



October 29, 2021

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

RE: Approval of Application and Reclamation Plan for a Mine Operating Permit  
Issuance of Mine Operating Permit I-2335  
Enoree Development Site Quarry, Spartanburg County

Dear Mr. Stilson:

The S.C. Department of Health and Environmental Control (DHEC) has approved the application and reclamation plan for the Enoree Development Site Quarry as of October 29, 2021. DHEC has approved the reclamation bond submitted in the amount of \$869,396.00.

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 Enoree Development Site 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 hesitate to contact the project manager, Jeremy Eddy, at 803-898-7609 or by e-mail at [eddyje@dhec.sc.gov](mailto:eddyje@dhec.sc.gov). Mr. Eddy is also the mine inspector for this site.

Sincerely,

Joseph M. Koon, Section Manager  
Division of Mining and Solid Waste Management

cc Joe Koon – BLWM  
Jeremy Eddy – BLWM  
Brett Caswell – BOW  
Cole Alverson ([calverson@spartanburgcounty.org](mailto:calverson@spartanburgcounty.org)) – Spartanburg County  
Bruce Smith ([brucesmith@luckcompanies.com](mailto:brucesmith@luckcompanies.com)) – Luck Stone Corp.  
Ben Thompson ([bthompson@luckcompanies.com](mailto:bthompson@luckcompanies.com)) – Luck Stone Corp.  
Craig Kennedy ([craigkennedy.kcs@gmail.com](mailto:craigkennedy.kcs@gmail.com)) - Consultant



# MINE OPERATING PERMIT

## PART I:

### Enoree Development Site Quarry Luck Stone Corporation

Luck Stone Corporation, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002335, to operate the Enoree Development Site 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.

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JOSEPH M. KOON, MANAGER  
MINING AND RECLAMATION SECTION  
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

**PERMIT NUMBER:** I-002335  
**ORIGINALLY ISSUED:** October 29, 2021  
**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-002335

## **Luck Stone Corporation**

**Home Office Address:** Luck Stone Corporation  
515 Stone Mill Drive  
P.O. Box 29682  
Richmond, Va 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.  
Mining Engineering Manager

Telephone: 804-784-6300  
Email: chuck.stilson@luckstone.com

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

Latitude: 34.6691

Longitude: -81.9381

**DESCRIBE LOCATION:** The operation is located in Spartanburg County, approximately 1.75 mile(s) east-northeast of Enoree, S.C. Specifically, the site is located between the two intersections of State Road S-256 and Hwy 92 (Parker Road).

## **Part II: MINE OPERATIONS**

Luck Stone Corporation, also referred to as the operator, is permitted to mine gneiss at the Enoree Development Site Quarry. The maximum depth to the pit floor will be 560 feet below ground surface (to an elevation of approximately +80 feet mean sea level) measured from the lowest ground surface elevation. 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 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; prior to overburden being placed in the SE Berm/Overburden Storage area, an updated reclamation cost estimate and additional financial assurance is required to be approved by DHEC. The exposed 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 in the mine map. Phase 1 shall occur in the northwest area and require the immediate permitting and mitigation-approval by the US Army Corps of Engineers (USACE) for impacts to Waters of the US/wetlands. Phase 2 shall expand the pit to the east and shall require the additional permitting and mitigation-approval by the USACE for impacts to Waters of the US/wetlands before any disturbance; this area is considered non-bonded affected area upon issuance of this permit, therefore an updated reclamation cost estimate and commensurate financial assurance must be submitted to DHEC. Phase 3 shall expand the pit to the south.

### 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. 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". For Phase 3, the processing plant shall be relocated to the south, as indicated on the mine map as "Final Plant Area".

### 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. Any accumulation of groundwater and stormwater shall be pumped 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* #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 review and approval, DHEC will then grant permission to begin blasting activities.

Pursuant to R.89-150J., the operator shall report any suspected incident of flyrock outside of the permitted area resulting 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 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.

**SIGNIFICANT CULTURAL OR HISTORICAL SITES:**

Two reports, *Cultural Resources Reconnaissance Survey, Enoree Hannah Site* (dated October 2019) and *Addendum Report, Cultural Resources Reconnaissance Survey, Enoree Development Site* (dated March 2021), have been reviewed by the State Historic Preservation Office, covering the entire permitted area. No archaeological sites or isolated finds are eligible for listing in the National Register of Historic Places (NRHP). 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.

