

January 14, 2022

Chuck Stilson, P.E. **Luck Stone Corporation** 515 Stone Mill Drive P.O. Box 29682 Richmond, Virginia 23242

RE: Approval of Application and Reclamation Plan for a Mine Operating Permit

Issuance of Mine Operating Permit I-002329

Fairfield I-77 Quarry, Fairfield County

Dear Mr. Stilson:

The S.C. Department of Health and Environmental Control (DHEC) has approved the application and reclamation plan for the Fairfield I-77 Quarry as of January 14, 2022. DHEC has approved the reclamation bond submitted in the amount of \$809,175.00.

With the receipt of the reclamation bond and the approval of the application and reclamation plan, this letter serves as official notification that the Mine Operating Permit for the Fairfield I-77 Quarry is being issued as of the date of this letter. Enclosed are the permit document, reclamation plan, and mine and reclamation maps.

A guide to board review outlining the procedure for requesting a final review is enclosed. Should there be any questions or if we may be of further assistance, please do not he sitate to contact the project manager, Jeremy Eddy, at 803-898-7609 or by e-mail at eddyje@dhec.sc.gov. Mr. Eddy will also be the mine inspector for this site.

Sincerely,

Joseph M. Koon, Section Manager

Division of Mining and Solid Waste Management

cc Marty Lindler - BLWM

Jeremy Eddy, P.G. - BLWM

Brett Caswell - BOW

Jeff DeWitt (Jeff.DeWitt@fairfield.sc.gov) - Fairfield County

Craig Kennedy - Consultant



### MINE OPERATING PERMIT

**PART I:** 

## Fairfield I-77 Quarry Luck Stone Corporation

Luck Stone Corporation, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002329, to operate the Fairfield I-77 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.

JOE/KOON, MANAGER

MINING AND RECLAMATION SECTION
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

PERMIT NUMBER: I-002329

**ORIGINALLY ISSUED:** January 14, 2022

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.

#### **Luck Stone Corporation**

**Home Office Address:** Luck Stone Corporation

515 Stone Mill Drive

P.O. Box 29682

Richmond, Virginia 23242

Local Office Address: None

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]:

Chuck Stilson, P.E. Telephone: 804-784-6300

Mining Engineering Manager Email: chuck.stilson@luckstone.com

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

Latitude: <u>34.3191</u> Longitude: <u>-81.0177</u>

**<u>DESCRIBE LOCATION:</u>** The operation is located in Fairfield County, approximately 3.5 mile(s) west of Ridgeway, S.C. Specifically, the site is located in the vicinity of the intersection of S.C. Highway 34 and Simpson Circle.

#### Part II: MINE OPERATIONS

Luck Stone Corporation, also referred to as the operator, is permitted to mine granite/gneiss at the Fairfield I-77 Quarry. The maximum depth to the pit floor will be 485 feet below ground surface (to an approximate elevation of +30 feet mean sea level) measured from the lowest ground surface elevation pending future DHEC approval; see *Part X: Additional Term and Condition #8*. Mining will take place on tracts of land owned by the referenced operator. These tracts of land are identified in the submitted *Land Entry Agreements* (LEAs).

#### MINE/PIT CHARACTERIZATION:

The granite/gneiss will be excavated, processed, and stockpiled on site. Ground clearing will be accomplished by heavy machinery (e.g., trackhoe, bulldozer, excavator). Topsoil will be stockpiled separately for use in reclamation; excess topsoil, not needed for reclamation, may be sold. Removed overburden will be placed in permanent storage areas at locations designated on the mine map. The exposed granite/gneiss 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 conveyor belt for further processing.

The mine pit will be excavated in three (3) phases, as designated on the mine map. Phase 1 shall occur in the north and require the immediate permitting and mitigation-approval by the US Army Corps of Engineers (USACE) for two small stream tributaries; the maximum depth of Phase 1 shall be 235 feet below ground surface (to an approximate elevation of +280 feet mean sea level). Phase 2 shall expand the pit further south and require the additional permitting and mitigation-approval by the USACE for impacts to wetlands and Waters of the US; the maximum depth of Phase 2 shall expand the pit further south and require the additional permitting and mitigation-approval by the USACE for impacts to wetlands and Waters of the US; the maximum depth of Phase 3 shall be 485 feet below ground surface (to an approximate elevation of +30 feet mean sea level). See *Part X: Additional Terms and Conditions #8*.

#### PROCESSING PLANT LOCATED ON MINE SITE:

The processing plant will consist of primary, secondary, and possibly tertiary 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. For Phases 1 and 2, the processing plant will be located directly to the south, as indicated on the mine map as "Initial Plant Area". Prior to beginning mining operations in the Phase 3 area, the processing plant will be relocated further to the southwest, as indicated on the mine map as "Final Plant Area".

