearing date.

DHEC held a virtual public hearing on June 3, 2021. The Notice of Public Hearing was mailed to interested parties on May 4, 2021 and published in *The Post and Courier* on May 4, 2021 and May 11, 2021. The comment period was extended through June 15, 2021.

History of Mine Permitting at the Site

On April 25, 2008, Risher Mining and Trucking was issued coverage for the Egeria Mine (GP1-001844) under the *General Mine Operating* Permit - GP1. Under GP1s, land disturbance is limited to 5 acres with a maximum depth of 20 feet for excavations. On September 26, 2016 the GP1 coverage was transferred to DLI.

DLI requested an individual permit to incorporate the GP1 and expand the permit acreage to 26.5 acres. Mine Permit I-002170 was issued on February 9, 2018. The permitted depth remained at 20 feet below the original ground surface elevation.

Modification Specifications

Land within a mine operating permit is designated according to the permitted use and is comprised of Affected acres, Future Reserves, and Buffer Areas. The sum of these acreages is the Permit Area. Below are the requested modifications to the described areas.

Permit Acres: The modification requests to expand the area permitted from 26.5 acres to 102.0 acres.

- Affected Area: - DLI requested the area affected by mine activity be expanded from 22.8 acres to 62.3 acres. The affected area is land to be disturbed by mining activities (pit, sediment basins, haul roads, berms, processing area, overburden storage piles, etc.).

- Future Reserves: - No area has been designated for future excavations.

- Buffer area: - The modification expands the buffer area from 3.7 to 39.7 acres. Buffer areas are land not to be disturbed by mine activity. Buffers are used to lessen potential effects to surrounding land (setbacks to property boundaries, public roads, wetlands, wildlife, etc.).

Mine Reclamation: The Act defines reclamation as the reasonable rehabilitation of affected land (mined or otherwise disturbed) to a useful purpose and the protection of natural resources in surrounding areas. The Act does not require the land disturbed by mining to be returned to its original state. Reclamation of the mine to a specific land use is based on many factors; including, but not limited to: the method of mining, the material mined, the geology and topography of the area, size, surrounding land uses, and the desired final use for the former mine site.

The approved reclamation plan states the site will be reclaimed to ponds. Reclamation standards require a water depth of 4 feet over 50% of the surface area of the pond. Banks shall be stabilized with vegetation and sloped to a maximum 3H:1V gradient to the average water depth. Once all mining has ended and the site meets reclamation standards, the mining permit would be canceled; at that time the Mining and Reclamation Program has no further jurisdiction over land use.