**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. A vegetated earthen berm shall be constructed and maintained on the western side of the pit and plant area, as designated on the mine map.

**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)*:  
TMS #: 4-50-00-007.00, Luck Stone Corporation  
4-55-00-076.00  
4-55-00-077.00 (a portion of)

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

OWNED 542.9                      LEASED 0.0                      TOTAL 542.9

### 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:** 255.8 acres of land are to be affected by Luck Stone Corporation under the current mine plan; 159.3 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:** 182.5 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:** 104.6 acres are identified as buffer area, setbacks, or areas that will not be disturbed beyond the pre-mine natural state. These buffer areas are identified on the mine site map. Acres designated as buffer areas are not bonded under the reclamation bond. Any activity within the buffer areas (e.g. removal of timber) shall require **prior** notification and approval by DHEC.

**TOTAL PERMITTED AREA:** 542.9 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-2335-1V1 Mine Map Dated: May 18, 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-2335-1V1 Reclamation Map Dated: October 21, 2020

### 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 \$869,396.00. 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 mostly undeveloped with one rural residence, one pre-law vermiculite mine, and one pre-law granite quarry; the immediate area around this site is undeveloped and rural residential. The topography of this area is moderately variable (i.e., several hills and dales), with surface elevation ranging from 530 - 650 ft. MSL. Unnamed tributaries of Hannah Creek flow across the site from east to west and two ponds (the reclaimed vermiculite mine and reclaimed granite quarry) are also on site. There are

multiple small (less than one acre) wetlands scattered across the site. 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. Most adjacent properties are undeveloped with a few rural residences; Hwy 92, to the south, is residential.

**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.

**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 Sediment & Erosion 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, unconsolidated pit walls shall be sloped 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.

**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 50ft. undisturbed buffer between all land disturbance activity and any USACE jurisdictional wetlands and/or Waters of the US/State. 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. Before entering into Pit Phases 1 or 2, 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. Additionally, the reclamation bond may need to be adjusted to include acreages associated with Pit Phase 2.

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 expanding mining activities into Pit Phase 2 or the SE Berm/Overburden Storage area, an updated reclamation cost estimate and financial assurance must be submitted and approved by DHEC.

8. Prior to any mining activities, a minimum of 12 groundwater monitoring wells shall be constructed in the areas delineated in the Groundwater Monitoring Plan, dated February 26, 2021. These monitoring wells shall be constructed prior to the initiation of dewatering activities. 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.

