

MINE OPERATING PERMIT

PART I:

DLI Plantation Egeria Mine Dorchester Logistics, Inc.

Dorchester Logistics, Inc., a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002170 to operate the DLI Plantation Egeria Mine in accordance with the S.C. Mining Act (S.C. Code Sections 48-20-10 *et seq.*, 1976) and Regulations 89-10 *et seq.* The operator shall conduct this operation as represented in documents submitted to support the issuance of this permit.

JOAN F. LITTON, DIRECTOR

DIVISION OF MINING AND SOLID WASTE MANAGEMENT

PERMIT NUMBER:

1-002170

ORIGINALLY ISSUED:

February 9, 2018

MODIFIED:

Not Applicable

In accordance with Section 48-20-60 of the South Carolina Mining Act, this Mine Operating Permit will remain valid unless it terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation Plan*.

The approved *Permit Application, Reclamation Plan*, and all supplemental information referenced herein, are an integral part of this permit. *Land Entry Agreements and Mine Maps* as identified in Part II and Part IV, respectively, are also a part of this permit.

Dorchester Logistics, Inc.

Home Office Address:	Dorchester Logistics, Inc. PO Box 365 Harleyville, SC 29448
Local Office Address:	None
Address for Official Mail:	Dorchester Logistics, Inc. PO Box 365 Harleyville, SC 29448
[South Carolina Department of Healt]	ne contact for official business and correspondence hand Environmental Control (DHEC) should be notified in contact, address, telephone or fax numbers]:
Todd Muckenfuss Vice-President	Telephone: 843-462-2600 Fax: 843-462-2929
LOCATION: The mine is located on the approximate geographic coordinates for	e Pringletown, SC U.S.G.S. 7.5' Topographic Map. The r the site are:
Latitude: <u>33.196484</u>	Longitude:80.349327
Specifically the site is located approxim	County approximately 5.8 miles east of Harleyville, SC. ately 0.8 mile north-northeast of the junction of SC Secondary d) and S-18-132 (Mallard Lake Road). The site is north of Old its junction with Beidler Forest Road.

Part II: MINE OPERATIONS

Dorchester Logistics, Inc. also referred to as the operator, is permitted to mine sand/clay at the DLI Plantation Egeria Mine. The maximum depth to the pit floor will be twenty feet below ground surface. Mining will take place on a tract of land leased by the referenced operator. The tract of land is identified in the submitted *Land Entry Agreement* (LEA).

MINE/PIT CHARACTERIZATION: The sand/ clay and topsoil will be excavated. Various equipment (trackhoes, backhoes, bulldozers) will be used to clear, excavate, stockpile and load material. Dump trucks will be loaded from stockpiles and used to haul material off-site.

Adequate amounts of topsoil shall be stockpiled for reclamation of the affected area; excess topsoil not needed for reclamation may be sold.

PROCESSING PLANT LOCATED ON MINE SITE: No processing will be done on site.

<u>MINE DEWATERING:</u> Water table at mine site is relatively shallow and lowering of the water table is necessary to facilitate mining. Any accumulation of groundwater and stormwater will be pumped into a sediment basin. All water discharged from the mine must be discharged through an outfall regulated by a NPDES permit.

BLASTING: Blasting operations are not permitted at this mine site.

<u>SIGNIFICANT CULTURAL OR HISTORICAL SITES:</u> No significant cultural or historical sites have been identified. Note Part X: *Additional Terms and Conditions* of this Mine Operating Permit.

<u>VISUAL SCREEN</u>: To appropriately screen the operation from view, the operator shall maintain undisturbed buffer from all property lines as depicted on the mine map. If the Department determines this buffer is inadequate, the operator may be required to supplement this vegetation by constructing an earthen berm toward the mine side of the buffer.

NOISE MONITORING AND CONTROL: The operator shall use Best Management Practices (BMPs) to minimize noise from the mine site. This noise BMP should include, at a minimum, proper maintenance of mufflers on equipment (trucks, trackhoes, pumps, etc.) and consideration of special buffering measures if planning to operate equipment during nighttime hours.

OTHER STATE OR FEDERAL PERMITS: The operator must obtain, maintain, and update, as appropriate, all necessary State and Federal permits in order to construct and operate the mine.

<u>LAND ENTRY AGREEMENTS:</u> The operator is required to furnish and maintain up-to-date *Land Entry Agreements* on all lands covered under this permit. Any change in ownership on any portion of land covered by this permit, the operator is responsible for furnishing the appropriate and completed *Land Entry Agreements* (Forms MR-600 or MR-700) to the DHEC within 30 days of the change of ownership.

