North Carolina
Department of Environment and Natural Resources

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Dexter R. Matthews, Interim Director

NCDENR

July 18, 2001

Mr. Dean Johnston
Ash Basics Company
P.O. Box 3573
Mooresville, NC 28117

References: 1) Iredell County CCBP structural fill located in Mooresville, NC and named the Duckworth Project. Owner is stated to be OTH HOLDINGS, LLC; Rob Duckworth, Member/manager.
2) Catawba County CCBP structural fill located at 7836 NC Highway 150E known as the Jeten Project. Owners are stated to be Edward and Nadine Tarantino c/o Jeten Properties, Inc. On the "Owner's Acknowledgment and Consent Form", Jeten Properties is shown to be the owner with Edward Tarantina's signature.

Dear Mr. Johnston:

On June 20, 2001 you and I discussed the recordation of completed CCBP structural fills and I promised to look at the two reference files to see if recordation documents had been received on the two reference projects. I have now searched those files and find that we have received a recordation document for the reference number one project but not for reference number two. Please have the owner(s) record that project as per Rule .1707 with the Catawba County Register of Deeds. Please note that in my previous correspondences about the Reference Number two site I have in error identified it as being in Iredell County when it is actually in Catawba. I apologize for any confusion this may have caused.

In searching the files I have also found that Certificates of Closure have not been received by the Division on either project. At your earliest convenience, please forward Certificates of Closure for both projects signed and sealed by a NC registered Professional Engineer. Rule .1706(d) states that these are due within 30 days after application of the final cover.

Sincerely,

William R. Hocutt

William R. Hocutt, Chemist
Solid Waste Section

cc: Jim Coffey
Jim Barber
Tim Jewett
Anthony Foster

c:/wp6docs/letters/dukpwr07-18.wpd

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone: 919-733-0692 \ FAX: 919-733-4810 \ Internet: www.enr.state.nc.us/

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GROUND
TECHNOLOGICAL
SERVICES
INC.

May 23, 2001

Mr. William Hocut
NC Division of Environment and Natural Resources (DENR)
Solid Waste Section
401 Oberlin Road
Raleigh, North Carolina 27605

MAY 2001

RE: "Jeten Property"
Regulatory requirements
7836 NC Highway 150 East
Mooresville, North Carolina
GTSI-010300

Dear Mr. Hocut,

On behalf of the owners, Ed and Nadine Tarantino, Ground Technological Services Inc. (GTSI) has performed field observations and field density quality control services for the referenced site in accordance with the NCDENR 15A-13B.17. - "Conditioned Ash Restrictions".

The 7.91 acre proposed construction consists of a series of commercial office and warehouse structures surrounded by impervious driveway and parking areas. Controlled conditioned ash structural fill was installed within a deep on-site northeast trending drainage swale. The coal combustion by-product was provided from the nearby Marshall Steam Station located approximately ½ mile to the west.

Duke Power Company provided initial environmental services, with groundwater measurements and topographic observations indicated in a report dated September 27, 2000. The report revealed no on-site standing or running water within the lowest elevation (approximately 765 feet) along the northwestern boundary area. Measurements within three (3) borings revealed groundwater from 3.0 to 6.0" below the existing surface in two of the borings within the lower part of the site. We understand no fly ash was installed below the 770-foot contour, meeting the two-foot separation criteria from groundwater.

For erosion control purposes, a silt fence was erected to separate the work area from a down gradient drainage channel above Lake Norman. A temporary water detention pond was excavated prior to ash and earthwork procedures and subsequently removed.

P.O. Box 2246 ▪ Huntersville, NC 28070 ▪ Phone 704-987-8378 ▪ Fax 704-987-8175

▪ Geotechnical ▪ Civil ▪ Environmental ▪ Structural ▪ Mechanical Engineering
▪ Construction Materials Testing ▪ Wetlands ▪ Geological & Drilling Services

Following "stripping and grubbing" of surficial top soils and plant materials to firm bearing soils, GTSI performed a total of one hundred and fourteen (114) field density tests in up to 37 feet of structural ash fill. The materials were installed in 12" moisture-conditioned structural lifts, with an 18" earthen structural fill cap compacted to subgrade elevation. A total of approximately 102,000 tons of conditioned ash materials were installed.

Water trucks were utilized during the structural ash fill installation for dust control measures and to facilitate adequate compaction. Following earthwork, the disturbed areas were seeded with grass. All tests or final retests met or exceeded the project design criteria of 95% of the (maximum) Standard Proctor Moisture-Density Relationship, ASTM D-698. GTSI reports summarizing the compaction data were issued February 28 and April 30, 2001.

GTSI noted average slope of side slope areas appeared to comply with the maximum 3:1 slope guidelines, and a well-established growth of grass covered disturbed areas was observed. No ponded areas were noted following inclement weather. Implementation of setback guidelines included 25' from property lines and bedrock outcrops and 50' from jurisdictional Waters of the U.S.

One on-site, up-gradient water supply well was noted beyond the 100 foot mandated setback. Unless utilized for the proposed project, it is our understanding the well will be properly abandoned in accordance with DENR 2C regulations.

A second water supply well noted on the adjacent, up-gradient residential property to the west was beyond the 100-foot setback.

If you should have any questions, please call us at your convenience.

Sincerely,
Ground Technological Services, Inc.

Geoff Underwood
Staff Geologist

Gary L. Gechter P.G.
President

Mark W. Hoidas P.E.
Vice President- Engineering

c.c. Dean Johnson
Ash Basics Company

GROUND
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Staff Geologist

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Vice President- Engineering

c.c. Dean Johnson
Ash Basics Company

Duke Power
A Duke Energy Company

Duke Power
Group Environment, Health & Safety
13339 Hagers Ferry Road
Huntersville, NC 28078-7929

September 27, 2000

To: Larry Harper
Fuels Procurement, Coal Ash

Subject: Highway 150 Ash Fill Site
Groundwater Evaluation

Site Location: The site is located approximately ¾ mile northeast of Marshall Steam Station on North Carolina Highway 150 (Figure 1).

Site Characteristics: At time of this assessment (9/25/00), the subject property was about 90% cleared of trees and vegetation. A moderately slopping ravine receives surface drainage from the north, south and western slopes and drains to a cove in the Marshall Steam Station intake cannel. Surface drainage has washed a five foot deep narrow gully in the bottom of the ravine with a bottom elevation of approximately 765 feet. No running or standing water was observed in the bottom of the ravine.

Groundwater Assessment: Three soil borings were advanced using a three inch diameter bucket auger to evaluate depth to seasonal high water table. Locations one and two (Figure 2) were located at approximate elevations 761 and 765 respectively. Location three was located on the northern lip of the gully above location two and at approximate elevation 770. Relevant soil descriptions and relation to seasonal high water table are provided below:

Location #1 Soil at a depth of two feet was a light brownish gray, silty sand with a Munsell chroma value of 2 (10YR 6/2). Low chroma values are indicative of saturated conditions. Water filled the boring to a depth of 6 inches below surface but was probably influenced by drainage from a rain event the previous day.

Location #2 Soil at a depth of two feet was a yellowish red silty sand with a Munsell chroma value of 6 (5YR 5/6) with 25% mottles. Mottles indicate conditions of variable saturation. Water filled the boring to a depth of 3 inches below surface but was probably influenced by drainage from a rain event the previous day.

Location #3 Soil from surface to five feet was a yellowish red clayey silty sand (5YR 5/8). Soil from five to six feet was of the same color but with 3% mottles at five feet and increasing with depth. No water entered the boring (termination depth 6.0').

Duke Power
A Duke Energy Company

Duke Power
Group Environment, Health & Safety
13339 Hagers Ferry Road
Huntersville, NC 28078-7929

Conclusions: Based on the topography of the site, soil descriptions and site observations, the seasonal high water table appears to be one to two feet below the bottom elevations of the site. If soil fill is used up to the 770 elevation as planed, then ash placement above 770 will meet the two feet above seasonal high water table permit requirement.
If you have any questions or need additional information, please don't hesitate to contact me at 875-5228.

