

Faxed 8/16/01 AM MARIE SUTTON

Post-it® Fax Note	7671	Date	8/16/01	# of pages	8
To	MARIE Sutton	From	Bill Hocutt		
Co./Dept	NC DOT	Co.	NC DENR		
Phone #	250-4128	Phone #	733-4810		
Fax #	250-4119	Fax #	733-0692	260	

MEMORANDUM

August 16, 2001

TO: Marie Sutton

From: Bill Hocutt WRH

Subj: Period of June, 1996-until approximately January 1, 1997 Coal Fly Ash structural Fill project named the "Jake Alexander Boulevard Extension". This Rowan County project (in Salisbury) was done using fly ash material from Fieldcrest-Cannon's Spencer, NC Facility.

- Attached References:
- 1) June 4, 1996 Acknowledgement Letter from Jim Coffey to Marie Casey (Sutton) in relation to the subject project.
 - 2) May 6, 1996 letter from Dr. Larry R. Goode, P.E. to the State Project File Number 8.2631502 which accepts responsibility by the NC DOT of Recordation within 90 days after completion of the fill.
 - 3) Pages 165 through 168 of the .1700 coal combustion by-product section of the 15A NCAC 13B Solid Waste Management Rules. These are included for your reference specifically to rules .1703(b), .1704(b), .1705(m), .1706(d) and .1707(a) through .1707(d).

RECORDATION

The Solid Waste Section is currently working on a report covering our experience with coal ash structural fills since January 1, 1994 when the .1700 rules issued and the current date. In reviewing the Subject file, I find several pieces of required information and specified items which have not been received by the Division. I would appreciate your calling me at 733-0692, extension 260 at your earliest convenience so that we can discuss these items. Thanks, Bill.

cc: Jim Coffey

c:\wp6docs\memos\DOT-Salisbury-Str-Fill

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



June 4, 1996

Ms. Marie L. Casey
NC Department of Transportation
Century Center
P. O. Box 25201
Raleigh, NC 27611

Subject: Coal Fly Ash Structural Fill at Jake Alexander Boulevard Extension from East of I-85 to SR 1004, Stokes Ferry Road in Salisbury (Rowan County). First Use of Fly Ash is Estimated to be June, 1996.

Dear Ms. Casey:

The Division of Solid Waste Management (DSWM) has received your May 6, 1996 notification of plans to utilize coal ash in the subject project. This letter of acknowledgement is confirmation of the verbal given to you by Bill Hocutt on May 21, 1996. The project is proposed to use 25,000-30,000 cubic yards of fly ash material from Fieldcrest-Cannon's Spencer, NC facility. Completion of the project is projected to be January 1, 1997. The information submitted satisfies the requirements for coal ash structural fill activities as set forth in Section .1700 of the Solid Waste Management Rules 15A NCAC 13B concerning beneficial use of coal combustion by-products.

Section .1703(b) allows the DOT to not submit construction plans with the other listed information required in the notification. However, it is required that DOT inform DSWM where a complete set of construction plans will be maintained. Based on our conversation of today, it is my understanding that a copy of the completed project plans will be kept at the Raleigh Construction Unit Office. Please inform me if that is incorrect or probable to undergo change.

Since no mention was made in your May 6 letter of any special changes or considerations such as those provided for in .1704(b), .1705(m) and .1706(e), we conclude that siting, design, construction, operation and closure on this project have no special factors or requirements. Please notify me immediately if that is not correct. Please note that Section .1706(d) states that: "The constructor or operator shall submit a certification to the Division signed and sealed by a registered professional engineer or signed by the Secretary of the Department of Transportation or his designee certifying that all requirements in the Rules of this Section have been met. The report shall be submitted within 30 days of application of the final cover." We have received Mr.

