



Facility Permit No.: 4117-CDLF-2008  
Permit to Construct – Phase 2  
A-1 Sandrock C&D Landfill  
September 11, 2015  
DIN 24959  
Page 1 of 11

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
Division of Waste Management

Pat McCrory  
Governor

Donald R. van der Vaart  
Secretary

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
DIVISION OF WASTE MANAGEMENT  
SOLID WASTE SECTION

**CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL**  
**Permit No. 4117-CDLF-2008**

A-1 SANDROCK, INC.  
is hereby issued a

**PERMIT TO CONSTRUCT**

A-1 SANDROCK CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL  
PHASE 2

**PERMIT TO OPERATE**

A-1 SANDROCK CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL  
CONTINUE OPERATION OF PHASE 1, CELLS A, B, & C

located at 2091 Bishop Road (State Road 1116) between the intersections of Bishop Road with Groomtown Road and Viewmont Road, south of the City of Greensboro, in the Sumner Township, Guilford County, North Carolina, in accordance with Article 9, Chapter 130A, of the General Statutes of North Carolina and all rules promulgated thereunder and subject to the conditions set forth in this permit. The facility is located and described by the legal description identified on the deeds recorded for this property listed in Attachment 1 of this permit.

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Edward F. Mussler, III, P.E.,  
Permitting Branch Supervisor  
Solid Waste Section

## ATTACHMENT 1

### PART I: PERMITTING HISTORY

Permit Type	Date Issued	Document Identification Number (DIN)
Original Permit to Construct (PTC) – Phases 1	February 7, 2004	6224
PTC Modification - Phases 1	June 1, 2006	6225
Permit to Operate (PTO) – Phase 1, Cell A	April 17, 2009	7222
PTO Modification - Phase 1, Cells A & B	February 28, 2011	12797
PTO Modification - Phase 1, Cells A, B, & C	November 27, 2012	17552
PTO Amendment - Phase 1, Cells A, B, & C	December 06, 2013	20123
PTC Amendment – Phase 2	September 11, 2015	24959

### PART II: LIST OF DOCUMENTS FOR APPROVED PLAN

1. *Site Application Report - Part 1 of 2, Hydrogeologic Investigation and Conceptual Plan, Construction and Demolition Debris Landfill (South Side)*. Prepared for: A-1 Sandrock, Inc. Prepared by: David Garrett, P.G., P.E. June 2002. Revised 20 August, 25 November 2002, and 6 November 2003 (Including a Drawing set Sheets 1-10).
2. *Site Application Report - Part 2 of 2, Facility Plan, Engineering and Design Hydrogeologic Report, A-1 Sandrock CDLF (South Facility), Guilford County, North Carolina*. Prepared for: A-1 Sandrock, Inc. Prepared by: David Garrett, P.G., P.E. September 2002. Revised 22 January, 12 February, and 30 March 2003 (Including a Drawing set Sheets 1-21).
3. Franchise Agreement between A-1 Sandrock, Inc. and Guilford County, North Carolina. November 6, 2003 (DIN 19619). Amended March 17, 2009. Including Articles of Incorporation, disposal fee limits, property description, and Articles of Amendments. DIN 7155.
4. Letter dated March 20, 2003 approval of the revised Sediment and Erosion Control Plan dated 22 January 2003 from the Division of Land Resources, Land Quality Section. DIN 7272.
5. Letter and drawing set describing the delay in construction and a revision to the phasing and progression of construction for the C&D landfill. Prepared for: A-1 Sandrock, Inc. by David Garrett, P.G., P.E. January 24, 2006.
6. *Permit to Operate Application, A-1 Sandrock C&D Landfill Phase 1, A-1 Sandrock CDLF (South Mine Facility), Guilford County, North Carolina*. Prepared for: A-1 Sandrock, Inc. Prepared by: David Garrett, P.G., P.E. March 2007. Resubmitted March 2009. DIN 7076.

