



S.C. Department of Health and
Environmental Control

MINE OPERATING PERMIT

PART I:

Fairfield Quarry Vulcan Materials Company, LLC

Vulcan Materials Company, LLC, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002297, to operate the Fairfield 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

JOE KOON, MANAGER
MINING AND RECLAMATION SECTION
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

PERMIT NUMBER: I-002297
ORIGINALLY ISSUED: Month ##, Year
MODIFIED: N/A

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.

I-002297

Vulcan Materials Company, LLC

Home Office Address: Vulcan Materials Company, LLC
201 Brown Road
Piedmont, S.C. 29673-8513

Local Office Address: Same as Home Office Address

Address for Official Mail: Same as Home Office Address

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, PE
Manager of Environmental Services

Telephone: 864-299-4785
Email: aultmanj@vmcmail.com

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

Latitude: 34.3886

Longitude: -80.9732

DESCRIBE LOCATION: The operation is located in Fairfield County, approximately 6.5 mile(s) east of Winnsboro, S.C. Specifically, the site is located less than one mile east of the I-77 Exit 41 on Old River Road (S-20-41).

Part II: MINE OPERATIONS

Vulcan Materials Company, LLC, also referred to as the operator, is permitted to mine granite at the Fairfield Quarry. The maximum depth to the pit floor will be 400 feet below ground surface (to an approximate elevation of -30 feet mean sea level) measured from the lowest ground surface elevation. Mining will take place on a portion of a tract of land leased by the referenced operator. This tract of land is identified in the submitted *Land Entry Agreements* (LEAs).

MINE/PIT CHARACTERIZATION:

The granite will be excavated, processed, and stockpiled on site. Ground clearing will be accomplished by heavy machinery (e.g., backhoe, excavator, bulldozer). Removed overburden will be placed in permanent storage areas at locations designated on the mine map. 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 the processing plant by haul trucks for further processing. Only Quarry Pit Area Phase I (as shown on the mine map) is approved for excavation; any extension into Phase II will require a modification to this mine operating permit.

PROCESSING PLANT LOCATED ON MINE SITE:

The processing plant will consist of primary and secondary crushers, screens, conveyors, and 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:

Due to groundwater seepage from natural fractures/joints in the host rock, quarry dewatering will be necessary when the pit floor extends below the water table. Additionally, where feasible, stormwater runoff shall be diverted into the pit, collected into the sump, and discharged in the same manner as groundwater. Water discharged from the pit to a receiving stream must be discharged through an outfall regulated by an NPDES permit.

If the operator receives a complaint concerning adverse impacts to neighboring wells, the operator is to notify DHEC's Manager of the Mining and Reclamation Section, Columbia, SC, within 48 hours. After investigation, if DHEC determines dewatering activities at the mine are affecting a drinking water well or water supply well, the operator shall be responsible for repairing, deepening, or re-drilling such wells. Until a 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).

Active pumping and discharge of water shall cease if the dewatering discharge causes flooding conditions to property downstream of the mine site.

See Part X: *Additional Terms and Conditions #7 and #8.*

BLASTING:

Blasting is permitted at this site. Blasting activities shall be conducted in accordance with R.89-150.

Pursuant to R.89-150A., the operator shall conduct a pre-blast survey on inhabited structures within one-half mile of any blasting, prior to the commencement of any blasting activities. The survey shall be completed by a third-party consultant and a copy of the report sent to DHEC, the operator, and the landowner. Upon receipt of the required pre-blast survey(s), DHEC will then grant permission to begin blasting activities.

Pursuant to R.89-150E., the operator shall report any suspected incident of flyrock outside of the permitted area resulting from blasting operations. Pursuant to R.89-150J., the operator shall report if the peak particle velocity exceeds one (1.0) inch per second at the immediate location of any dwelling not owned by the operator (or where a waiver of damage has been submitted to DHEC). These incidents shall be reported to DHEC within 24 hours of the blast, and a written report shall be submitted to DHEC within five (5) business days.

Pursuant to R.89-150H., the operator shall maintain a minimum distance of 250 feet from contiguous property boundaries when conducting blasting. Additionally, pursuant to R.89-150I., the operator shall maintain a minimum distance as shown on the approved mine map between the nearest point of blasting and any structures not owned by the operator (at the time of the completed application date) or where a waiver of damage has been submitted to DHEC.

See Part X: *Additional Terms and Condition #9.*

SIGNIFICANT CULTURAL OR HISTORICAL SITES:

Two reports, *Cultural Resources Identification Survey Weyerhaeuser Tract Fairfield County, South Carolina* (S&ME, 2019) and *Cultural Resources Survey of the Fairfield Quarry Tract, Fairfield County, South Carolina* (Brockington, 2019) have been submitted to the State Historic Preservation Office. All archaeological sites and isolated finds are not eligible for listing in the National Register of Historic Places. No significant cultural or historical sites have been identified. Note Part X: *Additional Terms and Conditions #1* of this Mine Operating Permit.

VISUAL SCREEN:

To appropriately screen the operation from view, the operator shall maintain a minimum 100ft. undisturbed buffer between mining activity and all property lines.

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.

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 DHEC within 30 days of the change of ownership.