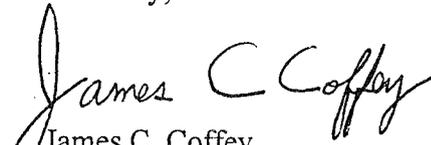
Marie Casey
June 4, 1996
Page 2

Larry R. Goode's May 6, 1996 letter pertaining to recordation within 90 days following completion of the project. His statement of intent satisfies the .1707 requirement except for returning to the Division the original notarized statement with the Register's seal and the date, book and page number of recording as specified in .1707(c).

Analysis of groundwater samples collected from monitoring wells located at a North Carolina coal ash structural fill site indicate that the ash may have caused or contributed to violation of the 15A N.C. Administrative Code 2L Standards for arsenic, cadmium, chromium, lead, and selenium, as well as elevated sulfate levels. Based upon this information, the Solid Waste Management Division strongly recommends that you retain the services of a qualified hydrogeologic consulting firm to assist you in determining the vulnerability of the groundwater at the site based on site attenuation, waste extractability and end use to inhibit infiltration and consider installation of groundwater monitoring wells on vulnerable sites before commencing fill operations.

Please contact me at (919) 733-0692 , extension 255 or Bill Hocutt at extension 260 if you have any questions about this.

Sincerely,


James C. Coffey
Permitting Branch Supervisor
Solid Waste Section

cc: Rick Doby
Julian Foscue
Bill Hocutt

c:wp6doc/letter/dot-ash.2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

GARLAND B. GARRETT JR.
SECRETARY

May 6, 1996

State Project: 8.2631502
Rowan County

"Jake Alexander Boulevard Extension from East of I-85 to SR 1004, Stokes Ferry Road in Salisbury"

Mr. Bill Hocutt
North Carolina Department of Environment, Health,
and Natural Resources, Solid Waste Section
P.O. Box 27687
401 Oberlin Road, Suite 150
Raleigh, NC 27611-7687

Dear Mr. Hocutt,

The North Carolina Department of Transportation as land owners of the subject project, will file a statement of the volume and locations of the coal combustion by-products with the Register of Deeds in Rowan County where the property is located within 90 days after completion of coal combustion by-product fill. The statement will 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 map. The statement will be signed and acknowledged by the form prescribed by G.S. 47-38 through 47-43.

Sincerely,

A handwritten signature in cursive script that reads "Larry R. Goode".

Larry R. Goode, Ph.D., P.E.
State Highway Administrator

LRG/mc

cc: Gerald Hilton
file



.1703 NOTIFICATION FOR STRUCTURAL FILL FACILITIES

(a) A minimum of 30 days before using coal combustion by-products in structural fill projects, the person proposing the use shall submit a written notice to the Division. The notice shall contain, at a minimum:

- (1) A description of the nature, purpose and location of the project, including the name of the United States Geological Survey seven and one-half minute map on which the project is located and a Department of Transportation map or an eight and one-half by 11 inch topographic map showing the project.
- (2) The estimated start and completion dates for the project.
- (3) An estimate of the volume of coal combustion by-products to be used for the project.
- (4) A Toxicity Characteristic Leaching Procedure (TCLP) analysis from a representative sample of each different coal combustion by-product source to be used in the project. The TCLP analysis shall be conducted and certified by the generator to be representative of each coal combustion by-product source used in the project. A TCLP analysis shall be conducted at least annually. A minimum analysis shall include: arsenic, barium, cadmium, lead, chromium, mercury, selenium and silver.
- (5) A signed and dated statement by the owner(s) of the land on which the structural fill is to be placed, acknowledging and consenting to the use of coal combustion by-products as structural fill and agreeing to record the fill in accordance with Rule .1707 of this Section.
- (6) The notification shall include:
 - (A) Name of coal combustion by-products generator;
 - (B) Physical location of the generating facility;
 - (C) Address of generator;
 - (D) Name of contact for generator;
 - (E) Telephone number of generator; and
 - (F) Changes that occur will require subsequent notification of the Division of Solid Waste Management.

