



PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

November 9, 2015

Mr. David Revoir, P.E.
Appian Consulting Engineers, PA
154 Roundabout Court
P. O. Box 7966
Rocky Mount, NC 27804

Subject: Request Acknowledge Letter
C.T. Trucking at Fountain Industrial Park
Edgecombe County, Structural Fill Site CCB0019, Document ID Number 25243

Dear Mr. Revoir:

Thank you for giving the Division of Waste Management, Solid Waste Section (Section) the opportunity to review and discuss the development plans for C.T. Trucking at the Fountain Industrial Park.

Coal combustion by-products were used as structural fill at Fountain Industrial Park in accordance with guidelines agreed to and documented in correspondence dated June 15, 1989, from Gordon Layton, a previous supervisor in the Solid Waste Branch. The Section identifies this site as CCB0019 – Fountain Industrial Park. The park was divided into lots and those lots have been redefined over time. The geotechnical engineering report prepared for the C.T. Trucking site development provides more specific information on the location of the fill material and cover on currently defined property. The intended development as described and shown in drawings should continue to provide protection to minimize the potential for release or cause a nuisance as was intended in the original guidelines.

The proposed site development includes earthwork which will strip the existing cover, grading areas that have coal combustion by-products, construct structures for stormwater and erosion control, and replace cover to meet or exceed the original cover guidelines. Coal combustion by-products may be moved on the site, but will not be removed from the site. No additional coal combustion by-products will be brought onto the site. The “Earthwork Notes (last revised 10.23.2015)” on Sheet CE-9 of plans and attached to this letter address the matter in which the activities will be conducted and reflect the discussions with the Section.

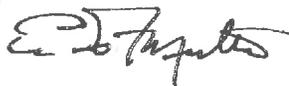
In reviewing the documents recorded with the Edgecombe County Register of Deeds, the Section found reference to the use of coal combustion by-products as structural fill at the Fountain Industrial Park but it was noted for a different lot and did not include the information that is



required under the current rules or statutes. Ms. Shawn McKee provided the language that should be used in her email of September 8, 2015, which is also attached. Please provide the Section a copy of the recordation when available for our records.

Again, the Section appreciates the opportunity to assist with the development of this site. We do maintain a file for the site and ask that you keep us informed so that our information is accurate. If have additional questions or need further assistance, please contact Pat Backus at (919) 707-8257 or by email at pat.backus@ncdenr.gov or Shawn McKee at (919) 707-8284 or by email at shawn.mckee@ncdenr.gov.

Sincerely



Digitally signed by Edward F. Mussler
III P.E.
DN: cn=Edward F. Mussler III P.E.,
o=Division of Waste Management,
ou=Solid Waste Section,
email=ed.mussler@ncdenr.gov, c=US
Date: 2015.11.09 14:30:01 -05'00'

Edward F. Mussler, III, P.E., Permitting Branch Supervisor
NCDEQ, Division of Waste Management

Attachments

cc: Ellen Lorscheider, Solid Waste Section Chief
Pat Backus, P.E., Permitting Engineer
Shawn McKee, Environmental Senior Specialist

CONSTRUCTION SAFETY

These drawings do not contain the requirements for job safety. All provisions for safety shall be the sole responsibility of the contractor.

EXISTING CONDITIONS:

The contractor shall be responsible for reviewing all existing job conditions. Any adverse existing conditions affecting work shown on these drawings shall be brought to the attention of the engineer for possible clarification or reconciliation.

ADA AND LEGAL DISCLAIMER

This document is not represented to comply with all requirements contained in the ADA or other laws. Engineers are not licensed to interpret laws or give advice concerning laws, the owner should have this document reviewed by his attorney to determine legal compliance.

These plans are for bidding purposes only and are not to be used as Construction drawings unless initialed and dated as approved for Construction below by the Engineer.

Approved for Construction: _____ Date: _____

RECORD DRAWINGS:

These drawings are believed to be a correct representation of actual field conditions but are not warranted as such.