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/Form	s MR-600 or MR-70	00) to the DHEC with	hin 30 days of the cha	ande of ownership	
(i oiiii	3 1011 (-000 01 1011 (-7)		illi oo days or life cir	ange or ownership.	

Land Owner(s) as Listed on Land Entry Agreement(s):								
Hugh E. Long	TMS# 051-00-00-	003						
Total acres of the contiguous tract(s) of land for which the permit is granted:								
OWNED0.0	LEASED <u>27.7</u>	TOTAL _	27.7					

Part III: PERMITTED LAND

This permit allows the operator to conduct mining operations within the permitted land as defined through the Land Entry Agreement submitted as part of the application. Permitted land as defined by Section 48-20-40(18) is "the affected land in addition to (a) lands identified for future mining to become affected land; (b) and undisturbed or buffer area that is or may become adjacent to the affected land." Therefore, this permit grants the operator the right to conduct active mining operations within the specified affected land, delineate land for future mine areas as future reserves and to establish undisturbed buffer zones to mitigate any adverse affects to the surrounding environment.

<u>AFFECTED LAND:</u> 24.0 acres of land are to be affected by Dorchester Logistics, Inc. under the current mine plan. The operator is permitted to affect up to 24.0 bonded acres of land at any point in time in accordance with the *Schedule for Conservation and Reclamation Practices* in the approved *Reclamation Plan*. Once affected land is released as reclaimed by the Department in accordance with R.89-330, that land is no longer considered affected and the mine operator carries no further reclamation liability. The affected acres are derived from the operator's response in the *Application for a Mine Operating Permit* (Form MR-400), page 3, line 2H.

<u>FUTURE RESERVES: 0.0</u> acres are identified as future mine reserves and are specified on the mine site map. Prior to the initiation of activity in future reserves, the operator shall submit detailed mine and reclamation plans. Failure to submit such plans to the SCDHEC and obtain approval prior to commencement of mining activities would be a violation of this permit.

<u>BUFFER AREAS:</u> 3.7 acres are identified as buffer area, setbacks or areas that will not be disturbed beyond the pre-mine natural state. These buffer areas are identified on the mine site map. Acres designated as buffer areas are not bonded under the reclamation bond. Any disturbance of the buffer areas (i.e. removal of timber) requires this *Mine Operating Permit* to be modified **prior** to any such disturbance.

TOTAL PERMITTED AREA: 27.7 acres as submitted on the Land Entry Agreement(s).

Part IV: MAPS

The permitted maps are listed herein. The maps are dated and further identified with DHEC assigned map number as listed and are part of the operating permit.

MINE MAP:

SM-2170-1V1

Mining Plan Map

April 19, 2017/ revised July 11, 2017

RECLAMATION MAP:

RM-2170-1V1

Reclamation Map

April 19, 2017

Part V: RECLAMATION BOND

The Reclamation Bond is based upon the total affected acres. Pursuant to Section 48-20-70 and R.89-200, the reclamation bond for this mining permit is set at \$25,000.00. The reclamation bond shall remain in force and continuous throughout the life of the mining operation and shall only be released, partially or in full, back to the operator after the operator has completed reclamation in accordance with the approved *Reclamation Plan* and the minimum standards in R.89-330.

Part VI: PROTECTION OF NATURAL RESOURCES

1. Describe the area of and around the mine site. Specify topography, surface water systems, wildlife habitats, residential houses, commercial properties, recreational areas and/ or public roads.

The site is located within a 119 acre tract of land in a rural area of Dorchester County. Uses of adjacent properties are a mix of forested/silvaculture and agriculture; few residences are in the vicinity.

The property has been clear-cut and has sparse scrubby vegetation. Several access roads exist in the mine area. Mine activity was initiated along Old Pond Road under GP1-001844.

The tract has a slight topographic break from Old Pond Road toward the back of the permitted area. Wetlands delineated in the lower areas drain to Four Hole Swamp located east of the site. Soils onsite consist mainly of Chipley Sand and Bonneau fine sand.

2. Methods used to prevent physical hazards to persons and to any neighboring dwelling, house, school, church, hospital, commercial or industrial building or public road.

A gate will be installed at the entrance to the mine site and kept locked during inactive periods. *Warning* and/ or *Danger* signs shall be posted around the perimeter of the property. To reduce the potential of accidental falls, the operator shall grade side slopes as excavations progress to minimize highwalls.

