



S.C. Department of Health and
Environmental Control

MINE OPERATING PERMIT

PART I:

Lexington Quarry Vulcan Construction Materials LLC

Vulcan Construction Materials LLC, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002106 to operate the Lexington Quarry 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.

DRAFT

JOAN F. LITTON, DIRECTOR
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

PERMIT NUMBER: I-002106
ORIGINALLY ISSUED: DRAFT
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.

DRAFT I-002106

Vulcan Construction Materials LLC

Home Office Address: Vulcan Construction Materials LLC
201 Brown Road
Piedmont, SC 29673-8513

Local Office Address: None

Address for Official Mail: Vulcan Construction Materials LLC
201 Brown Road
Piedmont, SC 29673-8513

Company personnel and title to be the contact for official business and correspondence (South Carolina Department of Health and Environmental control (DHEC) should be notified in writing immediately of any change in contact, address, telephone or fax numbers):

John R. Aultman

Telephone: 864-299-4785

Fax: 864-299-0610

LOCATION: The mine is located on the Gilbert, SC U.S.G.S. 7.5' Topographic Map. The approximate geographic coordinates for the site are:

Latitude: 33.949

Longitude: -81.464

The operation is located in Lexington County approximately 5 miles northeast of Batesburg-Leesville, S.C. Specifically the site is located 0.75 miles north of US Hwy 1 at its junction with Stutman Rd.

Part II: MINE OPERATIONS

Vulcan Construction Materials LLC also referred to as the operator, is permitted to mine granite and sand/clay at the Lexington Quarry. The maximum depth to the pit floor will be 350 feet below ground surface to an elevation of +150 feet mean sea level measured from the lowest ground surface elevation. Mining will take place on tracts of land leased by the referenced operator. These tracts of land are identified in the submitted *Land Entry Agreements* (LEAs).

MINE/PIT CHARACTERIZATION: The mining process will start with timbering and clearing of existing vegetation and stripping overburden. Removed overburden will be placed in permanent storage areas at designed locations. The exposed granite will be drilled, explosives loaded and blasted to fragment stone into manageable sizes to facilitate loading in haul trucks and crushing by the primary crusher. Stone passing through the primary crusher will be transported to a surge pile in the processing plant by conveyor for further processing.

PROCESSING PLANT LOCATED ON MINE SITE: The processing plant consists of primary and secondary crushers, screens, conveyors, loading and hauling machines. Waste screenings and other fines from crushing, washing and screening the crushed stone will be stockpiled around the plant site or placed in overburden storage areas.

MINE DEWATERING: Quarry dewatering will be necessary when the pit floor extends below the water table, with groundwater seepage from natural fractures/ joints and storm water accumulation. The water will be pumped into a series of sediment basins. Water discharged from the quarry to a receiving stream must be discharged through an outfall regulated by NPDES permit. See Part X: ADDITIONAL TERMS AND CONDITIONS numbers 6-8.

BLASTING: Blasting operations are permitted at this mine site. Blasting activities shall be conducted in accordance with R. 89-150.H, under the direction of a SC Licensed Blaster and in compliance with regulations of the S.C. Fire Marshall. A minimum distance of 250 ft shall be maintained between the blast area and adjacent property boundaries. Prior to the initiation of mining, the operator shall conduct a pre-blast survey pursuant to R. 89-150. The survey shall be offered to owners of structures within 0.5 mile radius of any blasting.

Pursuant to R.89-150.I, the operator must maintain a minimum distance of 1,000 ft between the nearest point of blasting and any structure not owned by the operator as of the completed application date. The operator may conduct blasting operations within 1,000 feet of a structure not owned or controlled where the structure owner has granted a waiver. The operator shall be required to monitor each blasting event by seismograph and maintain blasting records documenting each blast. Blasting records will be made available upon request to DHEC. DHEC shall be notified following any incident of flyrock outside the permitted area. This notice shall be made within 24 hours of the blast followed with a written report within five business days.

SIGNIFICANT CULTURAL OR HISTORICAL SITES: A *Cultural Resource Survey of the Lexington Quarry Project* dated February 2016 was conducted by Brockington Cultural Resources Consulting. The survey identified eight archaeological sites, one cemetery, and five isolated finds. One of the archaeological sites, a house and spring (38LX654) was recommended eligible for the National Register of Historic Places (NRHP). A cemetery (38LX652) was not recommended eligible for the NRHP, however it is protected by South Carolina Code of Laws 16-17-590 and 16-17-600. These sites shall be buffered and preserved as shown on mine map SM-2106-1V1.

