January 19, 2024

CERTIFIED LETTER
RETURN RECIEPT REQUESTED

Heidelberg Materials SE Agg, LLC
Attn: Jim Zadorozny
7 West Point Blvd
Mauldin, SC 29662

RE: Approval of Modification Application and Reclamation Schedule for a Mine Operating Permit
Modification of Mine Operating Permit I-000424
Anderson Quarry, Anderson County

Dear Mr. Jim Zadorozny,

The S.C. Department of Health and Environmental Control (DHEC) has approved the application to modify the mine operating permit for Anderson Quarry as of January 19, 2024. DHEC has approved the reclamation bond submitted in the amount of $1,355,115.00.

With the receipt of the reclamation bond, this letter serves as official notification that the Mine Operating Permit for the Anderson Quarry is being modified as of the date of this letter. Enclosed are the permit document, reclamation plan, and mine and reclamation maps.

Should there be any questions, or if we may be of further assistance, please do not hesitate to contact the project manager, Sarah Harris, at (803) 898-3887 or by e-mail at *harrissl@dhec.sc.gov*. Sarah is also the mine inspector for granite quarries.

Sincerely,

Jeremy E. Eddy

Jeremy E. Eddy, P.G.
Manager - Mining and Reclamation Section
Division of Mining and Solid Waste Management

cc: Sarah Harris – DMSWM
Kaylee Jones – Heidelberg Materials
Brett Caswell – BOW
Mareesa Singleton – BOA
Jeffrey Phillips – MSHA (Phillips.jeffrey@dol.gov)
Rusty Burns - Anderson County (rburns@andersoncountysc.org)

S.C. Department of Health and Environmental Control

MINE OPERATING PERMIT

PART I:

Anderson Quarry
Heidelberg Materials SE Agg., LLC

Heidelberg Materials SE Agg., LLC, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-000424, to operate the Anderson 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.

Jeremy E. Eddy

JEREMY E. EDDY, P.G.
MANAGER - MINING AND RECLAMATION SECTION
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

PERMIT NUMBER: I-000424
ORIGINALLY ISSUED: January 25, 1979
MODIFIED: January 19, 2024

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.

Heidelberg Materials SE Agg., LLC

Home Office Address: Heidelberg Materials SE Agg., LLC
7 West Point Blvd
Mauldin, SC 29662

Address for Official Mail: Heidelberg Materials SE Agg., LLC
7 West Point Blvd
Mauldin, SC 29662

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]:

Jim Zadorozny
Environmental Coordinator
Telephone*:* (770) 617-7398
Email:jim.zadorozny@heidelbergmaterials.com

Kaylee Jones
Environmental Professional
Telephone*:* (864) 308-7850
Email:Kaylee.jones@heidelbergmaterials.com

LOCATION: The mine is located on the Anderson South and Saylors Crossroads, SC U.S.G.S. 7.5' Topographic Maps. The approximate geographic coordinates for the site are:

Latitude: 34.432245 Longitude: -82.628560

DESCRIBE LOCATION: The operation is located in Anderson County, approximately 5 mile(s) south-southeast of Anderson, S.C. Specifically, the site is located along Hayes Road, approximately 1 mile west of its intersection with S.C. Primary Highway 28.

Part II: MINE OPERATIONS

Heidelberg Materials SE Agg., LLC, also referred to as the operator, is permitted to mine granite at the Anderson Quarry. The maximum depth to the pit floor shall not exceed 460 feet below ground surface (to an elevation of 200 feet mean sea level) measured from the lowest ground surface elevation. Mining will take place on tracts of land owned and leased by the referenced operator. These tracts of land are identified in the submitted *Land Entry Agreement*s (LEAs).

MINE/PIT CHARACTERIZATION:
Overburden, including topsoil, is to be stripped with heavy equipment (e.g., bulldozers, pan scrapers) and stockpiled in earthen berms. The berms will be located along the roads and will serve as visual and sound screens during mining. The topsoil will be used for reclamation upon termination of mining. Exposed rock will be drilled, blasted, and loaded onto trucks with hydraulic shovels and front-end loaders for transport to the processing plant for crushing.

PROCESSING PLANT LOCATED ON MINE SITE:
A processing plant is located on the permitted property using a variety of crushers, screens, and conveyors for sizing crushed granite. Sized material is stockpiled accordingly for transport. The plant and stockpile area is complemented by a make-up lake, pit supply pond, and settling cells.

MINE DEWATERING:
Mine dewatering is necessary when the pit floor extends below the water table and groundwater seeps into the quarry from natural joints and fractures in the rock. The groundwater is collected in a sump and pumped from the quarry to a storage/settling pond outside the pit. Water discharged from the quarry 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.

BLASTING:
Blasting is permitted at this site. Blasting operations shall be conducted in compliance with regulations of the S.C. Fire Marshal in the Department of Labor, Licensing and Regulation in accordance with R.89-150.

Pursuant to R.89-150A, the operator shall conduct a pre-blast survey on inhabited structures within the one-half mile arc of any blasting within the area added in Mod 21-1, prior to the commencement of any blasting activities in that area. 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, DHEC will then grant permission to begin blasting activities in that area.

Pursuant to R.89-150J., the operator shall report any suspected incident of flyrock outside of the permitted area resulting from blasting operations. The operator shall be required to monitor each blasting event by seismograph and maintain records documenting each blast. Blasting records will be made available upon request to DHEC. 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) or where a waiver of damage has been submitted to DHEC.

See Part X: *Additional Terms and Conditions* #4.

SIGNIFICANT CULTURAL OR HISTORICAL SITES:
A Cultural Resource literature review performed by S&ME, dated September 20, 2023, has been reviewed by the State Historical Preservation Office covering the newly added parcel. No significant cultural or historical sites have been identified. Note Part X: *Additional Terms and Conditions* of this Mine Operating Permit.

VISUAL SCREEN:
Existing woodlands will remain undisturbed, except for those within the affected areas. A vegetated buffer of 100 feet will be maintained around the perimeter of the site. Existing vegetated berms approximately 20 feet high will continue to provide a screen along Hayes Road, where the current entrance is located. Along Elrod Road, the screening berm will maintain a 50-foot woodland screen along the frontage of the Kelly and McAllister Tracts, between the public right-of-way and the toe of the overburden disposal area. A 55-foot undisturbed buffer between the McAllister Tract and the adjacent Buck Property (TMS: 153-06-01-014 and 153-06-01-020) must be maintained and supplemented by two (2) 250-foot vegetative screenings, planted at 28 trees per 100 feet, as required by Anderson County Land Use Ordinance. A 50-foot undisturbed buffer will be maintained along the property line of the new parcel (Mod 21-1) and along Elrod Road.

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*):

Heidelberg Materials SE Agg, LLC:

153-00-09-018	153-00-09-007	153-00-09-008	153-00-09-009
153-00-09-010	153-06-01-012	153-06-01-013	153-00-09-006

Davidson Mineral Properties, Inc:

153-00-09-002	153-00-09-016	153-06-01-001	153-06-01-004
153-06-01-007	153-06-01-008	153-06-01-011	153-06-01-017
153-06-01-018			

Boggs, Ray and Ruth:	153-00-07-004
Boggs, Betty et al:	153-00-09-003
Boggs, Betty and Paul:	153-00-09-013
Boggs, Ruth and Betty Bolt:	153-06-01-003

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

OWNED 55.6 LEASED 143.0 TOTAL 198.6

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: 156.6 acres of land are to be affected by Heidelberg Materials SE Agg, LLC under the current mine plan; 156.6 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: 0.0 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: 42.0 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: 198.6 acres as submitted on the *Land Entry Agreement*(s).

Part IV: MAPS

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

SM-0424-1V4	Master Mine Plan	Dated: April 15, 2021
SM-0424-2V4	Ultimate Mine Plan	Dated: May 15, 2021
SM-0424-3V4	Sediment Pond #1	Dated: April 15, 2021
SM-0424-4V4	Construction Details	Dated: May 15, 2021
SM-0424-5V4	Construction Details	Dated: May 15, 2021

The reclamation map was prepared by Black Rock Consulting, LLC. This map is further identified with the following SCDHEC map number and is part of the operating permit:

RM-0424-1V4	Reclamation Map	Dated: April 15, 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 $1,355,115.00. The reclamation bond shall remain in force and continuous throughout the life of the mining operation and shall only be released, partially or in full, back to the operator after the operator has completed reclamation in accordance with the approved *Reclamation Plan* and the minimum standards in R.89-330.

Part VI: PROTECTION OF NATURAL RESOURCES

1. Describe the area of and around the mine site. Specify topography, surface water systems, wildlife habitats, residential houses, commercial properties, recreational areas, and/or public roads.
The site is in the Inner Piedmont block of the western Piedmont Physiographic Province of South Carolina. The Inner Piedmont is a composite stack of thrust sheets containing a variety of gneisses, schists, amphibolites, sparse ultramafic bodies, and intrusive granitoids. The terrain is characteristically rolling topography with elevations ranging between 660 and 780 feet mean sea level.

Private homes and land lie to the north of the permitted area. The northeast boundary of the permitted area fronts on (the west side of) Elrod Road. To the southeast, near the intersection of Elrod Road and Hayes Road, three residences on private tracts lie between the mine boundary and Elrod Road. Hayes Road generally defines the southern limit of the mine site and private homes are beyond Hayes Road, to the south. Private property lies between the western boundary of the permitted area and Airline Road. The parcel added in Mod 21-1 is surrounded to the north and west by woodland, and Elrod Road to the east.

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.
Reasonable precautions shall be used by the operator to prevent trespassers from entering the permitted area (e.g. maintaining fences and signs, locked gates across access roads when inactive). Large screening berms will be maintained along Hayes and Elrod Roads, and a woven wire fence topped with four (4) strands of barbed wire and warning signs at *likely points of entry* will be constructed and maintained.

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.

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 in the vicinity of the quarry.

4. Measures taken to insure against substantial deposits of sediment in stream beds or lakes.
A sediment control plan shall be implemented and maintained throughout the life of the operation. The primary focus of the sediment control plan will consist of the following: 1) minimize size of affected area and the clearing only of natural vegetation necessary to safely conduct mining operations; 2) the use of properly designed sediment control structures to treat stormwater runoff from disturbed areas prior to discharge; 3) where feasible, the revegetation of areas barren of vegetation on a continuing basis to stabilize the soil and reduce erosion and sediment loads in stormwater runoff. The operator shall comply with the NPDES General Permit for Non-metallic Mineral Mining and Stormwater Pollution Prevention Plan developed for the mine.

5. Measures taken to insure against landslides or unstable mine walls.
Depth of mining is 400 feet and the quarry excavation will be reclaimed as a lake. During mining, the operator shall minimize height of vertical slopes to maintain stability per the Mine Safety and Health Administration (MSHA) requirements with benches. Ten-foot benches will be cut below the top rim of the excavation to provide a shelf beneath the full-pool water surface upon reclamation. Back slopes will be cut to 3H:1V to provide a safety exit at the full-pool shoreline. Final slopes of unconsolidated material will be 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.

The operator shall comply with the DHEC Air Quality Construction Permit and revised Fugitive Dust Control Plan (Appendix B) submitted for Mod 21-1. See Part X: *Additional Terms and Conditions* #5.

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 available electronically. 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. Any segments of existing fence not in good condition (e.g., rotten posts, fence unattached to posts, fence cut) must be repaired or replaced. Existing fencing comparable to a woven wire fence may be used toward establishing the perimeter fence for the permitted area. Installation of any new fencing will be done in conjunction with the construction of the berms and may use four strands of barbed wire. Until the entire perimeter fence is complete, the operator shall have suitable barriers (e.g., earthen berms, large boulders, temporary fencing) around the pit highwalls. During reclamation, the outer fence around the permitted area may be replaced or removed, as appropriate. The perimeter of the excavated area will be securely fenced to control access to the site as water fills the quarry.

4. The operator shall maintain a 1,000-foot blasting setback from neighboring structures for the expanded pit area, as shown on mine maps for Mod 21-1.

5. The operator shall implement the dust control methods described in the revised Fugitive Dust Control Plan (FDCP), dated May 8, 2022 (Appendix B). If these methods are not adequate to control fugitive dust, DHEC may require further revisions to the FDCP at any time.

APPENDIX A

MODIFICATIONS TO MINE PERMIT I-000424

NUMBER	DATE	DESCRIPTION OF MODIFICATION (PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage)
Issued	01/25/79	Original permit issued
99-01	12/02/99	Conversion to Life-of-Mine; PA = 143ac; AA = 105ac.
00-01	06/09/00	Modification of planned drainage ditch location.
01-01	05/21/05	PA = 153.3ac; AA = 115.3ac. Addition of 10.3ac. New design for large capacity sed. basin servicing 19ac.
17-01	03/01/19	PA = 178.0; AA = 138.8; FR = 0.0; BA = 39.2 Added 24ac. Relocated overburden pile into new area; expansion of pit northward.
21-1	01/19/24	PA = 198.6; AA = 156.6; FR = 0.0; BA = 42.0 Added 20.6 ac. Northward pit expansion; additional overburden storage; relocation of fines stockpiles; updated reclamation plan & revised Fugitive Dust Control Plan

APPENDIX B

FUGITIVE DUST CONTROL PLAN (FDCP)

Facility Name: Heidelberg Materials – Anderson Quarry
Facility ID No.: GCM – 0200-0073

Facility Location: 1413 Hayes Road
Anderson, Anderson County, SC
Date: May 8, 2023

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Appendix 5 Exempt Sources
Appendix 6 Water Truck Inspection/Maintenance Log
Appendix 7 Weekly Spray Nozzle Inspection Forms
Appendix 8 Facility Annual Review
Appendix 9 General Conditional Major Operating Permit

FDCP REVISIONS

Revision Date	Changes
1/31/2019	Original Document
5/8/2023	Name change Hanson Aggregates to Heidelberg Materials. Modify fugitive dust plan to update controls to include use of crusting agent, addition of sprinkler system, and overall reduce dust emissions.
	Updated appendices

1. INTRODUCTION

This document has been prepared to fulfill the requirements of the Air Quality Operating Permit (Permit) that was issued on September 19, 2017. The plan is required pursuant to SC Regulation 61-62.5 Standard 4 Section X(A), that mandate all non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no cases shall established ambient air quality standards be exceeded at or beyond the property line.

Specifically, Condition B.5 & B.6 of the Air Quality Permit requires that the owner/operator create and implement a written Fugitive Dust Control Plan (FDCP) to minimize dust generated from process equipment, truck traffic and other fugitive dust sources.

This facility relied upon EPA's AP-42 guidance documents for rock quarries to demonstrate compliance with the ambient air quality standards for total suspended particulate (TSP) and particulate matter with an aerodynamic diameter of less than 10 microns (PM-10). The Fugitive Dust Control Plan provides control and recordkeeping methods that will be used at the facility to ensure fugitive dust emissions are consistent with SC DHEC regulations.

2. FUGITIVE DUST EMISSION SOURCES & CONTROLS

The locations within the aggregate facility that have the potential to generate fugitive emissions include: the pit area (quarry), internal roads utilized by both customer trucks and on-site quarry mobile equipment, the processing plant including both the primary crushing circuit and the secondary/tertiary processing plant, and stockpile areas.

A. Pit

Fugitive emissions are generated in the pit area during the loading of the blasted materials into the haul trucks utilizing a front-end loader and the transport of this material to the primary crusher via the haul trucks.

Fugitive emissions can also be generated as a result of the controlled denotation of pre-drilled holes utilizing explosives otherwise known as a "blast" or "shot". There are no emission controls for these events. But since they typically are only weekly events with just a few minutes duration per event, the blasts are not considered to be significant contributors of fugitive emissions.

Generally, the material being excavated in the pit has a moisture content high enough to control the generation of fugitive emissions. In addition, the activities in the pit are conducted at a below grade elevation and thus sheltered from most prevailing winds. If fugitive emissions are observed, then the on-site water truck will be utilized to wet the muck pile and water the pit roads to control emissions.

B. Roads

In addition to the haul roads in the pit, the facility has a main entrance road leading to the scale house & plant/stockpile area. There are also a number of other internal roadways utilized by plant equipment to access the shop area and other auxiliary support areas of the operation.

The facility entrance road consists of asphalt pavement from Hayes Road to the facility scale. From the scale to the processing plant and around the stockpile areas, the internal roads are constructed of un-improved compacted sand & aggregates. As would be expected the sources of fugitive emissions will be from customer trucks & plant equipment driving over the roadways.

Emissions are controlled in part because the road surface is partially paved limiting the speed of the vehicles traveling through the plant. If fugitive emissions are observed, then the on-site water truck will be utilized to wet the roads to control emissions.

C. Plant

The plant includes both the primary crushing circuit located in the pit and the secondary/tertiary circuits which are located in the area generally referred to as the plant area. The type of processing equipment utilized at the facility are crushers, screens, conveyors, bins, sand screws, feeder units and cyclones. As detailed in the SC General Construction Major Operating Permit, the Anderson Quarry currently has the following: Crushers (4), Screening units (3), Conveyors (20), Bins (1) and one Sand screw.

Because of the potential emissions from this type of equipment at non-metallic mineral processing facilities, the EPA has developed fugitive emissions estimates (AP-42 guidance) and opacity limits (NSPS Subpart OOO) for the equipment. The process equipment is the major potential source for fugitive emissions and if unchecked would generate enough PM emissions to make this facility a “Major Source” and therefore these sources are the main focus of pollution controls.

There are (3) types of pollution controls noted in the General Permit, and all revolve around water. The primary method of controlling fugitive emissions is by the application of a water spray or mist at the point of generation or at a transfer point between two pieces of equipment. The application of water which wets the ore material has a lingering benefit to reduce the generation of fugitive dust which is referred to as “Control Carry”. Finally, at the Tertiary Circuit additional water is introduced into the system and the raw material (rock or sand) is saturated to improve the washing or sizing of the material. The part of the production line where the material is saturated with water is referred to as the “Wet Process”.

The “Water Spray” controls are the only one of the three types that operates independent of the production process. The plant wet suppression system is fed from a pump that

pulls water from the freshwater pond. This pump supplies the water to each of the individual spray nozzles that generate the water spray.

D. Stockpiles

Product & waste materials are stored in stockpiles throughout this facility. The final product stockpiles are located in close proximity to the plant. These stockpiles generally have a moisture content, either from the dust control water spray or from precipitation, great enough to control fugitive emissions. The waste piles are created as a result of digging fine material from the sediment retention ponds. This material is saturated when it is excavated and retains moisture for a period of time. If fugitive emissions are observed from either the produce stockpile or the waste sand stockpile water will be applied to the stockpile via the water cannon on the water truck. Additionally, crusting agents are applied regularly to prevent dusting and erosion on the manufactured sand and coarse screenings stockpiles. Amount of crusting agent and frequency of application is determined based on the crusting agent manufacturer and product specifications.

3. AREAS OF EMPHASIS

A. Water Truck *(Condition B.5.1)*

Though the plant processing equipment can be the greatest source of emissions, the water truck is the single most important method for controlling fugitive emissions at the facility. The water truck (Freight Line model) has a capacity of 6,000-gallons and is utilized to wet the surface of all the miles of internal roadways on the property both in the pit, around the plant & stockpiles.

The water truck is expected to be available for service everyday unless precipitation events make it unnecessary. This vehicle will be inspected every day for potential mechanical problems and a log maintained is recording these events. In additional, the manufacturer's recommended maintenance schedule is followed to minimize the potential for a breakdown.

If the event the water truck is unavailable for service, the facility will either borrow a water truck from another Heidelberg Materials quarry or rent a water truck from an equipment supply company.