Tim Hunsucker
Scientist, Environmental Chemistry
Scientific Services Section
Group Environment, Health and Safety

attachments

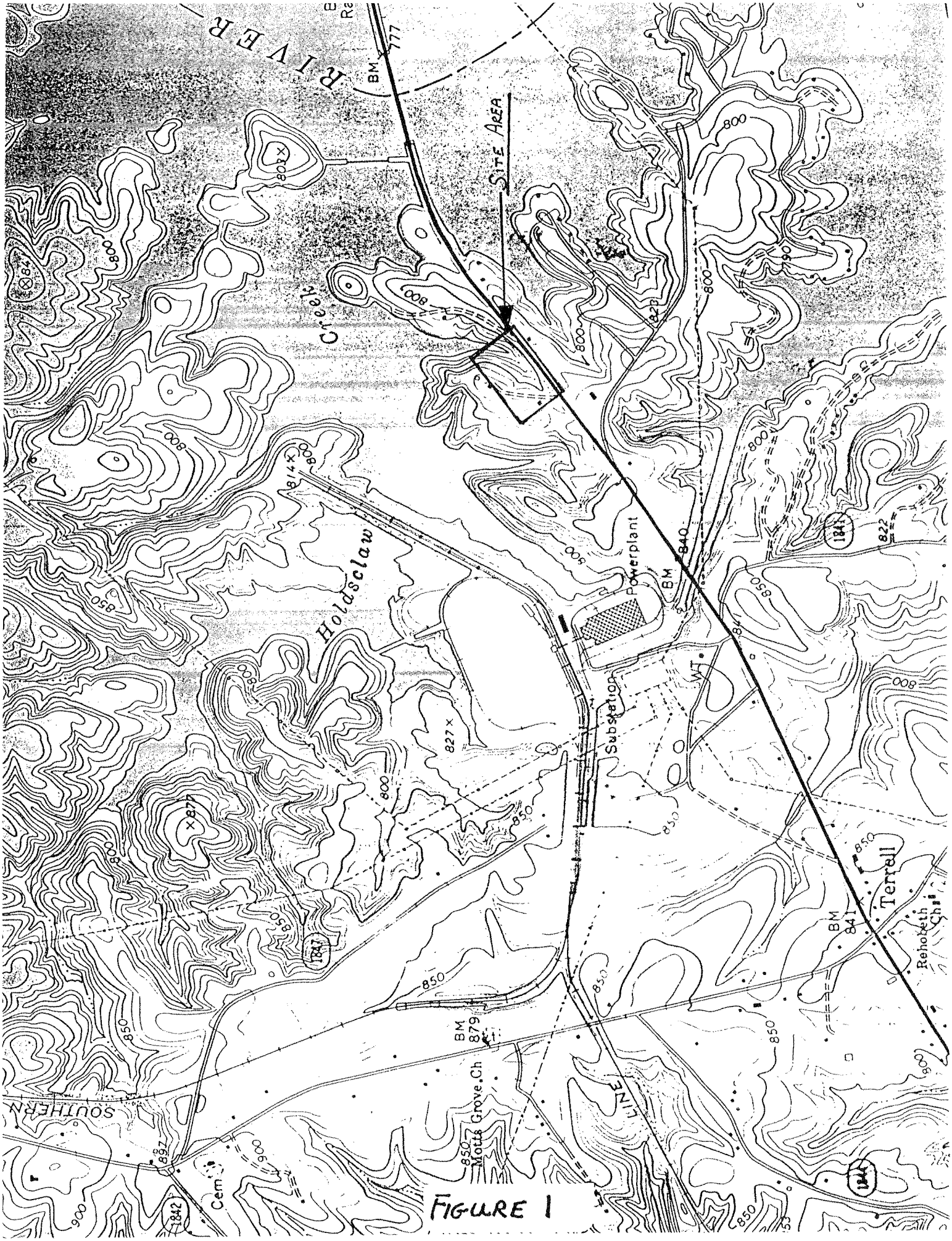
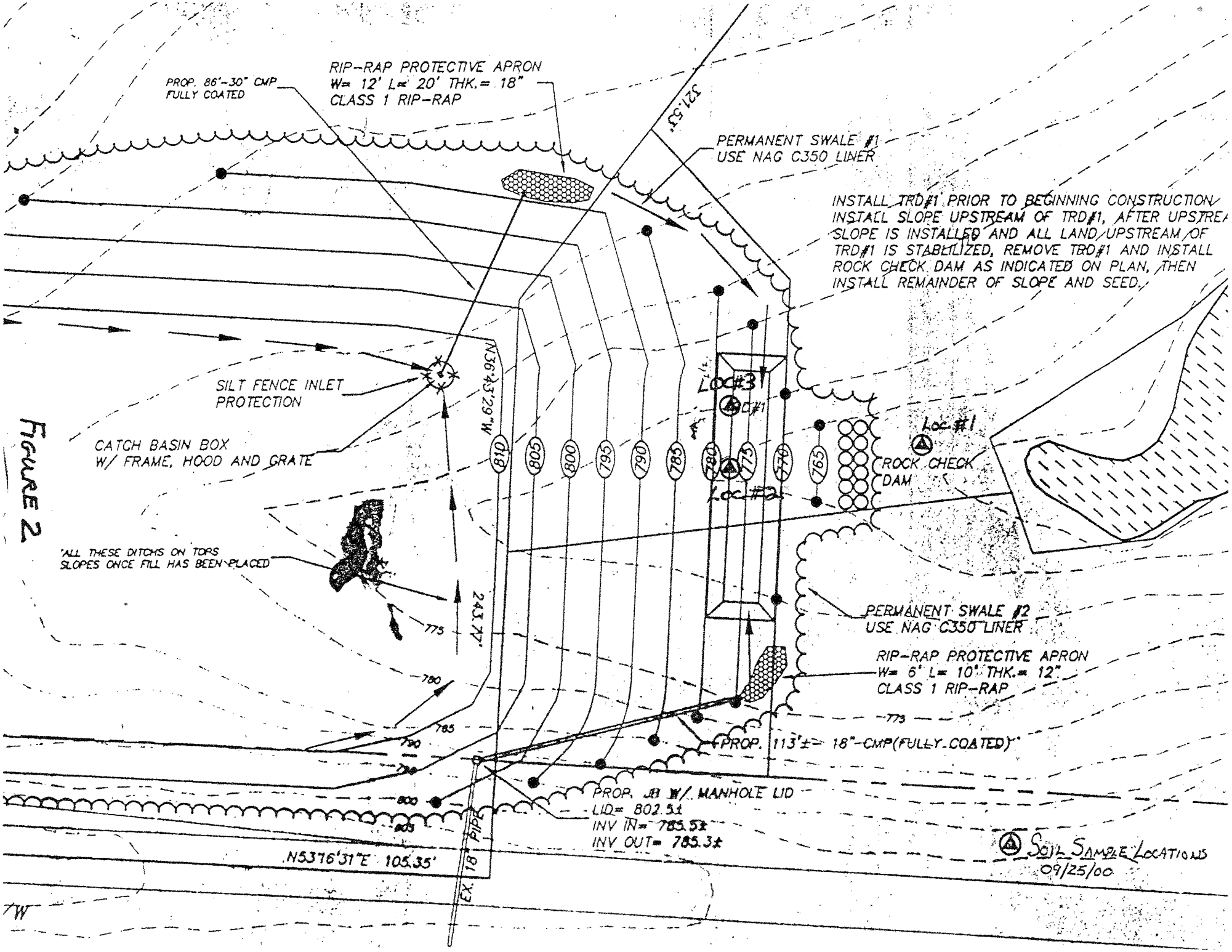

RIVER
Site Area
Creek
Holdsclaw
Powerplant
Substation
Terrell
Rehobeth Ch
Motts Grove Ch
SOUTHERN
LINE
Cem
BM 777
BM 840
BM 841
BM 879
1841
1842
1847
800
850
900