¹⁷⁰³ (b) In addition to the notification requirements under Paragraph (a) of this Rule, at least 30 days before using coal combustion by-products as a structural fill in projects with a volume of more than 10,000 cubic yards, the person proposing the use shall submit a written notice to the Division containing construction plans for the structural fill facility, including a stability analysis when necessary, which shall be prepared, signed and sealed by a registered professional engineer in accordance with sound engineering practices. The Department of Transportation is not required to submit construction plans with the written notice. The Department of Transportation shall maintain a complete set of construction plans and shall notify the Division where the construction plans are located.

History Note: Statutory Authority G.S. 130A-294; Eff. January 4, 1994

.1704 SITING FOR STRUCTURAL FILL FACILITIES

- (a) Coal combustion by-products used as a structural fill shall not be placed:
- (1) Within 50 horizontal feet of a jurisdictional wetland unless after consideration of the chemical and physical impact on the wetland, the U.S. Corps of Engineers

- issues a permit or waiver for the fill;
- (2) Within 50 horizontal feet of the top of the bank of a perennial stream or other surface water body;
 - (3) Within two feet of the seasonal high ground-water table;
 - (4) Within 100 horizontal feet of any source of drinking water, such as a well, spring or other groundwater source of drinking water;
 - (5) Within an area subject to a one-hundred year flood, unless it can be demonstrated to the Division that the facility will be protected from inundation, and washout, and the flow of water is not restricted and the storage volume of the flood plain will not be significantly reduced;
 - (6) Within 25 feet of any property boundary; and
 - (7) Within 25 feet of a bedrock outcrop.

1704 (b) The Division and the Department of Transportation may agree on specific structural fill siting criteria that may be used on Department of Transportation projects.

History Note: Statutory Authority G.S. 130A-294; Eff. January 4, 1994

.1705 DESIGN, CONSTRUCTION, AND OPERATION FOR STRUCTURAL FILL FACILITIES

(a) The structural fill facility must be designed, constructed, operated, closed, and maintained in such a manner as to minimize the potential for harmful release of constituents of coal combustion by-products to the environment or create a nuisance to the public.

(b) Coal combustion by-products shall be collected and transported in a manner that will prevent nuisances and hazards to public health and safety. Coal combustion by-products shall be moisture conditioned, as necessary, and transported in covered trucks to prevent dusting.

(c) Coal combustion by-products shall be placed uniformly and compacted in lifts not exceeding one foot in thickness and shall be compacted to standards, including in-situ density, compaction effort and relative density, specified by a registered professional engineer for a specific end use purpose.

(d) Equipment shall be provided which is capable of placing and compacting the coal combustion by-products and handling the earthwork required during the periods that coal combustion by-products are received at the fill area.

(e) The coal combustion by-product structural fill facility shall be effectively maintained and operated as a non-discharge system to prevent discharge to surface water resulting from the operation of the facility.

(f) The coal combustion by-product structural fill facility shall be effectively maintained and operated to ensure no violations of ground water standards, 15A NCAC 2L.

(g) Surface waters resulting from precipitation shall be diverted away from the active coal combustion by-product placement area during filling and construction activity.

(h) Site development shall comply with the North Carolina Sedimentation Pollution Control Act of 1973, as amended.

(i) The structural fill project must be operated with sufficient dust control measures to minimize airborne emissions and to prevent dust from creating a nuisance or safety hazard and must not violate applicable air quality regulations.

(j) All structural fills shall be covered with a minimum of 12 inches compacted earth, and an additional surface six inches of soil capable of supporting native plant growth.

(k) Compliance with these standards does not insulate any of the owners or operators from claims for damages to surface waters, ground-water or air resulting from the operation of the structural fill facility. If the facility fails to comply with the requirements of this Section, the constructor, generator, owner or operator shall notify the Division and shall take such immediate corrective action as may be required by the Department.