B. Truck Traffic *(Condition B.5 .2)*

Vehicle traffic can be a contributing source for fugitive emissions. As a result, the most practical method to control or reduce these emissions is by controlling the speed of the trucks through the plant area. Speed limit signs are posted throughout the facility informing all drivers that the acceptable vehicle speed is 15 mph while in the quarry facility. Furthermore, due to the tight conditions and close proximity of stockpiles and

equipment at the plant area, an environmental control has been created where vehicles are naturally required to travel at a lower speed.

When the trucks are loaded by the front-end loader, the operator will take care to slowly lower the loader bucket down toward the truck bed. This will allow the material to gently roll into the truck versus dumping the material from height in a quick manner which will generate release more fugitive emissions. In addition, the load bucket is equipped with a scale to better determine how many tons are being loaded into the customer trucks. This prevents trucks from being overfilled and having to dump off part of the load which is another source of dust generation.

The quarry has a sweeper attachment that can be pulled by the plant mobile equipment to collect materials spilled at the entrance and onto the roadway can be swept up and removed.

In addition, as specified under SC Code of Laws Sections 56-5-4100 & 56-5-4110, all loaded vehicles are required to be tarped to prevent the escape of materials from the truck when traveling on State Highways. Signage highlighting this requirement is posted at the truck scale as a reminder for the truck drivers.

No person shall operate on any highway any vehicle with any load unless load is securely covered & fastened to prevent load from becoming a hazard to other users of the highway.
SC Code 56-5-4110

The owner, driver of the vehicle shall bear all reasonable costs of removal and disposition.
Any person who violates the provisions is guilty of a misdemeanor and can be fined $100.
SC Code 56-5-4100

A sprinkler system was installed in July 2022 at the entrance driveway of the Anderson Quarry, which has significantly reduced material on the roadway. The image below is taken leaving the Anderson Quarry headed out towards Hayes Road. Sprinklers are actively wetting the driveway road to reduce material leaving the site.

Photo taken on 5/5/2023 at 13:36 pm by Kaylee Jones.

C. Storage Piles *(Condition B.5.3)*

Many of the final products manufactured at the Anderson Quarry end up being stored in large stockpiles on the ground. These products vary in size from large rocks (rip-rap size) down to sand size. Generally, fugitive emissions are not an issue for the rock stockpiles. Only the sand size products have the potential to become airborne from the wind.

Fugitive emissions will be controlled from the sand stockpiles by spraying the piles with water utilizing the water truck water cannon. On occasion as conditions require, a water spray sprinkler is utilized to wet the "Fines" stockpile. For stockpiles where no activity (adding or loading from) has occurred for a significant period of time, a crusting agent is used to protect the pile surface from the wind. As a general rule, the stockpiles will be expanded horizontally to the fullest extent before expanded vertically.

Crusting agents are film forming polymer-based products and are used to prevent dusting and erosion of fine material. Crusting agents are applied to the stockpiles consisting of manufactured sand and coarse screenings. The crusting agent is mixed with water and is sprayed evenly on the surface of the pile using the cannon on the water trucks. Crusting agent usually lasts for several months and the amount of crusting agent and frequency of application is determined based on the crusting agent manufacturer and specific product requirements.

As a result of the comments received during the public meeting held on August 2, 2022, additional controls steps were identified to target areas of potential fugitive emissions.

We are focusing on the stockpile areas close to resident on Elrod Road for additional controls.

(1) **410 MCB:** Short term, we are planning to reduce the stockpile labeled 410 MCB. Reducing the amount of material in the stockpile will lower the stockpile profile, significantly reducing the potential of particles to become airborne. The rate of draw down is dependent on sales for this product. Long term, this product is no longer being produced and the stockpile will not be replenished once it is sold. Crusting agents will regularly be applied to the remaining stockpile.

(2) **414 Coarse Screenings:** Intermediate term, we will apply crusting agent to the existing stockpile. The stockpile will be reduced over time, depending on product sales. Long term, we are planning to store this product at another location as new material is produced. The exact new storage location has yet to be determined but it will be located away from the periphery of the stock yard and property boundary. We will continue to regularly apply a crusting agent to this stockpile. A larger sized product will be stored in the location of 414 once the existing product has been sold. Larger size stone will have less potential for particles to be windblown. These measures will greatly reduce fugitive emissions.

Once the above steps in place have been completed, we will evaluate if additional controls are needed. The map below shows the stockpile location and size as of April 10th, 2023.

The table below corresponds the stockpile #, pile name, concern for fugitive emissions, and corrective actions.

Pile #	Pile Name	Fugitive Emission Concern	Corrective Action
423	#1 Construction Stone	No	
433	#4M	No	
416	#57	No	
412	#57	No	
441	#67	No	
407	#789	No	
439	#789	No	
426	#89M	No	
432	#89M	No	
430	Class A Rip Rap	No	
440	Class B Rip Rap	No	
435	Class C Rip Rap	No	
414	Coarse Screenings	Yes	Existing stockpile will be sold and replaced with larger size stone. New product produced will be stored elsewhere. Crusting agent applied existing stockpile to reduce fugitive emissions.
420	Coarse Screenings	Yes	Crusting agent applied to reduce fugitive emissions.
442	Fill Dirt	No	
411	MCB	No	
406	MCB	No	
410	MCB	Yes	Product is no longer produced and existing stockpile will be reduced. Eliminating this stockpile will eliminate this source of fugitive emissions.
428	Manufactured Sand	Yes	Crusting agent applied to reduce fugitive emissions.
408	Manufactured Sand	Yes	Crusting agent applied to reduce fugitive emissions.
443	Manufactured Sand	Yes	Crusting agent applied to reduce fugitive emissions.
425	SC #467	No	

D. Process Equipment *(Condition B.5.4)*

As detailed in the EPA NSPS subpart OOO (Non-metallic Mining) information, water spray systems are an effective method to control fugitive dust emissions from the point sources associated with processing equipment in a quarry. Water spray is usually applied directly on the ore material at a transfer point either when material is dumped into a crusher or onto a conveyor from a screen or another conveyor. As noted above, the Anderson Quarry wet suppression system is supplied directly from the freshwater pond via either a Godwin or Flight pump which based upon the head elevation will have a pressure of between 80 – 110 psi.

At the Anderson Quarry the pollution control water system is part of the overall quarry water control system. Water collected from the dust control system drains into a holding basin and either recycled back into the process water system or discharged from the property through the NPDES discharge outfall.

The plant wet suppression system is an active system which involves pumping water through a series of pipes/hoses and spraying the water at the desired locations. As with all active systems, pumps fail, water lines break and spray nozzles clog. In order to minimize these malfunctions, the system components will be inspected/monitored on a weekly basis. The equipment spray nozzles will be checked on an informal basis daily by the plant operator and on a more formal (documented) basis on a weekly basis. In addition to the spray nozzle inspection, a weekly inspection will be performed on the crushers, screens, stockpiles and the pumping system. The inspection will note if excessive fugitive emissions were observed, and any corrective actions taken. Furthermore, the water pressure from the dust suppression holding tank will be noted and monitored for signs of potential problems. If fugitive emissions are observed at the primary crusher, then the cannon on the water truck will be utilized to wet the muck pile to better control emissions.

The best method to control fugitive emissions at the plant is to prevent the conditions that generate its formation. Toward that end, the operations will strive to prevent material spillage from the transfer points and chutes. In addition, housekeeping practices will be implemented daily to minimize spillage build-up. Finally, water hoses will be utilized in the cleanup of any spilled materials to further prevent fugitive emissions.

In the case of the pollution control system at the plant the following operating guidelines have established:

Operating guidelines for dust control system

1. Operator shall conduct daily inspection of the wet suppression system (spray nozzles, lines and pump).
2. No further action required if system is operating correctly, and no excessive fugitive emissions observed.
3. If excessive fugitive emissions observed, operator should investigate for the cause (clogged/broken spray nozzles, broken water lines, insufficient water, etc).
4. If operator cannot fix, notify the foreman/plant manager of the situation.
5. Plant management can determine if can operate in compliance utilizing alternative controls (additional water at other locations, pre-wetting the feed material, etc).
6. If cannot operate in compliance using alternative methods – **MUST SHUT DOWN FOR REPAIRS!**

E. Stationary Internal Combustion Engines

The Permit (Condition GM.3) requires certain information regarding on-site stationary internal combustion engines be recorded. Specifically, the following information must be noted in the FDCP:

- Identification Number, Manufacturer's certification, maximum power output
- Fuel Certification of the Sulfur Content
- Requirements per Federal Standards under RICE & ICE *(40 CFR 63 Subpart ZZZZ & Subpart IIII)*

There are no stationary internal combustion engines at the Anderson quarry. There may be mobile diesel engines at the site on a temporary basis. However, these portable units are moved on a regular basis and are considered exempted equipment.

4. MONITORING & RECORDKEEPING REQUIREMENTS

The Fugitive Dust Control Plan has described the potential sources of fugitive emissions as well, as the control measures put into place to minimize those emissions. The final part of this action plan is the monitoring component to ensure the various controls are in place and functioning.

As spelled out in the Permit, the following inspection/recordkeeping activities will be conducted:

A. Water Truck

- Inspection records verifying that the water truck available for service (Pre-shift Inspection)
- Log of the Water Truck Activities i.e., how many loads sprayed and where in the plant applied (Water Truck Log).
- The Water Truck Log will also be utilized to document when either due to mechanical breakdown or weather conditions (rain) the water truck didn't operate. In those instances, the plant will mark the "Did Not Run" boxes and note the reason.

B. Plant Pollution Control Equipment

- Weekly spray nozzle inspections (Primary & Secondary Plant Spray Nozzle Form)
- Weekly spray nozzle maintenance activities recorded (Primary & Secondary Plant Spray Nozzle Form)

C. Facility Wide Conditions

Maintain a record of the daily tonnage produced and a 12-month rolling total for total production (Condition GM 2.a)

Conduct and document a weekly general plant inspection to verify; pollution control systems are operating i.e., dust control water pump & lines, no excess fugitive emissions observed from the crushers, screens & other point sources, and no excess fugitive emissions observed from roads & stockpiles. If issues are observed, steps will be taken immediately to correct the situation.

Maintain Onsite Implementation Log (OSIL) (Condition G.1)

Annual Reports of OSIL Activities (Condition G.1)

i. Due at the end of every calendar year but no later than January 31

Facility Annual Review (Condition G.2)

i. Due at the end of every calendar year but no later than January 31

5. PERMIT FLEXIBILTIY CONDITONS

The new General Conditional Major Operating Permit for the Nonmetallic Mineral Processing Plants provides a mechanism for the operator to make certain minor equipment changes or additions to the plant without first having to submit a new Construction Permit or revise the Operating Permit. These changes must comply with the criteria listed below and any air dispersion modeling relied upon for the issuance of the permit.

Permit Flexibility Criteria

- Changes do not increase the maximum permitted facility wide production rate
- Changes are directly related to the current permitted facility
- The changes will not result in an increase in controlled emissions of greater than or equal to 5 tons per year
- **Any changes are not divided into smaller parts to circumvent the 5-ton limit**
- Any new to stationary internal combustion engines must comply with RICE & ICE standards

Any changes made under this provision must be documented in the On-site Implementation Log (OSIL). At a minimum all of the following items shall be included in the OSIL:

- A brief description of the changes
- The date of the change
- Revised equipment list
  - Include a unique ID number for the equipment changed
  - Manufacture date of new equipment
  - Capacity, dimensions or configuration of the new equipment
- A revised flow diagram

- NSPS OOO applicability
- Emissions calculations for the new equipment and demonstration and facility-wide emissions totals
- A list of exempted sources should also be kept with the OSIL

In addition, any changes made under this provision must be reported to DHEC no later than January 31st for the prior year. A report will be submitted to DHEC even if no equipment changes were made during the year.

6. NSPS CONDITONS (40 CFR 60 Subpart OOO)

The Environmental Protection Agency has established performance standards for the non-metallic mining industry under Subpart OOO of the Clean Air New Source Performance Standards. These standards mandate specific opacity limits (based on the age of the equipment) for each type of equipment such as crushers, screens or conveyors. In addition, the EPA has certain notification & testing requirement when a new piece of equipment is installed at a quarry.

A. Initial Performance Test (New or Replacement Equipment) (Condition C.3, C.7)
    a. Performed Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup
    b. Notification of the actual date of initial startup

B. Periodic Inspections of wet suppression system (Condition C.5)
    a. Monthly for post April 22, 2008, Sources (Covered by weekly requirement per Condition B.6)

C. "Like for Like" Replacement (Condition C.6)
    a. Notification of the actual date of initial startup including Equipment descriptions per 40 CFR 60.676(a)

Appendix 1

Onsite Implementation Log (OSIL)

Air Permitting - On-Site Implementation Plan (OSIL) Report

version 1.0

(Submission #: HPT-GWH1-4PG3M, version 1)

Details

Submission Alias	OSIL - ON-SITE IMPLEMENTATION LOG
Submission ID	HPT-GWH1-4PG3M
Status	Submitting

Form Input

Permit Information

SC Air Permit Number
GCM-0200-0073

Facility Site Name
Heidelberg Materials Southeast Agg LLC - Anderson Quarry

Were an activities conducted that fall under the permit flexibility condition in your permit?
No

Owner or Operator

Prefix
Mr.

First Name	Middle Name	Last Name
Jim	*NONE PROVIDED*	*Zadorozny*

Title
Environmental Manager

Phone Type	Number	Extension
Mobile	770-617-7398	

Email
Jim.zadorozny@heidelbergmaterials.com

Status History

	User	Processing Status
5/9/2023 7:22:30 PM	Jim Zadorozny	Draft
6/27/2023 10:29:02 AM	Jim Zadorozny	Submitting
6/27/2023 10:29:02 AM	Jim Zadorozny	Signing

Agreements and Signature(s)

SUBMISSION AGREEMENTS

- ☑ I am the owner of the account used to perform the electronic submission and signature.
- ☑ I have the authority to submit the data on behalf of the facility I am representing.
- ☑ I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- ☑ I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

As a duly authorized representative of this facility, with the responsibility to ensure that this facility is in compliance with the requirements of any air permit issued by the Department, I certify that the information being submitted under this form is true, accurate, and complete.

Signed By Jim Zadorozny on 06/27/2023 at 10:29 AM

General Conditional Major Operating Permit - Anderson Nonmetallic Mineral Processing Plant

On-site Implementation Log (OSIL)

Revised Equipment List

Modification Date	Modified or New Equipment Description	Equipment ID	Design Capacity	Manufacture Date	Dimensions/Configuration	Control Device

Appendix 2

OSIL Annual Review

On-site Implementation Log (OSIL)
Annual Review

Condition G. - Reports of activities conducted under this permit flexibility condition shall be submitted at the end of every calendar year but no later than January 31, unless no changes were made, and every year thereafter, to the Director of the Engineering Services. The owner/operator shall meet all the reporting requirements of 40 CFR 60 Subpart OOO for applicable sources.

A. Facility Information	
Facility Name: Hanson Anderson Quarry	SC Air Permit Number (8-digits only): 0200-0073
Operating Permit Type: ☐ State Operating X☒ Conditional Major	
Operating Permit Effective Date: 9/19/2017	
Date of Annual Report: 5/9/2023	Reporting Period: January 1, 2022 – December 31, 2022

B. Permit Flexibility Criteria

Utilizing the flexibility condition found in your permit, exempt sources and existing permitted sources may undertake activities that meet the flexibility criteria. The activities shall be allowed, without a construction permit, or without revising or reopening the operating permit unless otherwise specified by any State or Federal requirement. The owner/operator may be subject to possible enforcement if changes are found to be inconsistent with the permit flexibility condition found in your most recently issued permit.

C. Implementation Details

1. After reviewing the permit, have any changes been made to any equipment, processes, or materials covered by the permit?

   ☐ YES ☒ NO (If '**NO'**, continue to #3.)

2. If **'YES'**, are these included in the facility's onsite implementation log (OSIL), along with supporting documentation explaining what has changed?

   ☐ YES ☐ NO (If '**NO'**, prepare or update DHEC OSIL form D-0722)

3. Have any changes been made that are not allowed by the flexibility condition?

   ☐ YES ☒ NO

4. If **'YES'**, was a construction permit requested from SC DHEC?

   ☐ YES ☐ NO

_____5/9/2023_____

Signature of Owner or Operator Date

Appendix 3

Equipment List

PERMITTED EQUIPMENT SUMMARY

Hanson Aggregates Southeast LLC Anderson Quarry
GCM-0200-0073

APPLICABLE PERMIT DATES

COVERAGE DATE	September 19, 2017

FACILITY PHYSICAL ADDRESS

STREET	1413 Hayes Road
CITY, STATE, ZIP CODE	Anderson, SC 29624
COUNTY	Anderson

STONE CRUSHING

Equipment ID	Equipment Description	Capacity (TPH)	Subject to 40 CFR 60 Subpart OOO	Control Device ID	Emission Point ID
CR-1	42” x 48” Hewitt Robins Jaw Crusher	800	Yes	WS	CR-1
CR-2	5.5” Std. Symons Cone Crusher	500	No	WS	CR-2
CR-3	4.25” Shorthead Crusher	280	No	WS	CR-3
CR-4	4.25” Shorthead Crusher	280	No	WS	CR-4

STONE SCREENING

Equipment ID	Equipment Description	Capacity (TPH)	Subject to 40 CFR 60 Subpart OOO	Control Device ID	Emission Point ID
HO-1	Feeder Hopper	1,200	No	WS	HO-1
F-1	50” x 20’ Vibratory Grizzly Feeder	1,200	Yes	WS	F-1
SF-1	Syntron Feeder SF-1	600	No	WCO	SF-1
SF-2	Syntron Feeder SF-2	600	No	WCO	SF-2
SCR-1	8’ x 20’ Triple Deck Screen	1,000	Yes	WCO	SCR-1
HO-2	Portable Feed Hopper	300	No	WS	HO-2
SCR-2	8’ x 20’ Triple Deck Screen	1,200	Yes	WS	SCR-2
F-4	Syntron Feeder F-4	280	No	WS	F-4
F-5	Syntron Feeder F-5	280	No	WS	F-5

PERMITTED EQUIPMENT SUMMARY

Hanson Aggregates Southeast LLC Anderson Quarry
GCM-0200-0073

STONE CONVEYING

Equipment ID	Equipment Description	Capacity (TPH)	Subject to 40 CFR 60 Subpart OOO	Control Device ID	Emission Point ID
C-1	48″ Conveyor C-1	1,200	Yes	WS	C-1
C-2	36″ Conveyor C-2	1,200	Yes	WS	C-2
C-3	42″ Conveyor C-3	1,000	Yes	WS	C-3
C-4	42″ Conveyor C-4	1,000	Yes	WS	C-4
C-5	36″ Conveyor C-5	500	Yes	WS	C-5
C-8	36″ Conveyor C-8	500	Yes	WS	C-8
C-7	36″ Conveyor C-7	500	Yes	WS	C-7
C-9	36″ Conveyor C-9	300	Yes	WS	C-9
C-10	48″ Conveyor C-10	750	Yes	WCO	C-10
C-11	48″ Conveyor C-11	1,200	Yes	WCO	C-11
C-12	36″ Conveyor C-12	600	Yes	WS	C-12
C-13	48″ Conveyor C-13	500	Yes	WS	C-13
C-14	30″ Conveyor C-14	500	Yes	WS	C-14
C-15	30″ Conveyor C-15	500	Yes	WS	C-15
C-15A	24″ Conveyor C-15A	350	Yes	WS	C-15A
C-16	30″ Conveyor C-16	500	Yes	WP	C-16
C-17	36″ Conveyor C-17	500	Yes	WP	C-17
C-21	36″ Conveyor C-21	300	Yes	WCO	C-21
BN-1	Storage Bin BN-1	280	Yes	WS	BN-1
BN-2	Storage Bin BN-2	280	Yes	WS	BN-2