With the exception for the existing perimeter road, the operator shall maintain a 50' undisturbed buffer/setback along the wetlands and property lines. This setback will lessen potential impacts to adjacent properties and Old Pond Road.

Operator shall use Best Management Practices (BMPs) to prevent accumulation of sediment/ soil on public roads carried by trucks and other vehicles exiting the mine site. At a minimum, accumulations shall be removed by the operator on a daily basis but more frequently if needed.

The operator shall establish a protected area or 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. Contaminated materials resulting from contact with petroleum products must be removed from the site and disposed properly to prevent contamination to ground and surface water resources.

3. Methods used to prevent an adverse effect on the purposes of a publicly owned park, forest or recreation area.

There are no publicly owned parks, forest or recreational areas near this mine site.

4. Measures taken to insure against substantial deposits of sediment in stream beds or lakes.

The operator shall comply with the NPDES discharge permit and *Stormwater Pollution Prevention Plan* developed for the mine.

With the exception for the existing perimeter road, the operator shall maintain a 50' undisturbed buffer along the wetlands and property lines. Appropriate Best Management Practices (BMPs) shall be installed to ensure no sediment encroaches wetland areas. BMPs shall be installed to the mine-side of the undisturbed buffer or along the outside of the access road.

Active pumping and discharge of water from the active pit through the sediment basin shall cease if the dewatering discharge causes flooding conditions to property downstream of the mine site.

5. Measures taken to insure against landslides or unstable mine walls.

Final slopes will be 3H:1V to minimize potential for landslides or unstable mine walls. The operator is responsible for maintaining stable mine walls and appropriate setbacks to prevent significant slumping that may encroach into non-permitted lands.

6. Measures taken to insure against acid water generation at the mine site that may result in pollution on adjacent property.

Acid water is not anticipated to be generated from the oxidation of existing minerals currently found on site.

7. Measures taken to minimize or eliminate fugitive dust emissions from the permitted area.

The mine operator will use appropriate measures (i.e. water truck, dust suppressants, etc.) to control fugitive dust created by moving equipment along haul roads. 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 blowing dust.

Part VII: STANDARD CONDITIONS OF MINE OPERATING PERMIT

- 1) SURVEY MONUMENTS: In accordance to R.89-130, the operator shall install and maintain the two required permanent survey monuments or control points within the permitted area as shown on the mine site map. At the discretion of DHEC the operator may be required to mark the area to be affected with flagging or other appropriate measures.
- 2) RIGHT OF ENTRY: Pursuant to Section 48-20-130 and R.89-240, the operator shall grant DHEC and/or duly appointed representatives access to the permitted area for inspection to determine whether the operator has complied with the reclamation plan, the requirements of this chapter, rules and regulations promulgated hereunder, and any terms and conditions of this permit.
- 3) RECORDS RETENTION: All records are to maintained through additional terms and conditions of this permit or by regulations, shall be kept on site or at the office identified for receipt of official mail and open for inspection during normal business hours. The records shall be maintained for a minimum of three (3) years or as specified by DHEC. The operator shall furnish copies of the records upon request to DHEC.
- 4) PERMIT MODIFICATIONS: Pursuant to Section 48-20-80, the operator may modify the permit and/or Reclamation Plan upon approval by DHEC. Requests for permit and/or Reclamation Plan modifications may be made to DHEC on Form MR-1300. The operator shall submit any requested supporting data for consideration during DHEC 's evaluation of the modification request. If a modification request is determined to be substantial by DHEC, the modification request will be public noticed pursuant to R.89-100 and a modification fee will be required as specified in R.89-340. If DHEC determines activities proposed under the Reclamation Plan and other terms and conditions of the permit are failing to achieve the purpose and requirements of the S.C. Mining Act and Regulations, DHEC shall notify the operator of its intentions to modify the permit and/or Reclamation Plan pursuant to Section 48-20-150.
- 5) TRANSFER OF PERMIT: Pursuant to Section 48-20-70, this permit may be transferred to another responsible party. The transfer of the permit must be conducted in accordance with R.89-230. The transferor of the permit will remain liable for all reclamation obligations until all required documents; plans and the replacement reclamation bond have been submitted and approved by DHEC. The transfer will be considered complete when all parties have received notification by certified letters of the approval of the transfer by DHEC.
- 6) DURATION OF MINE OPERATING PERMIT: In accordance with Section 48-20-60 this Mine Operating Permit will remain valid unless this permit terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The termination date of this permit may not be extended for the sole purpose of postponing reclamation of the mine site. Reclamation activities in the absence of active mining may be required pursuant to R.89-270.

