

SUMMARY RESPONSE TO COMMENTS AND QUESTIONS

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

Approval of the Application for Mine Operating Permit I-002198 Donmar Sand Mines, LLC Donmar Sand Mine October 22, 2020

This Summary Report outlines specific issues, within the jurisdiction of the South Carolina Department of Health and Environmental Control (DHEC), considered in review of the application submitted for the proposed Donmar Sand Mine on S.C. Highway 41 in Berkeley County. This Summary Report is being provided to address many of the issues raised by DHEC's Public Notice initiated on March 12, 2020 and the Virtual Public Meeting held on September 1, 2020. This Summary Report is specific to DHEC's technical review for the Mine Operating Permit under the authority of the South Carolina Mining Act (Act).

In order to construct and operate the Donmar Sand Mine and its associated process equipment, a National Pollutant Discharge Elimination System (NPDES) Permit and a Mine Operating Permit are required by state law. A NPDES Permit (SCG731378) was modified by DHEC on May 19, 2020. DHEC accepted comments on the Draft Mine Operating Permit following the virtual public meeting through September 16, 2020. The approved mine permit, maps, reclamation plan, and this Summary Report are available on DHEC's website at www.scdhec.gov/DonmarMine.

General overview: DHEC's Mining and Solid Waste Division has approved the mine operating permit after careful review of all information submitted by the applicant, as well as all 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 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 applications by DHEC. 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. DHEC has not been given the authority to consider the effect of a mining operation on property values. DHEC is required to evaluate the application in a timely manner and to consider relevant environmental issues.

Application for the Mine Operating Permit: DHEC received the Application for a Mine Operating Permit from Donmar Sand Mines, LLC for the proposed Donmar Sand Mine on November 1, 2017. An *Intent to Mine* notice was published in *The Post & Courier* newspaper on March 12, 2020 and March 19, 2020. The notice was mailed to adjacent landowners, government and regulatory agencies, and other interested parties.

In response to the *Intent to Mine* notice, DHEC received a request to hold a public meeting. DHEC acknowledged that a virtual public meeting would be held at a later date and that notice of the meeting would be made to the public. DHEC requested supplemental information from the applicant.

A virtual public meeting was held by DHEC on September 1, 2020. The *Notice of Virtual Public Meeting* was mailed to interested parties on August 7, 2020. The comment period was extended through **September 16, 2020**.

Permit Application Specifications: Donmar Sand Mines, LLC is permitted to mine sand/clay. The permitted area of this mine operation composes a tract of land totaling 141.86 acres (Berkeley County TMS # 248-00-03-065, -109, -114). The current topography of the permitted area is approximately 30-40ft. above mean sea level (msl). The operation is permitted to excavate to a maximum depth of 0ft. msl or 30ft. below ground surface (measured from the original ground surface elevation to final elevation at that location).

Land within a mine operating permit is designated according to the permitted use (*Affected acres, Future Reserves, and Buffer Areas*). The **141.86 acre Permitted Area** comprises *Affected acres* and *Buffer Areas*. The following list provides an area description, type of activities, and designated acreage for each component of the Permitted area:

1) **Affected Area – 40.54 acres.** The affected area comprises all lands to be disturbed by mining activities (pit, sediment basins, haul roads, berms, processing area, overburden storage piles, etc.). **40.54 acres are currently bonded and may be affected.** The affected area is subject to reclamation requirements.

2) **Future Reserves – 0.0 acres.** No land has been designated as future reserves.

3) **Buffer Area – 101.32 acres.** Buffer is 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.). Any land disturbance not consistent with accepted silviculture practices in the buffer areas would require the Mine Operating Permit to be modified *prior* to any such disturbance. Appropriate silviculture practices may be utilized to manage upland buffer areas allowing the thinning of timber under the direction of a SC Licensed Professional Forester.

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 use for the former mine site. Lakes or ponds, grassland, woodland, cropland, parks or recreational developments, or residential or commercial developments may be acceptable reclamation objectives.

Donmar Sand Mines, LLC is currently permitted to affect 40.54 acres. A 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).

The approved reclamation plan states the site will be reclaimed to pond and grasslands. Final pond slopes will be graded to no steeper than a 3H:1V gradient to a depth greater than 4ft on, at least, 50% of the water surface. Other disturbed areas (e.g., plant, processing area) will be graded at least 3H:1V and vegetated as grassland. Once all mining has ended and the site meets reclamation standards, the mining permit would be canceled; at that time the Mining & Reclamation Program has no further jurisdiction over land use.