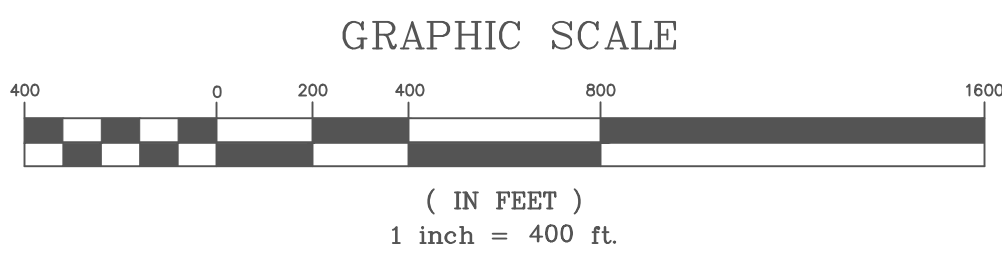
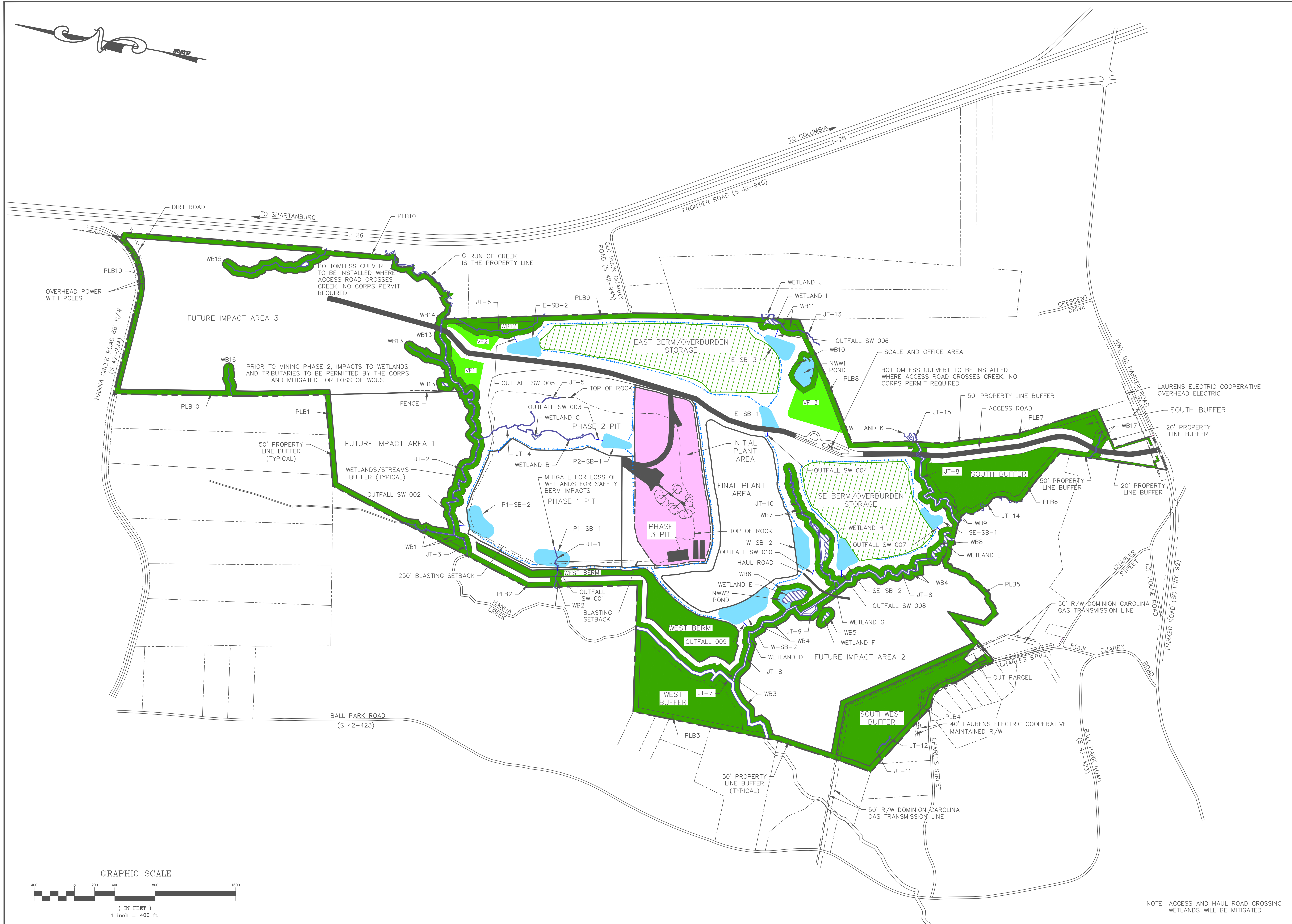
Groundwater monitoring wells shall be measured monthly. Groundwater elevations shall be normalized to mean sea level, and hydrographs plotted for each monitoring well. This data shall be submitted quarterly to the Division of Mining and Solid Waste Management by the 28<sup>th</sup> of the first month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

9. Prior to blasting within 2,000 feet of the gas utility line, approval from the utility company must be granted. A copy of the approval shall be submitted to DHEC.

## APPENDIX A

### MODIFICATIONS TO MINE PERMIT I-002335

<b>NUMBER</b>	<b>DATE</b>	<b>DESCRIPTION OF MODIFICATION</b> (PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Issued	10/29/21	Permit issued; PA = 542.9ac., AA = 255.8ac. (159.3ac bonded), FR = 182.5ac., B = 104.6ac.



NOTE: ACCESS AND HAUL ROAD CROSSING WETLANDS WILL BE MITIGATED

REVISIONS	
Date	Description
5-18-21 <td>ADD INFILES: OUTFALLS</td>	ADD INFILES: OUTFALLS
1	