Pursuant to R.89-80 (B), the operator shall conduct reclamation simultaneously with mining whenever feasible. Reclamation shall be initiated at the earliest practicable time, but no later than within 180 days following termination of mining of any segment of the mine and shall be completed within two years after completion or termination of mining on any segment of the mine.

Part VIII: ENFORCEMENT ACTIONS

Pursuant to Section 48-20-30 of the S.C. Mining Act, "DHEC has ultimate authority, subject to the appeal provisions of this chapter, over all mining, as defined in this chapter, and the provisions of the chapter regulating and controlling such activity." This allows DHEC to assist, cooperate with or supersede other State agencies in taking enforcement action on violations of the State Regulations or violations of the S.C. Mining Act to ensure the purposes of this Act are enforced.

<u>COMPLIANCE:</u> The operator shall comply at all times with all conditions of this mine operating permit. Non-compliance with this mining permit, statute, or regulations could lead to permit revocation and bond forfeiture pursuant to Sections 48-20-160 and 48-20-170 or other enforcement action allowed by law.

Compliance with the Mine Operating Permit requires the operator to conduct the mining operation as described in the approved *Application for a Mine Operating Permit*. Variance from the *Application for a Mine Operating Permit*, this permit, statute or regulation, without first receiving DHEC approval, shall be deemed non-compliance with the permit.

An operator or official representative of the mine operator who willfully violates the provisions of the S.C. Mining Act, rules and regulations or willfully misrepresents any fact in any action taken pursuant to this chapter or willfully gives false information in any application or report required by this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined not less than one hundred dollars nor more than one thousand dollars for each offense. Each day of continued violation after written notification shall be considered a separate offense.

The operator is responsible for all mining activity on the permitted mine site.

Part IX: REPORTS

1) ANNUAL RECLAMATION REPORTS: The operator shall comply with Section 48-20-120 and Regulation 89-210 and submit an *Annual Reclamation Report* on Form MR-1100 as supplied by DHEC. The form for the report will be sent by regular mail to the operator to the mailing address shown on the previous year's *Annual Reclamation Report*. The operator should receive the report form from DHEC by July 1 of each year; however, the operator is ultimately responsible for obtaining the *Annual Reclamation Report* form and is not excused from penalty fees for failure to submit the report on time.

The Annual Operating Fee is a part of the *Annual Reclamation Report*. Failure to submit a complete *Annual Reclamation Report* (i.e. information and fee) in accordance with Section 48-20-120 and R.89-340 will result in a late penalty payment. The *Annual Reclamation Report* and Annual Operating Fee is required if there is any permitted land not fully reclaimed and released by DHEC by June 30 of *each* year.

2) SPECIAL REPORTS: DHEC may at any time request information, data, or explanations from the operation as to conditions relating to the permitted mine site. Such request from DHEC shall be made in writing to the operator with appropriate time frame stated for the submittal of the requested information to DHEC. The operator must produce the information requested within the timeframe specified by DHEC.

Part X: ADDITIONAL TERMS AND CONDITIONS

- 1. 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, the South Carolina Institute of Archaeology and Anthropology, and the S.C. Department of Health and Environmental Control should be notified immediately. Historic or cultural resources consist of those sites listed in the National Register of Historic Places and those sites that are eligible for the National Register. 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.
- 2. In the future, if determined to be necessary by the Department, an appropriate fence will be installed around the affected area.
- 3. Temporary or permanent placement of refuse and debris from off-site locations is prohibited. Topsoil, free of debris and contaminants and as defined in Regulation 89-10D, may be brought in from off-site sources, but only for the purposes of mine land reclamation.
- 4. The operator shall maintain buffers/ setbacks as depicted on the mine map. The buffer/ setback shall be permanently flagged prior to the initiation of any mine activity or preparation. The flags shall be maintained throughout the operation/ reclamation of the site. To ensure proper buffering, any expansion or improvements to the existing perimeter road must be made along the mine side of the road.
- 5. Active pumping of water from the pit and discharge through the sediment pond shall cease if the dewatering discharge causes flooding conditions to property downstream of the mine site.
- 6. If the Department determines a drinking water well or water supply well is being adversely affected by dewatering activities at the mine, the operator shall be responsible for repairing, deepening or re-drilling such wells. If an impact to a well occurs, the operator shall supply the owner with a temporary water supply (e.g. bottled water for drinking, provisions for laundry services, etc.) until a permanent water supply is reestablished.
- 7. The operator shall comply with the approved Coastal Zone Consistency Determination issued under the SC Coastal Zone Management Program by the Department's Office of Ocean and Coastal Resource Management (OCRM). See Appendix B.