Land Owner(s) as Listed on *Land Entry Agreement(s)*:
A portion of TMS #: 110-00-00-004.000, Weyerhaeuser Company

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

OWNED	<u>0.0</u>	LEASED	<u>924.1</u>	TOTAL	<u>924.1</u>
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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 effects to the surrounding environment.

AFFECTED LAND: 201.8 acres of land are to be affected by Vulcan Materials Company, LLC under the current mine plan; 201.8 of the affected acres are currently bonded. 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(s).

FUTURE RESERVES: 522.9 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: 199.4 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 activity within the buffer areas (e.g. removal of timber) shall require **prior** notification and approval by DHEC.

TOTAL PERMITTED AREA: 924.1 acres as submitted on the *Land Entry Agreement(s)*.

Part IV: MAPS

The mine site maps were prepared by synTerra. These maps are further identified with the following SCDHEC map numbers and are part of the operating permit:

SM-2297-1V1	Mine Map	Dated: February 19, 2020
SED-2297-1V1	Erosion and Sed Control	Dated: February 19, 2020
SED-2297-2V1	Erosion and Sed Control	Dated: February 19, 2020

The reclamation maps were prepared by synTerra. These maps are further identified with the following SCDHEC map numbers and are part of the operating permit.

RM-2297-1V1	Reclamation Map	Dated: February 19, 2020
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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 \$1,171,500.00. 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.

Prior to mining activities, this site's land use type was managed timberland; the immediate area around this site is mostly managed timberland with a few rural residences, mainly to the east. The topography of this area is moderately variable (i.e., several hills and dales), with surface elevation ranging from 300 - 475 ft. MSL. This site is bordered on the west by Horse Branch Creek and on the south and west by an unnamed tributary to Horse Branch Creek. Several smaller tributaries flow across the site. Horse Branch Creek flows to the north and eventually connects to Lake Wateree. Common wildlife typical to this area can be found in and around this site; there are no threatened or endangered species believed to inhabit this area.

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.

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 trackout on public roads, the operator shall construct a crushed stone "mud mat" or paved road that extends the width of the haul road and stretches a minimum of one hundred (100) feet in length.

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.

There are no publicly owned parks, forests, or recreation 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 Erosion and Sediment Control Plan (SED-2297-1V1 and SED-2297-2V1), NPDES General Permit for Non-metallic Mineral Mining, and the Stormwater Pollution Prevention Plan developed for the mine.

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

To maintain stable mine walls, the unconsolidated saprolite shall be sloped to a stable configuration no steeper than 2H:1V during active mining. Per the Mine Safety Health Administration (MSHA) requirements, the hard rock pit walls shall be benched 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 mine operator will use appropriate measures (e.g. water truck, dust suppressants) 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 dust emissions.

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 be maintained through additional terms and conditions of this permit or by regulations. Records 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 Plan*.

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 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* 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 are 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 operator as to conditions relating to the permitted mine site. Such requests from DHEC shall be made in writing to the operator with an 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 (e.g., concrete, brick, asphalt) from off-site locations is prohibited without approval by DHEC. Topsoil fill approved by DHEC may be brought in from off-site sources only for the purposes of mine land reclamation.

3. In the future, if determined to be necessary by DHEC, an appropriate fence will be installed around the affected area.

4. The operator shall maintain a minimum 75ft. undisturbed buffer between all land disturbance activity and any USACE jurisdictional wetlands or delineated stream channels. This buffer shall be permanently flagged prior to the initiation of any mine activity. The flags shall be maintained throughout the active mine operation of the site. The operator is allowed to discharge accumulated stormwater—that meets NPDES permit limits—into wetlands through a regulated NPDES outfall.

5. Before entering into Future Reserves, a wetland and stream channel delineation—certified by the USACE—must be completed prior to any land disturbance activity. A copy of the delineation map and the USACE certification must be received and approved by DHEC.

6. An MR-1300, revised mine map, reclamation map, and reclamation schedule must be submitted and approved by DHEC prior to initiating any mining activity in Future Reserves.

7. Prior to any dewatering activities, four groundwater monitoring wells shall be constructed in the areas delineated on map SM-2297-1V1. 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 monitoring wells shall be measured monthly. Groundwater elevations shall be normalized to mean sea level. The report should include a record of monthly precipitation measurements. These data shall be submitted quarterly to the Division of Mining and Solid Waste Management by the 28th of the first month following the quarter via e-mail to miningreports@dhec.sc.gov and/or by physical mail.

8. 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) of the well. The inventory shall include the following information where available, as able to be determined without opening the well, 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 documented from drillers logs or DHEC well form 1903.
- D. Pump details such as type and depth as documented.

9. At no time is flyrock permitted to fall outside the permitted area. Any instance of flyrock falling outside the permitted area shall be reported to DHEC within 24 hours and a written report sent to DHEC within five (5) business days.

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APPENDIX A

MODIFICATIONS TO MINE PERMIT I-002297

NUMBER	DATE	DESCRIPTION OF MODIFICATION (PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Initial	Draft	Permit issued; PA = 924.1ac., AA = 201.8ac., FR = 522.9ac., B = 199.4ac.

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