#### MINE DEWATERING:

Due to possible groundwater seepage from natural fractures/joints in the host rock, quarry dewatering may 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. Any accumulation of groundwater and stormwater shall be pumped into a processing pond for use at the plant, to refill a water truck for dust suppression, or into a sediment basin prior to discharge. Water discharged from the mine to a receiving stream must be discharged through an outfall regulated by an NPDES permit.

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

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 and Appendix B: Well Water Contingency Plan.

#### **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.89-150J., the operator shall notify DHEC following the observation or discovery of flyrock outside the permitted area that resulted from blasting operations. Pursuant to R.89-150E., 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 not been submitted to DHEC). These incidents shall be reported to DHEC within 24 hours of the blast or discovery of the flyrock, 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 not been submitted to DHEC.

See Part X: Additional Terms and Conditions #10.

#### SIGNIFICANT CULTURAL OR HISTORICAL SITES:

A report, *Cultural Resources Reconnaissance Survey, Fairfield I-77 Development Site* (S&ME, March 2021) and an addendum report (S&ME, July 2021) have been reviewed by the State Historic Preservation Office, covering the entire permit area. No archaeological sites or isolated finds are eligible for listing in the National Register of Historic Places (NRHP), therefore no significant cultural or historical sites have been identified within the permitted boundary. Note *Part X: Additional Terms and Conditions #1* of this Mine Operating Permit.

One cemetery, the Old Homer Baptist Church Cemetery, was recorded in the survey. While it was not eligible for inclusion on the NRHP, it is protected by state law. This cemetery is located outside the permit boundary, protected by an approximately 1,800ft buffer from any approved excavation or blasting activities. The Vaughn's Stage Coach Stop (SHPO Survey Number 0038), which is included on the NRHP, is located outside the 1/2 mile blast radius, but within 1/2 mile of the permit boundary. Note *Part X: Additional Terms and Conditions #10 and #11* of this Mine Operating Permit.

#### **VISUAL SCREEN:**

To appropriately screen the operation from view, the operator shall maintain a minimum 50ft. undisturbed buffer between mining activity and all property lines, unless otherwise noted on the approved mine map.

<u>NOISE MONITORING AND CONTROL:</u> 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. See Part X: Additional Term and Condition #5.

<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 DHEC within 30 days of the change of ownership.

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

TMS #: 166-00-00-018 Luck Stone Corporation 166-00-00-028 Luck Stone Corporation 166-00-00-030 Luck Stone Corporation

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

OWNED <u>416.8</u> LEASED <u>0.0</u> TOTAL <u>416.8</u>

#### 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.

<u>AFFECTED LAND:</u> 259.5 acres of land are to be affected by Luck Stone Corporation under the current mine plan; 165.0 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**: 77.9 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**: 79.4 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**: 416.8 acres as submitted on the Land Entry Agreement(s).

#### Part IV: MAPS

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

SM-2329-1V1 Mine Map Dated: August 24, 2021

The reclamation maps were prepared by Kennedy Consulting Services, LLC. These maps are further identified with the following SCDHEC map numbers and are part of the operating permit.

RM-2329-1V1 Reclamation Map Dated: April 16, 2021

#### 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 \$809,175.00. 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 undeveloped; the immediate area around this site is mostly undeveloped with a few rural residences to the south and east, and a commercial business south of Hwy 34. The topography of this area is moderately variable (i.e., several hills and dales), with surface elevation ranging from 450 - 600 ft. MSL. Dutchman's Creek and several unnamed tributaries flow within the permitted area; Waters of the US/State and associated wetlands shall be buffered with a minimum 75ft buffer near the pit area and a minimum 100ft buffer in all other areas (as shown on the mine map) unless disturbances are permitted by the USACE and DHEC. 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. I-77 lies approximately 1,200 ft to the east; Hwy 34 lies to the south; mostly undeveloped property borders the northern and western sides of the permitted 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 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. Note Part X: Additional Term & Condition #9.

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 NPDES General Permit for Non-metallic Mineral Mining, the Stormwater Pollution Prevention Plan, and the Erosion & Sediment Control 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. Upon final reclamation, all unconsolidated materials shall be sloped no steeper than 3H:1V.

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.

<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* 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 <u>each</u> 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 near the pit area and a minimum 100ft. undisturbed buffer in all other areas, as

indicated on the mine map. 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. The three (3) temporary stream crossings are exempt from permitting under Section 404 of the Clean Water Act.