APPENDIX A

MODIFICATIONS TO MINE PERMIT I-002170

NUMBER	APPROVA L DATE	DESCRIPTION OF MODIFICATION (PA= Permitted Acreage; AA= Affected Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Issued	2/9/18	Permit issued; PA = 27.7 ac., AA = 24.0 ac., FR= 0.0 ac, B = 3.7 ac; Cancellation of GP1-001844

APPENDIX B

Coastal Zone Consistency Determination CZC-17-1313 Office of Ocean and Coastal Resource Management



Coastal Zone Consistency Determination

Wendy Hamilton, BLWM Mining and Solid Waste Permitting To:

နှင့် Sarah Reed, OCRM Coastal Zone Consistency Section 🕜 🗸 From:

Dorchester Logistics, Inc. Applicant:

Project Name: DLI Plantation Egeria Mining

Site location: Beidler Forest Road, Dorchester County, SC

Finding:

Consistent with the S.C. Coastal Zone Management Program

CZC #: CZC-17-1313

PN#: I-002170 (Mining)

Date: December 20, 2017

The proposed activity consists of mining, or excavation, of sand and clay. This project involves increasing the mining area of an existing GP1 mining project from 5 acres to 27.74 acres which will involve upgrading the mine to an individual mine operating permit. The material will be mined in layers, deposited into piles, and then loaded onto trucks or moved to a storage location on the mine property. The mining pit will have a 3:1 slope and will be excavated to a maximum depth of 20'. The project also proposes the installation of erosion and sediment control BMPs. The applicant has an approved (BLWM) reclamation plan that will be implemented after mining operations cease at 5-6 years. Once mining operations are complete, the mine will be reclaimed as a lake.

We hereby certify that the project, as proposed, is Consistent with the Guidelines for Evaluation of All Projects, as well as the (1) Coastal Industries (Mining) and the (2) Stormwater Management (Mines) policies contained in the S.C. Coastal Zone Management Program provided the following conditions are included in the permits and adhered to by the applicant.

- 1. In the event that any historic or cultural resources and/or archaeological materials are found during the course of work, the applicant must notify the State Historic Preservation Office and the South Carolina Institute of Archaeology and Anthropology. Historic or cultural resources consist of those sites listed in the National Register of Historic Places and those sites that are eligible for the National Register. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials.
- 2. Upon completion of construction activities, all disturbed areas, including those impacted for access, must be immediately stabilized.

- 3. Best management practices located at the spillway must be installed, inspected, and maintained through the life of the project to prevent discharged wastewater from negatively affecting receiving wetlands and waterbodies.
- 4. The pumping of groundwater from sediment basins must be done with floating intakes only. Pumping of the basin must cease whenever the water levels come to within 2 feet of the pond bottom.
- 5. The project must be fully consistent with all local zoning, ordinances, comprehensive plans, and other specific local authorizations prior to land disturbance.

This determination shall serve as the DHEC OCRM State Coastal Zone Consistency Determination for the work described above. This determination *does not* serve as the final permitting decision and *does not* alleviate the applicant's responsibility to obtain the final authorizing State or Federal permit(s). Local government authorizations *may also* be required.



DHEC 3103 (08/1997).

Mining Form MR-500

8.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT DIVISION OF MINING AND SOLID WASTE PERMITTING 2600 Bull Street, Columbia, SC 28201

Telephone Number: (893) 896-4261 Fax Number: (803) 896-4961

RECLAMATION PLAN DHEC FORM 500 DATE VERSION ADOPTED 7/1/94

As required in Section 48-20-90 of the South Carolina Mining Act, "An operator shall submit with his application for an operating permit a proposed reclamation plan. The reclamation plan for an operating permit only must be furnished to the local soli and water conservation district in which the mining operation is to be conducted. The plan must include as a minimum each of the elements specified in the definition of 'reclamation plan' in Section 48-20-40 and information required by the department. The reclamation plan must provide that reclamation activities, particularly those relating to control of erosion, to the extent feasible, must be conducted simultaneously with mining operations and be initiated at the earliest practicable time after completion or termination of mining on a segment of the permitted land. The plan must provide that reclamation activities must be completed within two years after completion or termination of nearly segment of the area for which an operation permit is requested unless a longer period specifically is permitted by the department."