7. *Facility and Operations Plan Update, A-1 Sandrock CDLF (Phase 1) and Processing Facility, Guilford County, North Carolina.* February 2009. Prepared for: A-1 Sandrock, Inc. Prepared by: David Garrett, P.G., P.E. (Including a drawing set Sheets 1-10). DIN 7039. Revised on April 2, 2009. DIN 7223.
8. *Six-Month Demonstration Report, A-1 Sandrock, Inc. C&D Landfill and Processing Facility, Guilford County, NC (Permit #41-17).* December 21, 2009. Prepared by: David Garrett, P.G., P.E. including a letter report, photos, and drawings in compliance with Permit Condition No. 40 of the PTO (DIN 7222) issued April 17, 2009. (DIN 10016).
9. *Application for Permit to Construct and Operate, A-1 Sandrock, Inc. C&D Landfill and Processing Facility, Guilford County, NC (Permit #41-17).* Dated November 17, 2010 and revised through January 2011. Prepared by: David Garrett, P.G., P.E. including a letter report, a permit application for Phase 1 which includes the final processing facility operation plan incorporating conclusions from the Six-Month Demonstration Report and DWM Facility Audit Reports (Attachment 1), Geologist's Subgrade Report and photos for Cell B (Attachment 2), and As-built survey of drawings for Cell B (Attachment 3), and an updated Facility Plan Drawing (Attachment 4) which delineates the correct Phase 1 footprints of 8.18 acres, and correspondences. (DIN 12796).
10. Letter, soil testing results, soil boring logs and a drawing describing and confirming the soil types of silty sand (SM) and sandy silt (ML) in the base grade for Phase 1, Cell B of the C&D landfill in compliance with Rule 15A NCAC 13B .0542)2)(b). Prepared for: A-1 Sandrock, Inc. by David Garrett, P.G., P.E. January 26, 2011. (DIN 12795).
11. *Application for Permit to Operate, A-1 Sandrock, Inc. C&D Landfill Phase 1C, Greensboro, Gilford County North Carolina, Solid Waste Permit No. 41-17.* Prepared for: A-1 Sandrock, Inc. Prepared by: David Garrett, P.G., P.E. September 13, 2012 (DIN 17289) and revised through October 26, 2012 (DIN17547).
12. Franchise Agreement between A-1 Sandrock, Inc. and Guilford County, North Carolina. October 03, 2013 and expires on October 03, 2023. Including Articles of Incorporation, disposal fee limits, property description, service area, waste disposal rate, and Articles of Amendments. DIN 19918.
13. *Facility and Operations Plan Update, A-1 Sandrock, Inc. C&DLF (Phase 1) and Processing Facility, Gilford County North Carolina, Solid Waste Permit No. 41-17.* Prepared for: A-1 Sandrock, Inc. Prepared by: David Garrett, P.G., P.E. Received September 05, 2013 and revised through November 05, 2013 (DIN 20125). The application includes revised landfill gas monitoring plan (DIN 20132) and water quality monitoring plan (DIN 20131).
14. *Permit to Construct Applications, A-1 Sandrock, Inc. CDLF, Phase 2, NC Solid Waste Permit #41-17 (Guilford County).* Prepared by SCS Engineers, PC. Dated January 13, 2015

and revised through February 25, 2015 (DIN 24958). This application is a compilation of several comments and responses and all e-mail correspondence is a supplemental document to the approved permit application (DIN 20125).

15. Design Hydrologic Report, A-1 Sandrock C&D Landfill, Phase 2A, Solid Waste Permit 4117-CDLF-2008. Prepared by SCS Engineers, PC. Dated May 19, 2015 and revised through September 04, 2015 (DIN 24938). This Design Hydro Report for Phase 2 was approved on September 04, 2015 (DIN 24941) and is a supplemental document to the approved *Site Application Report* dated 2003 and includes the revised Ground Water Monitoring Plan (DIN 24939) and revised Landfill Gas Monitoring Plan (DIN 24940).