STONE WASHING

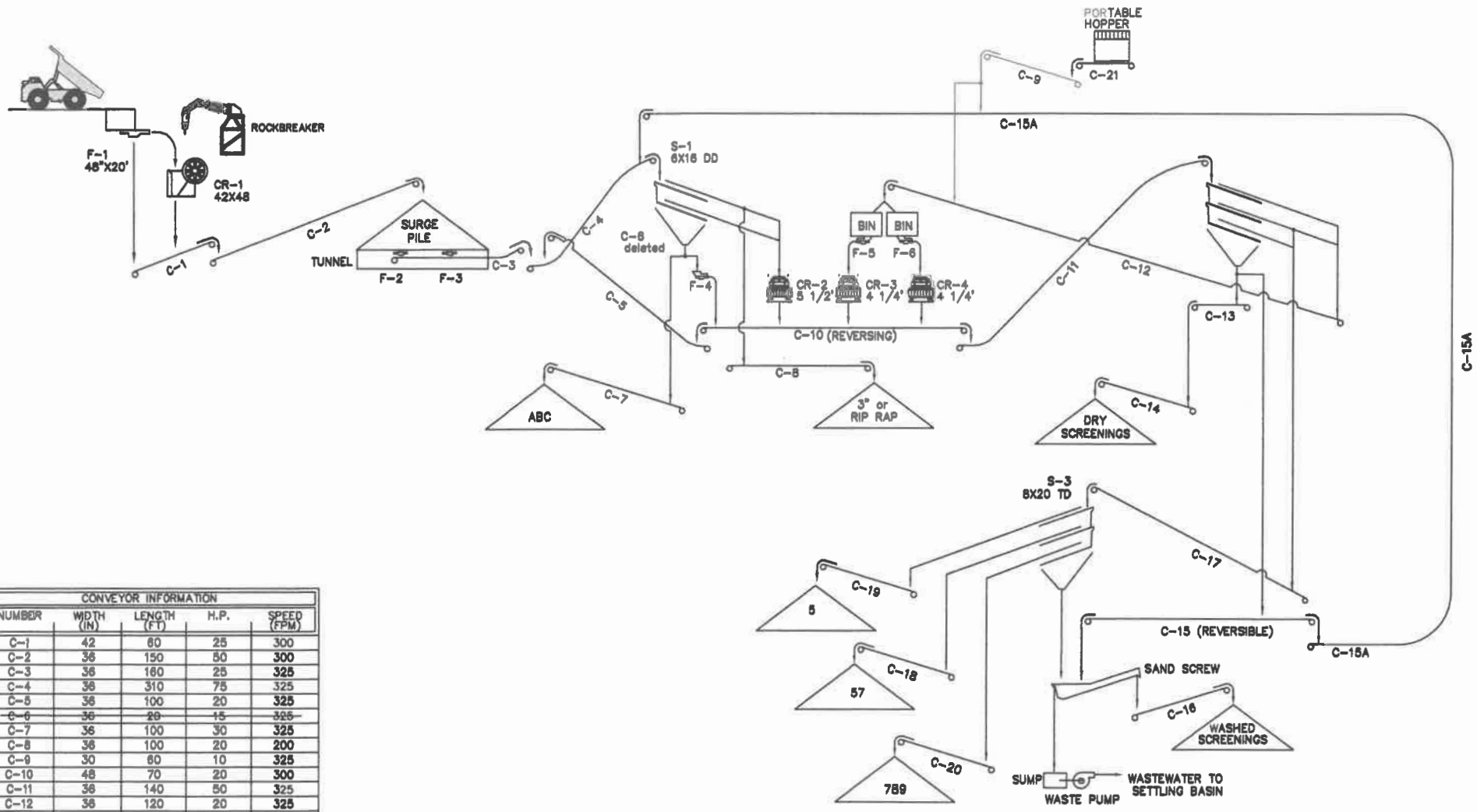
Equipment ID	Equipment Description	Capacity (TPH)	Subject to 40 CFR 60 Subpart OOO	Control Device ID	Emission Point ID
SCR-3	8′ x 20′ Triple Deck Wash Screen SCR-3	500	Yes	WP	SCR-3
C-20	30″ Conveyor C-20	300	Yes	WP	C-20
C-19	30″ Conveyor C-19	300	Yes	WP	C-19
C-18	30″ Conveyor C-18	300	Yes	WP	C-18

CONTROL DEVICES

Control Device ID	Control Device Description	Pollutants Controlled
WS	Wet Suppression	PM, PM_{10}, $PM_{2.5}$
WCO	Water Carryover from upstream water sprays	PM, PM_{10}, $PM_{2.5}$
WP	Wet Process	PM, PM_{10}, $PM_{2.5}$

Appendix 4

Flow Diagram



CONVEYOR INFORMATION				
NUMBER	WIDTH (IN)	LENGTH (FT)	H.P.	SPEED (FPM)
C-1	42	60	25	300
C-2	36	150	50	300
C-3	36	160	25	325
C-4	36	310	75	325
C-5	36	100	20	325
~~C-6~~	~~36~~	~~20~~	~~15~~	~~325~~
C-7	36	100	30	325
C-8	36	100	20	200
C-9	30	60	10	325
C-10	48	70	20	300
C-11	36	140	50	325
C-12	36	120	20	325
C-13	48	20	10	325
C-14	30	100	15	325
C-15	36	130	15	325
C-15A	24	185	25	325
C-16	30	100	25	325
C-17	36	140	40	325
C-18	24	120	15	325
C-19	30	100	15	325
C-20	30	80	15	325
C-21	36	20	15	325

RELOCATED BIN, C-21 & C-9 6/7/2016

Hanson
Hanson Aggregates Southeast

LOCATION: ANDERSON QUARRY

TITLE: PLANT FLOW

SCALE: NO SCALE

PICTURE: Anderson Proposed Flow.dwg

DATE: 9/30/04

DRAWING #:

Appendix 5

Exempt Sources

PERMITTED EQUIPMENT SUMMARY

Hanson Aggregates Southeast LLC Anderson Quarry
GCM-0200-0073

CONTROL DEVICES

Control Device ID	Control Device Description	Pollutants Controlled

Exempt Sources

Equipment ID	Equipment Description	Basis for Exemption
SF-1	Tunnel Feeder (350 tph)	BAQ Permitting Exemption List December 2016 update; Exemption B.6.i
SB-1	Flop Gate 1 (325 tph)	BAQ Permitting Exemption List December 2016 update; Exemption B.6.i
SF-2	Tunnel Feeder (125 tph)	BAQ Permitting Exemption List December 2016 update; Exemption B.6.i
SF-3	Tunnel Feeder (125 tph)	BAQ Permitting Exemption List December 2016 update; Exemption B.6.i
SS-1	Sand Screw (150 tph)	BAQ Permitting Exemption List December 2016 update; Exemption B.6.i

FACILITY SPECIFIC CONDITIONS - RESERVED

RECORD OF REVISIONS FOR PERMITTED EQUIPMENT SUMMARY

Date	Description of Change
03-01-2022	Updated permit template Updated equipment list with changes from OSIL report: SS-1 Sand Screw – Like for like replacement C-11 Conveyor – 36” conveyor replaced with 48” conveyor

Appendix 6

Water Truck Log Inspection

Heidelberg Materials

ANDERSON QUARRY

DAILY WATER TRUCK LOG

Time Started	Time Finished	Gallons Dispensed	Area Wetted (Circle Area Covered)
			Entrance Haul Roads Yard Plant Stockpile Area Shop Rain
			Entrance Haul Roads Yard Plant Stockpile Area Shop Rain
			Entrance Haul Roads Yard Plant Stockpile Area Shop Rain
			Entrance Haul Roads Yard Plant Stockpile Area Shop Rain
			Entrance Haul Roads Yard Plant Stockpile Area Shop Rain
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			Entrance Haul Roads Yard Plant Stockpile Area Shop Rain
			Entrance Haul Roads Yard Plant Stockpile Area Shop Rain

ANDERSON QUARRY AIR PERMIT #CM-0200-0070

I CERTIFY THE DAILY WATER TRUCK LOG TO BE TRUE AND ACCURATE

_________________, Operator Date:___________

_________________, Plant Manager Date:___________

MOBILE EQUIPMENT

Daily Pre-Operational Service & Safety Checklist

Location:______________________ **Date:**______________________

Equipment #:______________________ **Oper. Signature:**______________

Hour Meter Reading:_______ **Downtime Hours:**_______ **Gallons of Fuel:**_______

Equipment Checks	OK	INOP	Comments
Oil Level, Oil Pressure			
Radiator, Coolant Level			
Powertrain, Lubricant Level			
Hydraulic System, Oil Levels			
Tires/Tracks			
Rock Ejector/Knocker Bars			
Guards			
Hoses/Lines			
Ladder/Steps/Walkways/Travelways			
Handrails/Guardrails/Handholds			
Doors			
ROPS/FOPS			
Mirrors (Both Sides)			
Cab Interior			
Fire Ext./Suppression			
Seat			
Seatbelt			
Lights			
Windshield Wipers			
Windshield/All Glass			
Horn			
Parking/Emergency Brake			
Service Brake			
Reverse Alarm			
Instrument Cluster/Guages			
Steering/Aux Steering (If applicable)			
ANY Other Operational/Safety Concerns:			

Details of Repairs:

Repaired By: Date:

Reviewed By: Date:

If hour meter is broken, report the total operating hours for this piece of equipment. Use color guide to determine steps to be taken to address deficiencies found.

Color Guide: DO NOT RUN: (red) NOTIFY SUPERVISOR: (yellow) GOOD TO RUN: (green)

False certification is punishable under Section 110 (a) and (f) of the Federal Mine Safety and Health Act of 1977

Appendix 7

Weekly Spray Nozzle Inspection Form

HANSON - ANDERSON QUARRY

WEEKLY INSPECTION OF WET SUPPRESSION UNITS

Date: _____ Inspector: _____

ID	LOCATION	Wet Suppression System Operating Properly			Equipment Not Operating	Corrective Action Taken *
		YES	Not Required Due to Weather or Control Carry	NO		
HO-1	Feed Hopper					
F1	42" x 20' Vibratory Grizzly Feeder					
CR1	30" x 54" Cedarapids Jaw Crusher					
C1	48" Conveyor (>Conveyor C2)					
C2	36" Conveyor (> Surge Pile)					
C3	36" Conveyor (> Conveyor C4)					
C4	36" Conveyor (> Screen 1)					
CR2	5 1/2 Std. Symons Cone Crusher					
C8	36" Conveyor (Screen 1 > Conveyor 8)					
C8	36" Conveyor (> #3 stockpile)					
C7	36" Conveyor (> CR Stockpile)					
C9	36" Conveyor (> Convyor 15)					
HO2	Feed Hopper (Portable Hopper)					
C10	48" Conveyor (Return Con., C5/C11)					
C11	36" Conveyor (> Screen 2)					
CR3	4 1/4 Sh. Symons Cone Crusher					
CR4	4 1/4 Sh. Symons Cone Crusher					
C14	30" Conveyor (> Scr. Stockpile)					
C12	36" Conveyor (> Bins)					
C15A	30" Conveyor (Return Con. > C4)					

PRESSURE GAUGE READING ☐

*Document spray nozzle changes, nozzle cleaning, hose & pump repairs

REVIEWED BY: _____

Appendix 8

Annual Facility Review

General Conditional Major Operating Permit
Facility Annual Review

Condition G (IV). - Reports of activities conducted under this permit flexibility condition shall be submitted at the end of every calendar year but no later than January 31, unless no changes were made, and every year thereafter, to the Director of the Engineering Services. The owner/operator shall meet all the reporting requirements of 40 CFR 60 Subpart OOO for applicable sources.

A. Facility Information		
Facility Name:		SC Air Permit Number (8-digits only): -
Operating Permit Type:	☐ State Operating	☐ Conditional Major
Operating Permit Effective Date:		
Date of Annual Report:	Reporting Period:	

B. Permit Flexibility Criteria
Utilizing the flexibility condition found in your permit, exempt sources and existing permitted sources may undertake activities that meet the flexibility criteria. The activities shall be allowed, without a construction permit, or without revising or reopening the operating permit unless otherwise specified by any State or Federal requirement. The owner/operator may be subject to possible enforcement if changes are found to be inconsistent with the permit flexibility condition found in your most recently issued permit.

C. Implementation Details

1. After reviewing the permit & current plant equipment, have any changes been made to any equipment, processes, or materials covered by the permit?

   ☐ YES ☐ NO (If '**NO**', no additional information required)

2. If '**YES**', attach copy of updated onsite implementation log (OSIL).

3. If '**YES**', attach copy of updated emissions calculation

4. If '**YES**', attach copy of updated plant flow diagram.

Signature of Owner or Operator Date

Appendix 9

General Conditional Major Operating Permit

September 19, 2017 **VIA U.S. MAIL**

Jim Zadorozny
Hanson Aggregates Southeast, LLC
107 B Aaron Tippin Dr.
Greer SC 29650

Re: Notice of SC DHEC Staff Decision
Nonmetallic Mineral General Conditional Major Operating Permit Nos.:
0200-0073 – Anderson Quarry; 1200-0046 – Sandy Flat Quarry;

Dear Mr. Zadorozny:

The South Carolina Department of Health and Environmental Control ("DHEC") hereby provides notice that a General Conditional Major Operating Permit has been issued.

Electronic copies of this notice and your permit were emailed to you at Jim.Zadorozny@hanson.biz on September 19, 2017. If you did not receive that email, please notify Octavia Brown, via e-mail at brownoj@dhec.sc.gov, or call (803) 898-4339 immediately.

A DHEC staff decision involving the issuance, denial, renewal, suspension or revocation of a permit may be appealed by the applicant, permittee, licensee, and/or affected persons. Pursuant to S.C. Code Section 44-1-60(E)(2), "[t]he staff decision becomes the final agency decision fifteen calendar days after notice of the staff decision has been mailed to the applicant, unless a written request for final review accompanied by filing fee is filed with the department by the applicant, permittee, licensee, or affected person."

For your information, a DHEC "Guide to Board Review" is available at the following website: http://www.scdhec.gov/Agency/BoardofDirectors/GuidetoBoardReview/

Sincerely,

Steve McCaslin

Steve McCaslin, P.E., Director
Air Permitting Division
Bureau of Air Quality

cc: Conditional Major Files: 0200-0073; 1200-0046
ec: Jim Zadorozny (Jim.Zadorozny@hanson.biz)
Bryan Ball, BEHS
Tobbi Stewart, BEHS
Michael Shroup, Source Evaluation Section
Connie Turner, Air Toxics Section

ATTACHMENT for Nonmetallic Mineral Processing Plants – Facility Information

Hanson Aggregates Southeast, LLC - Anderson Quarry
GCM - 0200-0073

APPLICABLE PERMIT DATES

COVERAGE DATE	September 19, 2017

FACILITY PHYSICAL ADDRESS

STREET	1413 Hayes Road
CITY, STATE, ZIP CODE	Anderson, SC 29624
COUNTY	Anderson

STONE CRUSHING

Equipment ID	Equipment Description	Capacity (TPH)	Subject to NSPS OOO	Installation Date Modification Date Manufacture Date	Control Device ID	Emission Point ID
CR-1	42" x 48" Hewitt Robins Jaw Crusher	800	Yes	2006	WS	CR-1
CR-2	5.5" Std. Symons Cone Crusher	500	No	2006	WS	CR-2
CR-3	4.25" Shorthead Crusher	280	No	2006	WS	CR-3
CR-4	4.25" Shorthead Crusher	280	No	2006	WS	CR-4

STONE SCREENING

Equipment ID	Equipment Description	Capacity (TPH)	Subject to NSPS OOO	Installation Date Modification Date Manufacture Date	Control Device ID	Emission Point ID
HO-1	Feeder Hopper	1,200	No	2006	WS	HO-1
F-1	50" x 20' Vibratory Grizzly Feeder	1,200	Yes	2006	WS	F-1
SF-1	Syntron Feeder SF-1	600	No	2006	WCO	SF-1
SF-2	Syntron Feeder SF-2	600	No	2006	WCO	SF-2
SCR-1	8' x 20' Triple Deck Screen	1,000	Yes	2006	WCO	SCR-1
HO-2	Portable Feed Hopper	300	No	2006	WS	HO-2
SCR-2	8' x 20' Triple Deck Screen	1,200	Yes	2006	WS	SCR-2
F-4	Syntron Feeder F-4	280	No	2006	WS	F-4
F-5	Syntron Feeder F-5	280	No	2006	WS	F-5

ATTACHMENT for Nonmetallic Mineral Processing Plants – Facility Information

Hanson Aggregates Southeast, LLC - Anderson Quarry
GCM - 0200-0073

STONE CONVEYING

Equipment ID	Equipment Description	Capacity (TPH)	Subject to NSPS OOO	Installation Date Modification Date Manufacture Date	Control Device ID	Emission Point ID
C-1	48" Conveyor C-1	1,200	Yes	2006	WS	C-1
C-2	36" Conveyor C-2	1,200	Yes	2006	WS	C-2
C-3	42" Conveyor C-3	1,000	Yes	2006	WS	C-3
C-4	42" Conveyor C-4	1,000	Yes	2006	WS	C-4
C-5	36" Conveyor C-5	500	Yes	2006	WS	C-5
C-8	36" Conveyor C-8	500	Yes	2006	WS	C-8
C-7	36" Conveyor C-7	500	Yes	2006	WS	C-7
C-9	36" Conveyor C-9	300	Yes	2006	WS	C-9
C-10	48" Conveyor C-10	750	Yes	2006	WCO	C-10
C-11	36" Conveyor C-11	1,200	Yes	2006	WS	C-11
C-12	36" Conveyor C-12	600	Yes	2006	WS	C-12
C-13	48" Conveyor C-13	500	Yes	2006	WS	C-13
C-14	30" Conveyor C-14	500	Yes	2006	WS	C-14
C-15	30" Conveyor C-15	500	Yes	2006	WS	C-15
C-15A	24" Conveyor C-15A	350	Yes	2009	WS	C-15A
C-16	30" Conveyor C-16	500	Yes	2006	WP	C-16
C-17	36" Conveyor C-17	500	Yes	2006	WP	C-17
C-21	36" Conveyor C-21	300	Yes	2006	WCO	C-21
BN-1	Storage Bin BN-1	280	Yes	2006	WS	BN-1
BN-2	Storage Bin BN-2	280	Yes	2006	WS	BN-2

STONE WASHING

Equipment ID	Equipment Description	Capacity (TPH)	Subject to NSPS OOO	Installation Date Modification Date Manufacture Date	Control Device ID	Emission Point ID
SCR-3	8' x 20' Triple Deck Wash Screen SCR-3	500	Yes	2006	WP	SCR-3
C-20	30" Conveyor C-20	300	Yes	2006	WP	C-20
C-19	30" Conveyor C-19	300	Yes	2006	WP	C-19
C-18	30" Conveyor C-18	300	Yes	2006	WP	C-18

ATTACHMENT for Nonmetallic Mineral Processing Plants – Facility Information

Hanson Aggregates Southeast, LLC - Anderson Quarry
GCM - 0200-0073
Page 3 of 3

CONTROL DEVICES

Control Device ID	Control Device Description	Installation / Modification Date	Pollutants Controlled
WS	Wet Suppression	N/A	PM, PM_{10}, $PM_{2.5}$
WCO	Water Carryover from upstream water sprays	N/A	PM, PM_{10}, $PM_{2.5}$
WP	Wet Process	N/A	PM, PM_{10}, $PM_{2.5}$

FACILITY SPECIFIC CONDITIONS - RESERVED

RECORD OF REVISIONS FOR ATTACHMENTS	
Date	Description of Change

ATTACHMENT for Nonmetallic Mineral Processing Plants – Emission Rates for Ambient Air Standards

Hanson Aggregates Southeast, LLC - Anderson Quarry
GCM - 0200-0073

The emission rates listed herein are not considered enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see Ambient Air Standards Requirements).