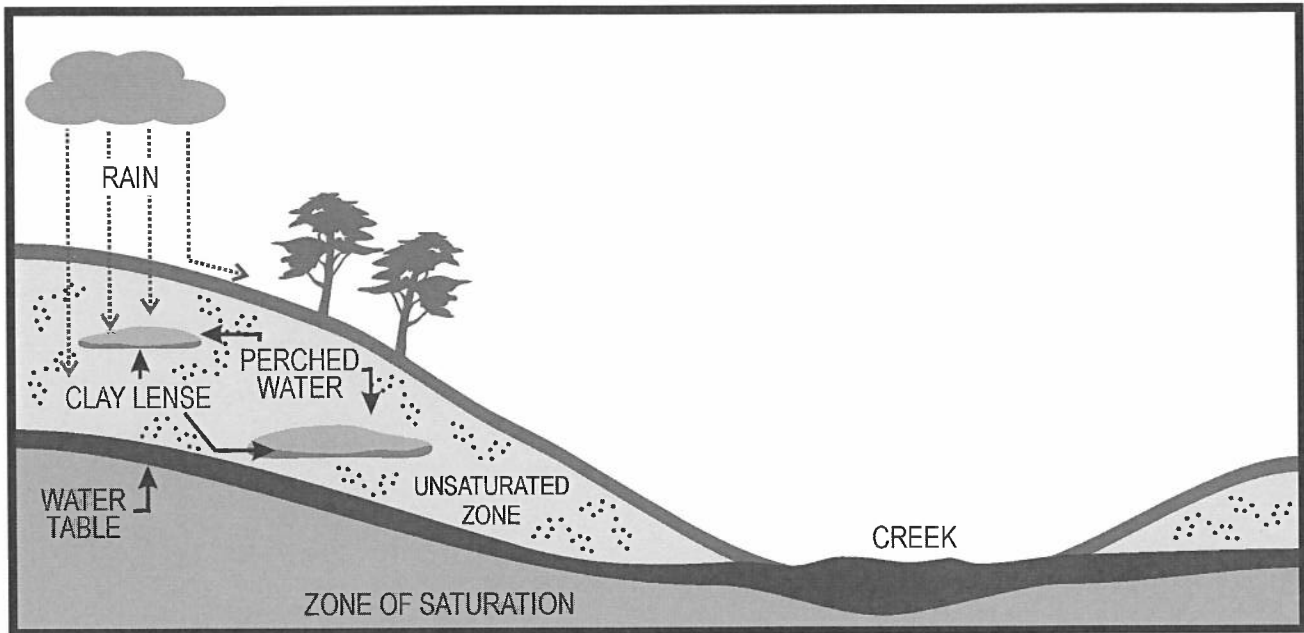
A reclamation bond is required for acreage affected under the mine permit. The reclamation bond has been submitted based on the requirements of the Act (Section 48-20-110) and Regulations (R.89-200). The reclamation bond will remain in effect with DHEC until the mine site has been reclaimed to regulatory standards and released. Reclamation bonds are in place to ensure proper reclamation of disturbed areas (it does not serve as financial assurance for potential off-site impacts).

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.



Groundwater Availability: DHEC considers the potential effects of mining activities on the quantity of groundwater available to nearby water supply wells, wetlands, and lakes/ponds. Pumping from the water table is expected at the Egeria Mine. The permitted excavation depth is a maximum of 20 feet below ground level; this shallow depth will limit the lateral extent of the cone of depression, narrowing the area of influence.

A collection of stormwater and groundwater in the mine will be pumped into a sediment basin for retention and settling. Water from the basin will be discharged through the NPDES outfall to adjacent wetlands. Water discharged from the site will provide some recharge to the wetlands and the water table aquifer thereby minimizing potential impacts to groundwater supply. It is not anticipated that the pumping of water from the mine will affect the quantity of water in nearby wells.

DHEC obtained information on one well in the area; records note the well was drilled 260 feet deep. It is not anticipated that the pumping of water from the shallow mine will impact the quantity of water in nearby wells. However, the permit is conditioned such that if a water supply well complaint is received, DHEC is responsible for determining if dewatering activities at the mine have caused the problem. If DHEC determines the mine caused the problem, the operator is responsible for repairing, deepening, or re-drilling the affected well.

Groundwater Quality: No chemicals are used in the excavation of materials from mines in the area. Both the mine permit and NPDES Stormwater Pollution Prevention Plan (SWPPP) require the operator to establish procedures to minimize fuel spillage or incidental spillage of other petroleum products during storage, refueling of equipment, or in the performance of routine maintenance on equipment. Any materials contaminated from contact with petroleum products shall be removed from the site and disposed of properly to prevent contamination to the ground and surface water resources.

Surface Water

Water Quality: The NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities (SCG731020) covering the mine allows the discharge of wastewater and stormwater. Discharges from the outfall will be subject to numeric effluent limits [total suspended solids (TSS) and pH] and other permit requirements protective of human health and the environment.

In addition, the NPDES permit requires the operator to have proper Best Management Practices (BMPs) and a Stormwater Pollution Prevention Plan (SWPPP) in place.

This existing mine has been covered under the NPDES General Permit for Nonmetallic Mineral Mining since coverage was first issued on April 29, 2008. In 13 years of operation, the facility has not had any NPDES violations.