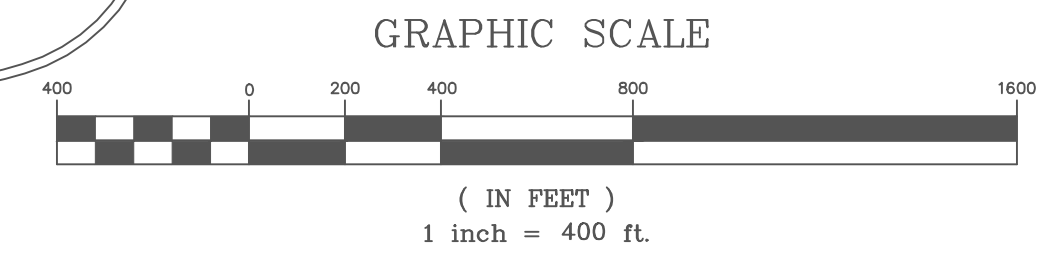
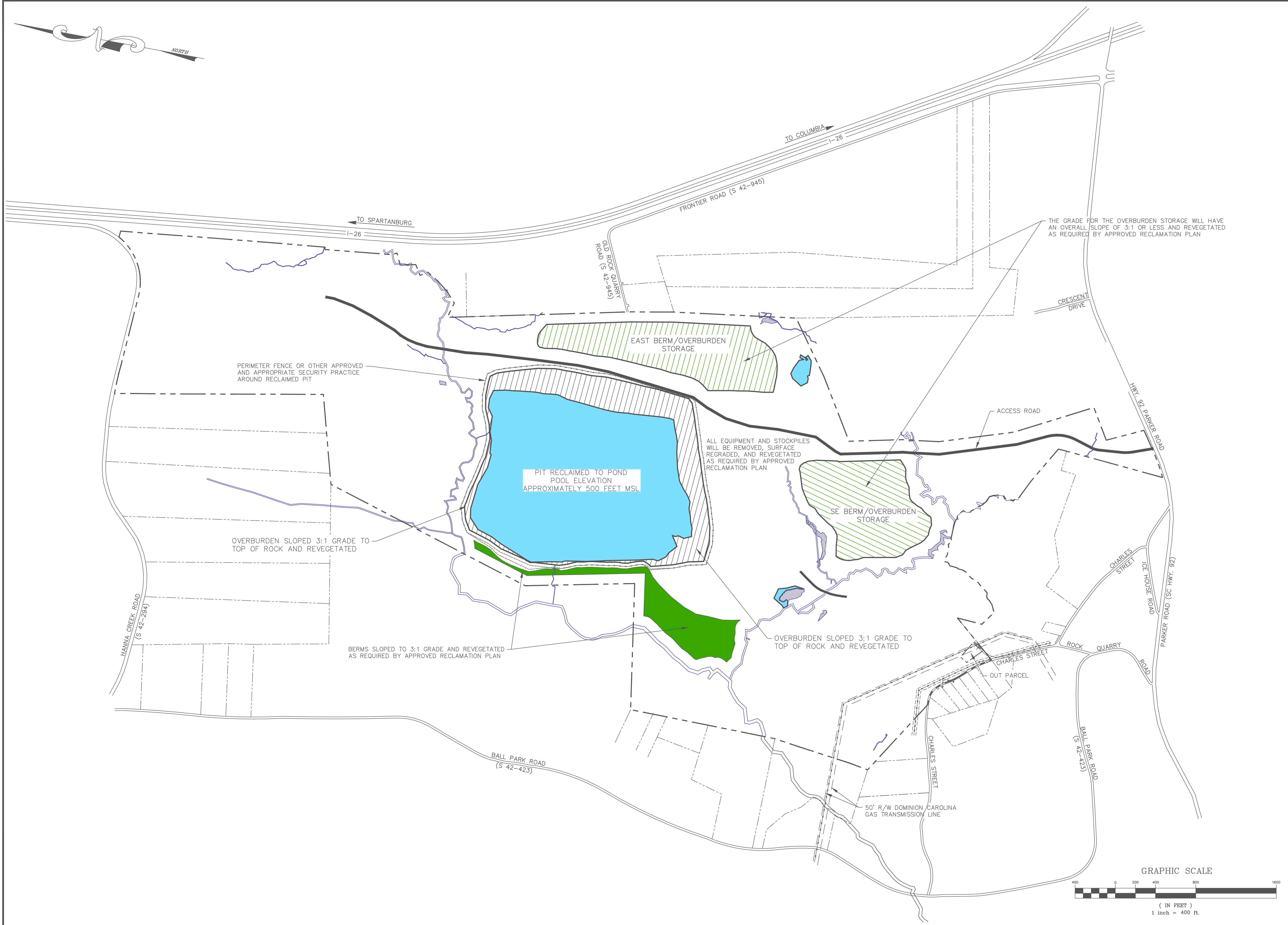
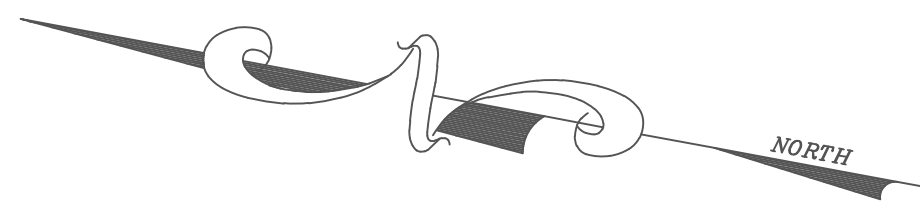
APPROVED BY:  
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
DIVISION OF MINING & SOLID WASTE MGT  
By: *[Signature]*  
Title: **SM 20205-1V1**  
DATE APPROVED: **October 29, 2021**  
PERMIT NUMBER: **F020235**