AMBIENT AIR QUALITY STANDARDS – STANDARD NO. 2						
Emission Point ID	Emission Rates (lbs/hr)					
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Lead
BN-1	0.013	0.004	--	--	--	--
BN-2	0.013	0.004	--	--	--	--
C-01	0.055	0.016	--	--	--	--
C-02	0.055	0.016	--	--	--	--
C-03	0.046	0.013	--	--	--	--
C-04	0.046	0.013	--	--	--	--
C-05	0.023	0.007	--	--	--	--
C-07	0.393	0.032	--	--	--	--
C-08	0.393	0.032	--	--	--	--
C-09	0.014	0.004	--	--	--	--
C-10	0.335	0.010	--	--	--	--
C-11	0.035	0.010	--	--	--	--
C-12	0.472	0.038	--	--	--	--
C-13	0.393	0.032	--	--	--	--
C-14	0.023	0.007	--	--	--	--
C-15	0.386	0.030	--	--	--	--
C-15 (SS-1)	0.023	0.007	--	--	--	--
C-15A	0.016	0.005	--	--	--	--
C-16	0.023	0.007	--	--	--	--
C-17	0.023	0.007	--	--	--	--
C-21	0.014	0.004	--	--	--	--
CR-1	0.432	0.080	--	--	--	--
CR-2	0.270	0.050	--	--	--	--
CR-3	0.151	0.028	--	--	--	--
CR-4	0.151	0.028	--	--	--	--
F-1	0.002	0.001	--	--	--	--
F-4	0.013	0.004	--	--	--	--
F-5	0.013	0.004	--	--	--	--

ATTACHMENT for Nonmetallic Mineral Processing Plants – Emission Rates for Ambient Air Standards

Hanson Aggregates Southeast, LLC - Anderson Quarry
GCM - 0200-0073

AMBIENT AIR QUALITY STANDARDS – STANDARD NO. 2						
Emission Point ID	Emission Rates (lbs/hr)					
	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Lead
HO-1	0.055	0.016	--	--	--	--
HO-2	0.014	0.004	--	--	--	--
SCR-1	0.740	0.050	--	--	--	--
SCR-2	0.888	0.060	--	--	--	--
SF-1	0.028	0.008	--	--	--	--
SF-2	0.028	0.008	--	--	--	--

ATTACHMENT – Exempt Sources

Hanson Aggregates Southeast, LLC - Anderson Quarry
GCM - 0200-0073

Equipment ID	Equipment Description	Basis for Exemption
SF-1	Tunnel Feeder (350 tph)	BAQ Pemitting Exemption List December 2016 update; Exemption B.6.i
SB-1	Flop Gate 1 (325 tph)	BAQ Pemitting Exemption List December 2016 update; Exemption B.6.i
SF-2	Tunnel Feeder (125 tph)	BAQ Pemitting Exemption List December 2016 update; Exemption B.6.i
SF-3	Tunnel Feeder (125 tph)	BAQ Pemitting Exemption List December 2016 update; Exemption B.6.i
SS-1	Sand Screw (150 tph)	BAQ Pemitting Exemption List December 2016 update; Exemption B.6.i

S.C. Department of Health and Environmental Control

Bureau of Air Quality
General Conditional Major Operating Permit

Nonmetallic Mineral Processing Plants

Pursuant to the provisions of the *Pollution Control Act*, Sections 48-1-50(5) 48-1-100(A) and 48-1-110(a), the *1976 Code of Laws of South Carolina*, as amended, and *South Carolina Regulation* 61-62, *Air Pollution Control Regulations and Standards*, the Bureau of Air Quality authorizes the operation of these sources in accordance with the valid construction permits, and the plans, specifications and other information submitted in an Operating Permit Application. All official correspondence, plans, permit applications and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction or operating permit may be grounds for permit revocation.

The operation of these sources are subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

Issue Date: September 19, 2017
Renewal Due Date: June 30, 2027 **Expiration Date:** September 30, 2027

Steve McCaslin

Steve McCaslin, P.E., Director
Air Permitting Division
Bureau of Air Quality

RECORD OF REVISIONS	
Date	Description of Changes

A. APPLICABILITY

Condition Number	Condition
A.1	A facility may operate under the conditions contained herein if it meets the following criteria, as applicable: 1. The facility shall be a nonmetallic mineral processing plant. For the purpose of this permit: a. A nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral. b. A Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals: Crushed and Broken Stone, Sand and Gravel, Clay, Gypsum Sodium Compounds, Pumice, Gilsonite, Talc and Pyrophyllite, Boron, Barite, Fluorospar, Feldspar, Diatomite, Perlite, Vermiculite, Mica, and Kyanite. c. It may or may not consist of any of the following: crushing, screening, conveying, transfer operations, internal combustion engines, generators, storage piles, and roads 2. The facility does not use dryers, grinding mills, air conveying systems, air classifiers, or calciners. 3. The only method used to control emissions from the process equipment is wet suppression or water carryover. 4. The stationary internal combustion engines are electric or fired on low sulfur (500 ppm or less) fuel.
A.2	Facilities covered under this permit shall have federally enforceable limits for the avoidance of Prevention of Significant Deterioration (PSD) and Title V.

B. FACILITY WIDE

Condition Number	Conditions
B.1	(S.C. Regulation 61-62.1, Section II.J.1.g) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be retained for a period of at least 5 years from the date the record was generated. Records generated in the last 24 calendar months must be maintained on site and shall be made available to a Department representative upon request. Older records may be stored off site but shall be made available within five business days of Department request.

B. FACILITY WIDE

Condition Number	Conditions
B.2	**Source Testing** For any source test required under an applicable standard or permit condition, the owner, operator, or representative shall comply with S.C. Regulation 61-62.1, Section IV - Source Tests. Unless approved otherwise by the Department, the owner, operator, or representative shall ensure that source tests are conducted while the source is operating at the maximum expected production rate or other production rate or operating parameter which would result in the highest emissions for the pollutants being tested. Some sources may have to spike fuels or raw materials to avoid being subjected to a more restrictive feed or process rate. Any source test performed at a production rate less than the rated capacity may result in permit limits on emission rates, including limits on production if necessary. The owner or operator shall comply with any limits that result from conducting a source test at less than rated capacity. A copy of the most recent Department issued source test summary letter, whether it imposes a limit or not, shall be maintained with the operating permit, for each source that is required to conduct a source test. Site-specific test plans and amendments, notifications, and source test reports shall be submitted to the Manager of the Source Evaluation Section, Bureau of Air Quality.
B.3	**Opacity** (S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began on or before December 31, 1985, emissions from these sources (including fugitive emissions) shall not exhibit an opacity greater than 40%. (S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began after December 31, 1985, emissions from these sources (including fugitive emissions) shall not exhibit an opacity greater than 20%.
B.4	**Aggregate Processing** (S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations: For process weight rates less than or equal to 30 tons per hour $E = (F)\ 4.10P^{0.67}$ and For process weight rates greater than 30 tons per hour $E = (F)\ 55.0P^{0.11} - 40$ Where E = the allowable emission rate in pounds per hour P = process weight rate in tons per hour F = effect factor from Table B in S.C. Regulation 61-62.5, Standard No. 4

B. FACILITY WIDE

Condition Number	Conditions
B.5	**Non-Enclosed Operations and Fugitive Dust** (S.C. Regulation 61-62.5, Standard No. 4, Section X) All non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line. The owner/operator of all such operations shall maintain dust control of the premises and any roadway owned or controlled by the owner/operator by paving or other suitable measures. Oil treatment is prohibited. (S.C. Regulation 61-62.6) Fugitive particulate matter (PM) emissions from material handling, process equipment, control equipment, or storage piles will be minimized to the maximum extent possible. This will include proper maintenance of the control system such as scheduled inspections, replacement of damaged or worn parts, etc. Fugitive emissions from dust buildup will be controlled by proper housekeeping and/or wet suppression. Compliance with non-enclosed operations and fugitive dust requirements shall be demonstrated by developing a facility-wide fugitive dust control plan for controlling fugitive emissions from process operations, truck traffic, storage piles, and any other areas within the permitted facility where fugitive dust emissions can be generated. The plan shall be developed and submitted to the Director of Engineering Services for approval within 180 days from the coverage date of this permit. The owner/operator shall implement the plan within 30 days of approval and create a schedule for its periodic review and update as necessary. The plan shall be kept and maintained on-site with a record of revisions. The plan shall address and/or contain at a minimum the following: 1. Water Trucks a. Weekly operation and maintenance checks of water trucks b. Operating scenarios for water truck failures or inadequacies c. Dates the water trucks did not operate and the alternative(s) dust control method used 2. Truck Traffic a. Road speed limits b. Vehicle loading, off-loading, transportation or dumping of material procedures c. Spillage and residual materials clean-up procedures d. Weekly operation and maintenance checks of sprinklers e. Signage with respect to SC Code of Laws Sections 56-5-4100 and 56-5-4110 (which requires haul trucks transporting aggregate from all quarries to prevent the escape of materials loaded onto the vehicles) 3. Storage Piles a. Material stock piling procedures 4. Process Equipment a. Weekly operation and maintenance checks of all plant equipment and enclosures

B. FACILITY WIDE

Condition Number	Conditions
	b. Spillage and residual materials clean-up procedures c. Written guidelines on how to handle opacity problems The owner/operator shall develop logs or use other approved methods to comply with the requirements of the plan.
B.6	**Wet Suppression Systems** The owner/operator shall operate its wet suppression system except as necessary for elevated material moisture content (i.e. rainfall). In case the wet suppression system is not operating properly, then a portable water spray system is acceptable for use until the permanent water spray system is back in proper operation. If a portable water system is not available, then the process shall be shut down until the permanent water spray system is back in proper operation. The owner/operator shall perform weekly inspections of all wet suppression related equipment including a check that water is flowing to discharge spray nozzles in the wet suppression system. The owner/operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner/operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner/operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken in the logbook. The weekly inspections required in this condition meets the requirements of monthly inspections in 40 CFR 60.674(b).
B.7	**Title V and PSD Avoidance** (S.C. Regulation 61-62.1, Section II.G and Section II.E) This facility is a potential major source for PM, PM_{10}, and $PM_{2.5}$ emissions. The facility has agreed to federally enforceable operating limitations to limit its potential to emit to less than 250 tons per year for PM and PM_{10} emissions to avoid PSD and less than 100 tons per year for PM_{10} and $PM_{2.5}$ emissions to avoid Title V. The owner/operator shall show compliance with these limits by operating its control devices in accordance with the conditions of this permit. The logs required in this permit and any corrective actions taken shall be maintained on site. However, in the event of enforcement actions or complaints, the Department may require that these the logs be reported annually.

C. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

<table>
<tr><th>Condition Number</th><th>Condition</th></tr>
<tr><td>C.1</td><td>General

This facility is subject to the provisions of 40 CFR Part 60, New Source Performance Standards General Provisions, Subparts A and Standards of Performance for Nonmetallic Mineral Processing Plants, Subpart OOO. Existing affected sources shall comply with the applicable provisions by the compliance date specified in Subparts OOO. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.</td></tr>
<tr><td>C.2</td><td>Applicability

40 CFR 60.670(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

40 CFR 60.670(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.</td></tr>
<tr><td>C.3</td><td>Standards for PM

(40 CFR 60.672(b)) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 CFR 60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(40 CFR 60.672(d)) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

<table>
<tr><td colspan="2">The owner or operator must meet the following fugitive emissions limit and must demonstrate compliance with these limits by conducting performance tests as listed below for:

Screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility.</td></tr>
<tr><th>Affected facilities that commenced construction, modification, or reconstruction after

August 31, 1983 but before April 22, 2008</th><th>Affected facilities that commence construction, modification, or reconstruct on or after

April 22, 2008</th></tr>
<tr><td>10 percent opacity</td><td>7 percent opacity</td></tr>
</table>
</td></tr>
</table>

C. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition	
	An initial performance test according to 40 CFR 60.11 of this part and 40 CFR 60.675 of this subpart	An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); A repeat performance test according to 40 CFR 60.11 of this part and 40 CFR 60.675 within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in 40 CFR 60.674(b) and 60.676(b) are exempt from this 5-year repeat testing requirement.

The owner or operator must meet the following fugitive emissions limit and must demonstrate compliance with these limits by conducting performance tests as listed below for:

Crushers at which a capture system is not used.

Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	Affected facilities that commence construction, modification, or reconstruct on or after April 22, 2008
15 percent opacity	12 percent opacity
An initial performance test according to 40 CFR 60.11 of this part and 40 CFR 60.675 of this subpart	An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); A repeat performance test according to 40 CFR 60.11 of this part and 40 CFR 60.675 within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in 40 CFR 60.674(b) and 60.676(b) are exempt from this 5-year repeat testing requirement.

C. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition
C.4	**Testing** (40 CFR 60.675(c)(1)) In determining compliance with the particulate matter standards in 40 CFR 60.672(b), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in 40CFR 60.11, with the following additions: (i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet). (ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (*e.g.*, road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed. (iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible. (40 CFR 60.675(c)(3)) When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR 60.672(b), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.
C.5	**Monitoring** (40 CFR 60.674(b)) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b). (1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

C. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition
	(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and 40 CFR 60.676(b) (ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under 40 CFR 60.11 of this part and 40 CFR 60.675 of this subpart. (2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under 40 CFR 60.676(b) must specify the control mechanism being used instead of the water sprays. (40 CFR 60.676(b)(1)) Owners or operators of affected facilities for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under 40 CFR 60.674(b), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Department upon request.
C.6	**Like Replacement** (40 CFR 60.670(d)) (1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in 40 CFR 60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of 40 CFR 60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section. (2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in 40 CFR 60.676(a). (3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of 40 CFR 60.672, 60.674 and 60.675. (40 CFR 60.676(a)) Each owner or operator seeking to comply with 40 CFR 60.670(d) shall submit to the Department the following information about the existing facility being replaced and the replacement piece of equipment. (1) For a crusher, bucket elevator, bagging operation, or enclosed truck or railcar loading station: (i) The rated capacity in megagrams or tons per hour of the existing facility being replaced.

C. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition
	(ii) The rated capacity in tons per hour of the replacement equipment. (2) For a screening operation: (i) The total surface area of the top screen of the existing screening operation being replaced (ii) The total surface area of the top screen of the replacement screening operation. (3) For a conveyor belt: (i) The width of the existing belt being replaced (ii) The width of the replacement conveyor belt. (4) For a storage bin: (i) The rated capacity in megagrams or tons of the existing storage bin being replaced (ii) The rated capacity in megagrams or tons of replacement storage bins.
C.7	**Reporting** (40 CFR 60.676(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR 60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with 40 CFR 60.672(b). (40CFR60.676(g)) The owner/operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in 40CFR60.672(b) and the emission test requirements of 40CFR60.11 if it meets the 40CFR60 Subpart OOO applicability requirements. (40 CFR 60.676(h)) The subpart A requirement under 40 CFR 60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart. (40 CFR 60.676((i)) A notification of the actual date of initial startup of each affected facility shall be submitted to the Department (1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Department. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available. (2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

D. STATIONARY INTERNAL COMBUSTION ENGINES

<table>
<tr><th>Condition Number</th><th>Condition</th></tr>
<tr><td>D.1</td><td>(S. C. Regulation 61-62.5, Standard No. 5.2) Any stationary internal combustion engines constructed after June 25, 2004 or any existing source that is removed from its presently permitted facility and moved to another permitted facility after June 25, 2004, except process equipment and commercial or industrial boilers that are transferred between facilities within the State under common ownership, is subject to the following emission limitations:

<table>
<tr><th>Source Type</th><th>Control Technology and/or Emission Limit</th></tr>
<tr><td>Internal Combustion Engines with a mechanical power output of 200 bHP or greater – Compression Ignition</td><td>Timing Retard ≤4° + Turbocharger with Intercooler or equivalent shall achieve 490 ppmv @ 15% O_2 (7.64 gm/bhp-hr)</td></tr>
</table>

Unless otherwise noted, all emission limits are based on monthly averages.

(S.C. Regulation 61-62.5, Standard No. 5.2, Section VI) The owner/operator of a subject combustion source shall conduct maintenance in accordance with the manufacturer's specifications.</td></tr>
<tr><td>D.2</td><td>Fuel oil sulfur content shall be less than or equal to 0.05 percent by weight. Fuel oil supplier certification shall be obtained for each batch of oil received and stored on site. Reports of the recorded sulfur content shall be maintained onsite.</td></tr>
<tr><td>D.3</td><td>Stationary internal combustion engines subject to the provisions of 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subparts A and NESHAP for Stationary Reciprocating Internal Combustion Engines. Existing affected sources shall comply with the applicable provisions by the compliance date specified in Subpart ZZZZ. Any new affected sources shall comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII for compression ignition engines or 40 CFR 60, Subpart JJJJ for spark ignition engines upon initial start-up unless otherwise noted.</td></tr>
<tr><td>D.4</td><td>All NESHAP notifications and reports shall be sent to the Manager of the Air Toxics Section, South Carolina Department of Health and Environmental Control - Bureau of Air Quality.</td></tr>
<tr><td>D.5</td><td>All NESHAP notifications and the cover letter for periodic reports shall be sent to the United States Environmental Protection Agency (US EPA) at the following address:
US EPA, Region 4
Air, Pesticides and Toxics Management Division
61 Forsyth Street SW
Atlanta, GA 30303</td></tr>
</table>

D. STATIONARY INTERNAL COMBUSTION ENGINES

Condition Number	Condition
D.6	Emergency power generators less than or equal to 150 kilowatt (kW) rated capacity or greater than 150 kW rated capacity designated for emergency use only and operated a total of 500 hours per year or less for testing and maintenance with a method to record the actual hours of use such as an hour meter have been determined to be exempt from construction permitting requirements in accordance with South Carolina Regulation 61-62.1. These sources shall still comply with the requirements of all applicable regulations including but not limited to the following: New Source Performance Standards (NSPS) 40 CFR 60 Subpart A (General Provisions); NSPS 40 CFR 60 Subpart IIII (Stationary Compression Ignition Internal Combustion Engines); NSPS 40 CFR 60 Subpart JJJJ (Stationary Spark Ignition Internal Combustion Engines); National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subpart A (General Provisions); and NESHAP 40 CFR 63 Subpart ZZZZ (Stationary Reciprocating Internal Combustion Engines). Facilities with emergency generators are not required to submit reports. Only facilities with existing non-emergency engines greater than 300 hp are required to submit semiannual reports. Facilities with emergency engines shall comply with the operations limits specified in 40 CFR 63.6640(f).

E. PORTABLE CONCRETE AND RECYCLED ASPHALT CRUSHING OPERATIONS

Condition Number	Condition
E.1	The owner/operator may operate a portable concrete and/or recycled asphalt crushing plant in conjunction with the nonmetallic mineral processing plant under the conditions herein if it meets the following criteria: 1. The equipment processes non-waste clean construction or demolition concrete only. 2. Wet suppression is used to control emissions. 3. The diesel engines are certified by the manufacturer to meet EPA's non-road diesel engine emission standards/tiers (40 CFR 89 and 1039).
E.2	The owner/operator shall evaluate emissions from the portable and/or recycled asphalt crushing operation and maintain the record onsite. The emissions from this operation shall be included in the facility wide potential to emit.
E.3	The portable concrete and/or recycled asphalt crushing operation is limited to operating a maximum of 500 hours per year at any one site. The owner or operator must record the actual operating hours and maintain records onsite. A site is one or more contiguous or adjacent properties that are under common control.
E.4	The portable/temporary plant equipment is subject to all of the applicable conditions and requirements of this permit and the owner/operator shall operate in accordance with the fugitive dust control plan

F. RELOCATION REQUIREMENTS

Condition Number	Condition
F.1	The owner/operator must submit an application in accordance with the Relocation of Nonmetallic Mineral Processing Plants guidance document and gain approval from this Department prior to relocating an existing permitted facility to any other site in South Carolina.
F.2	The owner/operator may move a plant out of South Carolina without gaining prior approval. Notification that the plant was moved out of South Carolina shall be made within 30 days of such a move. Department approval must be gained prior to bringing the plant back into South Carolina.