(l) Coal combustion by-products utilized on an exterior slope of a structural fill shall not be placed with a slope greater than 3.0 horizontal to 1.0 vertical.

1705 (m) The Division and the Department of Transportation may agree on specific design, construction, and operation criteria that may apply to the Department of Transportation projects.

History Note: Statutory Authority G.S. 130A-294; Eff. January 4, 1994

.1706 CLOSURE OF STRUCTURAL FILL FACILITIES

(a) No later than 30 working days or 60 calendar days, whichever is less after coal combustion by-product placement has ceased, the final cover shall be applied over the coal combustion by-product placement area.

(b) The final surface of the structural fill shall be graded and provided with drainage systems that:

- (1) Minimize erosion of cover materials; and
- (2) Promote drainage of area precipitation, minimize infiltration and prevent ponding of surface water on the structural fill.

(c) Other erosion control measures, such as temporary mulching, seeding, or silt barriers shall be installed to ensure no visible coal combustion by-product migration to adjacent properties until the beneficial end use of the project is realized.

1706 (d) The constructor or operator shall submit a certification to the Division signed and sealed by a registered professional engineer or signed by the Secretary of the Department of Transportation or his designee certifying that all requirements in the Rules of this Section have been met. The report shall be submitted within 30 days of application of the final cover.

(e) The Division and the Department of Transportation shall agree on specific closure criteria that apply to Department of Transportation projects.

History Note: Statutory Authority G.S. 130A-294; Eff. January 4, 1994

.1707 RECORDATION OF STRUCTURAL FILL FACILITIES

(a) The owners of land where coal combustion by-products have been utilized in volumes of more than 1,000 cubic yards shall file a statement of the volume and locations of the coal combustion by-products 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(s) in the form prescribed by G.S. 47-38 through 47-43.

(b) Recordation shall be required within 90 days after completion of coal combustion by-product fill project.

(c) The Register of Deeds in accordance with G.S. 161-14 shall record the notarized statement and index it in the Grantor Index under the name of the owner(s) of the land. The original notarized statement with the Register's seal and the date, book and page number of recording shall be returned to the Division after recording.

(d) When property with more than 1,000 cubic yards of coal combustion by-products is sold, leased, conveyed or transferred in any manner, the deed or other instrument of transfer shall contain in the description section in no smaller type than used in the body of the deed or instrument a statement that coal combustion by-products have been used as fill material on the property.

History Note: Statutory Authority G.S. 130A-294; Eff. January 4, 1994

.1708 OTHER USES FOR COAL COMBUSTION BY-PRODUCTS

Coal combustion by-products may be beneficially used on one or more of the following applications or when handled, processed, transported or stockpiled for such beneficial use applications and do not require a solid waste permit provided the uses are consistent with the requirements identified below:

- (1) Coal combustion by-products used as soil nutrient additives or other agricultural purposes under the authority of the North Carolina Department of Agriculture;
- (2) Coal combustion bottom ash or boiler slag used as a traction control material or road surface material if the use is approved by the North Carolina Department of Transportation;
- (3) Coal combustion by-products used as material in the manufacturing of another product, including, but not limited to concrete products, lightweight aggregate, roofing materials, plastics, paint, flowable fill and roller compacted concrete or as a substitute for a product or material resource, including but not limited to, blasting grit, roofing granules, filter cloth precoat for sludge dewatering and pipe bedding;
- (4) Coal combustion by-products used as a structural fill for the base, sub-base, under a structure or the footprint of a paved road, a parking lot, sidewalk, walkway or similar structure; *6" deep ON ANY ACRE (± 1,000 yd³) NO RECORDING FEE.*
- (5) Coal combustion by-products used for the extraction or recovery of materials and compounds contained within the coal combustion by-products. Residuals from the processing operations shall remain solid waste and be subject to this Section and Section .1600 of this Subchapter; and
- (6) Coal combustion by-products processed with a cementitious binder to produce a stabilized structural fill product which is spread and compacted for the construction of a project with a planned end use.