FIGURE 1



PROP. 86'-30" CMP FULLY COATED
RIP-RAP PROTECTIVE APRON
W= 12' L= 20' THK.= 18"
CLASS 1 RIP-RAP
321.53'
PERMANENT SWALE #1
USE NAG C350 LINER
INSTALL TRD#1 PRIOR TO BEGINNING CONSTRUCTION
INSTALL SLOPE UPSTREAM OF TRD#1, AFTER UPSTREA
SLOPE IS INSTALLED AND ALL LAND UPSTREAM OF
TRD#1 IS STABLILIZED, REMOVE TRD#1 AND INSTALL
ROCK CHECK DAM AS INDICATED ON PLAN, THEN
INSTALL REMAINDER OF SLOPE AND SEED.
SILT FENCE INLET PROTECTION
CATCH BASIN BOX W/ FRAME, HOOD AND GRATE
N36°43'29"W
LOC#3
LOC#1
LOC#2
810
805
800
795
790
785
780
775
770
765
ROCK CHECK DAM
ALL THESE DITCHS ON TOPS SLOPES ONCE FILL HAS BEEN PLACED
243.77'
775
780
785
790
795
800
805
PERMANENT SWALE #2
USE NAG C350 LINER
RIP-RAP PROTECTIVE APRON
W= 6' L= 10' THK.= 12"
CLASS 1 RIP-RAP
PROP. 113'± 18"-CMP(FULLY COATED)
PROP. JB W/ MANHOLE LID
LID= 802.5±
INV IN= 785.5±
INV OUT= 785.3±
N53°16'31"E 105.35'
EX. 18" PIPE
SOIL SAMPLE LOCATIONS
09/25/00

FIGURE 2

ASH BASICS COMPANY

"UTILIZATION ALTERNATIVES FOR THE FUTURE"

128 EAST PLAZA DRIVE
MOORESVILLE, N.C. 28115
(O. 704-799-2944) (M. 704-906-3735)
E-MAIL - GO4DEAN@AOL.COM

10-9-2000

OCT 2000 Received Solid Waste Section

WILLIAM R. HOCUTT
ENVIRONMENTAL CHEMIST
NCDEHNR SOLID WASTE SECTION
401 OBERLIN ROAD, SUITE 150
RALEIGH , N. C. 27605

Dear Mr. Hocutt,

Per the requirements of Solid Waste Management, Section .1700, Requirements For Beneficial Use Of Coal Combustion By-Products find the enclosed submittal for notification.

I am enclosing a drawing for your review for the use of fly ash produced at the Duke Energy's Plant Marshall in Terrell N.C..

Enclosed are the following documents:

1) Drawing of proposed site and erosion control plan
2) Duke Power Groundwater Assessment
3) Owners Acknowledge and Consent
4) TCLP Analysis
5) 8.5 X 11 copy of USGS location map, 7.5 Minute Series , Mooresville NC

A) The property is located at 7836 NC Hwy 150 E. The end use is intended for office warehouse, professional offices and out parcels to be developed at a later date.

B) The estimated start date is 10-1-2000. Site clearing and prep and erosion control measures will be installed prior to ash placement. Ash placement estimated to begin by 11-1-2000.

C) Estimated fill volume is 85,000 cu. yd. / 102,000 tons.

D) The generator of the product is Duke Energy.

E) The location of the generator is 8320 East Hwy 150 Terrell, NC 28682. Catawba County

F) The name of contact for the generator is Larry Harper @ 704-382-7982

G) Notes for the use and handling of the by-products are on Drawing labeled 2 of 2 Job # 312-001

I am submitting this notification on behalf of the owner.
Owner: Ed and Nadine Tarantino c/o JETEN PROPERTIES, LLC. 10722 TIGERTON LANE CHARLOTTE NC 28269.

Ash Basics Company, Inc has been contracted by the owner to provide these services for development of this property using the Coal Combustion By-Products under the current NCDEHNR state regulations.

Ash Basics Company, Inc. has performed these services in surrounding areas since 1989 and are familiar with the standards required by the guidelines.

I would appreciate a response to this matter as soon as possible due to time restraints. I will gladly meet with you at your convenience for the review.

Please feel free to contact me any time at (704) 799-2944 O. or (704) 906-3735 M.
I look forward to hearing from you. Thanks!

Sincerely,

Dean Johnston - President
Ash Basics Company, Inc.

NCDENR

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

MOORESVILLE REGIONAL OFFICE

DIVISION OF LAND RESOURCES
LAND QUALITY SECTION

July 24, 2000

Mr. Edward Tarantino
986 Magnolia Drive
Palm City, Florida 34990

RE: LETTER OF APPROVAL
Project Name: Edward & Nadine Tarantino Property
Project ID: CATAW-2000-141
Location: Highway 150 - Catawba County
Submitted By: Wright & Associates
Date Received: July 18, 2000
New Submittal: ____ Revision __X__
River Basin: Catawba

Dear Mr. Tarantino:

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The Certificate of Approval must be posted at the job site. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0029.

Title 15 NCAC 4B .0018(a) requires that a copy of the approved erosion control plan be on file at the job site. Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 thru 66), this office may require revisions to the plan and implementation of the revisions to insure compliance with the Act.

NC SCHOOLS FIRST IN AMERICA 2010

919 NORTH MAIN STREET, MOORESVILLE, NORTH CAROLINA 28115
PHONE 704-663-1699 FAX 704-663-6040
AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER - 50% RECYCLED/10% POST-CONSUMER PAPER

Acceptance and approval of this plan is conditioned upon your compliance with federal and state water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form which you have provided. You are requested to file an amended form if there is any change in the information included on the form. In addition, it would be helpful if you notify this office of the proposed starting date for this project.

Your cooperation is appreciated.

Sincerely,

Zahid S. Khan

Zahid S. Khan
Asst. Regional Engineer

cc: Wright & Associates
Inspections Dept.

ZSK/ae

NOTICE

Effective July 1, 2000

The Sedimentation Control Rules (Title 15A Chapter 4)
Have Been Amended*As Follows:

- (15A NCAC 4B.0126(e)) The Erosion and Sedimentation Control Plan Review Fee Will Increase to $40 for Each Acre or Part of Any Acre of Disturbed Land.

- (15A NCAC 4B.0106(b)) When Deemed Necessary by the Approving Authority a Preconstruction Conference May be Required.

- (15A NCAC 4B.0107(b)) The Time for Establishment of a Permanent Ground Cover Will Shorten to 15 Working Days or 90 Calendar Days, which ever is shorter.

- (15A NCAC 4B.0127(c)) No Person May Initiate a Land-disturbing Activity before Notifying the Agency that Issued the Plan Approval of the Date that the Land-disturbing Actitivty Will Begin.

* Subject to final approval through the APA process.

For More Information, Contact:
N.C. Division of Land Resources
Land Quality Section Central Office
919-733-4574

CERTIFICATE OF PLAN APPROVAL

The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by the North Carolina Department of Environment and Natural Resources in accordance with North Carolina General Statute 113A - 57 (4) and 113A - 54 (d) (4) and North Carolina Administrative Code, Title 15A, Chapter 4B.0007 (c). This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent groundcover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0027 (b).

HWY. 150 — CATAWBA Co.

EDWARD & NADINE - TARANTINO PROPERTY

Project Name and Location

7-24-00

Date of Plan Approval

ZAHD S. KHAN

Regional Engineer
Land Quality Section

NCDENR

DIVISION OF LAND RESOURCES

Duke Power
A Duke Energy Company

Hazardous Waste Analysis Results

Environmental Center - McGuire Nuclear Complex - Building 7405

North Carolina Department of Environmental Health & Natural Resources (DENR) Certification # 248
South Carolina Department of Health & Environmental Control (DHEC) Laboratory Certification # 99005

Field I.D.	MARSHALL ASH		
Station / Contact	MARSHALL	LARRY EVANS	
Collection Date	03/01/99	Analysis Date	03/18/99
Laboratory I.D.	99-MAR-0005 99005031	Matrix Type	SOLID NA % Volume NA Weight (g)
Laboratory Contact	Penny Franklin		(704) 875-5209

Analyte	T.C.L.P. Conc.		T.C.L.P. Regulatory Limit	Waste Code	Analytical Method (U.S.E.P.A. SW-846 METHODS)
Silver (Ag)	< 0.005	mg/L	5 mg/l	D011	7760
Barium (Ba)	0.24	mg/L	100 mg/l	D005	6010
Cadmium (Cd)	< 0.03	mg/L	1 mg/l	D006	6010
Chromium (Cr)	0.15	mg/L	5 mg/l	D007	6010
Lead (Pb)	< 0.09	mg/L	5 mg/l	D008	6010
Arsenic (As)	< 0.1	mg/L	5 mg/l	D004	6010
Selenium (Se)	0.38	mg/L	1 mg/l	D010	6010
Mercury (Hg)	< 0.001	mg/L	0.2 mg/l	D009	7471
Nickel (Ni)			134 mg/l	---	6010
Thallium (Tl)			130 mg/l	---	6010
% Ash @ 550° C			N/A	---	ASTM D297/D817 E830 @ 550° C
B.T.U.			N/A	---	ASTM D3286-91
Total Sulfur			N/A	---	ASTM D4239-85
Total Chlorine			N/A	---	EPA 9076
Ignitibility			(Y/N)	---	EPA 1010
pH			< 2.0 or > 12.5	---	EPA 9040
% Water			N/A	---	ASTM D3792