Impact on Water Resources- Groundwater, Dewatering, and Surface Water:

Groundwater Availability: DHEC considers the potential effects of mining activities on the quantity of groundwater available to nearby water supply wells and lakes/ponds. The pumping of water from the water table is expected at Donmar Sand Mine. The maximum depth of allowed excavation is 30ft. below ground level; however, the anticipated average depth of excavation is 20-25ft. below ground level. This shallow depth will limit the lateral extent of the cone of depression, narrowing the area of influence.

Water encountered in the active mine area will be discharged by being pumped from the active mine area into a retention pond. Only a volume of water needed to maintain a dry mine area will be pumped.

Pumping is not continuous and will occur periodically as needed. The water is then discharged into adjacent jurisdictional wetlands through rip-rap and vegetative filter. 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 Donmar Sand Mine will impact the quantity of water in nearby wells.

However, 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(s). Until that permanent water supply is re-established, the operator shall supply the owner with a temporary water supply (e.g., bottled water for drinking, provisions for laundry).

Discharge Monitoring and Sediment Control: Donmar Sand Mine is permitted to discharge wastewater and stormwater through an outfall in accordance with the *NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities (SCG731378)*. All discharges will be routed to the adjacent jurisdictional wetlands and eventually lead to French Quarter Creek at an approximate distance of 0.8 miles. Discharges from the outfall will be subject to numeric effluent limits (total suspended solids and pH) and other NPDES permit requirements that are protective of human health and the environment.

The primary control for sediment will be to contain the stormwater (runoff from rainfall) from the excavated area in the pit. This water will be conveyed to a sediment basin designed to allow the sediment to settle out of the stormwater prior to being discharged. The NPDES permit requires the operator to have proper Best Management Practices (BMPs) and a Stormwater Pollution Prevention Plan (SWPPP) in place. SC Mining regulations do not allow for pools of water that are, or are likely to become, noxious, odious, or foul to collect or remain on the mined area. Furthermore, the operator shall operate the Donmar Sand Mine 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. The operator is required to submit Discharge Monitoring Reports (DMRs) monthly to DHEC's Bureau of Water.

Water Quality: DHEC received comments and concerns that water quality and contaminants would be generated by the proposed mining. The proposed mining at the Donmar Sand Mine is strictly an excavation and hauling operation. No chemicals are used in this process. The mine permit requires 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.

Wetlands: The U.S. Army Corps of Engineers (USACE) issued an Approved Jurisdictional Determination (AJD) (SAC 2017-01426) concurring with a delineation depiction entitled "Wetland Survey of a Portion of TMS #248-00-03-065 Owned by Blessing Investments, LLC Located in Huger Area Berkeley County South Carolina" dated July 31, 2017 and last revised April 19, 2019, prepared by Michael S. Shulse. The USACE did not raise any concerns regarding the reclamation plans for this permit. The report identifies approximately 48.33 acres of jurisdictional wetlands and subject to regulatory jurisdiction under Section 404 of the Clean Water Act (CWA). The operator shall maintain a minimum 50ft. undisturbed buffer between all land disturbance activity and any USACE jurisdictional wetlands. The operator is allowed to discharge accumulated stormwater—that meets NPDES permit limits—into wetlands through a regulated NPDES outfall.

DHEC's Office of Ocean and Coastal Resource Management has reviewed their permit application and has determined that the proposed plan is consistent with the Guidelines for Evaluation of All Projects, as well as the (1) Coastal Industries (Mining), (2) Wildlife and Fisheries Management, (3) Dredging (Dredging and Spoil Disposal), and (4) Stormwater Management (Mines and Landfills) policies contained in the S.C. Coastal Zone Management Plan. The Coastal Zone Consistency Determination, along with all additional conditions, has been added to the mining permit as Appendix B.

Concerns about Flooding Potential: Comments and concerns were received that water discharged from the mine would cause flooding. The Act and regulations do not allow for 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. DHEC does not anticipate the volume pumped from the active pit to cause flooding downstream. The water will be pumped to a retention basin, and all discharges will be routed to the adjacent jurisdictional wetlands and eventually lead to French Quarter Creek at an approximate distance of 0.8 miles.

Buffers, Setbacks, and Visual Impact: Buffer areas provide distance between the mining operation and the neighboring properties and wetlands. The Act and Regulations do not have specific requirements for buffer areas. 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 Donmar Sand Mine will have 101.32 acres of the 141.86 acres of permitted area designated as buffer. The buffer width, or setback, from the permit boundary ranges from 50ft. to 500ft. in width. A security fence with mesh screen has been installed at the entrance of the mine. To appropriately screen the operation from view on the southwest side of the permitted area adjacent to the residential subdivision, the operator shall maintain a minimum 500ft. undisturbed buffer or, where a naturally occurring vegetative buffer does not exist, Donmar Sand Mines, LLC shall install a vegetated earthen berm. Additionally, a chain link fence will be installed along the southwest mine property line that adjoins with Francis Marion National Forest.