History Note: Statutory Authority G.S. 130A-294; Eff. January 4, 1994

.1709 STORAGE AND CONTAINMENT OF COAL COMBUSTION BY-PRODUCTS

(a) Coal combustion by-products may not be stored or speculatively accumulated at the immediate area where they will be put to beneficial use for a longer period of time than necessary to complete the project. Coal combustion by-products are not being speculatively accumulated when a minimum of 75 percent of the coal combustion by-products are removed from the facility and beneficially used annually.

(b) Compliance with this Section does not exempt the owner or operator of the structural fill facility from applicable North Carolina Water Pollution Control Regulations (15A NCAC 2H),

MEMORANDUM

August 16, 2001

TO: Marie Sutton

From: Bill Hocutt *DRH*

Subj: Period of June, 1996-until approximately January 1, 1997 Coal Fly Ash structural Fill project named the "Jake Alexander Boulevard Extension". This Rowan County project (in Salisbury) was done using fly ash material from Fieldcrest-Cannon's Spencer, NC Facility.

- Attached References:
- 1) June 4, 1996 Acknowledgement Letter from Jim Coffey to Marie Casey (Sutton) in relation to the subject project.
 - 2) May 6, 1996 letter from Dr. Larry R. Goode, P.E. to the State Project File Number 8.2631502 which accepts responsibility by the NC DOT of Recordation within 90 days after completion of the fill.
 - 3) Pages 165 through 168 of the .1700 coal combustion by-product section of the 15A NCAC 13B Solid Waste Management Rules. These are included for your reference specifically to rules .1703(b), .1704(b), .1705(m), .1706(d) and .1707(a) through .1707(d).

The Solid Waste Section is currently working on a report covering our experience with coal ash structural fills since January 1, 1994 when the .1700 rules issued and the current date. In reviewing the Subject file, I find several pieces of required information and specified items which have not been received by the Division. I would appreciate your calling me at 733-0692, extension 260 at your earliest convenience so that we can discuss these items. Thanks, Bill.

cc: Jim Coffey

c:wp6docs/memos/DOT-Salisbury-Str-Fill

8/28/01 Marie called me and said that there had been changes in personnel over in Rowan City. When I called her about this in June '01 she had called them & they said they thought this had been done (reported). She has now called them again & they now have checked & find that no Certificate of Closure & no Recordation statement were sent to the SWaste Division. They told Marie that it should be done in a few days. She will fax me a copy.

9/26/01 Nova Received Closure & Recordation

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management



James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

June 4, 1996

Ms. Marie L. Casey
NC Department of Transportation
Century Center
P. O. Box 25201
Raleigh, NC 27611

Subject: Coal Fly Ash Structural Fill at Jake Alexander Boulevard Extension from East of I-85 to SR 1004, Stokes Ferry Road in Salisbury (Rowan County). First Use of Fly Ash is Estimated to be June, 1996.

Dear Ms. Casey:

The Division of Solid Waste Management (DSWM) has received your May 6, 1996 notification of plans to utilize coal ash in the subject project. This letter of acknowledgement is confirmation of the verbal given to you by Bill Hocutt on May 21, 1996. The project is proposed to use 25,000-30,000 cubic yards of fly ash material from Fieldcrest-Cannon's Spencer, NC facility. Completion of the project is projected to be January 1, 1997. The information submitted satisfies the requirements for coal ash structural fill activities as set forth in Section .1700 of the Solid Waste Management Rules 15A NCAC 13B concerning beneficial use of coal combustion by-products.

Section .1703(b) allows the DOT to not submit construction plans with the other listed information required in the notification. However, it is required that DOT inform DSWM where a complete set of construction plans will be maintained. Based on our conversation of today, it is my understanding that a copy of the completed project plans will be kept at the Raleigh Construction Unit Office. Please inform me if that is incorrect or probable to undergo change.