ENGINEERING DATA
MARSHALL SILO ASH

Duke Power Company
System Coal Ash Analysis

Plant	Marshall	Report Date:	7/26/95
Ash Type	Silo Flyash		
Application	Sampled 2/24/94, lab testing completed 4/19/94		

Structural Fill Properties

Classification Tests		
	Specific Gravity	2.5
	Classification	Gray Fine Sandy Clayey Silt
	Atterberg Limits	Non-plastic

Moisture and Density			
	Natural Moisture Content		0.002
	Standard Proctor	Optimum Moisture, %	24
		Maximum Dry Density, PCF	80.8

Triaxial Shear Strength (Saturated, Consolidated, Drained)					
	Wet Density, PCF, avg.	Initial:	96.4	Final:	110.3
	Dry Density, PCF, avg.		77.2		79.9
	Moisture Content, %, avg.		24.8		38.1
	Cohesion, c	2448			
	Friction Angle, phi	26.5			
	Bearing Capacity, PSF	>5000			

Permeability, k, cm/sec	3.45 x 10^-4

Consolidation					
	Void Ratio, e	Initial:	1.037	Final:	0.92
	Compression Index, Cc	0.114			
	Strain, %, at 3000 PSF	1.66			

CONSOLIDATED DRAINED TRIAXIAL COMPRESSION TEST
SPECIMEN DATA

PROJECT:	MARSHALL STEAM STATION – SILOS
BOREHOLE NO.:	N/A
STATION:	N/A
DEPTH:	N/A
ELEVATION:	N/A

SAMPLE DESCRIPTION TOP ASH, DESCRIBED AS:
GRAY FINE SANDY CLAYEY SILT

INITIAL CONDITIONS

SPECIMEN NO.	1	2	3	AVERAGE
WET WEIGHT, PCF	96.0	96.5	96.6	96.4
DRY WEIGHT, PCF	77.1	77.0	77.4	77.2
WATER CONTENT %	24.5	25.2	24.8	24.8
SATURATION %	59.9	61.5	61.1	60.8
VOID RATIO	1.0227	1.0251	1.0160	1.0213

FINAL CONDITIONS

SPECIMEN NO.	1	2	3	AVERAGE
WET WEIGHT, PCF	110.9	109.4	110.6	110.3
DRY WEIGHT, PCF	80.8	78.4	80.4	79.9
WATER CONTENT %	37.2	39.6	37.6	38.1
SATURATION %	100.0	100.0	100.0	100.0
VOID RATIO	0.9300	0.9900	0.9400	0.9533