By: _____ Date: _____

EROSION AND SEDIMENTATION CONTROL NARRATIVE

I. PROJECT DESCRIPTION

The purpose of this project is a new 15,000 sf building for CT Trucking at Fountain Industrial Park in Rocky Mount, NC. The 28.477 acre site is an undeveloped parcel in the northeast quadrant of College Road and Fountain Park Drive. All work is in within property owned and maintained by CT Trucking, or within public ROW. The site is designed to balance cut and fill, with approximately 5' max cut and fill.

II. EXISTING SITE CONDITIONS

The project is in zoned Industrial (I-2) in the City of Rocky Mount (Edgecombe County), North Carolina. The site drains to the south to existing culverts under Fountain Park Drive. The site is in the Tar-Pamlico river basin.

III. ADJACENT PROPERTY

All adjacent property lines and property Owners are shown on the site plan.

IV. SOILS

The soils at the site are mostly sandy clay under coal ash fill. A subsurface exploration and geotechnical report has been prepared by Terracon Consultants Inc., 8.14.15.

Coal combustion products have been used as structural fill material on this property. Approximately 162,300 cy of coal ash fill were placed throughout the 28.477 acre property, ranging from 3 ft to 12 ft in depth, in accordance with attached letter of approval from NC Department of Human Resources – Division of Health Services – Solid Waste Management Section dated June 15, 1989. No additional coal ash material is known to have been placed since that time. Disturbance and placement of coal ash is currently monitored by NC Department of Environment and Natural Resources (NCDENR) Division of Waste Management – Solid Waste Section.

No new coal ash structural fill shall be used at this site.

Coal flyash is currently a regulated waste material. NCDENR Solid Waste Section met onsite with the City, Smithson and Applan on September 4, 2015, and has reviewed the project and confirmed that the stripping of topsoil, grading of the underlying ash fill, and recovering of ash fill is acceptable. Additional fill brought onto the site will not be coal ash. All coal ash fill disturbed shall remain on the site and covered as described on these plans.

An additional barrier to what is proposed for the commercial building (shallow foundations/concrete slab over 4" stone) is not required by NCDENR.

V. EROSION AND SEDIMENT CONTROL MEASURES

All vegetative and structural erosion and sediment control practices shall be constructed and maintained by the Contractor according to these plans and specifications and the minimum standards of the City of Rocky Mount and NC Dept. of Environmental Management, Land Quality Section. The Contractor shall also follow any additional requirements as outlined by the Project Engineer.

A. Structural Practices

- The contractor is responsible for securing a material lay down and stockpile storage area for this contract. As such, the contractor is responsible for the necessary erosion control measures, including but not necessarily limited to, a construction entrance, silt fence, protection of streams/buffers, clean up and restoration of site to the satisfaction of both the owner, Engineer and City.
- Vehicle wheels shall be clean when leaving the site to prevent the tracking of mud on paved roads.
- Construction Entrance Stabilization:** Construction traffic shall be limited to stabilized areas. Maintain existing gravel areas in a condition to prevent mud or sediment from leaving the construction site. Supplement per Detail 106.01 as needed.
- Horseshoe Rock Check Dam and Sediment Storage:** maintain existing per detail 105.04
- Rock Check Dam:** install as shown on plans and maintain per detail 104.02.
- Silt Fence:** Silt fences shall be provided where shown and as needed on the site plan. These barriers shall be used to contain sediment.
- Temporary Ditch Liner, Fiberglass Netting:** Fiberglass Netting shall be comparable to "CONVED" economy erosion control degradable netting. The netting shall be either black or white polypropylene extruded oriented plastic net with rectangular mesh openings of approximately 1.5x1 strands per square inch and a nominal weight of 2.6 lbs per 1000 SF, with permissible shear stress of 0.40 psf. Netting shall be placed uniformly over a mulched seedbed and stapled as shown on detail. Staples may be 6" long, 11 gauge U-shaped. Netting is an alternative to asphalt tack when a stronger method is desired to hold the mulch in place.
- Outlet Protection:** In locations shown, place rip rap armor over a blanket of Mirafi 140 N filter fabric, or other approved substitute. Stone shall be the size and/or class shown on the plans.
- Dust Control:** Controlling dust at this site will be more important than with a typical grading project. Flyash has very small particle sizes and is very light in unit weight. Wind-borne dust can become a significant problem if the ash is not kept damp while it is uncovered. Stone base shall be placed over the exposed subgrade as soon as practical (ie within 24 hours) after the subgrade is compacted, proof-rolled and approved. **Geotechnical engineer/technician to continually remain onsite whenever coal ash is exposed.**
- Seeding to be installed per details.