Since no mention was made in your May 6 letter of any special changes or considerations such as those provided for in .1704(b), .1705(m) and .1706(e), we conclude that siting, design, construction, operation and closure on this project have no special factors or requirements. Please notify me immediately if that is not correct. Please note that Section .1706(d) states that: "The constructor or operator shall submit a certification to the Division signed and sealed by a registered professional engineer or signed by the Secretary of the Department of Transportation or his designee certifying that all requirements in the Rules of this Section have been met. The report shall be submitted within 30 days of application of the final cover." We have received Mr.

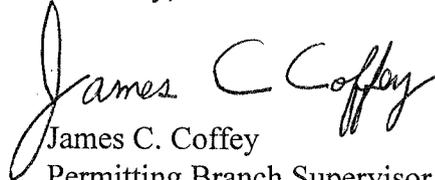
Marie Casey
June 4, 1996
Page 2

Larry R. Goode's May 6, 1996 letter pertaining to recordation within 90 days following completion of the project. His statement of intent satisfies the .1707 requirement except for returning to the Division the original notarized statement with the Register's seal and the date, book and page number of recording as specified in .1707(c).

Analysis of groundwater samples collected from monitoring wells located at a North Carolina coal ash structural fill site indicate that the ash may have caused or contributed to violation of the 15A N.C. Administrative Code 2L Standards for arsenic, cadmium, chromium, lead, and selenium, as well as elevated sulfate levels. Based upon this information, the Solid Waste Management Division strongly recommends that you retain the services of a qualified hydrogeologic consulting firm to assist you in determining the vulnerability of the groundwater at the site based on site attenuation, waste extractability and end use to inhibit infiltration and consider installation of groundwater monitoring wells on vulnerable sites before commencing fill operations.

Please contact me at (919) 733-0692 , extension 255 or Bill Hocutt at extension 260 if you have any questions about this.

Sincerely,

A handwritten signature in black ink that reads "James C Coffey". The signature is written in a cursive style with a large initial "J" and "C".

James C. Coffey
Permitting Branch Supervisor
Solid Waste Section

cc: Rick Doby
Julian Foscue
Bill Hocutt

c:wp6doc/letter/dot-ash.2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

GARLAND B. GARRETT JR.
SECRETARY

May 6, 1996

State Project: 8.2631502
Rowan County

"Jake Alexander Boulevard Extension from East of I-85 to SR 1004, Stokes Ferry Road in Salisbury"

Mr. Bill Hocutt
North Carolina Department of Environment, Health,
and Natural Resources, Solid Waste Section
P.O. Box 27687
401 Oberlin Road, Suite 150
Raleigh, NC 27611-7687

Dear Mr. Hocutt,

The North Carolina Department of Transportation as land owners of the subject project, will file a statement of the volume and locations of the coal combustion by-products with the Register of Deeds in Rowan County where the property is located within 90 days after completion of coal combustion by-product fill. The statement will 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 map. The statement will be signed and acknowledged by the form prescribed by G.S. 47-38 through 47-43.

Sincerely,

A handwritten signature in cursive script that reads "Larry R. Goode".

Larry R. Goode, Ph.D., P.E.
State Highway Administrator

LRG/mc

cc: Gerald Hilton
file





STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

GARLAND B. GARRETT JR.
SECRETARY

May 6, 1996

Mr. Bill Hocutt
NC DEHNR, Solid Waste Section
P.O. Box 27687
401 Oberlin Road, Suite 150
Raleigh, NC 27611-7687

Subject: State Project 8.2631502, Rowan County
Jake Alexander Blvd. Extension from East of I-85 to SR 1004,
Stokes Ferry Road in Salisbury

Dear Mr. Hocutt,

Attached for your review and approval is a request to use fly ash material in the structural fills for the subject project. Also enclosed in a TCLP report from Fieldcrest Cannon, the generator for the material. A letter stating that the North Carolina Department of Transportation is the land owner for this project is forthcoming.