	in two years after completion or termination of mining on each segment of the area for which an operation permit is re- sted unless a longer period specifically is permitted by the department."	
,	APPLICANT INFORMATION	
	1. Name of Company: DORCHESTISR LOGISTICS, INC	
	2. Name of Proposed Mine: DLI PLANTATION EGERTA County: DORCHESTER	
	3. Home Office Address: 26/SEVEN MILE POLPO Box 365 843-462-2600 (Telephone No.)	
	HAR/EYUI/18 5C 29448 843-462-2929	,
	(City) (State) (Zip Code) (Fax No.) 4. Local Office Address: 5AM3 (Street and P.G. Box) (Telephone No.)	
	(City) (State) (Zip Code) (Fact No.) 5. Name of company personnel and their title to be the contact for official business and correspondence: MICHAE (TODD MUCKEN FUSS: VICE PRESIDENT)	<u>-</u>
	6. Location of Mine: S-18-28 BEIDLER FOREST RD DORCHESTER SC State or County Hwy No. Negrest Town or City	;
ı.	ENVIRONMENTAL PROTECTION	
	1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation. Soil BERM, FITTER COTA, SWAISS, RETENTION POND:	5
	2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources. ANY DISTURBED AREA RUN-OF WILL BE CHANNELLED TO HAIN PIT. FITER CLOTH WILL BE USED ON DIRT BERMS AND SEEDED TO PREVENT SEDIMENT RUN-OFC.	
	3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.	
	NO SITES ON PROPERTY.	

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4. Describe method to prevent or eliminate conditions that could be hazardous to animal or fish life in or adjacent to the permitted area. NO FISH IFE IN AREA. BANK OF PIT WILL BLE STOPED IN ONE AREA FOR BSCAPE OF ANY WILDLIFE WHICH ENTER PIT.
5. Describe how applicant will comply with State air quality and water quality standards as established by the S.C. Department of Health and Environmental Control. All Equipment will be IN 9000 MAINTENCE. PREVENTATIVE MAINTENCE WILL be CONDUCTED TO PREVENT ANY AIR OR 9 ROUN WATER POLLUTION- RECLAMATION OF AFFECTED AREA
6. State useful purpose(s) the affected land is being proposed for rectamation. More than one purpose may be checked, but information should be submitted to support the feasibility for each proposed purpose.
b. Agriculture g. Recreation fish rep. pack hunting c. Woodlands h. Wellands h. Wellands i. Park e. Commercial 7. State the final maximum surface gradient(e) (stope) in soil, sand, or other unconsolidated materials on reclaimed land. Surface gradients steeper than 31-t1V (18 degrees or 33 percent) may be required to submit geotechnical data and studies to demonstrate that the steeper slopes will remain stable following final reclamation. FINA (Slope 3: 1 AND SEEDED 8. How will the final slopes in unconsolidated material be accomplished? If the slope will be by backfilling, demonstrate that there is adequate material to accomplish the stated final gradient. If gradient is to be achieved by bringing in material from outside the permitted area, state the nature of the material and approximate quantities. If the gradient is to be achieved by grading, show that there is adequate area for grading to achieve gradient (i.e., adequate distance between the property ine and edge of highwell). Operator should show calculations or other appropriate information to demonstrate that there is adequate materials in backfilling and grading to meet the requirements for final slope. FINA Slope will be workeo in As Mining PRGRESSES. Adequate. Require O Slope.
9. Describe the plan for revegetation or other surface treatment of affected area(s). The revegetation plan shall include but not be limited to the following: (a) planned soil test; (b) site preparation and fartization; (c) seed or plant selection; (d) rate of seeding or amount of planting per acre; (e) maintenance. All of This. Abour. Operator has hydro seeofa which will be used To seed to the Maintain Slope.
Sono 2 December 1

GP1-001844 I-002170 10. Provide, as a separate document, a closure plan of the mine and permitted facilities to prevent a release of contaminants from being harmful to the environment. A closure plan is not necessary for all mines, but is required where the possibility exists for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has discharge limitation parameters other than pH and Yotal Suspended Solids (TSS); (c) chemically treated tellings or stockniles (excludes fertilizar or tima far revegatation purposes).