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 SC 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. The jurisdictional wetlands adjacent to the proposed mine will not be directly impacted and will have a 50-foot natural buffer with double silt fence to trap any migration of sediment into the buffer and wetland areas.

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. The mine operating permit would require 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 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. Additionally, since the S.C. Mining Act does not supercede any local or county ordinances, the operator must comply with any local noise ordinance that may apply.

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. An opaque privacy fence has been installed along the property line that adjoins the residential area. Additionally, natural barriers (e.g., streams, wetlands, vegetation) and constructed berms provide a deterrent for accidental entry into a mine site. If approved, the combination of these barriers and site characteristics will limit public exposure to the operations at the Donmar Sand Mine.

The risk of accidentally encountering a highwall will be minimized by excavating the site on a slope. Slopes at final reclamation will be constructed no steeper than 3H:1V.

Traffic: A common concern expressed is the increase of truck traffic hauling mined material. The SC Mining Act only authorizes DHEC to regulate truck traffic on roads inside the permit boundary. DHEC can only evaluate impacts to public roads as it pertains to the physical effects from the mining operation (e.g. blasting, undermining, etc.).

In the Consent Order with Berkeley County, the operator agreed to have "New Road" serve as the sole ingress-egress right of way to service the mining operators to and from S.C. Highway 41. The operator shall not access the mine site through Charity Church Road or any other road, public or private. The sole use of this new haul road will also be under the jurisdiction of DHEC.

Other concerns with road systems, including use of the roads, are under the jurisdiction of S.C. Department of Transportation (SCDOT), S.C. Public Service Commission, or Berkeley County's Roads and Bridges Department.

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. Wind erosion of areas stripped of vegetation and material stockpiles are also sources for potential dust. Properly constructed access roads with dust suppression methods (e.g., water trucks, sprinklers) is the most effective way to manage dust from traffic. Donmar Sand Mines, LLC will use sprinklers along the haul road. The frequency of watering will depend on weather conditions and volume of traffic. The operator, where feasible, will establish and maintain vegetation in non-active mine areas barren of vegetation to stabilize the soil and reduce potential for wind erosion and dust emissions.

Natural Resources and Wildlife: The S.C. Mining Act grants DHEC the authority to consider any *undue adverse effects* on wildlife or freshwater, estuarine, or marine fisheries. DHEC interprets an undue adverse effect as a detrimental effect to any federal or state recognized Threatened or Endangered (T&E) species or habitat; any effects to common wildlife is not considered "undue". The S.C. Department of Natural Resources (SCDNR) offers comments on the application as part of the review process. The intent of the SCDNR review is to assess the potential impact of mining on the requested area, with special attention to state or federally listed T&E species. The U.S. Fish and Wildlife Service (USFWS) conducted a species survey on September 3, 2016 for American chaffseed and pondberry and did not find any evidence of either species. SCDNR and USFW did not identify any T&E species within the project area.

In contrast to a T&E species that have very specific demands for survival, common wildlife are adaptable to a wide range of environmental factors. A minimum of 101.32 acres will be maintained as buffer. These buffer areas will remain undisturbed by mining practices and will continue to offer suitable habitats for common wildlife. The maintenance of buffer areas around the mines will protect wetlands and minimize displacement of animals from the areas mined.

Operating Hours: Comments were received regarding hours of operation. In the Consent Order with Berkeley County, the operator agreed to the following operating hours: Monday through Friday between the hours of 7:30 A.M. and 4:30 P.M. No weekend operations shall be allowed. The hours of operation have been included in our permit conditions and are fully enforceable.

Inspections: S.C. Mining Act 48-20-130 and Regulation 89-240 allow DHEC 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 DHEC's discretion in order to assess and/or enforce permit compliance. DHEC staff may also respond to complaints about a facility.

Land and Property Value/Economic Impact: Comments were received regarding the impact to property values and the possible economic impact. All zoning decisions are made at the local level by a city or county zoning authority, usually before a permit request is received. DHEC cannot dictate where a facility locates or factor property value impacts into permitting decisions. Contact your local city or county council representatives for more information on how to get involved in local zoning and planning issues.

Zoning: Concerns were raised about the location of this mine given the various surrounding land uses. Appropriate or compatible land use is determined at the local level. DHEC has no authority regarding zoning in Berkeley County or the Town of Huger. 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.*"

Community / Quality of Life: Comments were received regarding the potential impacts to the community's way of life. DHEC cannot make its permit decisions based on these factors. The permit decision is based on DHEC's technical review of the permit application and the Act and Regulations in place at the time of the DHEC's review.

General Opposition: DHEC received several comments requesting denial of a permit. While DHEC 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. DHEC 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, DHEC is required to grant an operating permit to the applicant if there are no technical reasons to deny the permit.