This usage will be done in the same manner as the I-95 Interchange in Halifax County. (Please refer to our May 24, 1995 request). Please advise if any additional information is needed or if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Marie Casey".

Marie Casey
Resource Conservation Engineer

mc



THE ALEXANDER COMPANY

1918 West Innes Street
Salisbury, North Carolina 28144-2433
(704) 637-7073 FAX (704) 638-0406

To: Marie Casey - NCDOT
Design Services Unit
P.O. Box 25201
Raleigh, NC 27611

From: Jake Alexander - The Alexander Company

Date: April 29, 1996

Subject: Use of coal combustion by-product (fly ash) in NCDOT
highway construction project in Rowan County, NC

Notification for Structural Fill Facility

1. Project number 8.2631502, Rowan County
Jake Alexander Blvd. extension from east of I-85 to SR 1004,
Stokes Ferry Road, in Salisbury, NC
2. Start date - 01/15/96 ±
Completion date - 01/31/97
3. 25 - 30,000 cubic yards of fly ash are proposed to be
utilized in this project
4. TCLP analysis enclosed
5. NCDOT will supply
6. a. Name of coal combustion by-products generator:
Fieldcrest-Cannon, Inc.
b. Physical location of the generating facility:
North Carolina Finishing Company, a division of
Fieldcrest-Cannon, Inc., 2555 N. US 29 Hwy.;
Spencer, NC
c. Address of generator:
Fieldcrest-Cannon, Inc.
P.O. Box 107; Kannapolis, NC 28082
d. Name of contact for generator:
The Alexander Company - Jake F. Alexander, Pres.,
(704)637-7073, fax (704)638-0406
e. Telephone number of generator:
Fieldcrest-Cannon, Inc. - (704)939-2305



REPORT OF LABORATORY ANALYSIS

Fieldcrest Cannon, Inc.
 P. O. Box 107
 Kannapolis, NC 28082

September 07, 1995
 PACE Project Number: 650821506

Attn: Mr. Battle Moore

Client Reference: TCLP Analyses

PACE Sample Number: 92 0457064
 Date Collected: By Client
 Date Received: 08/21/95
 Coal Ash

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

pH	Units	0.10	✓ 4.26 (1)	09/06/95
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PACE Sample Number: 92 0457072
 Date Collected: By Client
 Date Received: 08/21/95
 Client Sample ID: Coal Ash

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS

TCLP RCRA TOXICITY METALS

Arsenic	mg/L	0.005	✓ 0.005	08/27/95
Barium	mg/L	0.010	✓ 0.229	09/01/95
Cadmium	mg/L	✓ 0.010	✓ ND	09/01/95
Chromium	mg/L	✓ 0.010	✓ ND	09/01/95
Lead	mg/L	✓ 0.10	✓ ND	09/01/95
Mercury	mg/L	✓ 0.0002	✓ ND	08/25/95
Selenium	mg/L	0.005	✓ 0.014	08/26/95
Silver	mg/L	✓ 0.005	✓ ND	09/01/95

These data have been reviewed and are approved for release.

Charles M. Cabaniss
 Manager, Inorganic Chemistry



REPORT OF LABORATORY ANALYSIS

Mr. Battle Moore
Page 2

FOOTNOTES
for page 1

September 07, 1995
PACE Project Number: 650821506

Client Reference: TCLP Analyses

- MDL Method Detection Limit
- ND Not detected at or above the MDL.
- (1) 20gm to 20mls D.I. water.
- (2) All analysis performed on Toxic Characteristic Leachate.