Should NOT Apply. Only mining of SAND/clay will be DONE, THEN RETURN PIT TO RECREATION PISHING /AKE

11. Method of control of contaminants and disposal of mine waste soil, rock, mineral, scrap, tallings, stimes, and other material directly connected with the mining, cleaning, and preparation of mineral substances mined and includes all waste materials deposited on or in the permit area from any source.

Should not Apply, MINING of Fill dIRT ONLY.

Method of reclaiming settling and/or sediment ponds.

Will be PART of MAIN LAKE whEN COMPLETED.

13. Describe method of restoration or establishment of stream channels, stream banks and alte drainage to a condition minimizing erosion, siliation and other pollution.

SlopE ON BANKS WILL BE MAINTAINED TO KEEP EROSION INSIDE EXISTING PIT. FHIShED bANKS WILL BE 3:1 AND SEEDED WHEN COMPLETED.

- 14. What are the maintenance plans to insure that the reclamation practices established on the affected land will not deteriorate before released by the Department? OPERATOR, EMPLOYEES AND OWNER WILL MONITOR SITE. SITE CONDITIONS WILL INFLUENCE OVERALL FINAL RESULTS. IT IS IN OUR DEST INTEREST TO MAINTAIN SITE IN EXCELLANT
- 15. For final reclamation, submit information about practices to provide for safety to persons and to adjoining properly in all excavations, identify areas of potential danger (vertical walls, unstable slopes, unstable surface on day slimes, etc.) and provide appropriate safety provisions. These provisions can include but are not limited to satisacies, fencing,

 All Slopes will be graded as Required, gates will be locked AND SIGNS WILL BE POSTED ABOUT MINING SITES AND NO TRESPASSING
- 16. What provisions will be taken to prevent notious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or pends, provide supporting information that a minimum water depth of four (4) feet on at least fifty percent (50%) of the pond surface area can be maintained. MINE PIT depth will be 20t. This depth will prevent wesos from growing AND WATER FROM WARMING. WATER TABLE IN AREA IS 4-5' Which WILL BE SUFFICENT TO KEEP LAKE AT AN

ACCEPTABLE LEVEL AND WATER GUALITY ACCEPTABLE.

17.		ntify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclar ion for leaving any structures.	estion. Provide justifi-
	N	10 BUILDINGS OR STRUCTURES WILL PEMAIN.	
	-		
18.		ach <u>two (Z)</u> copies of a map of the area (referred to as the RECLAMATION MAP) that shows as and conservation practices to be implemented. The following should be shown:	the reclamation proc-
√		The outline of the proposed line! limits of the excevation during the number of years for whitequested.	ich the permit is
,		The approximate first surface gradient(s) and contour(s) of the area to be racialmed. This wand bottoms of mines racialmed ponds and lakes.	ould include the sides
MA	C.	The outline of the tailings disposal area.	
NA	Đ.	The outline of disposal areas for spoil and refuse (exclusive of tailings ponds).	
	E.	The approximate location of the mean shore line of any impoundment or water body and in structures which will remain upon final reclamation.	let and/or cullet
A	F.	The approximate locations of access roads, haut roads, ramps or buildings which will remain	in upon linal
3	8 _	rectametion. GRASS ROAD AROUND PAKE, BOAT PAMP	
		The approximate locations of various vegetable treatments. 7,746.5 Y TREES	
		The proposed locations of re-established streams, ditches or drainage channels to provide	
V	L	The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Mai be used for preventing or controlling erosion and off-site siltation.	agement Practices to
V	1	Proposed locations of the measures to provide safety to persons and adjoining property.	
L	K.	Segments of the mine that can be mined and reclaimed as an ongoing basis.	
6	L	The boundaries of the permitted area.	
1	M.	. The boundaries of the affected area for the anticipated life of the mine.	
4	N.	The boundaries of the 100-year floodplain, where appropriate.	
	0.	Identify sections of mine where the final surface gradient will be achieved by grading and/o 50'SETBACK AR WET 18440S - FY 1/1849 + 9 R& D 1849	r backfilling.
V	P.	A legand showing the name of the applicant, the name of the proposed mine, the north an scale, the date of preparation and the name and life of the person who prepared the map.	out, the county, the
HEREO MFORM ARCEN	11.7	DRECIAMATION MAPSHALLHAVE ANEXT, LEGISLE APPEARANCE AND SECT SUFFICIENT SCALE TO CLEA ILLISTED ABOVE. THE BASEFOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AL STOPOGRAPHIC MAP OR A RECENTLY PREPARED THAT, SECLAMATION MAP SHOULD HE SHE SHALE SCALE	RALPHOTOGRAPH, EN-
0.00		HE FOR HIPLEMENTATION OF CONSERVATION AND RECLAMATION PRACTICES	energy a concept.
		is taked in Section 48-20-80 of the S.C. Mining Act, reclamation activities, to the extent leasit	to must be anothered
145.	si	multisneously with mining operations. Identity which areas or segments of the mine are <u>not</u>	feasible to reclaim
	635 640	realization can not proceed simultaneous test.	S MINISTER
		GRADING OF SIDE WALLS WILL BE COMPLETED A IS COMPLETED ON CERTAIN SECTION TO STAB	ILIZE THE
		WAII.	
THE P	310	19 Page-4	Permit No.
		•	<i>GPI-001844</i> I-002170