In this latest modification, the facility will expand their operations from 27 acres to 102 acres, and from 1 mining segment to 4 mining segments. Any water that would be generated from mining segments 2 - 4 will be pumped from these segments into segment 1 which will be impounding water and acting as a sediment pond.

Any water pumped from segment 1 (not to exceed 10,000 gallons per day as per the Notice of Intent) will flow through the previously constructed sediment pond into an unnamed tributary. After entering the unnamed tributary, the water will flow approximately 5,000 feet to Four Hole Swamp.

Segment 1 will now serve as a settling basin, which will greatly reduce any solids that might otherwise enter Four Hole Swamp. Settling basins are generally considered the standard for Best Management Practices (BMPS) for this industry due to their effectiveness.

While public concerns of heavy metals possibly present at the site were noted, no source of these metals was provided. An examination of aerial photos dating back to 1985 indicated nothing had existed at this site except forested land. Given the lack of supporting documentation for the presence of heavy metals, the Department believes this concern lacks basis. Therefore, the Department believes the impact from stormwater and dewatering on Four Hole Swamp and the nearby Beidler Forest to be very minimal.

In the event a permit violation of TSS or pH might occur, a compliance action would be initiated. Depending on the severity and frequency of the violations, an engineering study could be required by the facility to determine the cause of the violation, as well as the implementation of a solution to ensure that the violation would not reoccur.

Wetlands:

The US Army Corps of Engineers (ACOE) issued a Preliminary Jurisdictional Determination (PJD) dated August 24, 2020 (SAC 2020-01078). The delineation identified the location and extent of aquatic resources as outlined on Figure 7 Wetland Delineation Map prepared by D&D W.E.S.T.

The ACOE conducts two types of wetland reviews - an Approved Jurisdictional Determination (AJD) and the PJD. Both determinations are given the same level of field review to ensure the limits of the wetlands and other waters onsite are correct; the ACOE conducts the same type field review for both determinations, and wetland boundaries are identified in the same manner. There are two types of wetlands - isolated and non-isolated. The ACOE has authority over non-isolated wetlands (wetlands that are connected to other water bodies). For a PJD, the ACOE does not determine how each wetland is connected to other waters - a PJD presumes ACOE jurisdiction of all aquatic resources. Therefore a PJD is a more encompassing determination. Since wetlands boundaries are verified under a PJD, the company can proceed with work outside of the wetland boundaries determined under the PJD.

In addition to ACOE jurisdiction, DHEC's Office of Ocean and Coastal Resource Management (OCRM) must certify the project is consistent with the Coastal Zone Management Plan, which includes protection of isolated wetlands. The Coastal Zone Consistency Determination, with additional conditions, is included in the mining permit as Appendix B.

All wetlands are protected by a minimum 50' undisturbed buffer. In addition to this vegetated buffer, the operator shall properly install and maintain appropriate Best Management Practices such as silt fencing.

The operator plans to lay a pipe through the wetlands to transport pit water from Segments 2 - 4 to Segment 1 for retention prior to discharge. There will not be any ground disturbance in laying the pipe. Any floodwaters block by the pipe will re-route to the pit or surrounding wetlands.

Potential for Flooding

The regulations to the SC Mining Act prevent excessive drainage, accumulation, or release of excess water that may damage adjoining property of other owners from dewatering activities. The permit is conditioned that if dewatering causes flooding conditions to property downstream, the operator is to cease discharge of water from the mine.

Wetlands help funnel flood waters; excavations will not alter adjacent wetlands or impact their function. Natural flooding resulting from heavy precipitation and low topography cannot be controlled. However, having an open cut can be advantageous by holding floodwaters which can be released when flood conditions abate.

Buffers, Setbacks, and Visual Impact

The Act and Regulations do not have specific requirements for distance between the mining operation and the neighboring properties and wetlands. The depth of the buffers (undisturbed land) and/or setbacks (from excavation) from the permit boundary is dependent on the nature of the mine, the neighboring land use, and the purpose of the buffer/setback area.