The State Historic Preservation Office (SHPO) reviewed the survey and concurred with the findings of the survey and recommended a 100 foot buffer be maintained around the NRHP eligible site 38LX654. The buffers shown on mine map SM-2106-1V satisfy the buffer recommendations. Note Part X: *Additional Term and Conditions* of this Mine Operating Permit.

VISUAL SCREEN: To appropriately screen the operation from view, the operator shall maintain a minimum 100 ft undisturbed buffer from all property lines. Property line buffers ranging from 100 to 600 ft in width will be utilized leaving existing and enhanced vegetation. Additionally, a vegetated earthen berm approximately 10 ft in height shall be placed on the inside perimeter of the setback area as required by local zoning ordinance. These visual screen features are shown to scale on permitted mine map SM-2106-1V1

NOISE MONITORING AND CONTROL: The operator shall use Best Management Practices (BMPs) to minimize noise from the mine site. These noise BMPs shall 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. Additionally, a vegetated earthen noise berm approximately 10 ft in height shall be placed on the inside perimeter of setback area as required by local zoning ordinance.

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.

LAND ENTRY AGREEMENTS: 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.

Land Owner(s) as Listed on *Land Entry Agreement(s)*:

- TMS # 006100-05-030, Vulcan Lands, Inc.
- TMS # 006100-05-023, Vulcan Lands, Inc.
- TMS # 006100-05-035, Vulcan Lands, Inc.
- TMS # 005000-05-020, Crapps Family Limited Partnership

Total acres of the contiguous tract(s) of land for which the permit is granted:

OWNED 0.0 LEASED 553.2 TOTAL 553.2

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.

AFFECTED LAND: 288.3 acres of land are to be affected by Vulcan Construction Materials LLC under the current mine plan. The affected acres are derived from the operator's response in the *Application for a Mine Operating Permit* and are shown on the approved mine map SM-2106-1V1.

FUTURE RESERVES: 69.3 acres are identified as future 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 to DHEC for approval

BUFFER AREAS: 195.6 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: 553.2 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.

SM-2106-1V1, Mine Map - prepared by Synterra dated 9/11/2015

RM-2106-1V1, Reclamation Map - prepared by Synterra dated 9/11/2015

SedM-2106-1V1, Erosion and Sediment Control Map - prepared by Synterra dated 9/11/2015

GWM-2106-1V1, Groundwater Observation Plan - prepared by Vulcan dated 4/29/2016

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 \$1,090,000. 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 quarry permit area is located at the fall line situated primarily in the Piedmont Ecoregion with some southwest portion in the Inner Coastal Plain. Portions of the site have been logged; otherwise the site is wooded and undeveloped. Surrounding land uses are residential, agricultural and woodland. Wildlife typical to the area would be expected in and around the site. Little Creek, which flows generally from south to north alongside Windmill Road, transects the permit area near its western end. There are several man-made ponds around the site. US Highway 1 is at the southern boundary of the permit area and will be used to access the quarry.

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 shall 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. Pursuant to R.89-150.I, the nearest point of blasting will be a minimum distance of 1,000 ft from the nearest structure not owned by the operator. Blasting operations shall be conducted under the direction of a SC Licensed Blaster to alleviate fly-rock from leaving the permitted area. At any time DHEC may require a fence to be installed where necessary.

Operator shall use BMPs to prevent accumulation of sediment/ soil on public roads carried by trucks and other vehicles exiting the mine site; any accumulations shall be removed by the operator on a daily basis or more frequently if needed. To reduce the potential of tracking debris on the highway, the operator shall provide and maintain an asphalt surfaced roadway from US Highway 1 to the entrance and office area and a minimum of 100 feet on the approach to this area from the direction of the processing plant. Roads interior to the plant and product stockpile area shall be maintained with crushed stone.

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 shall be removed from the site and disposed of 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.

Any parks, forest, or recreation areas are located at a safe distance and buffered appropriately to avoid any adverse effects from mining operations.