G. PERMIT FLEXIBILITY

Condition Number	Conditions
G.1	The facility may undertake minor alterations or additions without a construction permit, or without revising or reopening the operating permit unless otherwise specified by any State or Federal requirement. These alterations or additions must meet the criteria and procedures as prescribed in this condition. The owner or operator may be subject to possible enforcement if the activity is found to be inconsistent with the permit flexibility conditions. (I) Permit Flexibility Criteria 1. The activity does not increase the maximum permitted facility wide production rate. 2. The activity is directly part of or supports the permitted non-metallic mineral process. 3. The activity will not result in facility wide net increase in controlled PM_{10} emissions greater than or equal to 5 tons per year. 4. The activity is not divided into smaller projects to circumvent facility wide net increase in controlled PM_{10} emissions greater than or equal to 5 tons per year. 5. The activity does not trigger a regulation or regulatory requirement not already covered in this operating permit. See exceptions under (I)7 of this section. 6. The activity does not result in emissions that would potentially subject the facility to the Title V operating permit program. 7. The activity does not trigger S.C. Regulation 61-62.5, Standards No. 7 and No. 7.1 or synthetic minor permitting requirements. 8. Any new affected sources subject to 40 CFR Part 60 Subparts A, OOO, IIII, JJJJ or 40 CFR Part 63 Subparts A and ZZZZ shall comply with the applicable requirements of these Subparts upon initial start-up unless otherwise noted in the permit. Existing affected sources shall comply with the applicable provisions by the compliance date specified in the applicable Subpart. 9. Compliance with S.C. Regulations 61-62.5 Standards No. 2 (Ambient Air Quality Standards) and No. 8 (Toxic Air Pollutants) is not affected. 10. Any activity exempted in S.C. Regulation 61-62.1 Section II.B.2 or the BAQ published exempt source list. Case by case exemptions described in Section II will require prior written approval.

G. PERMIT FLEXIBILITY

Condition Number	Conditions
	(II) Ambient Air Standards Demonstration Flexibility Changes that impact an ambient air standards demonstration (such as air dispersion modeling), but are otherwise allowed under the permit flexibility condition, shall be allowed provided: 1. The facility operations including the proposed activity is within the parameters of the Ambient Air Standards General Model or current Department Approved facility wide modeling. 2. That if the facility operations including the proposed activity is not within the parameters of the Ambient Air Standards Requirements General Model or the current facility wide modeling, an updated air dispersion modeling or other information demonstration is conducted prior to the source operating under the new operating scenario. A copy of these results for the new operating scenario are kept on site and available for inspection. The air dispersion model used must be BAQ approved. 3. The facility submits a written request to modify the demonstration within 15 business days of operating under the new operating scenario. The demonstration shall include a description of the scenario, emission rates, modeling results, modeling files and a completed modeling information form and any other pertinent information relevant to the demonstration. This request shall be submitted to the Director of Engineering Services. (III) Record Keeping As part of this permit flexibility procedure, the facility shall keep an on-site implementation log (OSIL) (written or electronic), to document all changes made under the procedure. The OSIL will be kept with the facility's air permit and made available for inspection. The OSIL shall provide detailed information supporting the changes made under this procedure. At a minimum all of the following items shall be included in the OSIL: 1. A brief description of the activity and how it meets the criteria listed in this condition. Include impacted equipment identification numbers, operating permit identification unit, and stack identification. 2. The date the activity occurred. 3. Revised equipment list to include: i. A unique ID number ii. Manufacture date iii. Capacity, dimensions, and/or configuration 4. Revised plant or flow diagram 5. 40 CFR 60 Subpart OOO applicability 6. A demonstration that the activity did not trigger any new regulations, standards or requirements not already covered in this permit. 7. Emissions calculations for all regulated air pollutants resulting from the activity and demonstration that when added to the existing emissions all permit limits will be met. This should include the increase and the facility-wide emissions totals from the activity. 8. A list of exempt sources will be kept with the OSIL and only the information required by the regulation for the exemption shall be included with the OSIL.

G. PERMIT FLEXIBILITY

Condition Number	Conditions
	(IV) Reporting Reports of activities conducted under this permit flexibility condition shall be submitted at the end of every calendar year but no later than January 31, unless no changes were made, and every year thereafter, to the Director of the Engineering Services. The owner/operator shall meet all the reporting requirements of 40 CFR 60 Subpart OOO for applicable sources. See ambient air standards demonstration flexibility section of this condition for modeling or other information demonstration reporting requirements.

H. AMBIENT AIR STANDARDS REQUIREMENTS

Condition Number	Conditions
H.1	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in this demonstration may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment - Emission Rates for Ambient Air Standards of this permit. Higher emission rates may be administratively incorporated into Attachment - Emission Rates for Ambient Air Standards of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment - Emission Rates for Ambient Air Standards, not to exceed the pollutant limitations of this permit. Should the facility wish to increase the emission rates listed in Attachment - Emission Rates for Ambient Air Standards, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified above. This is a State Only enforceable requirement.

I. REPORTING CONDITIONS

Condition Number	Conditions
I.1	Reporting required in this permit, shall be submitted in a timely manner. Annual reports are due at the end of every calendar year but no later than January 31.
I.2	All reports and notifications required under this permit shall be submitted to the person indicated in the specific condition at the following address: **2600 Bull Street** **Columbia, SC 29201** The contact information for the local EQC Regional office can be found at: **http://www.scdhec.gov**
I.3	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality.
I.4	(S.C. Regulation 61-62.1, Section II.J) For sources not required to have continuous emissions monitors, any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the Department's local Environmental Quality Control Regional office within 24 hours after the beginning of the occurrence. The owner/operator shall also submit a written report within 30 days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality and shall include, at a minimum, the following: 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 7. The steps taken to limit the excess emissions; and, 8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions.

J. GENERAL CONDITIONS

Condition Number	Conditions
J.1	The owner or operator shall comply with S.C. Regulation 61-62.2 "Prohibition of Open Burning."
J.2	The owner or operator shall comply with S.C. Regulation 61-62.3 "Air Pollution Episodes."

J. GENERAL CONDITIONS

Condition Number	Conditions
J.3	The owner or operator shall comply with S.C. Regulation 61-62.4 "Hazardous Air Pollution Conditions."
J.4	This permit only covers emission units and control equipment while physically present at the indicated facility. Unless the permit specifically provides for the equipment relocation, this permit is void for an item of equipment on the day it is removed from the permitted facility, notwithstanding the expiration date specified on the permit.
J.5	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.
J.6	In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II.L, the owner or operator may document an emergency situation through properly signed, contemporaneous operating logs, and other relevant evidence that verify: 1. An emergency occurred, and the owner or operator can identify the cause(s) of the emergency; 2. The permitted source was at the time the emergency occurred being properly operated; 3. During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and 4. The owner or operator gave a verbal notification of the emergency to the Department within 24 hours of the time when emission limitations were exceeded, followed by a written report within 30 days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II.J.1.c.i through viii. The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
J.7	(S.C. Regulation 61-62.1, Section II.O) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following: 1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit. 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. 3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit. 4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

K. PERMIT RENEWAL, MODIFICATION, EXPIRATION AND TRANSFER OF OWNERSHIP

Condition Number	Conditions
K.1	(S.C. Regulation 61-62.1, Section II.H) The owner/operator shall submit an operating permit renewal request to the Department within 90 days prior to the operating permit expiration date. The operating permit renewal requests shall include a description of any changes at the facility that have occurred since issuance of the last operating permit that may affect the operating permit or operating permit review. In general, the description shall include any addition, alteration or removal of sources, including sources exempt from construction permit requirements; addition, alteration or removal of emission limitations; any changes to monitoring, recordkeeping, or reporting requirements; and any changes or additions to special permit conditions.
K.2	Submission of a request for renewal meeting the requirements in S.C. Regulation 61-62.1, Section II.H, shall allow the owner/operator to continue operating pursuant to the most recent general conditional major operating permit, until such time as the Department has taken final action on the request for renewal.
K.3	This permit may be reopened by the Department for cause or to include any new standard or regulation which becomes applicable to a source during the life of the permit.
K.4	This permit may be modified by the Department for cause, to include any applicable requirement or to add or alter a permit's expiration date.
K.5	(S.C. Regulation 61-62.1, Section II.M) Within 30 days of the transfer of ownership/operation of a facility, the current permit holder and prospective new owner/operator shall submit to the Director of Engineering Services a written request for transfer of the source operating or construction permits. The written request for transfer of the source operating or construction permit shall include any changes pertaining to the facility name and mailing address; the name, mailing address, and telephone number of the owner/operator for the facility; and any proposed changes to the permitted activities of the source. Transfer of the operating or construction permits will be effective upon written approval by the Department.

General Conditional Major Operating Permit
Nonmetallic Mineral Processing Plant
Attachment - General Model

<table>
<tr><th>Condition Number</th><th>Conditions</th></tr>
<tr><td>GM.1</td><td>Facilities that demonstrate Compliance with the Ambient Air Standards Using the Quarry Operations General Model

In lieu of site specific modeling, the owner operator may demonstrate compliance with the ambient air standards using the Department developed quarry operations general model (general model). The owner/operator may choose to use the general model for activities at the facility that require a new or updated ambient air standards compliance demonstration. The parameters for use of the general model are listed in the conditions below.</td></tr>
<tr><td>GM.2</td><td>Process Equipment (Crushers, Screens, Conveyors)

The owner/operator shall not exceed the maximum allowable production rates at the boundary distance to process equipment provided in the table below.

<table>
<tr><th rowspan="2">Boundary Distance to Process Equipment (feet)</th><th colspan="2">Maximum Allowable Production Rates</th></tr>
<tr><th>Daily (tons/calendar day)</th><th>Annual (tons/ 12-months)</th></tr>
<tr><td>150≤D<300</td><td>5,700</td><td>1,300,000</td></tr>
<tr><td>300≤D<450</td><td>7,000</td><td>1,450,000</td></tr>
<tr><td>D≥450</td><td>9,000</td><td>2,500,000</td></tr>
</table>

Boundary Distance to Process Equipment is the shortest distance between any process emission (excluding the wash process) source (not to include roads, storage piles, etc.) and the property boundary at the facility.

The owner/operator shall:

a. Record the total quantity of crushed stone produced (in tons) during each calendar day and a twelve month rolling sum shall be calculated for total production (in tons). The required production records shall be maintained in logbook (written or electronic) on-site.

b. Maintain on-site a plant plot plan, equipment list, and plant or flow diagram of all air polluting emission sources.
i. The plot plan shall be sufficient to identify and measure the boundary distance.
ii. The equipment list shall include:
iii. Equipment description
1. A unique ID number
2. Manufacture date
3. Capacity, dimensions, and/or configuration
4. 40 CFR 60 Subpart OOO applicability
The plot plan, equipment list, and plant diagram shall have the date when the current document was revised.</td></tr>
</table>

<table>
<tr><th>Condition Number</th><th>Conditions</th></tr>
<tr><td>GM.3</td><td>
Stationary Internal Combustion Engine

The source(s) shall be EPA / Tier 3 or Tier 4 compliant and the maximum power output for each stationary internal combustion engine shall be:

<table>
<tr><th>EPA Tier / Standard Compliant Engine</th><th>Power Output for each Stationary Internal Combustion Engine (HP)*</th></tr>
<tr><td>Tier 3</td><td>173</td></tr>
<tr><td>Interim Tier 4</td><td>345</td></tr>
<tr><td>Final Tier 4</td><td>395</td></tr>
</table>
*The Power out per engine may be greater than those listed based on the manufacturer's data.

The owner/operator shall maintain on-site identification of each diesel engine operated at the facility, including the identification number, manufacturer's engine certification, and the maximum power output capacity. The owner/operator shall also obtain supplier certification of the sulfur content of the fuel for each batch of fuel received and stored on site.
</td></tr>
</table>

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dhec	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: 803-898-1426 E-mail: *AskMines@dhec.sc.gov*

RECLAMATION PLAN

Permit # I-000424

DHEC FORM 500 DATE VERSION ADOPTED 7/1/94

****

As required in Section 48-20-90 of the South Carolina Mining Act, "An operator shall submit with his application for an operating permit a proposed reclamation plan. The reclamation plan for an operating permit only must be furnished to the local 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: **Heidelberg Materials Southeast Agg LLC**

2. Name of Proposed Mine: **Anderson Quarry** County: **Anderson**

3. Home Office Address: **7 West Point Blvd** **(864) 308-7850**
   (Street **and** P.O. Box) (Telephone No.)
   Mauldin **SC**
   (City) (State) (Zip Code) (Fax No.)

4. Local Office Address: **1413 Hayes Road** **(864) 296-8245**
   (Street **and** P.O. Box) (Telephone No.)
   Anderson **SC**
   (City) (State) (Zip Code) (Fax No.)

5. Name of company personnel and their title to be the contact for official business and correspondence: **Kaylee Jones, Environmental Professional**

6. Location of Mine: **1413 Hayes Road** **Anderson**
   State or County Hwy No. Nearest Town or City

II. ENVIRONMENTAL PROTECTION

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

   Sufficient buffers will be maintained between the quarry and adjacent resources to ensure these resources are protected during the life of the mine. Sediment and erosion control features and BMPs will be used to protect adjacent resources.

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

   Sufficient control, such as sediment and stormwater basins, silt fencing, diversion ditches and swales will be used to limit potential impacts to surface waters. Land disturbing activities will be kept to a minimum. All petroleum products will be maintained in secondary containment to minimize spillage. Any spill that occurs will be immediately cleaned up.

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

   There are no known cultural or historic sites within the proposed permitted area.

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

The use of stormwater and sediment basins will reduce the potential for sediment getting into the creek and thus adversely affecting the fisheries. Limiting land disturbance activities and preservation of the creek buffers should minimize impacts on wildlife. Wildlife corridors along the creeks will be preserved.

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.

Heidelberg Materials will comply with the Air Permit, GCM - 0200-00073. The permit requires control fugitive dust at the processing plant by use of wet suppression and use of water trucks to control dust from haul roads and stockpiles. Heidelberg Materials will comply with the NPDES General Permit, SCG730222. Both stormwater and process water are routed through sediment/stormwater basins prior to discharge to provide adequate holding time for the sediment to settle.

III. RECLAMATION OF AFFECTED AREA

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

a. Lake or pond ☑ f. Grassland ☑

b. Agriculture ☐ g. Recreation ☐

c. Woodlands ☑ h. Wetlands ☐

d. Residential ☐ i. Park ☐

e. Commercial ☐ 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 surface gradient on all final slopes for reclamation will be 3:1 or less.

8. How will the final slopes in unconsolidated material be accomplished? If the slope will be by backfilling, demonstrate that there is adequate material to accomplish the stated final gradient. If gradient is to be achieved by bringing in material from outside the permitted area, state the nature of the material and approximate quantities. If the gradient is to be achieved by grading, show that there is adequate area for grading to achieve gradient (i.e., adequate distance between the property 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.

Limit of excavation will be sloped to 3:1 and vegetated. Overburden disposal areas will be sloped 3:1 and permanent vegetation planted once the final face has been prepared and graded.

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.

Spring planting will be mixtures of Fescue, Bermuda, and Sericea. Fall planting will be a mixture of rye grain and Fescue. Additionally areas may be identified for the planting of loblolly or long-leaf pine. Commercial lime and fertilizer will be used.

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10. Provide, as a separate document, a closure plan of the mine and permitted facilities to prevent a release of contaminants from being harmful to the environment. A closure plan is not necessary for all mines, but is required where the possibility exists for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes).

No closure plan is required for this permit application.

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.

All scrap metal is recycles and disposed of off site. All tailings and mine wastes are dipped from ponds, drained and disposed of in the overburden disposal areas.

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

The settling and sediment ponds will be drained, allowed to dry, re-contoured and vegatated with a mixture of grasses.

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

No stream channels or creeks are to be disturbed during mining. Any drains established during mining and reclamation will be grass lined or rip-rap lined depending on the slope. Use of check dams in drainage ditches will be made to minimize the potential for erosion and off-site sedimentation.

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?

Reclaimed areas will be inspected on a regular basis and should any areas require maintenance it will be performed according to the vegetation plan. Reclaimed areas will be set aside to ensure they are not used in normal course of business to prevent the reclaimed areas being damaged prior to release.

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,

Final reclamation of the pit will include the installation of a 6-ft high barbed wire fence around the perimeter. Warning signs will be posted at regular intervals in the fence. Locked gates will be maintained at the mine entrance. Buffers present during mining will be maintained during reclamation.

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 pit is to be reclaimed as a lake. It will be prevented from becoming noxious and foul by the regular inflow of stormwater and groundwater into the pit.

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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 entrance road(for site access),shop,employee building,and fuel building will remain. The shop is a block structure; the fuel building is steel frame w/ metal siding. Both can be re-used. All petroleum storage tanks will be removed unless requested by post-mine owner.

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 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.

Overburden disposal areas will be reclaimed as the final slopes are developed. Once the ultimate pit limits of the quarry have been reached it will be possible to perform final reclamation on the unconsolidated overburden.

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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 Practices	Segment # or Area	Planned		*Applied		Notes
		Amount	Year	Amount	Month/Year	
Re-slope and vegetate	Area #1 &	18.1 AC.	2055			
Overburden piles	Area #2					
Mining activities end			2155			
Remove office, scales,			2156			
plant, and lab						
Re-vegetate	Plant Site	44.5 AC.	2156			
Re-slope pit edge			2156			
Fence former pit area		6,197 LF	2156			
Pit fills in as a lake		42.7 AC.	2161			

* Completed by the Department

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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.