- 5. The operator shall maintain the minimum 75ft undisturbed buffer around JT3 and JT4 (as shown on the mine map) until they submit the appropriate state and federal permits to allow the wetland disturbance. Before expanding excavation activities into Phase 2 or Phase 3, impacts to jurisdictional wetlands and/or Waters of the US/State shall be permitted by the U.S. Army Corps of Engineers and DHEC. Approval shall be submitted to the Mining and Reclamation Section prior to any disturbance.
- 6. A 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 mining activities, a minimum of four (4) groundwater monitoring wells and one (1) calibration well shall be constructed in the areas delineated on mine map SM-2329-1V1. These monitoring wells shall be constructed prior to the initiation of dewatering activities. One year of monitoring results shall be completed and submitted to DHEC prior to the development of the granite pit sump and subsequent dewatering. If, in the future, DHEC determines additional monitoring wells should be installed, the operator shall comply with DHEC's request.

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, and hydrographs plotted for each monitoring well. This data shall be submitted quarterly to the Division of Mining and Solid Waste Management by the 28<sup>th</sup> of the first month of the next quarter. The report should include a record of daily precipitation measurements, with monthly rainfall totals.

8. At Mine Year 5, the groundwater model shall be recalibrated using data from the monitoring wells; this new information shall be used to determine what impacts—if any—are predicted to occur at the public water supply well or individual wells in the area, and to adjust the mine plan accordingly, if necessary.

Additionally, the operator shall submit an updated groundwater models 90 days prior to excavations below 235ft below ground surface (or +280ft relative to mean sea level) or any subsequent depth limits imposed by DHEC. DHEC shall then use these updated models and monitoring data to approve lower depth limits or adjust mine plans accordingly.

- 9. In order to minimize the potential for contamination of the public water supply well, the operator shall construct any fueling areas and maintenance shops outside of the 2,180ft.-radius Source Water Protection Area.
- 10. The operator shall give the Vaughn's Stage Coach Stop structure (located at 183 Barber Road) the opportunity for a pre-blast survey (as described in R.89-150). Additionally, the operator shall be required to place a seismograph on the property, and monitor for at least six (6) months after blasting operations have commenced. If, at any time, the landowner refuses to reasonably allow the operator to complete either aspect of this condition, the condition becomes null and void.
- 11. In order to preserve accessibility to the Old Homer Baptist Church Cemetery, the operator shall not construct a vehicle entrance/exit directly onto Barber Road.

#### **APPENDIX A**

#### MODIFICATIONS TO MINE PERMIT I-002329

NUMBER	DATE	DESCRIPTION OF MODIFICATION  (PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Issued	1/14/22	Permit issued; PA = 416.8ac., AA = 259.5ac., FR = 77.9ac., B = 79.4ac.

#### APPENDIX B

#### Fairfield I-77 Development Well Investigation and Contingency Plan September 10, 2021

#### **Individual Wells:**

#### Receipt of a Complaint

Should the operator of the Fairfield I-77 Development (the "Operator") receive a complaint from an individual well owner (the "Well Owner") regarding the Well Owner's water supply (a "Complaint"), the Operator's personnel will be instructed to ask the Well Owner for his/her name, address, telephone number and a brief description of the problem with the water supply. The Operator will promptly contact DHEC by telephone and follow up by e-mail to inform DHEC of the Operator's receipt of the Complaint and provide the Well Owner's contact information. DHEC will contact the Well Owner to acknowledge the Complaint and will inform the Operator and the Well Owner of the steps and expected timing of its investigation.

#### **Assistance Pending Investigation and Resolution**

Upon receipt of a Complaint, the Operator will promptly supply up to Fifty (50) one-gallon containers of potable water to the Well Owner. If required pursuant to DHEC's preliminary determination as described below, until a final determination by DHEC and completion of any required work on the Well Owner's well by the Operator, the Operator will continue to supply potable water as reasonably required to meet the Well Owner's needs.

If the Well Owner has need for non-potable water, as required pursuant to DHEC's preliminary determination, the Operator will promptly provide 300 gallons of non-potable water for the Well Owner's non-potable water needs in a container delivered to the Well Owner. The operator can make reasonable arrangements to connect and distribute the non-potable water, at its expense, using existing non-potable well's electrical and water lines to distribute water for non-potable uses.

Additional water, both potable and non-potable, will be supplied as required by DHEC throughout the investigation process.

Any assistance provided by the Operator to the Well Owner prior to DHEC's final determination that the Fairfield I-77 Development is responsible for correction of the well problem shall not be deemed an acceptance of responsibility nor, except as provided in this Plan, shall the Operator be required to assist other well owners who may experience problems with their wells unless and until DHEC has made a determination with respect to such well and the Fairfield I-77 Development as provided above.