**PART III: PROPERTIES APPROVED FOR THE SOLID WASTE FACILITY**

<b>Guilford County, N.C. Register of Deeds</b>					
Book	Page	Grantee	Grantor	Acres	Parcel No.
4378	198	Ronald E. Petty and Wife Betty B. Petty	Greensboro Cerebral Palsy Association, Inc.	69.833	12-03-0185-0- 0739-W-007 and 12-03-0185-0- 0754-00-003
Plat 149	93	Survey plat			
<b>Total Site Acreage: 69.833 acres</b>					

**PART IV: GENERAL PERMIT CONDITIONS**

1. This permit is issued by the North Carolina Department of Environment and Natural Resources, Division of Waste Management (the Division), Solid Waste Section (Section). In accordance with North Carolina Solid Waste Management Rule 15A NCAC 13B .0201(d), a solid waste management facility permit shall have two parts: a Permit to Construct and a Permit to Operate. The Permit to Construct for the C&DLF - Phase 2 must be implemented in accordance with Attachment 2 of this permit. The Permit to Operate for continued operation of the existing Phase 1 of the C&DLF shall be implemented in accordance with Attachment 3 of this permit.
2. The persons to whom this permit is issued (“permittee”) are the owners and operators of the solid waste management facility.
3. The Permit to Construct (DIN 6225) for the Construction and Demolition Debris Landfill has been registered in the Guilford County Register of Deeds on July 28, 2006 in Deed Book R 6573, Pages 1017 through 1027.
4. When this property is sold, leased, conveyed, or transferred in any manner, the deed or other instrument of transfer must contain in the deed description section, in no smaller type than that used in the body of the deed or instrument, a statement that the property has been used as a sanitary landfill and a reference by book and page to the recordation of the permit.

5. By beginning construction or receiving waste at this facility the permittee shall be considered to have accepted the terms and conditions of this permit.
6. Construction and operation of this solid waste management facility must be in accordance with the Solid Waste Management Rules (Rule), 15A NCAC 13B, Article 9 of Chapter 130A of the North Carolina General Statutes (NCGS. 130A-290, et seq.), the conditions contained in this permit, and the approved plan. Should the approved plan and the rules conflict, the Rules shall take precedence unless specifically addressed by permit condition. Failure to comply may result in compliance action or permit revocation.
7. This permit is issued based on the documents submitted in support of the application for permitting the facility including those identified in Attachment 1, “List of Documents for Approved Plan,” and which constitute the approved plan for the facility. Where discrepancies exist, the most recent submittals and the Conditions of Permit shall govern.
8. This permit may be transferred only with the approval of the Section, through the issuance of a new or substantially amended permit in accordance with applicable statutes and rules. In accordance with NCGS 130A-295.2(g), the permittee must notify the Section thirty (30) days prior to any significant change in the identity or business structure of either the owner or the operator, including but not limited to, a proposed transfer of ownership of the facility or a change in the parent company of the owner or operator of the facility.
9. The permittee is responsible for obtaining all permits and approvals necessary for the development of this project including approval from appropriate agencies for sedimentation and erosion control, and a General or Individual National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit, if applicable. Issuance of this permit does not remove the permittee’s responsibilities for compliance with any other local, state or federal rule, regulation or statute.

*- End of Section –*

## **ATTACHMENT 2 CONDITIONS OF PERMIT TO CONSTRUCT**

### **PART I: GENERAL FACILITY CONSTRUCTION CONDITIONS**

1. This permit approves the Facility Plan and the follow-up amendment and update (DIN 24958 & 24938) that defines the comprehensive development of the construction and demolition debris landfill (C&DLF) facility including the estimates of gross capacity of the entire C&DLF, the estimates of gross capacity for each of the four (4) phases of the C&DLF, the solid waste stream to be received, the areas served by the facility, all other onsite solid waste management facilities and related

facility infrastructure in accordance with the North Carolina Solid Waste Management Rules (Rule) 15 NCAC 13B .0537 and the Franchise Agreement between A-1 Sandrock, Inc. and Guilford County, North Carolina (DIN 19918) .

2. The following table lists the dimensions and details for each of the four (4) phases of the C&DLF, both existing and planned. The approved gross capacity of the C&DLF is 2,240,000cubic yards (CY), as defined in the Rule 15A NCAC 13B .0537(e)(2)(B); the final cap elevations are up to 904 feet above mean sea level (amsl) with a maximum 3 (horizontal) to 1 (vertical) side slopes as shown on Drawing No. E5/Sheet No. 6 (DIN 20125). The estimated service life of the facility is ranging from 25 to 30 years.