Kaylee Jones

Signature of Applicant/Operator or his Authorized Representative

Kaylee Jones

Printed Name of Applicant/Operator or his Authorized Representative

Environmental Manager

Title

1/1/2024

Date

Department Use Only

Permit No.: I-000424 Date Application Approved: January 19, 2024 Date Bond Rec'd: August 28, 2023

Bond Amount: $1,355,115.00 Blanket or Single Bond: Single Permit Modification Date: January 19, 2024

ACTION TAKEN ON THIS RECLAMATION PLAN: Approved with Additional Terms and Conditions

By: Jeremy E. Eddy Date: January 19, 2024

SECTION MANAGER

Reset this form ? (These Buttons Do Not Print)

MINE MODIFICATION #5

FOR

MINE PERMIT #I-000424

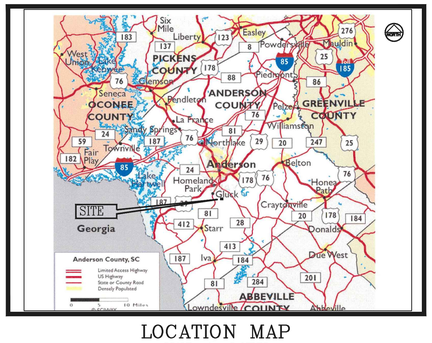
Hanson

Hanson Aggregates Southeast, LLC

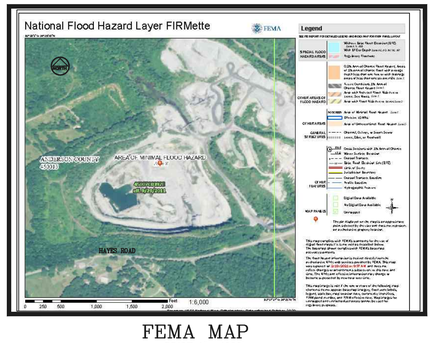
7 West Point Blvd.
Mauldin, S.C, 29662

ANDERSON QUARRY

413 HAYES ROAD
ANDERSON , SOUTH CAROLINA, 29624
ANDERSON COUNTY
Phone 864-296-9242



LOCATION MAP
SCALE: 1"= 5 MILES
LAT: 34.4310 N
LONG: -82.6316 W



FEMA MAP
SCALE 1" =1000'
ANDERSON COUNTY FLOOD MAP - 45007C0392F

SITE DATA:
PROPERTY OWNER : HANSON AGGREGATES SOUTHEAST, LLC .
ENVIRONMENTAL 24 HOUR CONTACT
JIM ZADOROZNY - 770-617-7398

Black Rock Consulting, LLC
Seven Dunwoody Park, Suite 115
Atlanta, Georgia 30338
Phone:(770) 395-6111 Fax:(770) 395-6999

SHEET INDEX

Last Modification: March 1, 2019

APPROVED BY
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT

BY Jeremy E. Eddy
TITLE SM-0424-1V4
DATE APPROVED January 19, 2024
PERMIT NO I-000424

HANSON AGGREGATES SOUTHEAST, LLC

EXISTING CONDITIONS MAP

ANDERSON QUARRY

BLACK ROCK CONSULTING, LLC
Seven Dunwoody Park, Suite 115
Atlanta, Georgia 30338
Ph:770-395-6111 Fax:770-395-6999

Checked By	DB
Scale	1"= 200'
Date	5/15/2021
Drawing Number	1

NORTH

STOCK PILE AREA

DIVERSION DITCH

SEE SHEET #6 FOR POND DESIGN

400 L.F. 18" RCP

GRASSED BERM

ELROD ROAD

EXISTING STOCKPILE AREA

PROPOSED STREAM CROSSING (SEE SHEET # 7)

EXISTING POND

PLANT SITE

NPDES OUTFALL 002

EXISTING STORMWATER POND

STOCKPILE AREA

OVERBURDEN

TAILINGS PONDS

SHOP

QC LAB

FUEL TANKS

OFFICE & SCALES

PIT AREA
ELEV. - 200' MSL

HAYES ROAD

STORM WATER OUTFALL 001

1000' BLASTING SETBACK

100' BUFFER

100' PLANTED BUFFER

3:1 DIRT SLOPE

EROSION CONTROL LEGEND

Te	TEMPORARY VEGETATION
Pe	PERMANENT VEGETATION
S	SEDIMENT BARRIER - SENSITIVE
DD	TEMPORARY DIVERSION

NOTE: INSTALL SILT FENCE AS NEEDED

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER WILLIAM B. DUNCAN 24120

APPROVED BY
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT

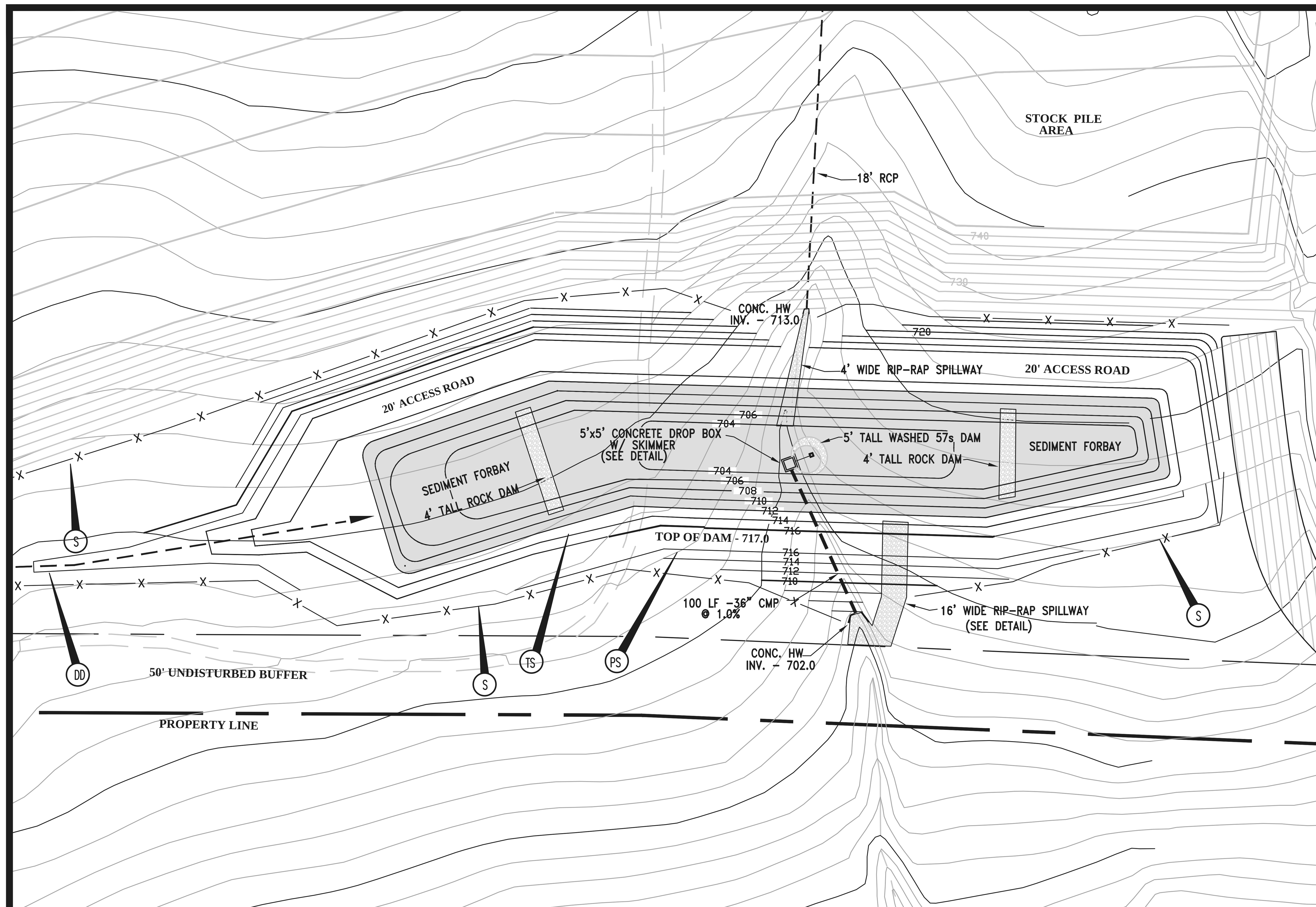
BY Jeremy E. Eddy
TITLE SM-0424-2V4
DATE APPROVED January 19, 2024
PERMIT NO I-000424

ULTIMATE MINE PLAN MODIFICATION #5

HANSON AGGREGATES SOUTHEAST, LLC
ANDERSON QUARRY
ANDERSON COUNTY, SOUTH CAROLINA

Checked By	DB
Scale	1"= 200'
Date	5/15/2021
Drawing Number	3

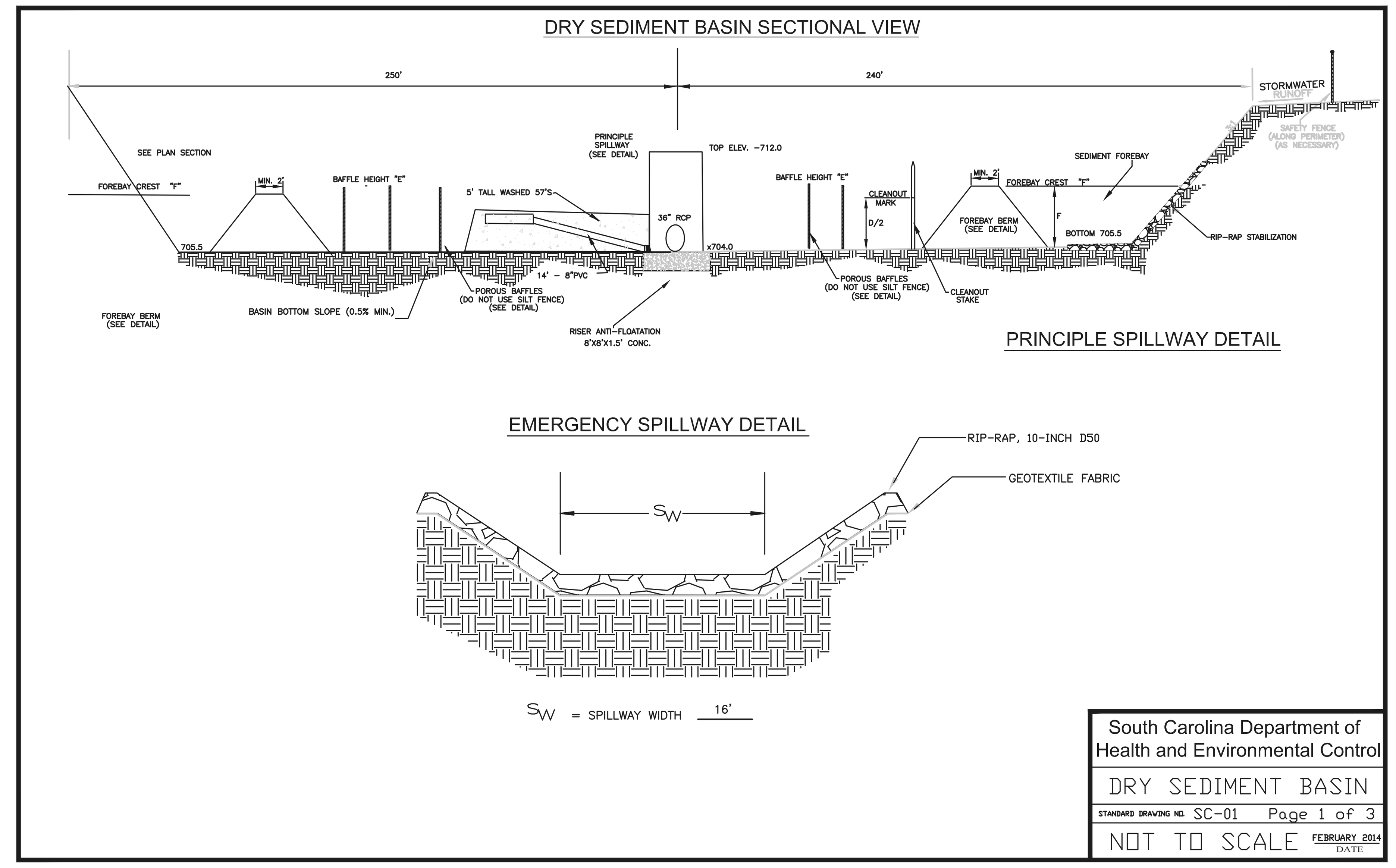
BLACK ROCK CONSULTING, LLC
Seven Dunwoody Park, Suite 115
Atlanta, Georgia 30338
Ph:770-395-6111 Fax:770-395-6999



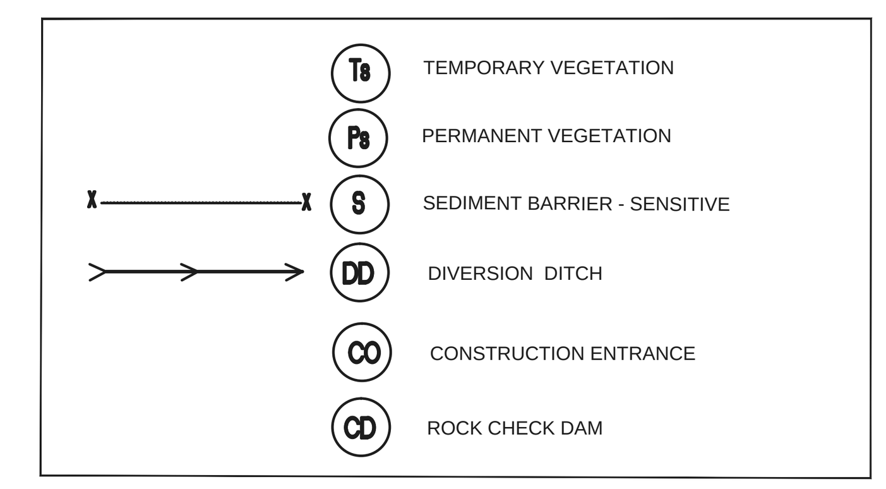
PLAN VIEW
PROPOSED SEDIMENT POND #1

SCALE 1"= 40'

NOTE: FIELD VERIFY ELEVATIONS

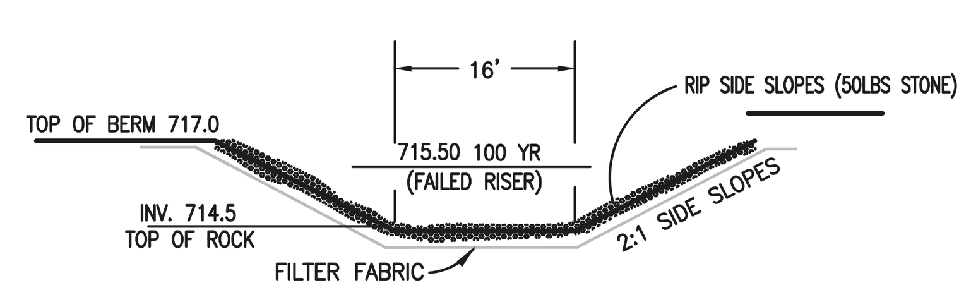


EROSION CONTROL LEGEND



STAGE/STORAGE

Elevation (ft)	Incremental Depth (ft)	Contour Area (sf)	Average Area (sf)	Incremental Volume (cf)	Cumulative Volume (cf)	Cleanout Elevation (ft)		
704		6300			0			
	2.00		5506	11,011		<--	705.5	
706		18,070			11,011			
	2.00		9635	19,270				
708		27,499			30,281			
	2.00		13850	27,700				
710		36,900			57,981			
	2.00		36600					
712		47,331		36557	94046			
	2.00							
714		67,360						



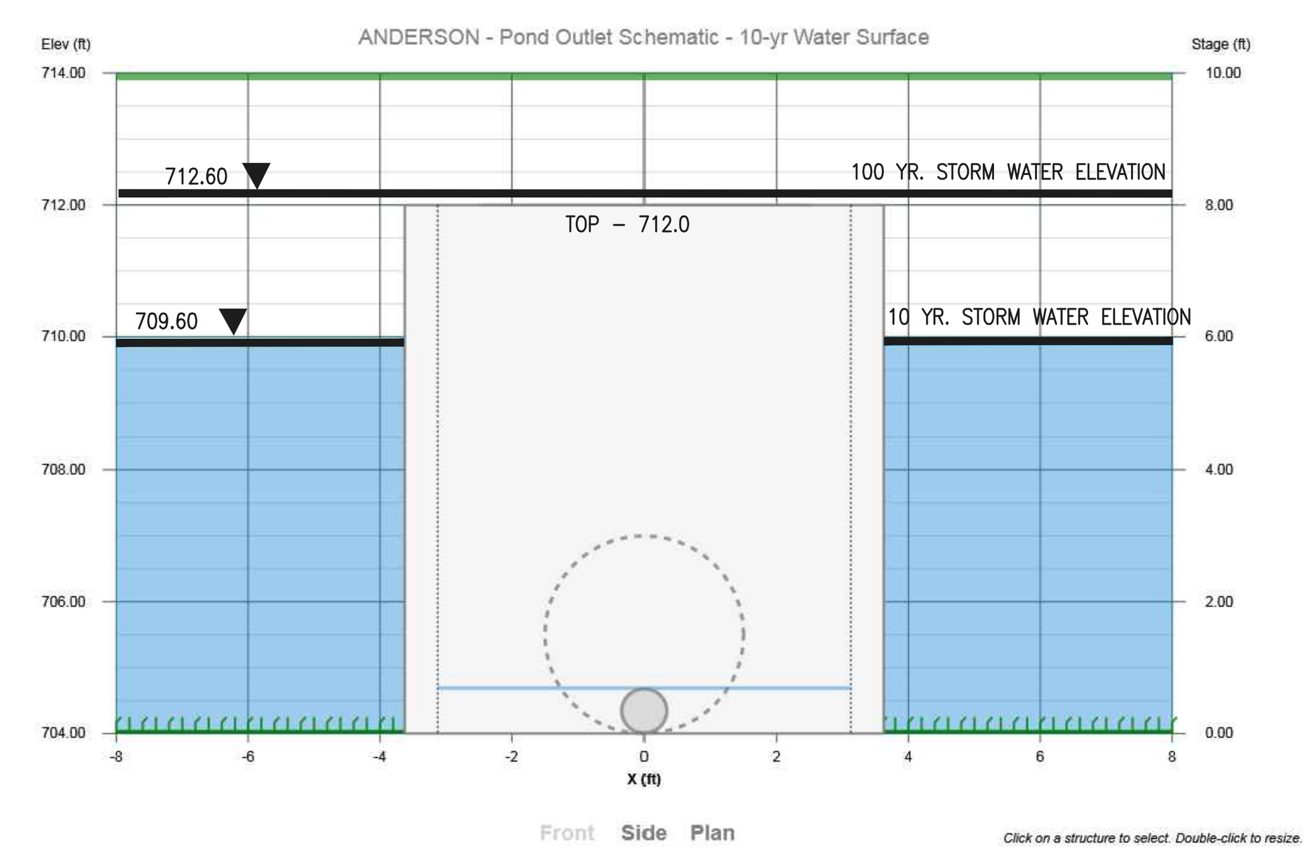
FILTER FABRIC INSTALLATION NOTE:
NON-WOVEN FILTER FABRIC SUCH AS AMOCO #4545 OR TYPAR #3301 OR APPROVED EQUAL. 5' MINIMUM OVERLAP AT ALL SEAMS W/ PLASTIC ANCHORS 5' O.C. E.W.