#### **Investigation**

DHEC will be responsible for investigating the Complaint. Within 24 - 48 hours from its receipt of a Complaint, DHEC shall make a preliminary determination regarding whether or not the Fairfield I-77 Development may be a significant factor in causing the reported problem. If DHEC's preliminary determination is that the Fairfield I-77 Development may be a significant factor, DHEC will (i) request the Operator to continue assistance to the Well Owner regarding potable water as described above, (ii) request the Operator to begin assistance to the Well Owner regarding nonpotable water as described above, if applicable and (iii) begin its detailed investigation of the Complaint as further described below. If DHEC determines that the Fairfield I-77 Development is not a significant factor in causing the reported problem, DHEC will inform the Well Owner and the Operator of its determination and no further action will be required of the Operator.

If DHEC's preliminary determination is that the Fairfield I-77 Development may be a significant factor, DHEC will conduct an investigation to determine if the Fairfield I-77 Development is responsible for lowering groundwater at the well to an elevation (msl) that adversely impacts the functioning of the well. The investigation will give primary consideration to groundwater data collected in the groundwater monitoring well network. If water levels in the monitoring well network

indicate groundwater levels are lower than expected, DHEC may measure the groundwater level in the reported malfunctioning well. Other information that may be considered in determining if the well is adversely impacted by the Fairfield I-77 Development include, as applicable, the following:

- Data collected from the water well inventory
- Location of the reported water well
- Groundwater level(s) in other nearby domestic water wells
- Additional or other commercial, industrial, or residential development in the area
- Weather data collected from US Weather Service and from on-site rain gauge
- Anecdotal information as provided by the Well Owner on the well operating history
- Seasonal or long term weather pattern change impacts on water well levels Type, construction, and age of the well

The Operator shall have the opportunity to promptly review all data relied upon by DHEC in responding to a Complaint. If the Fairfield I-77 Development is considered a significant factor in causing the well problem, the Operator may contract with a third party engineer or well expert to lead the investigation into the causes and possible remedies for the well problem. The Operator will also work with DHEC and the Well Owner in the investigation into the potential cause or causes of the well problem. The Operator will report the results of its investigation to DHEC as soon as practicable.

#### **Findings / Conclusions**

After review and input from the Well Owner and the Operator, if DHEC determines that the well is not being adversely affected by operations at the Fairfield I-77 Development, the Operator may cease the supply of potable and non-potable water to the Well Owner and shall have no further responsibility with respect to the Complaint. If DHEC determines that the water well is being adversely affected by operations at the Fairfield I-77 Development and that the Operator is responsible for mitigating the impact of its operations, the Operator shall continue to supply the Well Owner with temporary water supply until a permanent water supply is reestablished and the Operator will be responsible for mitigating the impact as required by DHEC. Possible mitigating measures include, but are not limited to the following:

- Improving the Well Owner's existing well or installing a new well. In this event, the Operator will pay for a certified well driller and related expenses necessary to provide potable water to the Well Owner.
- Connecting the Well's Owner's property to a public water system. In this event, the Operator will pay for all ordinary and necessary costs associated with labor, materials and fees required by a municipal supplier, as available, to connect the Well Owner's property to the public water system.

Following completion of any required work, the Operator shall have no further responsibility for maintenance of the Well Owner's well or payment of any costs of service under the public water system.

#### **Public Well:**

#### **Receipt of a Complaint**

Should the operator of the Fairfield I-77 Development (the "Operator") receive a complaint from the owner of the public well (the "Public Well Owner") located on Fairfield County parcel 166-00-00026-000 as of the date of this Plan (the "Public Well") regarding the operation of the Public Well (a "Public Well Complaint"), the Operator's personnel will be instructed to ask for the name, address and telephone number of the Public Well Owner's representative (the "Representative") and a brief description of the problem with the Public Well. The Operator will promptly contact DHEC by telephone and follow up by e-mail to inform DHEC of the Operator's receipt of the Public Well Complaint and provide the contact information for the Representative. DHEC will contact the Representative to acknowledge the Public Well Complaint and will inform the Operator and the Representative of the steps and expected timing of its investigation.

#### **Investigation**

DHEC personnel will be responsible for investigating the Public Complaint. Within 24 - 48 hours from its receipt of a Public Well Complaint, DHEC shall make a preliminary determination regarding whether or not the Fairfield I-77 Development may be a significant factor in causing the reported problem. If DHEC's preliminary determination is that the Fairfield I-77 Development may be a significant factor, DHEC will initiate a detailed investigation as described below. If DHEC determines that the Fairfield I-77 Development is not a significant factor in causing the reported problem, DHEC will inform the Representative and the Operator of its determination and no further action will be required of the Operator.