C&D Unit	Acres	Gross Capacity (cubic yards)	Status
Phase 1, Cell A	2.54	62,370	Developed
Phase 1, Cell B <sup>(a)</sup>	3.18	186,242 <sup>(b)</sup>	Developed
Phase 1, Cell C <sup>(a)</sup>	2.46	221,720 <sup>(c)</sup>	Developed
Phase 2, Cell A	4.4	304,097	To Be Constructed
Phase 2, Cell B	3.42	304,096	To Be Constructed
Phase 3	5.89	647,787	Not developed
Phase 4 (vertical expansion)	-	505,536	Not developed
<b>Total</b>	<b>21.9</b>	<b>2,231,848<sup>(c)</sup></b>	

Notes:

- a. This permit approves the redefined footprints of Cells B and C at the Phase 1 area consistent with the revised Facility Plan map Drawing No. E1B/ Sheet No. 3B (DIN 12796).
  - b. The gross capacity of Phase 1, Cell B is reduced to 186,242 CY from the original approved capacity of 192,470 CY. The reduction of capacity of 6,228 CY resulted from the as-built grades of Cell B having an average of 2-feet higher than the originally designed grade over approximately 1.9 acres. (DIN 12795).
  - c. The gross capacity of Phase 1, Cell C is reduced to 221,720 CY from the original approved capacity of 223,664 CY based on the as-built grades. The capacity reduction in Phase 1 development results in the new total gross capacity of the landfill of 2,231,848 CY. (DIN 17547). The originally approved total gross capacity for the C&DLF is 2,240,000 CY (DIN 6225) and A-1 Sandrock, Inc. may not cede capacity at this permit action.
3. Construction of all solid waste management units within this facility including site preparation must be in accordance with NCGS. 130A-295.8(b)(2) and the pertinent approved plans and only for those phases of development approved for construction as described in Attachment I, Part II List of Documents for Approved Plan.

4. This facility shall conform to the specific conditions set forth in this permit and the provisions of the Rule 15A NCAC 13B .0534(b)(2).
5. The permittee shall submit an amendment to this permit pursuant to Rule 15A NCAC 13B .0533(a)(2) for any subsequent cell or phase of development described in the approved Facility Plan and the update (DIN 20125 & 24958). The permit amendment application shall be subject to a permit fee according to NCGS 130A-295.8(c).
6. A copy of this permit, the approved plans, and all pertinent records and reports shall be maintained on-site at the facility and made available to the Division upon request according to Rule 15A NCAC 13B .0542(n).

#### **FACILITY CONSTRUCTION CONDITIONS**

7. This Permit to Construct is issued for the A-1 Sandrock C&DLF facility under the criteria set forth in accordance with Rule 15A NCAC 13B .0533(a)(2) for a lateral expansion of the C&DLF - Phase 2 as shown on the Drawing No. E1A/ Sheet No. 2 of 8 in the approved plan (DIN 24958). Construction and development of the C&DLF - Phase 2, consisting of two cells – Cell A & Cell B shall only be in accordance with the Section approved plans and the requirements stipulated in Rules 15A NCAC 13B .0531 - .0547. The construction of the Phase 2 is permitted for:
  - a. 7.82 acres – approximately 4.4 acres for Cell A and 3.42 acres for Cell B.
  - b. Up to 608,193 CY of total gross capacity as defined in Rule 15A NCAC 13B .0537(e)(2)(B). Cell A has the approved gross capacity of 304,097 CY and Cell B has the approved gross capacity of 304,096 CY.
8. The initial and substantial construction authorized by this Permit to Construct for Phase 2 – Cells A and B shall expire eighteen (18) months from the issuance date according to Rule 15A NCAC 13B .0534(b)(2)(H) if substantial construction is not commenced. Substantial construction includes, but is not limited to, issuance of construction contracts, mobilization of equipment on site, and construction activities including installation of sedimentation and erosion control structures. The permittee may reapply for the Permit to Construct prior to the expiration date. The re-application will be subject to the statutes and rules in effect on that date and may be subject to additional fees.
9. The permittee shall conduct a preconstruction meeting, on site, prior to initiating construction of Phase 2 – Cells A or B at the site and periodic construction progress meetings, as needed in accordance with the Rules 15A NCAC 13B .0541. The permittee shall notify the Section 10 days prior to these required meetings.