LONGITUDINAL SLOPE = 2%

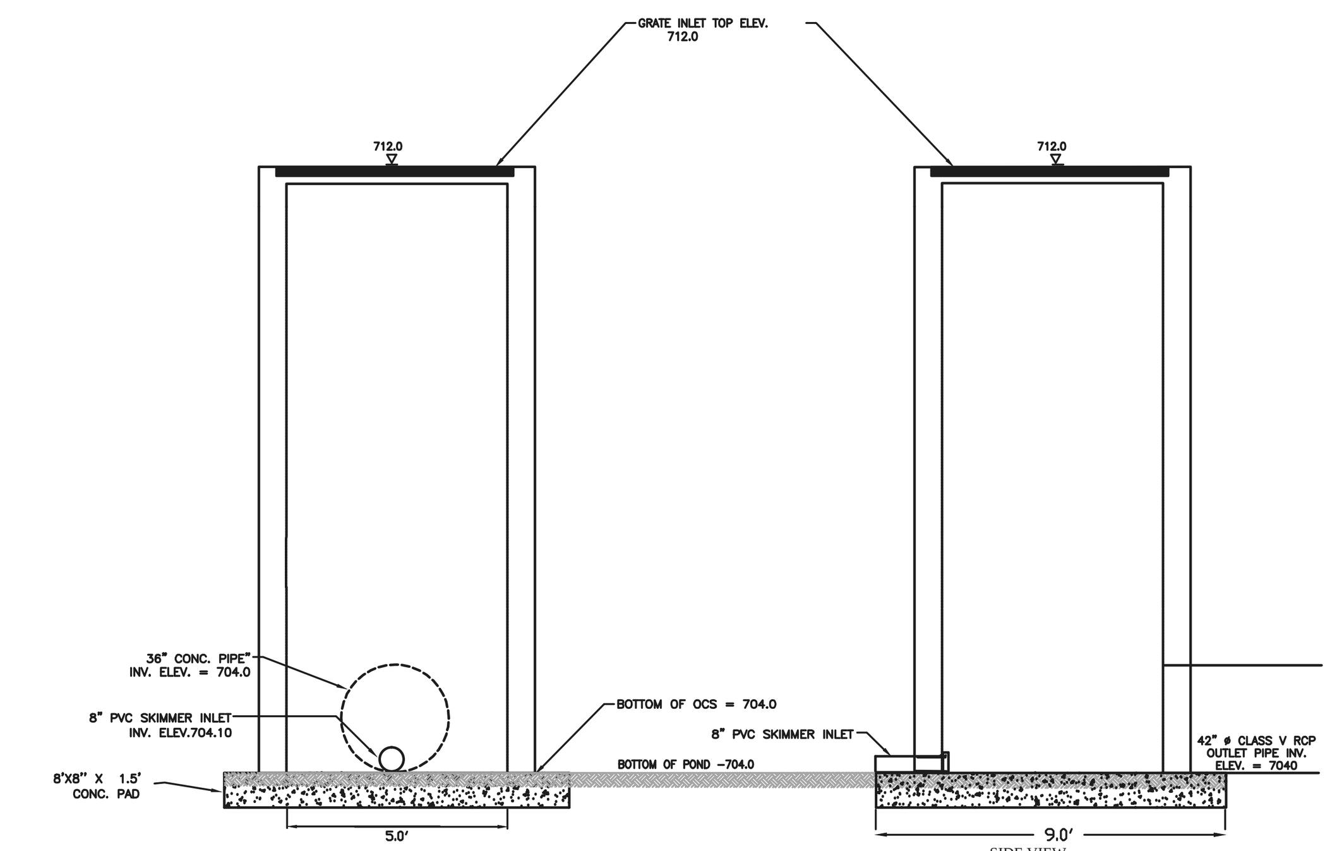
SEE PLANS FOR SPECIFIC SPILLWAY INVERT ELEVATION

RIP RAP SPILLWAYS

NTS

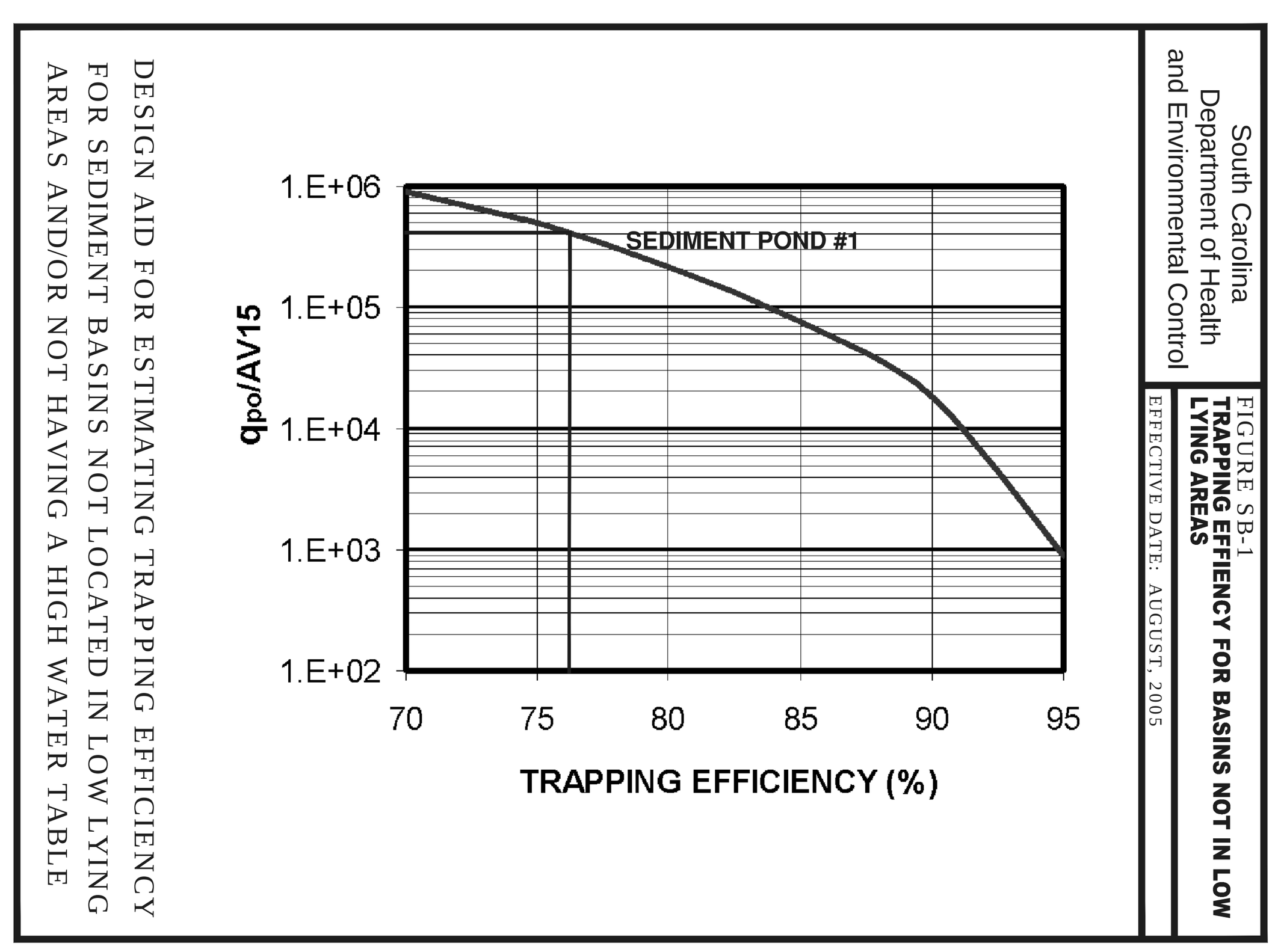


POND ROUTING RESULTS



5'x 5' OUTLET CONTROL STUCTURE

NTS



TRAPPING EFFICIENCY CALCULATIONS

DA = 16.1ACRES
CN = 86 (RANGE LAND POOR)
TC = 5.2MIN.
SOILS = CECIL
HYDROLOGIC SOIL GROUP = B
D_{15} = 0.0081
Q_{25} = 29.4 CFS

SETTLING VELOCITY

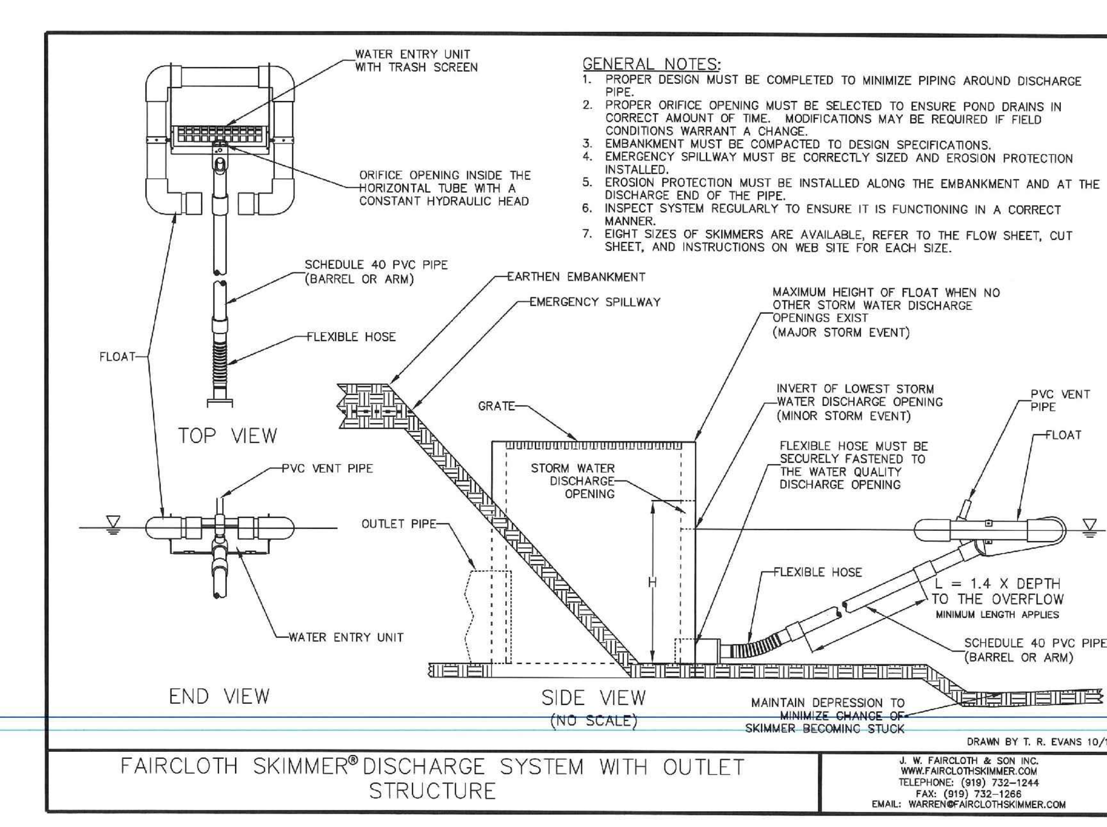
V15 = 2.0 E-4 (APPENDIX A-FIG. SV-1)

BASIN RATIO

$$\text{BASIN RATIO} = \frac{Q_{25}}{A \times V_{15}} = \frac{29.4}{0.436ac \times 2.0\ E-4} = 3.37\ E5$$

TRAPPING EFFICIENCY +/- 77% (SE FIG. SB-1

REQUIRED SEDIMENT STORAGE = 1,353 CY
ACTUAL SEDIMENT STORAGE = 2,47 CY
REQUIRED CLEANOUT VOLUME = 178 CY

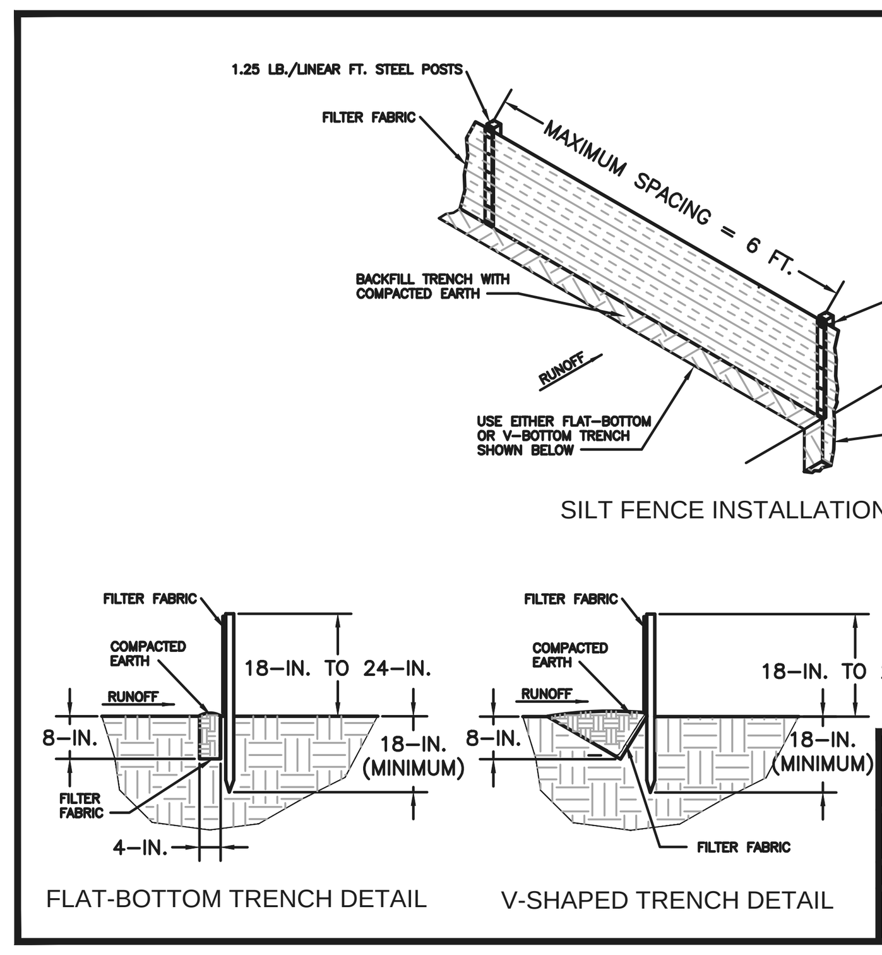


APPROVED BY
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT

BY Jeremy E. Eddy
TITLE SM-0424-3V4
DATE APPROVED January 19, 2024
PERMIT NO I-000424

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 28122 WILLIAM B. DUNLOP

SEDIMENT POND #1 DESIGN MODIFICATION #5 HANSON AGGREGATES SOUTHEAST, LLC ANDERSON QUARRY ANDERSON COUNTY, SOUTH CAROLINA	Drawn By DB
	Checked By
	Scale AS SHOWN
Black Rock Consulting, LLC SEVEN DUNWOODY PARK, SUITE 115 - ATLANTA, GA 30338 - 770-395-6111	Date 4/15/2021
	Drawing Number 5



South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 1 of 2

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE

SILT FENCE DETAIL

When and Where to Use It
Silt fence is applicable in areas:

Where the maximum sheet or overland flow path length to the fence is 100-feet.
Where the maximum slope steepness (normal [perpendicular] to fence line) is 2H:1V.
That do not receive concentrated flows greater than 0.5 cfs.

Do not place silt fence across channels or use it as a velocity control BMP.

Materials

Steel Posts
Use 48-inch long steel posts that meet the following minimum physical requirements:
- Composed of high strength steel with minimum yield strength of 50,000 psi.
- Have a standard "T" section with a nominal face width of 1.38-inches and nominal "T" length of 1.48-inches.
- Weigh 1.25 pounds per foot (± 8%).
- Have a soil stabilization plate with a minimum cross section area of 17-square inches attached to the steel posts.
- Painted with a water based baked enamel paint.

Use steel posts with a minimum length of 4-feet, weighing 1.25 pounds per linear foot (± 8%) with projections to aid in fastening the fabric. Except when heavy clay soils are present on site, steel posts will have a metal soil stabilization plate welded near the bottom such that when the post is driven to the proper depth, the plate will be below the ground level for added stability. The soil plates should have the following characteristics:
- Be composed of minimum 15 gauge steel.
- Have a minimum cross section area of 17-square inches.

Geotextile Filter Fabric
Filter fabric is:
Composed of fibers consisting of long chain synthetic polymers composed of at least 85% by weight of polyolefins, polyesters, or polyamides. Formed into a network such that the filaments or yarns retain dimensional stability relative to each other. Free of any treatment or coating which might adversely alter its physical properties after installation. Free of defects or flaws that ignificantly affect its physical and/or filtering properties. Cut to a minimum width of 36 inches.

Use only fabric appearing on SCDOT Approval Sheet #34 meeting the requirements of the most current edition of the SCDOT Standard Specifications for Highway Construction.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 2 of 3

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE

SILT FENCE DETAIL

Installation
Excavate a trench approximately 6-inches wide and 6-inches deep when placing fabric by hand. Place 12-inches of geotextile fabric into the 6-inch deep trench, extending the remaining 6-inches towards the upslope side of the trench. Backfill the trench with soil or gravel and compact.Bury 12-inches of fabric into the ground when pneumatically installing silt fence with a slicing method. Purchase fabric in continuous rolls and cut to the length of the barrier to avoid joints. When joints are necessary, wrapped the fabric together at a support post with both ends fastened to the post, with a 6-inch minimum overlap. Install posts to a minimum depth of 24-inches. Install posts a minimum of 1- to 2- inches above the fabric, with no more than 3-feet of the post above the ground. Space posts to maximum 6-feet centers. Attach fabric to wood posts using staples made of heavy-duty wire at least 1½-inch long, spaced a maximum of 6-inches apart. Staple a 2-inch wide lathe over the filter fabric to securely fasten it to the upslope side of wooden posts. Attach fabric to the steel posts using heavy-duty plastic ties that are evenly spaced and placed in a manner to prevent sagging or tearing of the fabric. In call cases, ties should be affixed in no less than 4 places. Install the fabric a minimum of 24-inches above the ground. When necessary, the height of the fence above ground may be greater than 24-inches. In tidal areas, extra silt fence height may be required. The post height will be twice the exposed post height. Post spacing willremain the same and extra height fabric will be 4-, 5-, or 6-feet tall. Locate silt fence checks every 100 feet maximum and at low points. Install the fence perpendicular to the direction of flow and place the fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.

Inspection and Maintenance
Inspect every seven calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation. Check for sediment buildup and fence integrity.
Check where runoff has eroded a channel beneath the fence, or where the fence has sagged or collapsed by fence overtopping. If the fence fabric tears, begins to decompose, or in any way becomes ineffective, replace the section of fence immediately.
Remove sediment accumulated along the fence when it reaches 1/3 the height of the fence, especially if heavy rains are expected.
Remove trapped sediment from the site or stabilize it on site.
Remove silt fence within 30 days after final stabilization is achieved or after temporary best management practices (BMPs) are no longer needed.
Permanently stabilize disturbed areas resulting from fence removal.

South Carolina Department of Health and Environmental Control

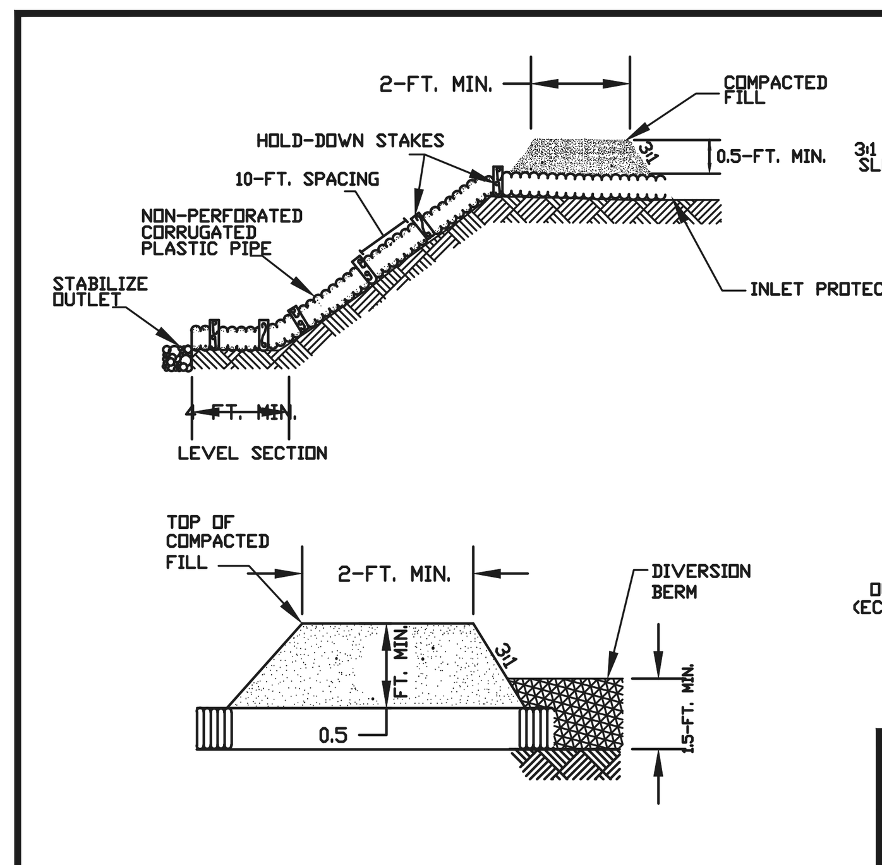
SILT FENCE

STANDARD DRAWING NO. SC-03 Page 3 of 3

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE

Temporary Seeding - Upstate

Species	lbs./ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Browntop Millet (Alone)	40												
Browntop Millet (Mix)	10												
Rye Grain (Alone)	56												
Rye Grain (Mix)	10												
Rye Grass (Alone)	50												
Rye Grass (Mix)	8												
For Steep Slopes/Cut Slopes													
Weeping Lovegrass (Alone)	4												
Weeping Lovegrass (Mix)	2												



TYPICAL PIPE SLOPE DRAIN LAYOUT

South Carolina Department of Health and Environmental Control

PIPE SLOPE DRAIN

STANDARD DRAWING NO. RC-01 Page 1 of 2

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE

STABILIZED CONSTRUCTION ENTRANCE

When and Where to Use It

Stabilized construction entrances should be used at all points where traffic will be leaving a construction site and moving directly onto a public road.