If DHEC's preliminary determination is that the Fairfield I-77 Development may be a significant factor, DHEC will conduct investigations to determine if the Fairfield I-77 Development is responsible for lowering groundwater at the Public Well to an elevation (msl) that adversely impacts the functioning of the Public Well. The investigation will give primary consideration to groundwater data collected in the groundwater monitoring well network. If water levels in the monitoring well network indicate groundwater levels are lower than expected, DHEC can measure the groundwater level in the Public Well, if accessible. Other information that may be considered in determining if the Public Well is adversely impacted by the Fairfield I-77 Development are:

- Data collected from the water well inventory
- Location of the reported water well
- Groundwater level(s) in other nearby domestic water wells
- · Commercial, industrial, or residential development in the area
- Weather data collected from US Weather Service and from on-site rain gauge
- Anecdotal information as provided by the Public Well Owner regarding the Public Well's operating history
- Seasonal or long term weather pattern change impacts on water well levels
- Type, construction, and age of the well
- Current and historical water supply data from the Town of Winnsboro

The Operator shall have the opportunity to promptly review all data relied upon by DHEC in responding to a Public Well Complaint. If the Fairfield I-77 Development is considered a significant factor in causing the well problem, the Operator may contract with a third party engineer or well expert to lead the investigation into the causes and possible remedies for the well problem. The Operator will also work with DHEC and the Representative in the investigation into the potential cause or causes of the well problem. The Operator will report the results of its investigation to DHEC as soon as practicable.

#### **Findings / Conclusions**

After review and input from the Representative and the Operator, if DHEC determines that the Public Well is not being adversely affected by operations at the Fairfield I-77 Development, the Operator shall have no further responsibility with respect to the Public Well Complaint. If DHEC determines that the Public Well is being adversely affected by operations at the Fairfield I-77 Development and that the Operator is responsible for mitigating the impact of its operations, the Operator will be responsible for improving the existing Public Well or installing a new Public Well as required by DHEC in which event the Operator will pay for a certified well driller and related expenses necessary to provide potable water to the Public Well Owner. In addition, the Operator will be responsible for reimbursing the Public Well Owner for lost net income from sales of water from the Public Well during the period the Fairfield I77 Development impacted the Public Well. To determine the amount of the lost net income, the Operator will employ a certified, third party forensic accountant selected by the Operator subject to approval by DHEC to determine the amount of net income the Public Well Owner lost during the impacted period.

DHEC will review and approve the forensic accountant findings and the Operator will pay the Public Well Owner the final DHEC approved amount within 30 days of DHEC's determination of the amount due.







Mining Form MR-500

#### S.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 29201

PHONE:803-898-1362 FAX: 803-4-898-1426 EMAIL: AskMines@dhec.sc.gov

# SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT DIVISION OF MINING AND SOLID WASTE PERMITTING 2600 Bull Street; Columbia, SC 29201

## RECLAMATION PLAN FORM MR-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 soil 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 mining on each segment of the area for which an operation permit is requested unless a longer period specifically is permitted by the department."

I.	APPLICANT INFORMATION						
1.	Name of Company:		Luck Stone Corporation				
2.	2. Name of Proposed Mine:		Fairfield I-77	County:	Fairfield		
3.	Home Office Address: 515		Stone Mill Dr.; P.O. Box 29	<u> </u>	804-784-6300		
	Richmond	VA	23242 (Street <u>and</u> P.O. Box)		804-784-6390 (Telephone No.)		
4. Lo	ocal Office Address:	Not es	tablished (Street <u>and</u> P.O. Box)		(Telephone No.)		
	(City)	(State)	(Zip Code)		(Fax. No.)		
5. De	esignate to which office	e Official	Mail is to be sent:				
	Home Office: x		Local Office:				
6. Na	ame of company person	nnel and tl	neir title to be the contact for	or official busines	ss and		
	correspondence:	Chuck	Stilson, PE Mining Engineer	ing Manager			

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#### II. ENVIRONMENTAL PROTECTION

## 1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.

The mine permit area is located in a rural area with land cover consisting of hardwood and pine forests for managed timber. Of the permitted land, 89.2 acres will be undisturbed buffer to provide additional protections to adjacent properties, creeks and other sensitive areas. Currently, the only agricultural related resource are pine plantations adjacent the permit area. The nearest public road, SC Hwy 34, is approximately 250 feet south of the mine permit area. Based on a survey, there are no endangered species or sensitive habitats on-site that would be potentially affected by mining and reclamation.