SPECIFIC GRAVITY 2.50

SCALE ID SYSTL 10068

OVEN ID 19423

INSPECTOR J. S. Tatum DATE 3-31-94

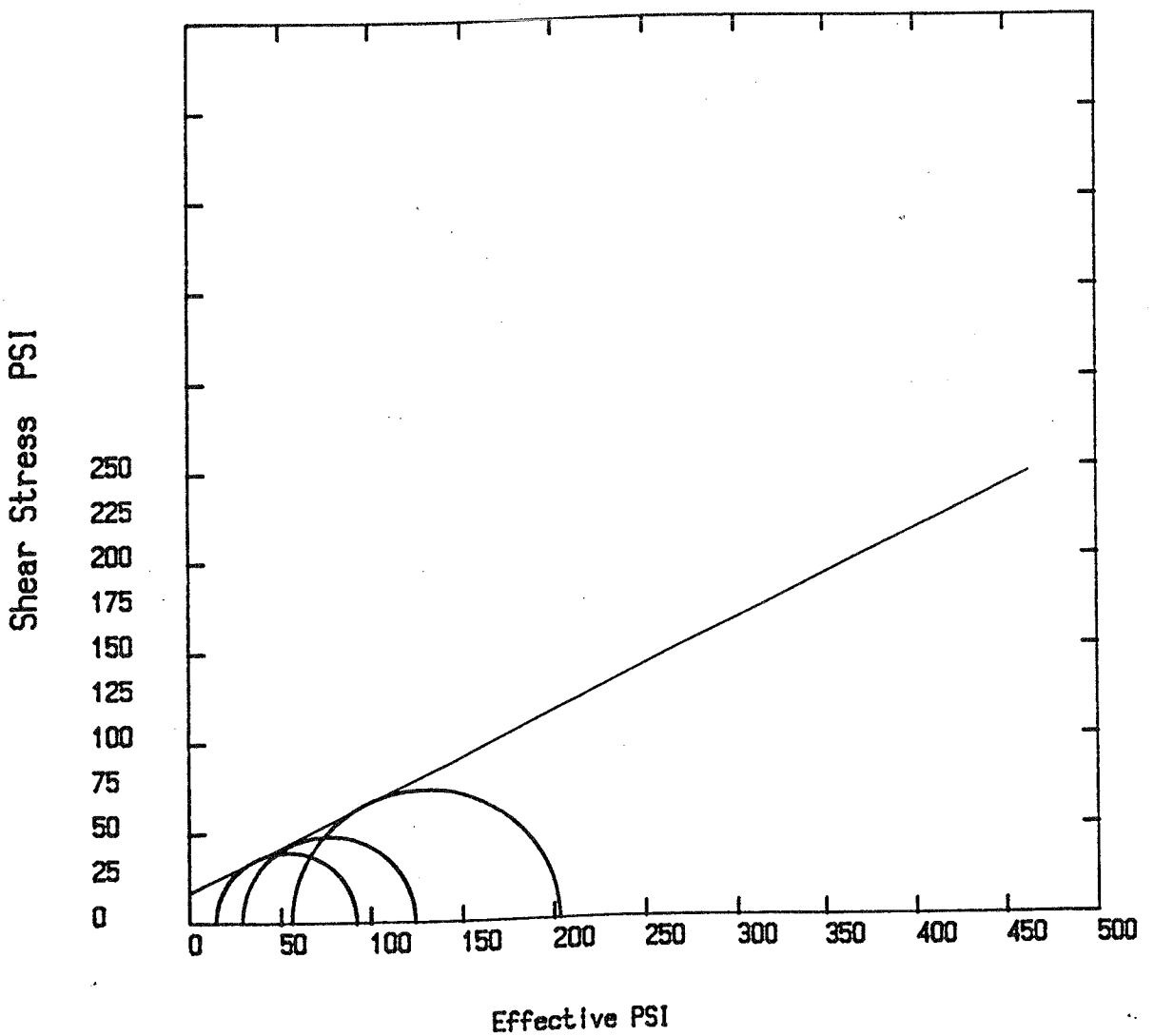
LEVEL 2 EVALUATION N/A DATE N/A

CONSOLIDATED DRAINED TRIAXIAL COMPRESSION TEST

SHEAR STAGE

C = 17.0PSI

PHI = 26.5 Degrees



Sample type N/A

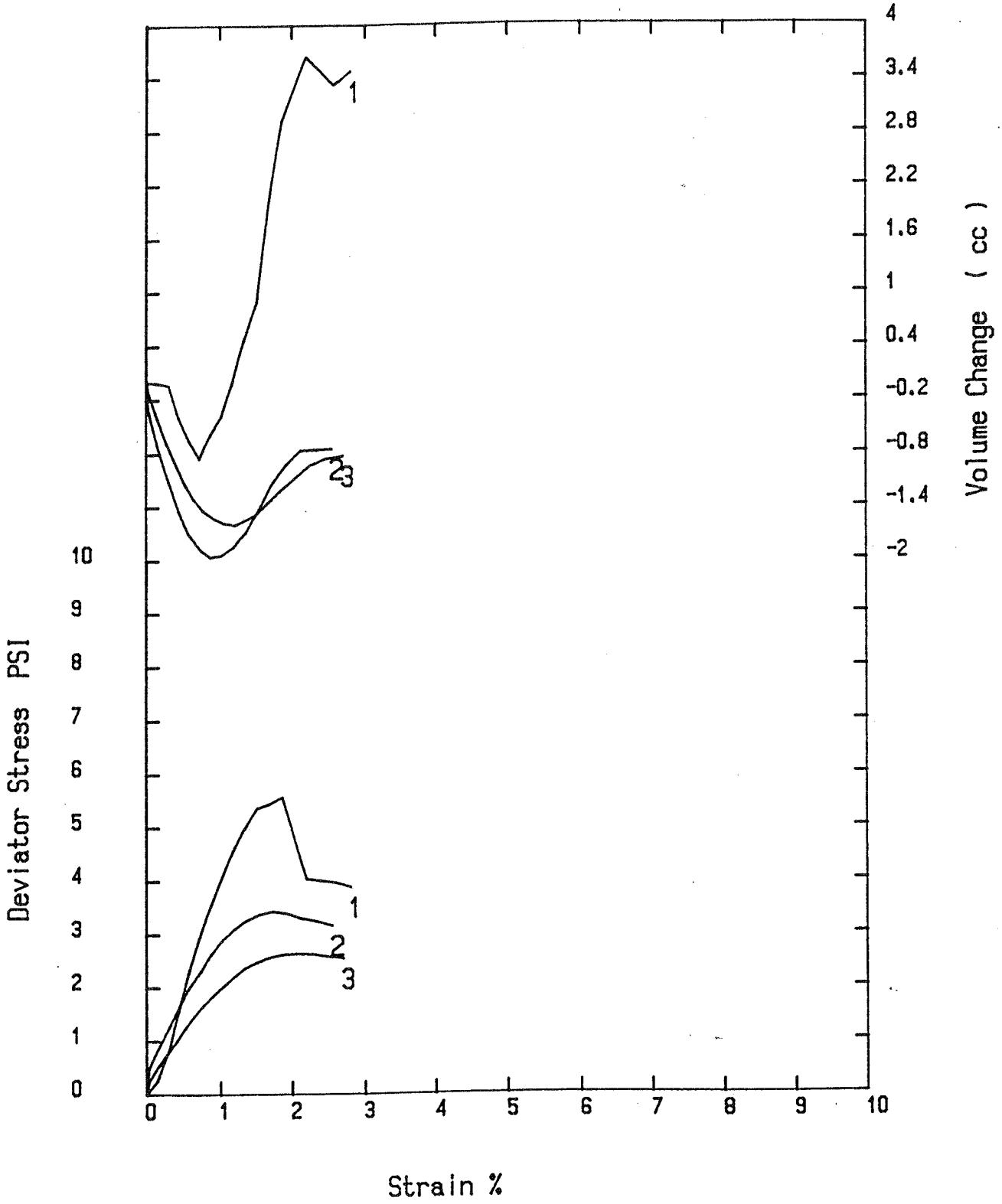
Sample Description TOP ASH, DESCRIBED AS: GRAY FINE SANDY CLAYEY SILT

Borehole No : N/A Sample No: 1 Depth : N/A

	Site ref : MARSHALL STEAM STATION - SILOS (ASH)	Job No : Fig No :

CONSOLIDATED DRAINED TRIAXIAL COMPRESSION TEST

SHEAR STAGE



Sample type N/A

Sample Description TOP ASH, DESCRIBED AS: GRAY FINE SANDY CLAYEY SILT

Borehole No : N/A Sample No: 1 Depth : N/A

	Site ref : MARSHALL STEAM STATION - SILOS (ASH)	Job No : Fig No :