**Kennedy Consulting Services, LLC**  
Craig Kennedy, P.G.  
**KCS**  
Office: 403 Seaside Court, Lexington, SC 29073  
Tel: 803.399.1133  
Mail: P.O. Box 364, Irmo, SC 29063  
Cell: 803.960.2562 • craigkennedy\_kcs@gmail.com

**Enoree Development Site**  
Mine Map  
Prepared for  
**Luck Stone Corporation**  
Enoree, Spartanburg County, South Carolina

Project No.: KCS 19-120  
Date: 10-21-20  
Approved by: RCK  
Drawn by: B.C.  
Scale: 1"=400'

Sheet No.  
1  
of  
3



REVISIONS	Description	Date	By

APPROVED BY  
SOUTH CAROLINA DEPARTMENT OF HEALTH  
DIVISION OF MINING & SOLID WASTE MGT

BY: *[Signature]*  
DATE APPROVED: October 29, 2021  
PERMIT NUMBER: 1-002335

Kennedy Consulting Services, LLC  
Craig Kennedy, P.G.  
**KCS**

Office: 403 Seaside Court, Lexington, SC 29073  
Tel: 803.399.1133 • Cell: 803.960.2562

Mail: Irmo, SC 29063  
P.O. Box 364  
• craigkennedy\_KCS@gmail.com

Enoree Development Site  
Reclamation Map  
Prepared for  
Luck Stone Corporation  
Enoree, Spartanburg County, South Carolina

Project No.: KCS 19-120  
Date: 10-21-20  
Approved by: RCK  
Drawn by: B.C.  
Scale: 1"=400'

Sheet No.  
**2**  
of  
**3**



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

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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."

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I. APPLICANT INFORMATION

1. Name of Company: Luck Stone Corporation

2. Name of Proposed Mine: Enoree Development Site County: Spartanburg

3. Home Office Address: 515 Stone Mill Dr.; P.O. Box 29682 Richmond VA 23242
(Street and P.O. Box) (Telephone No.)

4. Local Office Address: Not established
(Street and P.O. Box) (Telephone No.)
(City) (State) (Zip Code) (Fax. No.)

5. Designate to which office Official Mail is to be sent:

Home Office: x Local Office:

6. Name of company personnel and their title to be the contact for official business and correspondence: Chuck Stilson, PE Mining Engineering Manager

## 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, but no agricultural areas. Of the permitted land, 104.6 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 in and around the permit area. The nearest public road, SC Hwy 92 (Parker Road) is south and adjacent to the mine property and provides access to the site. Ball Park Road (S-42-423) and Charles Road runs west of the property. Residential homes are located along these roads. Interstate 26 is approximately 1,300 feet from edge of pit and approximately 1,600 feet from blasting. Based on the protective species surveys, there are no endangered species 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 archaeological survey on the southernmost 396 acres of the permit area, TMS# 4-55-00-076.00 (Boundary survey conducted by Glenn Associates Surveying, Inc. sets the area of this tract (Hanna tract) at 431.73 acres). The results of the cultural survey are provided in the October 2019 *Cultural Resources Reconnaissance Survey, Enoree Hanna Tract, Enoree, Spartanburg County, South Carolina*. Three archaeological sites within the mine permit area were located and recorded. Ten above ground resources were identified, whereas, only two of which are within the mine permit area. None of these sites are recommended for eligibility 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 is attached.