## 2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.

Proper reclamation of the mine site will include stabilizing all overburden storage piles with vegetation, removal of mine equipment both mobile and stationary, clean-up of any spillage of petroleum products, and removal of scrap material. Once mining is terminated, groundwater levels will rebound to approximate original levels. The mining process will not use chemicals in the mining or processing of crushed stone; consequently, there is no potential for chemical contamination to groundwater resources. Additionally, vegetative filters of existing vegetation will provide redundancy to active sediment control measures to further protect adjacent surface water resources.

## 3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.

S&ME conducted a reconnaissance level archaeological survey on the mine permit area consisting of 416.8 acres, with TMS#s 166-00-00-018-000, 116-00-00-028-00 and 116-00-00-030-000. The results of the survey are provided in the *Cultural Resources Reconnaissance Survey, Fairfield I-77 Development Site, Fairfield County, South Carolina* being submitted with the application in Appendix E. Four archaeological sites (38FA666 through 38FA669), one isolated find (1F-1), five above ground resources (SHPO Survey Numbers 0108 through 0112), and one cemetery (38FA670/SHPO Survey No. 0113) were identified and recorded. The four archaeological sites and one isolated find are located within the mine permit area. The five above ground resources and cemetery are located outside the mine permit area. All sites are not eligible for listing in the National Register of Historic Places (NRHP) and no further investigations are recommended. The concurrence letter from SC Department of Archives and History's State Historic Preservation Office (SHPO) for these recommendations will be provided to DHEC upon receipt from SHPO.

## 4. Describe method to prevent or eliminate conditions that could be hazardous to animal or fish life in or adjacent to the permitted area.

Proper reclamation of the mine site will include stabilizing all overburden storage piles with vegetation, removal of mine equipment both mobile and stationary, clean up of any spillage of petroleum products, and removal of scrap material. Setbacks, established buffers and soil stabilization along stream banks will provide protection to fisheries in nearby streams. Establishing 3:1 slopes around the pit and overburden storage areas will remove hazardous conditions for the public and indigenous animal populations. On final reclamation, a fence or other suitable and approved barrier around the pit will be constructed. The undisturbed buffer will provide for wildlife corridors and natural habitat.

Vegetative filters will be established consisting of existing woodlands to provide redundant sediment control to protect wetlands and adjacent properties from mining activities.

## 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.

To operate the mine and processing plant, the mine operator will obtain the Air Quality Construction Permit and the Air Quality Operating Permit. These permits set the quantity of air particulates that can be emitted to be protective of air quality standards.

With the termination of mining all mobile mine equipment and processing plant equipment will be removed from site. Once the process plant equipment is removed from site, the Air Quality Operating Permit can be terminated. Stone stockpiles, fines and barren soils, (potential sources of dust after mining), will be either removed (stone stockpiles) or stabilized with vegetation to eliminate windblown dust.

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Discharges from the quarry will qualify for the *NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities*. These standards are set to be protective of aquatic life and human health and safety. Prior to discharge in to waters of the State, stormwater and groundwater will be treated by appropriated sized and designed sediment basins. Upon final reclamation, vegetation will be established to control erosion and protect water quality.

#### III. RECLAMATION OF AFFECTED AREA

6.	State useful purpose(s) the affected land is being proposed to be reclaimed to. More than one purpose may be
	checked, but information should be submitted to support the feasibility for each proposed purpose.

a. Lake or pondx	f. <b>Grassland</b> x
b. Agriculture	g. Recreation
c. Woodlands	h. Wetlands
d. Residential	i. Park
e. Commercial x	i. Other

7. State the final maximum surface gradient(s) (slope) in soil, sand, or other unconsolidated materials on reclaimed land. Surface gradients steeper than 3H:1V (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.

The final maximum surface gradient for slopes in overburden storage areas and slopes in overburden in the pit will be 3:1.

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 bring 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 (ie. adequate distance between the property line and edge of highwall). 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.

The overburden stripped to expose granite will be placed in overburden storage areas or earthen berms. The final overburden slope around the pit perimeter will be cut slopes at a 3:1 grade for stability and safety. Backfilling is not necessary within the pit to achieve final 3:1 slopes.

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 fertilization; (c) seed or plant selection; (d) rate of seeding or amount of planting per acre; (e) maintenance.

Soil test, seed bed preparation, seed mix selection, soil amendments (fertilizer, lime, growth stimulants, etc.), cover and seeding rates will be based upon SC DOT's *Supplemental Technical Specification (SC-M-810-2(04/11)) for Seeding*.