B. Vegetative Practices

- Refer to Stabilization Timeframe Table.
Per NPDES Stormwater Discharge Permit for Construction Activities, NCG01, effective Aug. 3, 2011, seeding shall be placed in the timeframes shown in the table below. The timeframes shown below govern over any other less stringent note on the plans or specifications for this contract.

STABILIZATION TIMEFRAMES TABLE

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter Dikes, Swales, Ditches and Slopes	7 days	None
High Quality Water (HWQ) Zones	7 days	None
Slopes Steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, then 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones

- Permanently seed areas that will not be re-disturbed. Do not allow any disturbed areas to remain disturbed any longer than necessary and do not remove protection devices until adequate ground cover has been achieved. Note that the time for establishment of permanent ground cover is 14 calendar days.

C. Management Strategies

- Contractor is to notify the Engineer and City at least 48 hours prior to starting work.
- Perimeter measures are to be installed prior to grubbing or grading.
- Tail Ditches shall be stabilized immediately following their construction. As an alternate, rock check dams may be provided at their outlets and/or the terminal downstream end of disturbance until ground cover is implemented.
- Stockpile and/or waste areas must be maintained within the limits of the areas protected by the proposed measures and otherwise temporarily seeded if to be left stockpiled over 14 days.
- Construction shall be planned so that grading operations can begin and end as quickly as possible.
- Silt Fences shall also be installed prior to or as a first step in construction.
- The Contractor shall be responsible for the installation and maintenance of all erosion and sediment control practices.

D. Vegetative Ground Cover

Immediately following grading, all areas shall receive either permanent or temporary seeding, as applicable, as follows:

	FEB-MAY	JUNE-OCT	NOV-JAN
Permanent Seed	Tall Fescue @ 240#/Ac (Kentucky 31)	Bermudagrass (hulled) @ 35#/Ac, plus Centipede @ 10#/Ac, plus German/Browntop Millet Grain @ 10#/Ac	Tall Fescue @ 240#/Ac (Kentucky 31), plus Winter Rye @ 50#/Ac
Temporary Seed	German/Browntop Millet Grain @ 40#/Ac	German/Browntop Millet Grain @ 40#/Ac	Rye grain @ 120#/Ac

Fertilizer: 10-10-10 @ 20#/1000 SF, plus
Lime: 100#/1000 SF, plus
Mulch: Straw @ 95#/1000 SF, plus
Tack: 400 gallons/Ac on all mulching

E. Seed Bed Preparation

- The soil shall be scarified or otherwise loosened to a depth of not less than 5 inches except as otherwise directed by the Engineer. Clods shall be broken and the top three inches of soil shall be worked into an acceptable seedbed by the use of soil pulverizers, drags, or harrows.
- On 2:1 slopes a seedbed preparation will be required that is the same depth as that required on flatter areas, although the degree of smoothness may be reduced from that required on the flatter areas.
- Seedbed preparation within two feet of the edge of any pavement shall be limited to a depth of two to three inches.
- The preparation of seedbeds shall not be done when the soil is frozen, extremely wet, or when the Engineer determines that it is in an otherwise unfavorable working condition.
- Before mulch is applied, the Contractor shall remove and dispose of all exposed stones in excess of one inch in diameter and all roots or other debris which prevent proper contact of the mulch with the soil. Segregation of exposed stone under one inch shall be avoided and, if found, dispersed or disposed of at the direction of the Engineer.