10. The permittee shall implement the approved construction quality assurance (CQA) in accordance with the Rules 15A NCAC 13B .0540 & .0541 and the approved CQA plan (DIN 20125) to ensure that the base grades of the landfill cells are consistent with those shown on drawing Sheet Nos. S3, S4 & X1/Sheets 3 of 6 through 5 of 6 (DIN 24938).
11. A modification to the Permit to Construct for the facility, modifications or revisions of the approved documents or changes during construction of any landfill unit/cell require approval by the Section, and may constitute a permit modification in accordance with Rule 15A NCAC 13B .0533(a)(4), and be subject to a permitting fee according to NCGS 130A-295.8(c).

#### **EROSION AND SEDIMENTATION CONTROL REQUIREMENTS**

12. Prior to construction of Phase 2, Cells A or B, all sedimentation and erosion control activities shall be constructed and conformed to the approved Erosion and Sediment Control Plan drawings – Sheet No. 4/Drawing No. E3 (DIN 20125), the Sedimentation Pollution Control Law (15A NCAC 04), and any required Storm Water General Permit, NCG020000 – Certification No. NCG020633.
  - a. All sedimentation and erosion control activities shall be conducted by installing and maintaining adequate structures and measures to manage the run-on and run-off generated by the 24-hour, 25-year storm event, to prevent silt from leaving the site, and to prevent excessive on-site erosion.
  - b. Provisions for a vegetative ground cover sufficient to restrain erosion must be established within 30 working days or 120 calendar days upon completion of any phase or cell of C&DLF development.
13. Modifications in sedimentation and erosion control activities must be approved by the NC Land Quality Section. Upon receiving the approval letter, the permittee shall notify the Section of any sedimentation and erosion control modifications.

#### **GEOLOGIC, GROUND WATER AND MONITORING REQUIREMENTS**

14. Prior to construction of Phase 2, Cells A or B, all piezometers, groundwater monitoring wells, and borings, located within the proposed cell footprint, shall be properly abandoned by over-drilling first (exception of non-cased borings) and sealed with grout in accordance with the Rule 15A NCAC 2C .0113, titled “Abandonment of Wells.”
15. In areas where soil is to be undercut, abandoned piezometers, monitoring wells and borings must not be grouted to pregrade land surface, but to the proposed base grade surface to prevent having to cut excess grout and possible damage the wells.
16. A Licensed Geologist must report any pertinent geological feature(s) exposed during phase or cell excavation. Pursuant to Rule 15A NCAC 13B .0540(5) the geologist must

submit to the Section hydrogeologist a written report that includes an accurate description of the exposed geological feature(s) and effect of the geological feature(s) on the design, construction, and operation of the cell, phase, or unit.

17. A Licensed Geologist must supervise installation of groundwater monitoring wells and landfill gas monitoring wells. Each groundwater monitoring well and landfill gas well must be surveyed for location and elevation. Each groundwater monitoring well and landfill gas monitoring well must have an identification plate permanently attached to the well in accordance with 15A NCAC 2C .0108(o).
18. Any modification to the approved water quality monitoring plan or landfill gas monitoring plan must be submitted to the Section Hydrogeologist for review and approval.
19. Groundwater and landfill gas monitoring well construction and abandonment must meet the requirements of 15A NCAC 02C.
20. Within 30 days of completed construction of each new groundwater and landfill gas monitoring well, a well construction record, well schematic, boring log, field log and notes, and description of well development activities, certified by a Licensed Geologist, must be submitted to the Section. Form GW-1 must be used for both groundwater and landfill gas wells. The submittal must also include a scaled topographic map, showing the location and identification of new, existing, and abandoned wells and piezometers.
21. Within thirty (30) days of the abandonment of any groundwater monitoring well or landfill gas monitoring well, the well abandonment record and any additional information included in the abandonment record must be certified by a Licensed Geologist, and submitted to the Section. Form GW-30 must be used for both groundwater and landfill gas wells.
22. All forms, reports, maps, plans, and data submitted to the Section must include an electronic (pdf) copy.