Revegetated sites will be maintained with periodic inspections to detect areas with significant erosion, seed germination failure or significant plant die off. Site will be inspected after significant storm events to detect wash outs or gullies in planted areas. Damaged areas will be repaired where necessary by fixing erosion damage and reseeding as necessary.

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 exist for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit have discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes).

Reclamation for the pit will not require a closure plan. A) The granite does not oxidize to form acid and thus, create acid mine conditions. B) This mine qualifies for coverage under the *NPDES General Permit for Discharges* Associated with Nonmetal Mineral Mining Facilities (SG-730000) with no additional parameters other than pH and TSS. C) No chemicals will be used in the mining process.

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11. Method of control of contaminants and disposal of mine waste soil, rock, mineral, scrap, tailings, slimes, 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.

Fines created from processing granite are not "clay slime"; thus, they will not create an unstable sediment mass in settling ponds. These fines, that are chemically inert, will accumulate in the clarification ponds of the wash circuit and periodically removed and either sold as a co-product or placed in overburden storage that will be reclaimed.

12. Method of reclaiming settling and/or sediment ponds.

Any process ponds associated with the process plant will be backfilled to original grade, topsoiled and revegetated.

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

Impact to streams will be permitted and mitigate under the Corps of Engineers permit. Stream crossings will utilize bottomless culverts that do not place fill in jurisdictional tributaries and do not require permitting by the Corps.

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?

Areas that have undergone final reclamation practices will be maintained through periodic inspections and conducting any necessary repairs in a timely manner.

15. For final reclamation, submit information about practices to provide for safety to persons and to adjoining property in all excavations. Identify areas of potential danger (vertical walls, unstable slopes, unstable surface on clay slimes, etc.) and provide appropriate safety provisions. These provisions can include but are not limited to setbacks, fencing, signs, benching, guardrails and boulders.

Prior to commencing final reclamation activities, the operator intends to conduct both market, community, and zoning investigations to determine the best and proper utilization for post mine development. By example, this may include uses such as parks & community space, agricultural/timber, commercial ventures, or residential uses. Upon determination, any plans shall incorporate all necessary activities associated with necessary and responsible bonded reclamation requirements. This shall include continued focus to provide safety to persons and adjoining areas. The outer perimeter of the reclaimed pit will be secured by fencing or other approved and appropriate security practice. The following mine segments will be reclaimed to provide safety to persons and adjoining areas.

**Highwalls** -- The relative shallow overburden will be sloped to a 3:1 gradient around the pit perimeter. Due to the sloped overburden and water filled pit, exposure of rock highwalls will be limited.

**Unstable Slopes** -- All overburden storage areas will be sloped to 3h:1v gradient and vegetated. Soils placed to a 3:1 gradient are stable and are not prone to landslides.

16. What provisions will be taken to prevent noxious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or ponds, 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.

The final pit will be reclaimed as a lake and will meet the above referenced regulatory requirement for sufficient depth. Areas of the affected land not reclaimed to ponds will be properly graded to prevent unwanted pools of water from collecting and prevent foul water from forming.

17. Identify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclamation. Provide justification for leaving any structures.

The office building and other support buildings may be left upon final reclamation future tenants on the property can use the facilities. Also, some of the haul roads may be left to provide access to the property. All areas will be sloped and stabilized to prevent erosion and control sediment.

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- 18. Attach  $\underline{\text{two }(2)}$  copies of a map of the area (referred to as the RECLAMATION MAP) that shows the reclamation practices and conservation practices to be implemented. The following should be shown:
- A. The outline of the proposed final limits of the excavation, during the number of years for which the permit is requested.
- B. The approximate final surface gradient(s) and contour(s) of the area to be reclaimed. This would include the sides and bottoms of mines reclaimed of ponds and lakes.
- C. The outline of the tailings disposal area.
- D. 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 inlet and/or outlet structures which will remain upon final reclamation.
- F. The approximate locations of access roads, haul roads, ramps or buildings which will remain upon final reclamation.
- G. The approximate locations of various vegetative treatments.
- H. The proposed locations of re-established streams, ditches or drainage channels to provide for site drainage.
- I. The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Management Practices to be used for preventing or controlling erosion and off-site siltation.
- J. Proposed locations of the measures to provide safety to persons and adjoining property.
- K. Segments of the mine that can be mined and reclaimed as an ongoing basis.
- L. The boundaries of the permitted area.
- M. The boundaries of the affected area for the anticipated life of the mine.
- N. The boundaries of the 100-year floodplain, where appropriate.
- O. Identify sections of mine where the final surface gradient will be achieved by grading and/or backfilling.
- P. A legend showing the name of the applicant, the name of the proposed mine, the north arrow, the county, the scale, the date of preparation and the name and title of the person who prepared the map.