Important Considerations

If washing is used, provisions must be made to intercept the wash water and trap the sediment before it is carried offsite. Washdown facilities shall be required as directed by SCDHEC as needed. Washdown areas in general must be established with crushed gravel and drain into a sediment trap or sediment basin. Construction entrances should be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by vehicles.

Installation:

Remove all vegetation and any objectionable material from the foundation area.

Divert all surface runoff and drainage from stones to a sediment trap or basin.

Install a non-woven geotextile fabric prior to placing any stone.

Install a culvert pipe across the entrance when needed to provide positive drainage.

The entrance shall consist of 1-inch to 3-inch D50 stone placed at a minimum depth of 6-inches.

Minimum dimensions of the entrance shall be 24-feet wide by 100-feet long, and may be modified as necessary to accommodate site constraints.

The edges of the entrance shall be tapered out towards the road to prevent tracking of mud at the edge of the entrance.

South Carolina Department of Health and Environmental Control

STABILIZED CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 Page 2 of 3

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE

STABILIZED CONSTRUCTION ENTRANCE

Inspection and Maintenance:

Inspect construction entrances every seven (7) calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation, or after heavy use. Check for mud and sediment buildup and pad integrity. Make daily inspections during periods of wet weather. Maintenance is required more frequently in wet weather conditions. Reshape the stone pad as needed for drainage and runoff control.

Wash or replace stones as needed and as directed by the inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone.

Immediately remove mud and sediment tracked or washed onto public roads by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.

Repair any broken pavement immediately.

South Carolina Department of Health and Environmental Control

STABILIZED CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 Page 3 of 3

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE

Permanent Seeding - Upstate

Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bahia Grass (Alone)	40												
Bahia Grass (Mix)	30												
Bermuda Grass (hulled) (Alone)	8-12												
Bermuda Grass (hulled) (Mix)	4-6												
Fescue, Tall (KY31) Alone	40												
Fescue, Tall (KY31) mix	20												
Sericea Lespedeza (Scarified) Alone or Mix (inoculate with EL Innoculant	40												
Ladino Clover (mix only) Innoculate with AB Innoculant	2												
For Steep Slopes/Cut Slopes													
Weeping Lovegrass (Alone)	4												
Weeping Lovegrass (Mix)	2												
Crownvetch (Mix) (Inoculate with Type M Innoculant	8-10												

PIPE SLOPE DRAIN

When and Where to Use It

Pipe slope drains are used when it is necessary for water to flow down a slope without causing erosion, especially before a slope has been stabilized or before permanent drainage structures are installed.

Installation:

Typical pipe slope drains are made of non-perforated corrugated plastic pipe.

Slope drain sections should be securely fastened together, have gasket watertight fittings, and be securely anchored into the soil.

Diversion berms or dikes should direct runoff to slope drains. The minimum depth of these dikes or berms should be 1.5-feet. The height of the berm around the pipe inlet should be a minimum of 1.5-feet high and at least 0.5-feet higher than the top of the pipe. The berm at the pipe inlet shall be compacted around the pipe. The area around the inlet shall be properly stabilized with ECBs, TRMs, riprap or other applicable stabilization techniques.

The area below the outlet must be properly stabilized with ECBs, TRMs, riprap or other applicable stabilization technique.

If the pipe slope drain is conveying sediment-laden water, direct all flows into the sediment trapping facility.

Permanent slope drains should be buried beneath the soil surface a minimum 1.5-feet.

Inspection and Maintenance:

Inspect pipe slope drain inlet and outlet points every seven (7) calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation.

The inlet should be free from undercutting, and no water should be going around the point of entry. If there are problems, the headwall should be reinforced with compacted earth or sandbags. The outlet point should be free of erosion and installed with appropriate outlet protection.

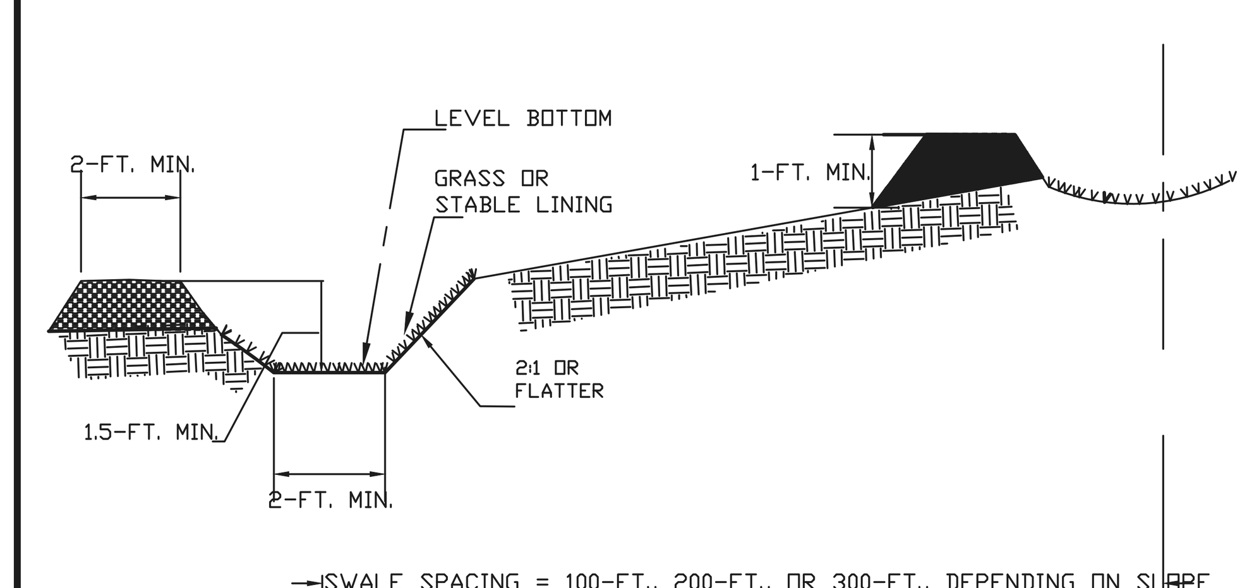
All temporary pipe slope drains should be removed within 30 days after final site stabilization is achieved or after the temporary BMP is no longer needed. Disturbed soil areas resulting from removal should be permanently stabilized.

South Carolina Department of Health and Environmental Control

PIPE SLOPE DRAIN

STANDARD DRAWING NO. RC-01 Page 2 of 2

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE



South Carolina Department of Health and Environmental Control

DIVERSION SWALE

STANDARD DRAWING NO. RC-03 Page 1 of 2

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE

DIVERSION SWALE

Installation

The bottom width should be a minimum of 2-feet, and the bottom should be level.

The depth should be a minimum of 1.5-feet and the side slopes should be 2H:1V or flatter.

The maximum grade shall be 5%, with positive drainage to a suitable outlet.

Slopes shall be stabilized immediately using vegetation, sod, and erosion control blankets or turf reinforcement mats to prevent erosion.

The upslope side of the swale should provide positive drainage so no erosion occurs at the outlet. Provide energy dissipation measures as necessary.

Sediment-laden runoff shall be directed to a sediment trapping facility.

Inspection and Maintenance:

Swales should be inspected, every seven (7) calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation and repairs made as necessary.

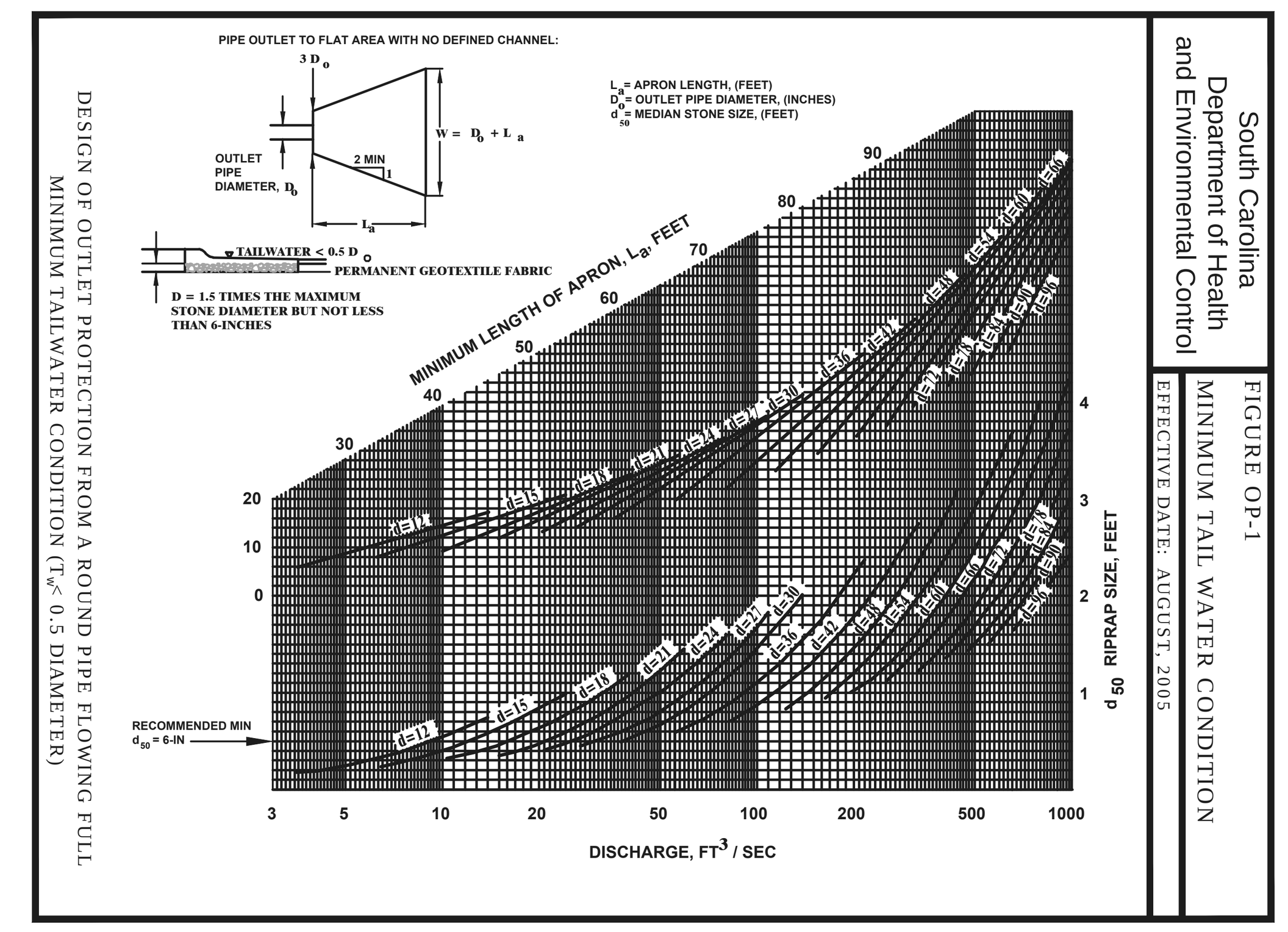
Damage caused by construction traffic or other activity must be repaired before the end of each working day.

South Carolina Department of Health and Environmental Control

DIVERSION SWALE

STANDARD DRAWING NO. RC-03 Page 2 of 2

APPROVED BY: ______ SCDHEC AUGUST, 2005 DATE



APPROVED BY
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT

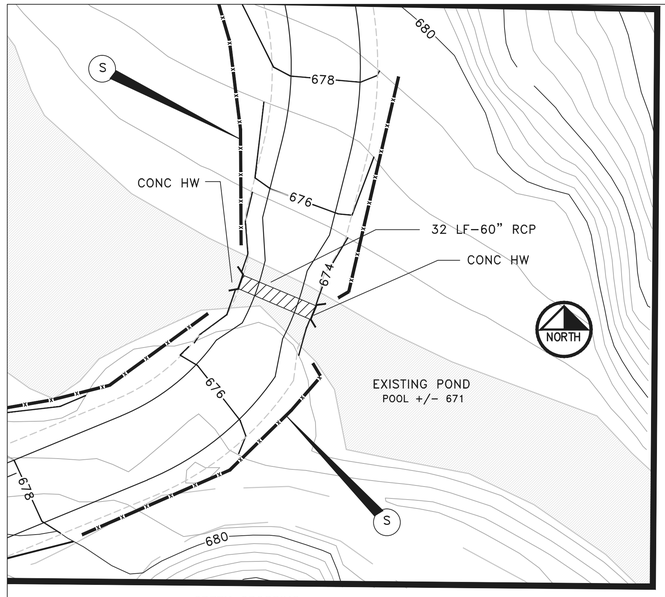
BY Jeremy E. Eddy
TITLE SM-0424-4V4
DATE APPROVED January 19, 2024
PERMIT NO I-000424

CONSTRUCTION DETAILS	
HANSON AGGREGATES SOUTHEAST, LLC ANDERSON QUARRY ANDERSON COUNTY, SOUTH CAROLINA	Drawn By: BDJ Checked By: DB Scale: AS SHOWN Date: 5/15/2021
Black Rock Consulting, LLC SEVEN DUNWOODY PARK, SUITE 115 - ATLANTA, GA 30338 - 770-395-6111	Drawing Number: 6

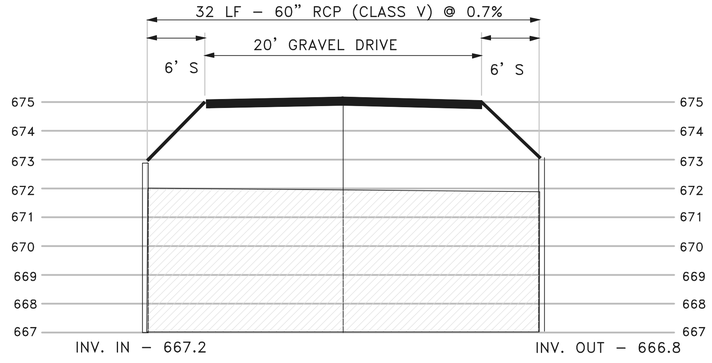
EROSION CONTROL LEGEND

TS	TEMPORARY VEGETATION
PS	PERMANENT VEGETATION
X——X S	SEDIMENT BARRIER - SENSITIVE
DD	TEMPORARY DIVERSION

NOTE: INSTALL SILT FENCE AS NEEDED



CREEK CROSSING
PLAN VIEW
1"=20'



PIPE PROFILE
HORZ. 1"=10'

APPROVED BY
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT

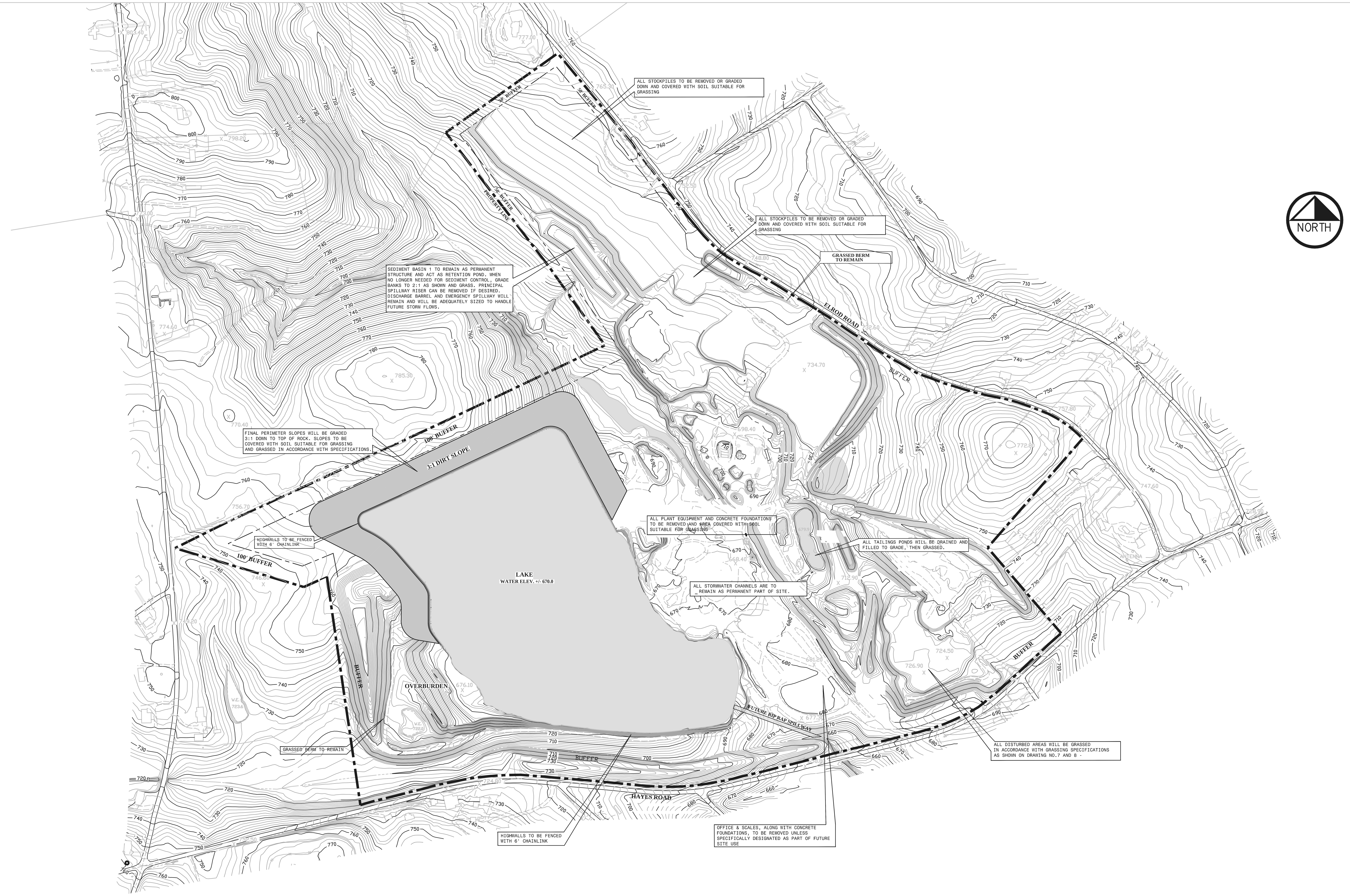
BY Jeremy E Eddy
TITLE SM-0424-5V4
DATE APPROVED January 19, 2024
PERMIT NO I-000424

CONSTRUCTION DETAILS
MODIFICATION #5

HANSON AGGREGATES SOUTHEAST, LLC
ANDERSON QUARRY
ANDERSON COUNTY, SOUTH CAROLINA

Black Rock Consulting, LLC
SEVEN DUNWOODY PARK, SUITE 115 – ATLANTA, GA 30338 – 770-395-6111

Drawn By DB
Checked By
Scale AS SHOWN
Date 5/15/2021
Drawing Number 7



SOUTH CAROLINA ... WILLIAM B. DUNLOP

NOTE: ALL DISTURBED AREAS TO BE GRASSED

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

APPROVED BY
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF MINING AND SOLID WASTE MGT

BY Jeremy E. Eddy
TITLE RM-0424-1V4
DATE APPROVED January 19, 2024
PERMIT NO I-000424

RECLAMATION PLAN
MODIFICATION #5

HANSON AGGREGATES SOUTHEAST, LLC
ANDERSON QUARRY

ANDERSON COUNTY, SOUTH CAROLINA

BLACK ROCK CONSULTING, LLC
Seven Dunwoody Park, Suite 115
Atlanta, Georgia 30338
Ph:770-395-6111 Fax:770-395-6999

Checked By	DB
Scale	1"= 200'
Date	4/15/2021
Drawing Number	4