DUKE POWER COMPANY
ONE DIMENSIONAL CONSOLIDATION TEST

COMPRESSION INDEX = .114

* INITIAL PROPERTIES *

VOID RATIO = 1.037

UNIT WEIGHT : WET = 95.1 PCF

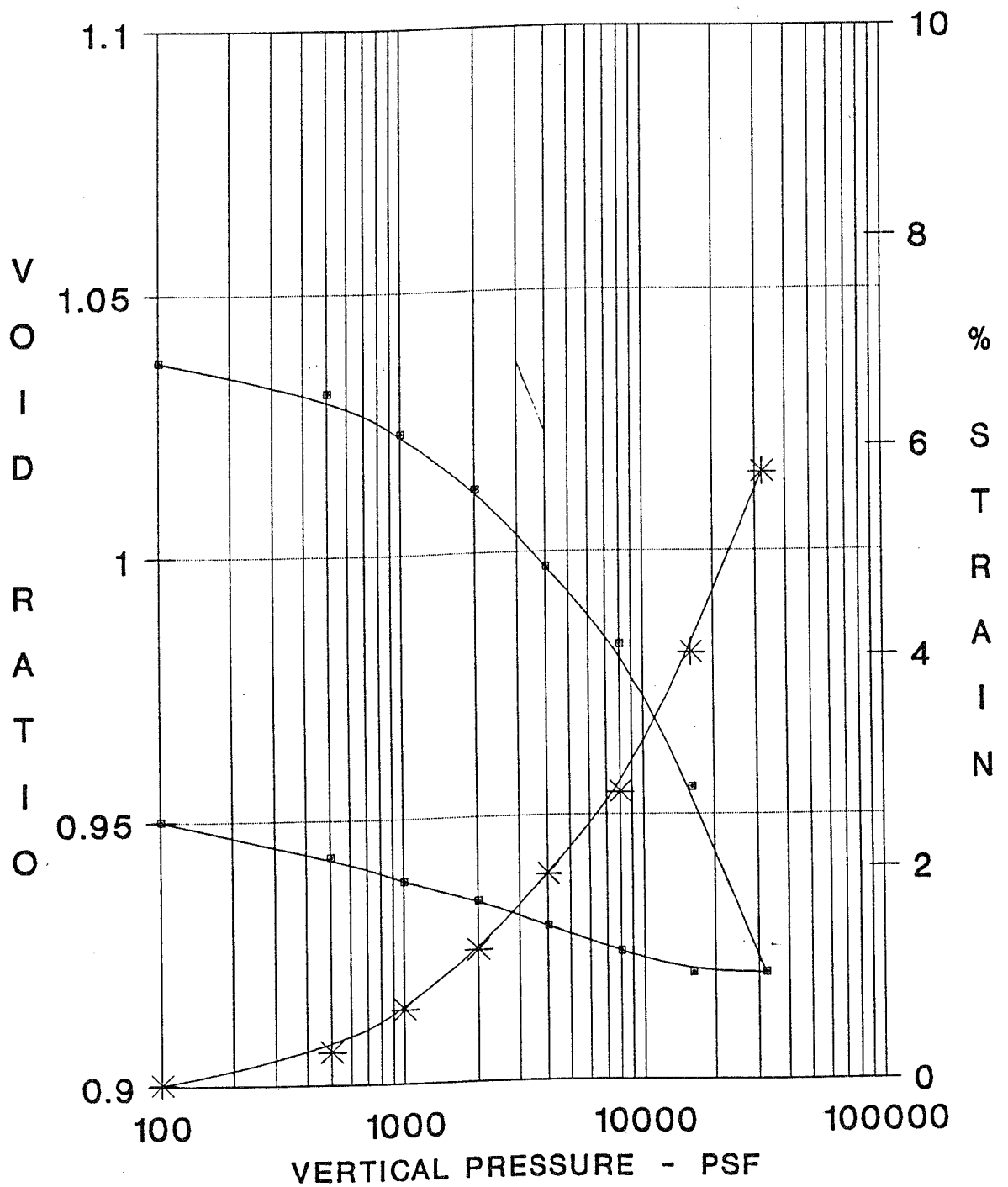
DRY = 76.6 PCF

PERCENT MOISTURE = 24.1 %

PERCENT SATURATION = 58.1 %

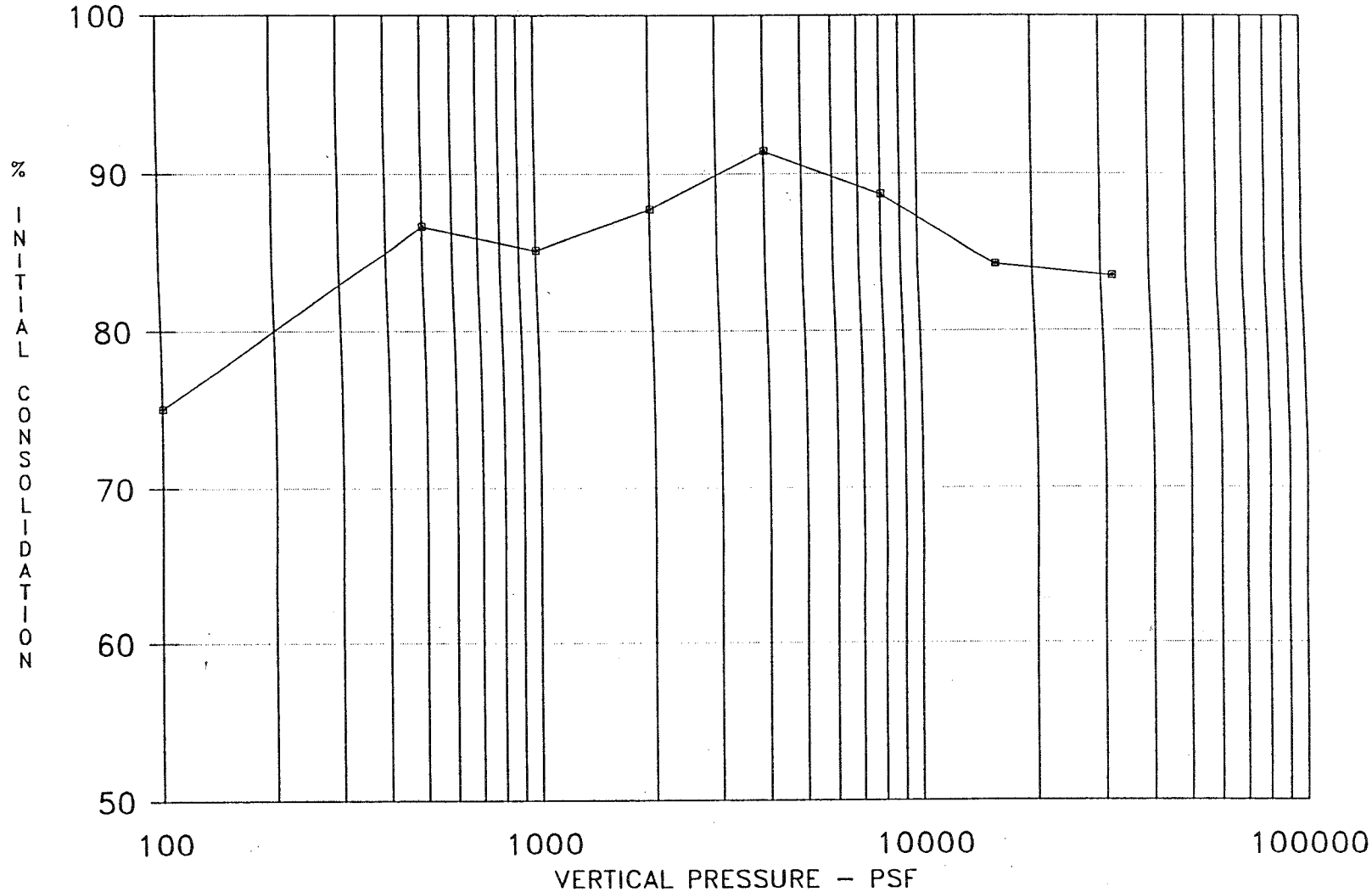
MARSHALL STEAM STATION SILOS-FLY ASH

DUKE POWER COMPANY
ONE DIMENSIONAL CONSOLIDATION TEST



MARSHALL STEAM STATION SILOS-FLY ASH

DUKE POWER COMPANY
ONE DIMENSIONAL CONSOLIDATION TEST



MARSHALL STEAM STATION SILOS–FLY ASH

25560 (R9-85)