F. Maintenance

- Reseed and mulch bare spots larger than 9 square feet (limited to 5% maximum of site area.)
- Maintain all seeded areas until uniform stand is acceptable.
- If growth is not established by final project inspection, continue specified attention until the stand is acceptable.
- Correct and repair all undue setting and erosion within 1 year after final inspection.
- Remove from the site, all erosion control structures after complete stabilization at end of construction period.
- Remove silt from sediment pits and from behind check dams when silt is within half depth of the pit or spillway. Dispose of in an area where silt cannot re-enter pit/trap.
- Place rock from rock check dams and temporary sediment traps in roadside ditch as armor protection. Do not dispose of rock. All stone armor protection is to fit contour of channel. Do not dump but handspread.

G. Calculations

The practices utilized for the proposed site did require formal calculations. Calculations have been provided.

VI. OWNER

CT Management, Inc.
Attn: Daniel G. Barnes
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Claremont, NC 28610
dan.barnes@ctmanagementinc.com
828.459.3218

OWNER REPRESENTATIVE

Smithson, Inc.
Attn: Daniel Proctor, PE
PO Box 1731
Rocky Mount, NC 27802
daniel@smithsonnet.com
252.972.3055

EARTHWORK NOTES

Last revised 10.23.15

- Contractor to adhere strictly to instructions and recommendations provided by Terracon Consultants Inc., in their Geotechnical Engineering Report dated 8.14.15 (excepted notes and recommendations below). Materials testing during construction to be provided by Terracon as specified in the report.
- EXISTING COAL ASH STRUCTURAL FILL ONSITE:**
 - In accordance with NC GS 130A-309.223, it be known that coal combustion products have been used as structural fill material on this property. Approximately 162,300 cy of coal ash fill were placed throughout the 28.477 acre property, ranging from 3 ft to 12 ft in depth, in accordance with attached letter of approval from NC Department of Human Resources – Division of Health Services – Solid Waste Management Section dated June 15, 1989. No additional coal ash material is known to have been placed since that time. Disturbance and placement of coal ash is currently monitored by NC Department of Environment and Natural Resources (NCDENR) Division of Waste Management – Solid Waste Section.
 - No new coal ash structural fill shall be used at this site.
 - Coal flyash is currently a regulated waste material. NCDENR Solid Waste Section met onsite with the City, Smithson and Applan on September 4, 2015, and has reviewed the project and confirmed that the stripping of topsoil, grading of the underlying ash fill, and recovering of ash fill is acceptable. Additional fill brought onto the site cannot be coal ash. All coal ash fill disturbed shall remain on the site and covered as described below.
 - An additional barrier to what is proposed for the commercial building (shallow foundations/concrete slab over 4" stone) is not required by NCDENR.
- DEMOLITION:**
 - After installation of erosion control measures, site preparation should begin with the complete removal of existing vegetation, utilities and gravel and as shown on the demolition plan and construction sequence.
 - Topsoil/vegetation stripping should be carefully monitored to avoid incorporating flyash into the stripped material. Stripped topsoil can likely be used in landscaping areas, but may considered a waste material by the onsite geotechnical engineer (requiring cover as described below) if it contains a high percentage of flyash. Topsoil should not be used as structural fill or backfill.
- EARTHWORK:**
 - Geotechnical engineer/technician to continually remain onsite whenever coal ash is exposed.** All exposed ash to be kept sufficiently damp at all times when exposed to prevent wind-borne dust. Site contractor to follow instructions of the onsite geotechnical engineer regarding handling coal ash material. Site contractor will be responsible for any fines imposed by NCDENR or the City for mishandling of coal ash, including any wind-borne dust or water-borne sedimentation.
 - After stripping and grading the site to a "rough grade" condition, the exposed subgrade soils in the building and parking lot footprints should be scarified, moisture conditioned, and compacted in place to at least 95% of the material's standard Proctor maximum dry density using a medium weight vibratory roller. The purpose of the vibratory rolling is to improve loose subgrade soils and create a more uniform cover.