### **PRE-OPERATIONAL CONDITIONS**

23. The following conditions must be met prior to the operation of the Phase 2, Cells A or B and any subsequent phase of the C&DLF:
  - a. The permittee must obtain a Permit to Operate from the Section in accordance with Rule 15A NCAC 13B .0201(d)(2) prior to receiving any permitted wastes at the Phase 2, Cells A or B.
  - b. A written Construction Quality Assurance (CQA) and certification report, including as-built drawings which demonstrate that the landfill base liner system was built in compliance with Rules 15 NCAC 13B .0540, in accordance with the

Rules 15A NCAC 13B .0541(c) & (d) and the approved CQA Plan (DIN 20215) shall be submitted to the Section for review and approval.

- c. Prior to waste disposal in any new phase or cell, the permittee shall arrange for a site inspection and/or a pre-operative meeting by a NC Solid Waste Section representative(s) or regional environmental specialist of the Section for the purpose of demonstrating that the facility construction is consistent with approved plans and specifications.
- d. Ground water monitoring wells and landfill gas wells shall be installed and surface water sampling locations shall be established. A baseline sampling event for background water quality shall be completely performed in accordance with Rule 15A NCAC 13B. 0544(b)(1)(D). Well construction and abandonment records and sampling results shall be submitted to the Section Hydrogeologist for review and approval prior to issuing the Permit to Operate for the C&DLF.
- e. The edge of the waste footprint must be physically identified with permanent physical markers, for both existing units and the new unit.
- f. The permittee shall completely implement and install site access, security, signs, and safety requirements in accordance with 15A NCAC 13B. 0542(j).
- g. The permittee shall completely construct and install all required and approved measures, devices, and structures to prevent soil erosion, control sedimentation, manage surface water drainage, and to protect surface waterbody in accordance with 15A NCAC 13B. 0542(k) & (l) and the approved plan (DIN 7039 & 20215).
- h. Documentation of financial assurance mechanisms must be submitted to the Section. The financial assurance amount must include closure and post-closure costs including the new phase, cell, or sub-cell to receive the Permit to Operate and costs for potential assessment and corrective action at the landfill facility in accordance with NCGS 130A-295.2 (h1), Rules 15A NCAC 13B .0546 &.0547 (2).

*- End of Section -*

### **ATTACHMENT 3 CONDITIONS OF OPERATING PERMIT**

#### **PART I: OPERATING CONDITIONS**

1. The Permit to Operate for the C&DLF - Phase 1, Cells A, B, & C shall expire **December 06, 2018**. Pursuant to Rule 15A NCAC 13B .0201(g), no later than **June 09, 2018**, the permittee must submit a request to the Section for permit review and must update

pertinent facility plans including, but not limited to, the facility operation and waste screening plans in accordance with Rule 15A NCAC 13B .0535 and franchise agreement (DIN 19918).

2. This permit approves the continued operation of Phase 1 - Cells A, B, & C, totaling approximately 8.18-acre waste footprint, as well as the onsite environmental management protection facilities as described in the approved plans (DIN 20125) and Permit Conditions in Attachment 3 of the Permit to Operate for Phases 1 of the landfill dated December 06, 2013 (DIN 20123). The approved gross capacity for Phase 1 is 470,332 cubic yards (CY) with three (horizontal) to 1 (vertical) side slopes and the maximum approved fill elevation up to 830 feet above mean seal level as shown on Drawing No. E3A/ Sheet 3 of 8 (DIN 24958).
3. Pursuant to North Carolina Solid Waste Management Rule (Rule) 15A NCAC 13 B and North Carolina General Statutes (NCGS) Article 9 Chapter 130A, the permittee must submit an application to the Section for review and approval prior to initiating operation of any additional solid waste management units within this facility or any C&DLF future phases or cells including Phase 2 – Cells A or B.
4. Modification or revision of the approved documents or changes in the facility operations require approval by the Section prior to implementation, and may constitute a permit modification and be subjected to a permit fee according to NCGS 130A-295.8.
5. At the time of issuance of this permit, no additional facility operation is approved.

*- End of Permit Conditions -*