With the addition of two tracts of land to the mine permit, 105.1-acre Virk tract (Glenn Associates' boundary survey 105.23 acres.) and Rice tract (5.90 acres as determined by Glenn Associates), S&ME conducted a second cultural survey to assess the cultural and historic resources for these two tracts. The results of the survey are provided in *Addendum Report Cultural Resources Reconnaissance Survey Enoree Development Site, Spartanburg County, SC*. The northern 105.23-acre Virk tract, TMS# 4-50-00-007.00, one archaeological site (38SP470) and two isolate finds were identified and recorded. No archaeological sites or isolated finds were identified in the southern 5.9-acre Rice tract. None of these sites are recommended for eligibility in the NRHP and no further investigations are recommended.

### 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 vegetative cover 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.

Discharges from the site 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 pond <input checked="" type="checkbox"/> | f. Grassland <input checked="" type="checkbox"/> |
| b. Agriculture _____                                | g. Recreation _____                              |
| c. Woodlands _____                                  | h. Wetlands _____                                |
| d. Residential _____                                | i. Park _____                                    |
| e. Commercial <input checked="" type="checkbox"/>   | j. 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 gneiss 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 to achieve final 3:1 slope.

**9. Describe the plan for revegetation or other surface treatment of affected area(s). The revegetation plan shall include but not be limited to the following: (a) planned soil test; (b) site preparation and 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. The 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 gneiss 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.

**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 gneiss are not "clay slime"; thus, they will not create an unstable sediment mass in settling ponds. These fines 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 a 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 that 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 so 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.

18. Attach 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 not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas.

Not applicable

**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 Practices	Segment or Area	Planned		*Applied		Notes
		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 JT-1
Mark wetland & property line buffers along access road	PLB7, PLB8, WB13, WB9	~6 acs	2022			JT-2, JT-8
Mark wetland buffers and property line buffer along Pit Phase 1	PLB2, WB13	~7 acs	2022			JT-1 & JT-2
Mark undisturbed property line buffer along east property line	PLB9	~4 acs	2022			JT-6
Construct Sediment Basins and associated diversion channels	Pit Phase 1	~2 acs	2022/23			P1-SB-1 & P1-SB-2
Mark wetland & PL buffers for West Berm	PLB3, WB3 & WB4	~10 acs	2022/23			JT-7 & JT-8
Construct Sediment Basins and associated diversion channels	Initial Process Plant & West Berm	~5 acs	2022/23			P2-SB-1; W-SB-2 & W-SB-1
Deploy silt fencing and/or other sediment control BMPs	Where necessary	Varies	All times			
Prior to mining, jurisdictional wetlands & tribs will be permitted by the Corps of Engineers	Pit Ph 2	TBD	TBD			Portion of JT-4, JT-5, wetlands A, B&C
Route stormwater into pit	Pit Phases 1, 2 & 3	Varies	All Times			
Development of overburden storage – grading to 3:1 slopes and revegetating	East Ovbn Storage	38 acs	TBD			
Slope overburden to 3:1 slope along terminal pit wall and revegetate	Phase 1 Pit	~2 acs	TBD			
Construct Sediment Basins and diversions	SE Ovbn Storage	~7 acs	TBD			
Development of overburden storage – grading to 3:1 slopes and revegetating	SE Ovbn Storage	28 acs	TBD			
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					
Construction perimeter fence around final pit	Final Pit	~8,800 ft.	End of mining			
Remove mine equipment, process plant equipment, and stone stockpiles	All areas		End of mining			

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.**

\* Completed by the Department

\* Completed by the Department

YOU ARE NOTIFIED THAT:

- 1) you, the operator, must file an application to modify the reclamation plan in the event actual reclamation varies from the 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.



Signature of Applicant/Operator or his Authorized Representative

BENJAMIN A. THOMPSON

Printed Name of Applicant/Operator or his Authorized Representative

DIRECTOR - LAND & DEV.

Title

4/7/21

Date

Department Use Only

Permit No. I-002335 Date Application Approved 10/29/2021 Date Bond Rec'd 10/21/2021

Bond Amount \$869,396.00 Blanket or (Single) Bond Permit Issuance Date 10/29/2021

ACTION TAKEN ON THIS RECLAMATION PLAN

Approved  Denied  Approved with Additional Terms and Conditions

By:   
SECTION MANAGER

Date: October 29, 2021