 - The roller should make at least 6 passes across the site, with the second set of 3 passes perpendicular to the first set of 3 passes. Additional water application may be required to achieve the desired density.
 - After the vibratory rolling, pore pressures should be allowed to dissipate for a minimum of 48 hours. After the waiting period, proof-rolling should be performed with a fully loaded, tandem-axle dump truck or similar rubber-tired construction equipment. Proofrolling is recommended as a means of detecting areas of soft or unstable subgrade soils. The proofrolling should be performed during a period of dry weather to avoid degrading an otherwise suitable subgrade. The proofrolling operations should be observed by a representative of the geotechnical engineer. Subgrade soils that exhibit excessive rutting or deflection during proofrolling should be overexcavated as directed by the representative and replaced with properly compacted soil fill or crushed stone. Undercutting could be required in localized areas.
 - Engineered fill shall meet the requirements shown in the geotech report, and shall be certified the geotechnical engineer.
- DUST CONTROL**
 - Controlling dust at this site will be more important than with a typical grading project. Flyash has very small particle sizes and is very light in unit weight. Wind-borne dust can become a significant problem if the ash is not kept damp while it is uncovered.
 - Stone base shall be placed over the exposed subgrade as soon as practical (ie within 24 hours) after the subgrade is compacted, proof-rolled and approved.
- COVER:**
 - Ground cover is essential with coal ash to prevent its contact with surface runoff. Excavated flyash should not be graded in planned landscaping areas without the protective cover.
 - ALL UNCOVERED COAL ASH MATERIAL MUST RECEIVE A MINIMUM COVER OF 6-INCHES OF TOPSOIL, OR 12-INCHES OF TOPSOIL ON SLOPES GREATER THAN 10:1** (unless otherwise covered by impervious material such as asphalt or concrete).
 - Specified depths will be spot-checked by geotechnical engineer.
- DRAINAGE:**
 - Due to the fine particle size of the coal ash, all joints of proposed underground drainage structures and culverts exposed to ash shall be provided with O-ring and shall be wrapped with non-woven geotextile fabric in 2' wide strips, centered on each joint.
- METALS:**
 - Because of its higher corrosion potential, metal underground piping and conduits embedded in ash should either be avoided or provided with a suitable wrap/sleeve to provide corrosion protection.
- PONDS:**
 - Pond subgrade shall be free of all organic material and shall be inspected by geotechnical engineer when excavation is completed. Subgrade shall be properly proofrolled prior to placement of liner.
 - Two earthen liners are required on the base and slopes of the proposed ponds and wherever water is proposed to be impounded above the elevation of ash in order to prevent water infiltration into the ash.
 - LOWER LINER** to consist of compacted clay (off-site virgin material, CL or CH) with a maximum permeability of 0.01 in/hr and shall be a minimum of 12-inches in thickness.
 - UPPER LINER** to consist of compacted clay/clayey sand (off-site virgin material, CL or SC) with sufficient clay to resist erosion and shall be a minimum of 12-inches in thickness.
 - If required by the geotechnical engineer to sustain vegetation, an additional 6" of topsoil shall be placed on top of the upper liner. Note that topsoil is only needed in the deep pool areas (below elev. 116) if the geotech believes the upper clay/sand liner cannot sustain temporary seeding... otherwise the topsoil is NOT required!
 - If ash material is encountered at the pond at the intersection of College Rd and Fountain Park Drive, an earthen liner will be required up to elevation 113.0 (25 yr 24hr storm routed peak elevation is 112.6).
 - Liner material to be approved and certified by geotechnical engineer prior to placement. Geotechnical engineer to be onsite during placement of liner.
- Passing Test:** Average of 3 test results meeting the applicable provisions of Tables 2200.2A and 2200.2B (below) with no one test failing by more than -3 percentage points. Moisture content tolerance is to be within +/- 3 percentage points of the optimum moisture content unless otherwise specified by the Engineer or Geotechnical Engineer.