The mine is in a rural area mostly comprised of larger tracts of land. Like many parcels in the area, the tract has been in silvaculture practice with the cycling of harvesting and re-planting of trees. Existing roads from timbering will be used for access around the mine perimeter. The trees have recently been cut leaving little vegetation for screening.

A combination of buffers and setbacks from the excavation along the property boundary will be in place to minimize effects of the mine on residences in the area. A berm will be constructed on the northern boundary to provide visual screening of the operation and reduce exposure to noise and dust.

Noise

Most of the noise generated with mining activity is associated with motorized vehicles and equipment; back-up alarms are required for worker safety. 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 (trucks, dozers, loaders) usually has an average noise level determined by the manufacturer. The majority of 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.

In addition to this attenuation factor, an earthen berm will be constructed along the northern perimeter of the permit area to block the direct path of and provide a visual screen. To minimize noise from equipment and pumps, the operator is required to maintain equipment (e.g., mufflers on trucks, track hoes, pumps) to minimize noise.

The combination of buffers, setbacks, 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 government 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.

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. Various methods can be used including locked entry, warning signs, berms, and natural barriers (streams, wetlands, vegetation).

The mine is accessed by a private road, Old Pond Road. The road is gated at the entrance off Beidler Forest Road restricting entry to the area. The gate is kept locked when the mine is not active.

The operator is required to post warning signs around the perimeter to alert anyone of the presence of the mine. The berm and vegetated wetlands also will deter accidental entry to the area. Interim grading of the side slopes to a rough 3H:1V will minimize highwalls and potential for falls.

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, 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. A watering truck will be used to control dust along roads internal to the mine; 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 plan for the mine involves segmental mining - overburden will be stripped from the areas to be mined first and soil stabilization measures installed as soon as practical. 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.

There is frequent exposure to dust from non-industrial sources such as dirt roads, fields, and un-vegetated lots. Although the proposed sand mining operation does not add any new hazards, controls are in place 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 DHEC's Bureau of Air Quality website at <http://www.scdhec.gov/HomeAndEnvironment/Air/AmbientAir/>.

Endangered or Threatened Species

The historic timbering practices at the site diminishes the potential for an environment suitable for threatened and endangered species.

Comments were requested from several environmental entities regarding the potential effect of the expansion on wildlife. Included were the SC Department of Natural Resources (SCDNR), US Fish and Wildlife Service (USF&WS), National Oceanic and Atmospheric Administration (NOAA), US Army Corps of Engineers (USACOE), and the SC Wildlife Federation (SCWF). Comments received from SCDNR did not indicate any issues with threatened or endangered species within the project area. USF&WS, NOAA, USACOE, nor SCWF expressed concerns with the expansion.

The main effect on wildlife present would be the loss of habitat. Native species survive in a wider range of conditions than threatened and endangered species. In response to mine activities, these species will migrate to the areas surrounding the affected area.

Cultural and Historical Resources

The State Preservation Office (SHPO) reviewed the modification for possible adverse effects to significant cultural and historical sites. Records from SC Department of Archives and History indicated a known archaeological site on the adjacent property to the east. SHPO was comfortable with the distance between the mine and the site and offered no other comments.

Property Value/ Economic Impact/ Quality of Life

Comments were received regarding potential impacts of the proposed mine on the local community including property values, local economy, and quality of life.

DHEC cannot dictate where a facility locates or factor these potential impacts into the permitting decision. DHEC is required to make its decision based on the technical review of the application and the Act and Regulations in place at that time.

Compatible land use is best determined by local government; these concerns are protected through zoning decisions made at the local level by city or county zoning authority. All zoning decisions typically are made before a permit request is received.

Zoning

Whether it is a mine, landfill, or construction, appropriate or compatible land use is determined by local government. DHEC has no authority regarding zoning in Dorchester 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."