FORM M-1F	REV. 4

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT

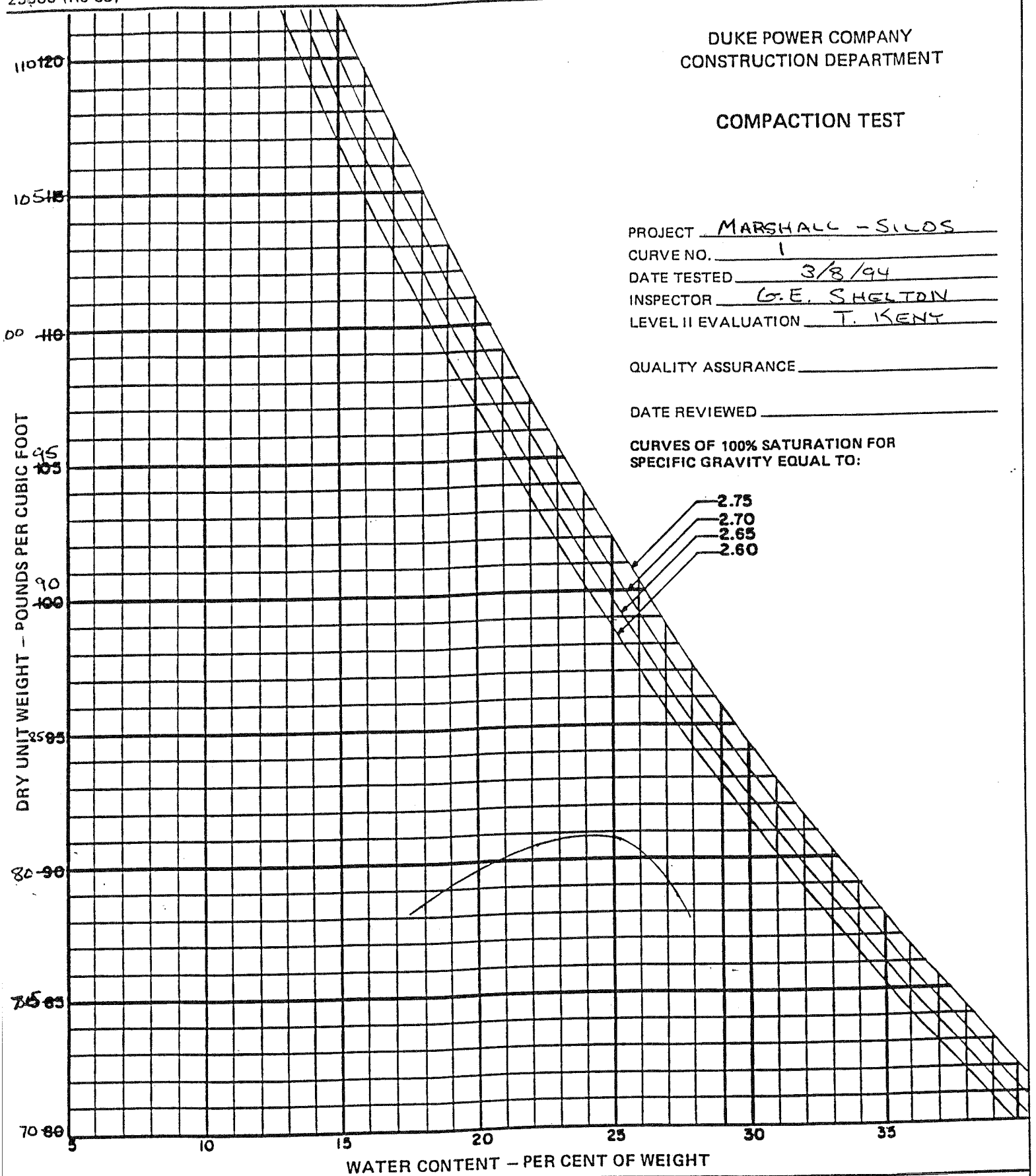
COMPACTION TEST

PROJECT MARSHALL - SILOS
CURVE NO. 1
DATE TESTED 3/8/94
INSPECTOR G.E. SHELTON
LEVEL II EVALUATION T. KENT

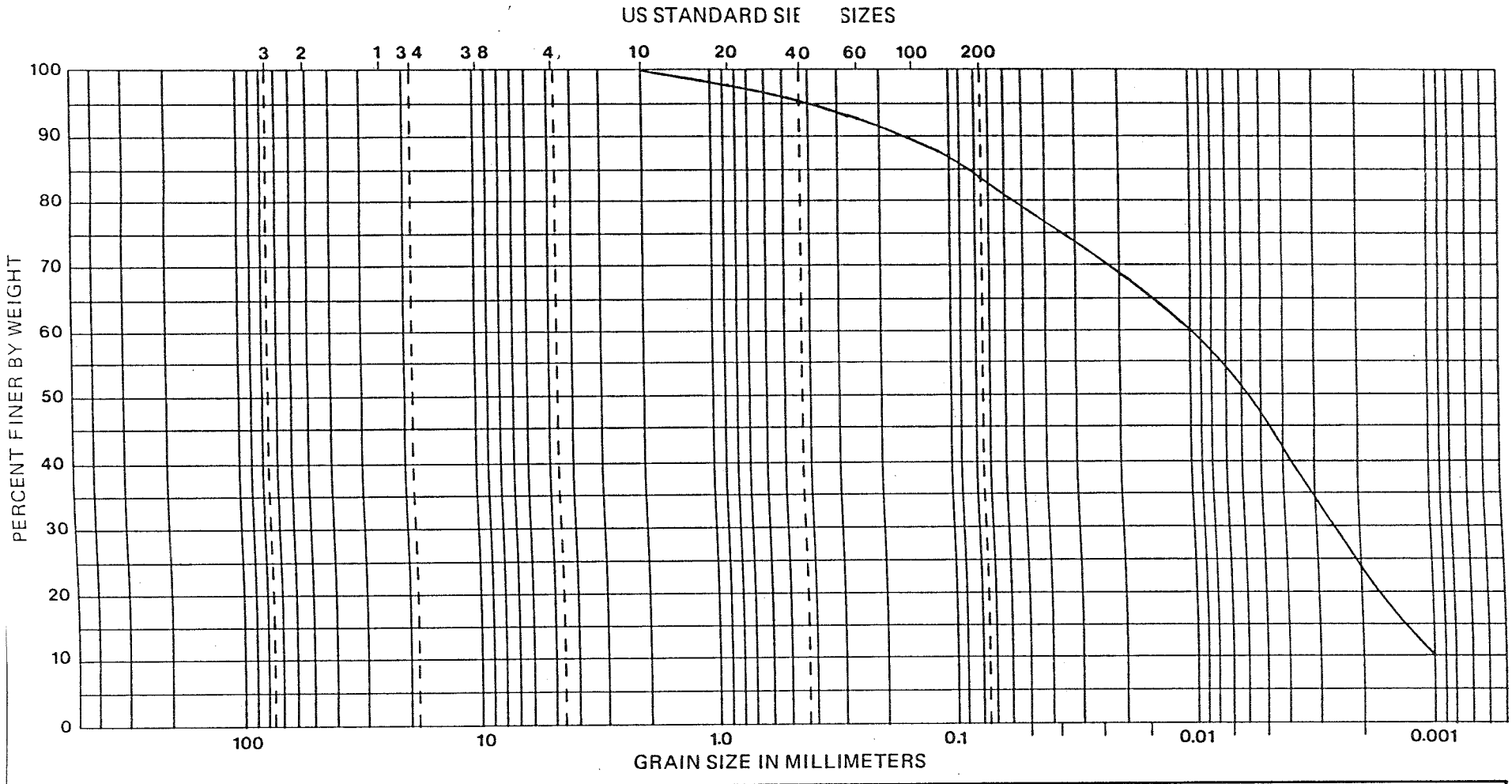
QUALITY ASSURANCE

DATE REVIEWED

CURVES OF 100% SATURATION FOR SPECIFIC GRAVITY EQUAL TO:



MOISTURE DENSITY RELATION	METHOD OF TEST	MAX. DRY DENSITY PCF	OPTIMUM MOISTURE CONTENT %	SOIL DESCRIPTION OR CLASSIFICATION AND SAMPLE LOCATION
N/A	ASTM D698 METHOD	80.8		TOP ASH



BOULDERS	COBBLES	GRAVEL		SAND			FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT SIZES	CLAY SIZES

PROJECT MARSHALL
SILOS - TOP ASH

BORING NO	ELEV OR DEPTH	NAT WC	LL	PL	PI	DESCRIPTION OR CLASSIFICATION
SILOS - TOP ASH	N/A	0.002%	N/A	N/A	N/A	~~GRAY~~ DST TOP ASH DESCRIBED AS: GRAY FINE SANDY CLAYEY SILT

GRAIN SIZE DISTRIBUTION

TEST NO. 1 JOB NO. N/A

INSPECTOR J. S. Tatum

DATE 3-14-94

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT

LEVEL II EVALUATION N/A

QA APPROVAL N/A DATE N/A

25565 (R9-85)

FORM M-1L

REV. 5

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAKE NORMAN NORTH
QUADRANGLE

STATE OF NOR
DEPARTMENT OF NATURAL
RALEIGH, NOR

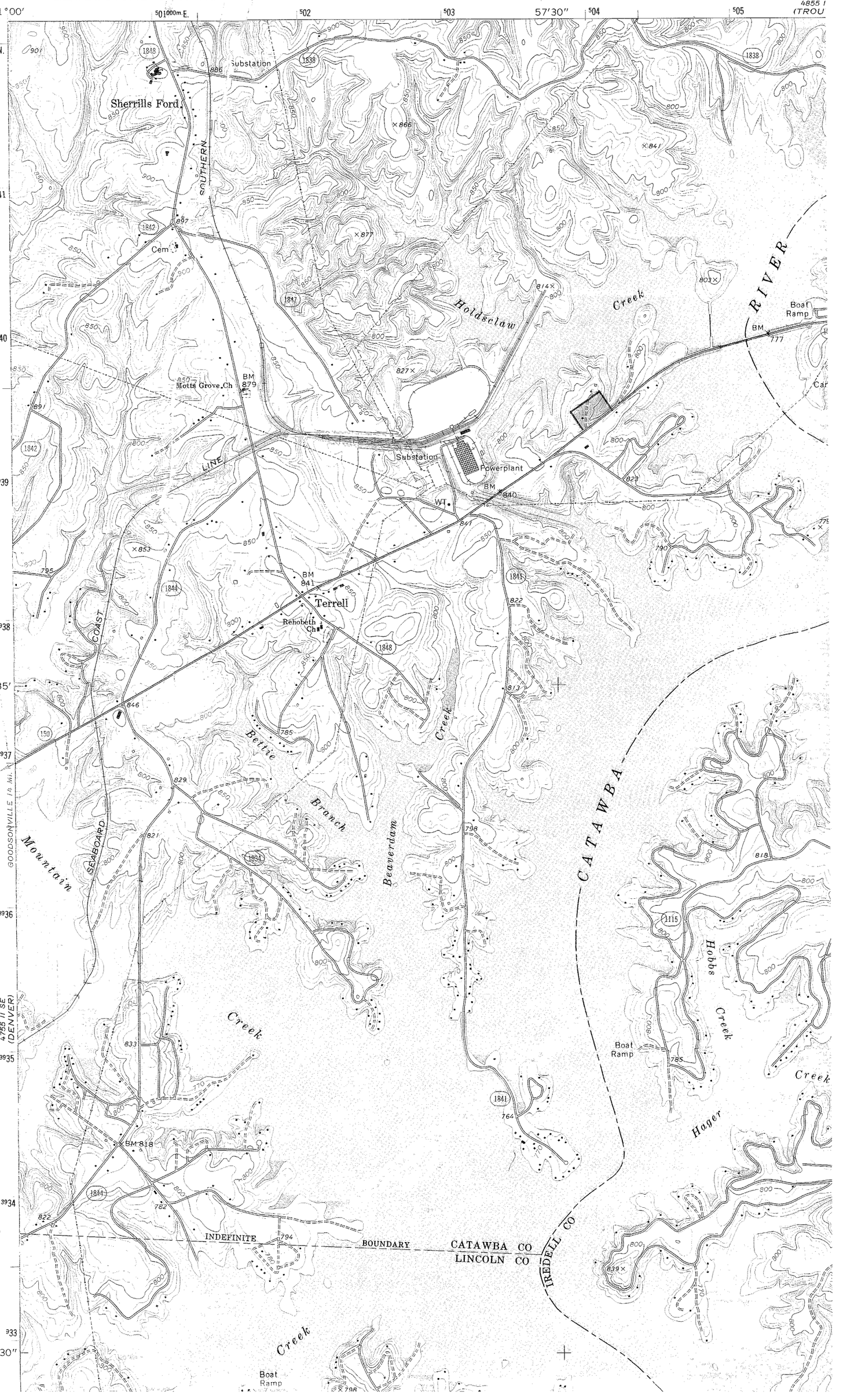


EXHIBIT 'E'

STATE OF NORTH CAROLINA
COUNTY OF CATAWBA

OWNER'S ACKNOWLEDGMENT AND CONSENT

JETEN PROPERTIES, INC. ("Owners") hereby execute this Owner's Acknowledgment and Consent as of the 23 day of August, 2000

1. We are the Owners of the Property located in CATAWBA County, North Carolina and described in more detail below (See Property Description).