Table 2200.2A MINIMUM COMPACTION LIMITS		
LOCATION	SITE	DENSITY
Embankment/borrow under roadway pavement surfaces, sidewalks, and curb and gutter	Top 12 inches	100% of the maximum dry density by ASTM D698 (Standard Proctor), AASHTO T99.
	Up to within 12 inches	95% of the maximum dry density by ASTM D698 (Standard Proctor), AASHTO T99.
Roadway Shoulders		95% of the maximum dry density by ASTM D698 (Standard Proctor), AASHTO T99.
Under turf, sodded, planted, or seeded non-traffic areas		90% of the maximum dry density by ASTM D698 (Standard Proctor), AASHTO T99.
Stone Base		100% of the maximum dry density by ASTM D698 (Standard Proctor), AASHTO T99.

Table 2200.2B		
LOCATION	BUILDING STRUCTURES	DENSITY
Embankment/borrow beneath and within 5 feet of buildings, under foundations, and scarified existing subgrade beneath buildings.	Top 12 inches	100% of the maximum dry density by ASTM D698 (Standard Proctor)
	Up to within 12 inches	95% of the maximum dry density by ASTM D698 (Standard Proctor)
Outside structures next to walls and any other structural exterior member		90% of the maximum dry density by ASTM D698 (Standard Proctor)
Backfill less than 10 feet from exterior retaining walls		90% of the maximum dry density by ASTM D698 (Standard Proctor)

- FAILURE OF COMPACTIVE EFFORTS:** If compaction efforts should fail to provide a stable subgrade in accordance with the requirements in paragraph 3.6 C, Passing Test after subgrade materials have been shaped and brought to optimum moisture, such unstable materials shall be removed to the extent directed by the Geotechnical Engineer and/or the Engineer and replaced and compacted using new material and must pass compaction test prior to proceeding to the next stage of construction and at no expense to the Owner.
- The costs associated with excavation and re-compaction of areas that have failed will be the Site Contractor's responsibility.

NO. SCALE:	As Noted	DATE:	SEPT. 1, 2015	DESIGNER:	David Revair
VER. SCALE:	N/A	DATE:		REVISIONS:	
				DATE:	
				BY:	
				CAD:	



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Final Drawings
Review Purposes ONLY



**Erosion Control Notes & Details for
C.T. Trucking - Fountain Ind. Park
Rocky Mount, N.C. (Edgecombe County)**

15-065

D-0000

CE-9

From: Mckee, Shawn
Sent: Tuesday, September 08, 2015 4:34 PM
To: drevoir@appianengineers.com
Cc: 'Daniel Proctor'; brad.kerr@rockymountnc.gov; donald.perry@rockymountnc.gov; Lorscheider, Ellen; Mussler, Ed; Backus, Pat
Subject: RE: Fountain Industrial Park- Pro. Truck Distribution Site

In regards to Question #1, per NCGS130A-309.223:

(a) The owner of land where coal combustion products have been used in volumes of more than 1,000 cubic yards shall file a statement of the volume and locations of the coal combustion residuals with the Register of Deeds in the county or counties where the property is located. The statement shall identify the parcel of land according to the complete legal description on the recorded deed, either by metes and bounds or by reference to a recorded plat map. The statement shall be signed and acknowledged by the landowners in the form prescribed by G.S. 47-38 through G.S. 47-43.

(b) Recordation shall be required within 90 days after completion of a structural fill project using coal combustion residuals

The statutory language can be found at

http://www.ncga.state.nc.us/EnactedLegislation/Statutes/PDF/BySection/Chapter_130A/GS_130A-309.223.pdf

The recorded language must meet those requirements.

Let me know if you have additional questions about the recordation requirements.

Shawn McKee

Environmental Senior Specialist
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