THE REQUIRED RECLAMATION MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT. RECLAMATION MAP SHOULD BE THE SAME SCALE USED FOR THE SITE MAP.

#### IV. SCHEDULE FOR IMPLEMENTATION OF CONSERVATION AND RECLAMATION PRACTICES

19. As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are <u>not</u> feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas.

Not applicable

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20. Section 48-20-40(16)(l) 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 & Reclamation	Segment or	Planned		*Applied		Notes
Practices	Area	Amount	Year	Amount	Month/Year	
Permit w/Corps permit and mitigate for impacts to wetlands	Pit Phs 1	Less than 0.05 ac	2022			Portions of wetlands JT3 & JT4
Mark wetland & property line buffers along access road	WB-2, WB-3, WB-4, PLB 2, 3 & 5	~22 acs	2022			
Mark wetland buffers and property line buffer along Pit Phase 1	WB-5; PLB-4	~25 acs	2022			
Mark undisturbed property line buffer along south property line	PLB-1 & PLB-6	~10 acs	2022			Prior to construction of access road and office
Construct Sediment Basins and associated diversion channels	Initial Process Plant, Ph 1 Pit	~7 acs	2023			P-SB-1; P-SB-2; NE-SB-4; P-SB-3;
Mark wetland buffers for NE Ovbn	WB-6, WB-7 & WB-8	~10 acs	2022			Prior to Sed basins construct in NE Overburden Storage
Construct Sediment Basins and associated diversion channels	NE Ovbn	11.4 asc	2023			NE-SB-1; NE-SB-2; NE-SB-3
Deploy silt fencing and/or other sediment control BMPs	Where necessary	Varies	2023			
Prior to mining, jurisdictional wetlands & tribs will be permitted by the Corps of Engineers	Pit Phs 2 & 3	TBD	TBD			Portion of JT-5, JT-5A, JT-6, JT-7. JW-C, JW-D, JT-10
Route stormwater into pit	Pit Phases 1, 2 & 3	Varies	All times			Where feasible
Development of overburden storage – grading to 3:1 slopes and revegetating	NE Ovbn Storage	37.1 acs				During Phase 1 Pit development Reclamation continuous
Slope overburden to 3:1 slope along terminal pit wall and revegetate	Phase 1 Pit	~10 acs	TBD			When and where feasible
Construct Sediment Basins and diversions	West Ovbn Storage	3.9 acs	TBD			W-SB-1
Development of overburden storage – grading to 3:1 slopes and revegetating	West Ovbn Storage	10.1 asc	TBD			Reclamation continuous where feasible
Stream crossing will use bottomless culverts to avoid fill in tributaries	JT-16, JT-12 & JT-8					Requires no Corps permitting
Seed & fertilize as necessary in areas above the planned ultimate pool level lake surface water	Final Pit	As needed	End of mining			Final Reclamation
Construction perimeter fence around final pit	Final Pit	TBD	End of mining			Final Reclamation
Remove mine equipment, process plant equipment, and stone stockpiles	All areas	TBD	TBD			At end of mining and final reclamation

AA – Affected Area; BMPs – Best Management Practices; Fert. – Fertilize; PL – Property Line; SB – Sediment Basin; ST – Sediment Traps SW – Stormwater; TS – Topsoil; WL – Wetlands;

NOTE: The year and amount for deployment of conservation & reclamation practices are estimates and subject to change depending on market conditions and rate of mining.

#### YOU ARE NOTIFIED THAT:

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<sup>\*</sup> Completed by the Department

1) you, the operator, must file an application to modify the reclamation plan in the event actual reclamation varies from the set forth hereinabove, and
2) if at any time it appears to the Department that the activities under the reclamation plan are failing to achieve the purposes and requirements of the S.C. Mining Act, the Department may modify the RECLAMATION PLAN in accordance to Section 48-20-150.
LE POPESON
Signature of Applicant/Operator or his Authorized Representative
Printed Name of Applicant/Operator or his Authorized Representative
Timed Traine of Applicant Operator of his Authorized Representative
DIR, LAND & DEV.
Title
3/16/21
Date
Department Use Only
Permit No. I-002329 Date Application Approved 1/14/2022 Date Bond Rec'd 1/7/2022
Bond Amount \$809,175.00 Blanket or Single Bond Permit Issuance Date 1/14/2022
ACTION TAKEN ON THIS RECLAMATION PLAN
ApprovedDeniedXApproved with Additional Terms and Conditions
By:
SEC/TION MANAGER
Date: January 14, 2022