20. Section 48-20-40(16)(1) of the S.C. Mining Act requires a time schedule, including the anticipated years for completion of reclamation by segments. This time schedule should meet the requirements of Section 48-20-90 of the Mining Act.

SCHEDULE FOR IMPLEMENTING CONSERVATION AND RECLAMATION PRACTICES

Conservation &	Segment #	Planned		*Applied		Notes	
Reclamation Practices	or Area	Amount	Year	Amount	Month/Year	7,0,00	
Excavation initiated under GP1-001844	GP1	4.0				GP1 incorporated	
Install survey control markers	PA		GP1			See Note 1, maintain LOM	
Flag buffer area	PA		2017			See Note 2, maintain LOM	
Post Warning signs	PA		2017			Maintain LOM	
Install stormwater BMPs along wetlands, access road; basin	PA		2017			See Note 3	
Clear/ stockpile topsoil	AA	24.0	2017- 2024			See Note 4	
Remove/ stockpile overburden	AA	24.0	2017- 2024			See Note 5	
Excavate	AA	24.0	2017- 2024			See Note 5	
Grade final side slopes 3H:1V	final banks	~4.0	2017- 2024			See Note 6	
Topsoil, fertilize, seed slopes	final banks	~4.0	2017- 2024			See Note 7	
Grade out sediment basin	basin		2024			once mining is completed	
Inspect, repair, maintain	final banks	24.0	2017- 2024			See Note 8	

Notes:

- 1. Two permanent survey markers within the permitted area shall be located at least 100 feet apart as required in R.89-130.
- 2. Markers should be located prior to the start of mining. Permanently flag buffers associated with property line and wetlands
- 3. Best Management Practices shall be installed and maintained as necessary to ensure stormwater is retained on site. Water discharged from the mine must be discharged through an outfall regulated by a NPDES permit.
- 4. Enough topsoil for reclamation must be stockpiled at the site
- 5. Minimize the amount of disturbed acreage to reduce the potential for offsite sediment and erosion control concerns.
- 6. Slopes shall be graded as excavations progress.
- 7. Topsoil placement, fertilizing, seeding of final banks shall be done as soon as feasible
- 8. Reclamation/ vegetation shall be inspected on a regular basis and corrective measures taken to prevent erosion of final slopes

AA – Affected Area BMPs – Best Management Practices LOM – Life of Mine PA – Permitted Area PL – Property Line ST – Sediment Traps SW – Stormwater TS – Topsoil WL - Wetlands

^{*} Completed by the Department

YOU ARE NOTIFIED THAT:	
1) You, the operator, must file an application to modify the reclamation plan in the event actual reclamation varies from the se forth hereinabove; and	Ł
2) If at any time it appears to the Department that the activities under the reclamation plan are failing to achieve the purpose and requirements of the S.C. Mirring Apt; the Department may modify the RECLAMATION PLAN in accordance to Section 48-20-150.	1
Mill M	
Signature of Applicant/Operator or his Authorized Representative	
Michael T. Il Muckenfuss	
Printed Name of Applicant/Operator or his Authorized Representative	
UP.	
Time *	
6-1-17.	
Date	
Department Use Only	
Permit No.: I-002170 Date Application Approved: 2/9/18 Date Bond Rec'd: 2/7/18	
Bond Amount: \$25,000.00 Blanket or Single Bond: single Permit Issuance Date: 2/9/18	
Bond Amount: 420,000.00 Barrier of Sargie Bond: 5111915 Femal Issualice Date: 270/10	
ACTION TAKEN ON THIS RECLAMATION PLAN	
Approved DeniedXApproved with Additional Terms and Conditions	
By: Man L: On DIRECTOR	
Date: February 9, 2018	
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-*GPI-001844* I-002170