REPORT OF LABORATORY ANALYSIS

Mr. Battle Moore
Page 3

QUALITY CONTROL DATA

September 07, 1995
PACE Project Number: 650821506

Client Reference: TCLP Analyses

Arsenic
Batch: 92 39456
Samples: 92 0457072

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
Arsenic	mg/L	0.005	ND

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Reference Value</u>	<u>Recv</u>
Arsenic	mg/L	0.005	0.040	98%



REPORT OF LABORATORY ANALYSIS

Mr. Battle Moore
Page 4

QUALITY CONTROL DATA

September 07, 1995
PACE Project Number: 650821506

Client Reference: TCLP Analyses

Mercury
Batch: 92 39327
Samples: 92 0457072

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Mercury	mg/L	0.0002	ND

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	920458290	Spike	Spike Recv	Spike Dupl Recv	RPD
Mercury	mg/L	0.0002	ND	0.0050	92%	112%	20%

LABORATORY CONTROL SAMPLE:

Parameter	Units	MDL	Reference Value	Recv
Mercury	mg/L	0.0002	0.0050	108%



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QUALITY CONTROL DATA

September 07, 1995
PACE Project Number: 650821506

Client Reference: TCLP Analyses

Selenium
Batch: 92 39459
Samples: 92 0457072

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
Selenium	mg/L	0.005	ND

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Reference Value</u>	<u>Recv</u>
Selenium	mg/L	0.005	0.040	110%



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QUALITY CONTROL DATA

September 07, 1995
PACE Project Number: 650821506

Client Reference: TCLP Analyses

ICP QUALITY CONTROL
Batch: 92 39493
Samples: 92 0457072

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Nickel	mg/L	0.010	ND
Cadmium	mg/L	✓0.010	✓ND
Vanadium	mg/L	0.010	ND
Lead	mg/L	✓0.10	✓ND
Barium	mg/L	✓0.010	✓ND
Copper	mg/L	0.010	ND
Chromium	mg/L	✓0.010	✓ND
Beryllium	mg/L	0.010	ND
Zinc	mg/L	0.010	ND
Cobalt	mg/L	0.010	ND
Iron	mg/L	0.010	ND
Silver	mg/L	✓0.005	✓ND
Manganese	mg/L	0.010	ND
Aluminum	mg/L	0.010	ND
Calcium	mg/L	0.10	ND
Sodium	mg/L	0.10	ND
Potassium	mg/L	0.10	ND
Magnesium	mg/L	0.10	ND
Molybdenum	mg/L	0.020	ND

LABORATORY CONTROL SAMPLE:

Parameter	Units	MDL	Reference Value	Recv
Nickel	mg/L	0.010	1.0	92%
Cadmium	mg/L	0.010	1.0	88%
Vanadium	mg/L	0.010	1.0	87%
Lead	mg/L	0.10	1.0	89%
Barium	mg/L	0.010	1.0	96%
Copper	mg/L	0.010	1.0	93%
Chromium	mg/L	0.010	1.0	90%
Beryllium	mg/L	0.010	1.0	83%
Zinc	mg/L	0.010	1.0	91%



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QUALITY CONTROL DATA

September 07, 1995
PACE Project Number: 650821506

Client Reference: TCLP Analyses

ICP QUALITY CONTROL
Batch: 92 39493
Samples: 92 0457072

LABORATORY CONTROL SAMPLE:

Parameter	Units	MDL	Reference Value	Recv
Cobalt	mg/L	0.010	1.0	92%
Iron	mg/L	0.010	1.0	95%
Silver	mg/L	0.005	0.10	104%
Manganese	mg/L	0.010	1.0	93%
Aluminum	mg/L	0.010	1.0	98%
Calcium	mg/L	0.10	10.0	94%
Sodium	mg/L	0.10	10.0	97%
Potassium	mg/L	0.10	10.0	97%
Magnesium	mg/L	0.10	10.0	86%
Molybdenum	mg/L	0.020	1.0	87%



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FOOTNOTES
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September 07, 1995
PACE Project Number: 650821506

Client Reference: TCLP Analyses

MDL Method Detection Limit
ND Not detected at or above the MDL.
RPD Relative Percent Difference

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