2. We consent and acknowledge the use of coal ash as structural fill on the Property. Said Property is estimated to require approximately 90,000 cubic yards of coal ash. We also authorize Duke Energy Corporation and it employees, contractors and agents to enter the Property to review the placement of coal ash as required.

OWNER'S AGREEMENT TO RECORD

3. We the Owners of the Property further agree to record a statement of the volume and location of coal ash utilized on the property with the Register of Deeds in the county or counties where the Property is located. This recordation shall be in accordance with 15A NCAC 13B.1707.

Property Description (Court Records and Project Drawings):
DEED BOOK 2120, PAGE # 827

Jeten Properties, Inc.
Owner
By Edward Tarantino
Owner

Date: 8-23-2000

I Jill Grigorian, a Notary Public in the County of Catawba and State of North Carolina certify that Edward Tarantino personally appeared before me this day and acknowledged the due execution of the foregoing instrument.
Witness my hand and Notarial seal, this 23rd day of August, 2000.

Jill Grigorian
Notary Public
My Commission Expires: April 1, 2003

EXHIBIT 'F'

BORAL MATERIAL TECHNOLOGIES INC.

Material Safety Data Sheet

This document has been prepared to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

Classification: CCP

A Boral Industries Inc. Company

45 N.E. Loop 410, Suite 700
San Antonio, Texas 78216
Phone: (210) 349-4069
FAX: (210) 349-8512
E-mail: BMTI@BORALMTI.com

IDENTITY *(As used on label and list)*
BOTTOM ASH, LWA, LITE SAND

Note: *Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

Section I - Identity Information

Chemical Name: Bottom Ash	Emergency Telephone Number: 1 (800) 424-9300 (CHEMTREC)
Chemical Family: Coal Ash	Telephone Number for Information: (210) 349-4069
Date Prepared: 15-Feb-93	Date Revised: 07-Jan-98

Section II - Hazardous Ingredients

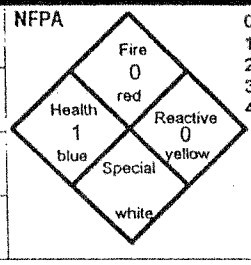
Hazardous Component *(Specific Chemical Identity; Common Name(s))*	OSHA PEL	ACGIH TLV	Other Limits Recommended
Silica, Amorphous (SiO_2) CAS# 7631-86-9.	~2.58 mg/m³	10 mg/m³	NIOSH: 6 mg/m³
Silica, Crystalline (SiO_2) CAS# 7631-86-9.	~1.56 mg/m³	0.1 mg/m³	0.05 mg/m³
Alumina, Respirable (Al_2O_3) CAS#1344-28-1.	5 mg/m³	5 mg/m³	NA
Calcium Oxide (CaO) CAS# 1305-78-8.	5 mg/m³	2 mg/m³	NA
Titanium Dioxide, Respirable (TiO_2) CAS# 13463-67-7.	15 mg/m³	5 mg/m³	NA
Ferric Oxide (Fe_2O_3) CAS# 1309-37-1.	10 mg/m³	5 mg/m³	NA
Magnesium Oxide (MgO) CAS# 1309-48-4.	15 mg/m³	10 mg/m³	NA

1. Composition is variable depending on coal source and power plant characteristics. 2. This product does not have a significant respirable particle size distribution. However, various material handling operations may produce dust with respirable particles. 3. Materials present at >0.5% and <12% and not listed in OSHA or ACGIH include Potassium Oxide and Carbon.

Section III - Physical/Chemical Characteristics

Boiling Point (°F): NA	Specific Gravity (H_2O=1): NA
Vapor Pressure (mm Hg.): NA	Percent Volatile by Volume (%): NA
Vapor Density (AIR=1): NA	Evaporation Rate (Butyl Acetate=1): NA
Solubility in Water: NA	pH: NA

NFPA



0 = Minimum hazard
1 = Slight hazard
2 = Moderate hazard
3 = Serious hazard
4 = Severe hazard

Special Symbols
OX = Oxidizer
ACID = Acid
ALK = Alkali
COR = Corrosive
W = Use no water
▼ = Radioactive

Appearance and Odor
Grayish white or black sand or aggregate material, odorless.

Section IV - Fire and Explosion Hazard Data

Flash Point: NA	Flammable Limits: LEL NA, UEL NA

Extinguishing Media
NA

Special Fire Fighting Procedures
NA

Unusual Fire and Explosion Hazards
NA

Section V - Reactivity Data

Stability: Unstable ☐ Stable ☑ | Conditions to Avoid: NA

Incompatibilty (Materials to Avoid): NA

Hazardous Decomposition or Byproducts: NA

Hazardous Polymerization: May Occur ☐ Will Not Occur ☑ | Conditions to Avoid: NA

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation? ☑ Skin? ☑ Ingestion? ☑

Health Hazards (Acute and Chronic)

Acute: Irritation of the eyes, skin and mucous membranes.
Chronic: Fibrotic disease of the lungs and potential carcinogencity.

Carcinogenicity: NA NTP? ☐ IARC Monographs? ☐ OSHA Regulated? ☐

Signs and Symptoms of Exposure

NA

Medical Conditions Generally Aggravated by Exposure

Persons with history of respiratory illness and reduced pulmonary function should avoid work areas with high dust levels. Persons with skin disorders may experience aggravation of the condition.

Emergency and First Aid Procedures

Skin: Wash with soap and water.
Eyes: Rinse eyes with water for at least 15 minutes, lifting eye lid occasionally. See a Physician.
Ingestion: DO NOT INDUCE VOMITING. Dilute by drinking milk or water. Never give anything by mouth to unconscious person. Keep victim warm and at rest. See a Physician.
Inhalation: Remove from dusty area to fresh air.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

Clean up for use or disposal. Dampen with a water mist to control dust (airborne dust) before removal. Do not use compressed air. If loaded on trucks, wet down material to prevent dusting during transport.

Waste Disposal Method

Dispose of in a landfill or coal ash disposal pond. observe local, state and federal regulations. This material is not a RCRA hazardous waste.

Precautions to Be Taken in Handling and Storing

Avoid creating dust.

Labeling

WARNING: Normal safety precautions are advised when handling these materials. Dampen with a water mist to control airborne dust and use appropriate personal protective equipment to avoid inhalation and exposure to eyes, skin and mucus membranes. Excessive exposure to these materials may cause irritation of the eyes, skin and mucus membranes and chronic exposure could lead to fibrotic disease of the lungs. This product contains silica, which has been identified as a potential carcinogen. If contact is made, areas affected should be thoroughly flushed with water. Medical attention is advised in case of ingestion, inhalation or eye contact. A Material Safety Data Sheet is on file. Call 210-349-4069 and ask for the Safety Manager.

Section VIII - Control Measures

Respiratory Protection (Specify Type): None required under PEL. If PEL is exceeded, use MSHA/NIOSH TC-21C-XXX respirators.

Type of Ventilation: Local Exhaust ☑ Special ☐ Mechanical (General) ☑ Other ☐

If Special or Other specify:
Use local exhaust during transfer to stay below PEL. Use mechanical ventilation for indoor work places as needed.

Protective Gloves

Work gloves as needed

Eye Protection

Recommend Safety goggles or safety glasses. Eye wash stations should be readily accessible.

Other Protective Clothing or Equipment

As needed.

Work/Hygienic Practices

Use good hygiene practices and observe above precautions.

The information and recommendations set forth herein are based on data we have in our possession and we have reason to believe is accurate. It is, however, the user's responsibility to determine the safety, toxicity, and suitability for his own use of the herein described product. Because the actual use by others is beyond our control, Boral Material Technologies Inc. makes no warranty expressed or implied regarding accuracy of the data or the results to be obtained from the use thereof.