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

The operator shall comply with the *NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities* and *Stormwater Pollution Prevention Plan* developed for the mine. Active pumping and discharge of water from the active pit and any subsequent settling basins shall cease if the dewatering discharge causes flooding conditions to property downstream of the mine site. Little Creek and its tributaries shall be protected by a minimum 75 foot undisturbed buffer except where access for discharge outfall and withdrawals are required. Additionally, the operator shall install any appropriate BMPs to ensure no sediment encroaches the creeks; BMPs shall be installed to the mine side of the undisturbed buffer.

5. Measures taken to insure against landslides or unstable mine walls. To maintain stable mine walls, the unconsolidated saprolite will be sloped to a stable configuration during mining (no steeper than 3:1 slope). The hard rock pit walls shall be benched per the Mine Safety Health Administration (MSHA) requirements to maintain stability and provide safety.

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 this site.

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

The operator shall comply with DHEC Air Quality Construction Permit. Prior to mine development; the operator shall implement a Fugitive Dust Control Plan (FDCCP) in accordance with their Air Quality Construction Permit.

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 proposed anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation*.

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.

COMPLIANCE: 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 and DHEC should be notified immediately. Archaeological materials consist of any items, fifty years or older, which were made or used by humans. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, oyster shell, worked wood, bone and stone, metal and glass objects, human skeletal remains, and concentrations of charcoal and stones below the ground surface. These materials may be present on the ground surface and/or under the surface of the ground.
2. Temporary or permanent placement of refuse and debris from off-site locations is prohibited. Topsoil fill approved by DHEC may be brought in from off-site sources only for the purposes of mine land reclamation.
3. The operator shall maintain a minimum seventy five foot undisturbed buffer between any land disturbance activity and wetland areas. This buffer shall be permanently flagged prior to the initiation of any mine activity or preparation. The flags shall be maintained throughout the active mine operation of the site. Access road(s) through the buffer are allowed to for gaining access to maintain and utilize NPDES outfall and water withdrawal locations.
4. At the time of permit issuance, a Jurisdictional Determination (JD) from the Army Corps of Engineers (Corps) of wetlands within the permitted area has not been received by DHEC. Wetlands have been delineated and a JD request has been submitted to the Corps. The JD shall be submitted to DHEC along with an updated accounting of wetlands to be protected and impacted in the mine permit area. DHEC will review this information and once approved, land disturbance activities may commence. No land disturbance activities under the jurisdiction of this Mine Operating Permit may commence until an approval letter is given by DHEC.
5. The application approved by DHEC states that some Jurisdictional Wetland impacts will be unavoidable and that these impacts will be mitigated pursuant to the permitting requirements of the Corps. The operator shall provide a 404 Dredge and Fill Permit and a 401 Water Quality Certification to the Mining and Reclamation Section prior to any impacts to Jurisdictional Wetlands.
6. An inventory of all water wells for domestic or agricultural purposes within the pre-blast survey area shall be conducted prior to the initiation of mining. Additional inventories at a greater distance from the pit may be required during mining if deemed necessary by DHEC. The information collected at each well shall be used to establish the existence, condition and productive use(s) that might be impacted by mine activities. The inventory shall include the following information where available, as able to be determined, and as access is allowed by the property owner:
 - A. Location of well.
 - B. Name and address of property owner, use of the well water, use of property.
 - C. Well completion details as available from drillers logs or able to be determined.
 - D. Pump details: a) type of pump; b) pump capacity; c) pump setting details.
 - E. Production details: a) water levels at time of inspection; b) production at time of inspection.
7. Upon commencement of land disturbing activities, six groundwater monitoring wells shall be constructed in the general areas delineated on the approved map GWM-2106-1V1. The final location and depth of the monitoring wells will be approved once information from the well inventory outlined in permit condition number 6 is received. The monitoring wells shall be installed by a certified well driller in accordance with R.61-71, Well Standards and Regulations. The surveyed elevation of the measuring point, relative to an established benchmark, must be submitted with the driller/geologist's log for each well. Groundwater elevation measurements (to the nearest inch) shall begin after well development is complete and continue monthly thereafter. The elevation data shall be submitted to DHEC in a spreadsheet accompanied by time/water level graphs on a quarterly basis unless otherwise approved. A log of local precipitation amounts shall be maintained and submitted quarterly with the groundwater elevation data. One year of monitoring results shall be completed and submitted to DHEC prior to the development of the granite pit sump and subsequent dewatering.

