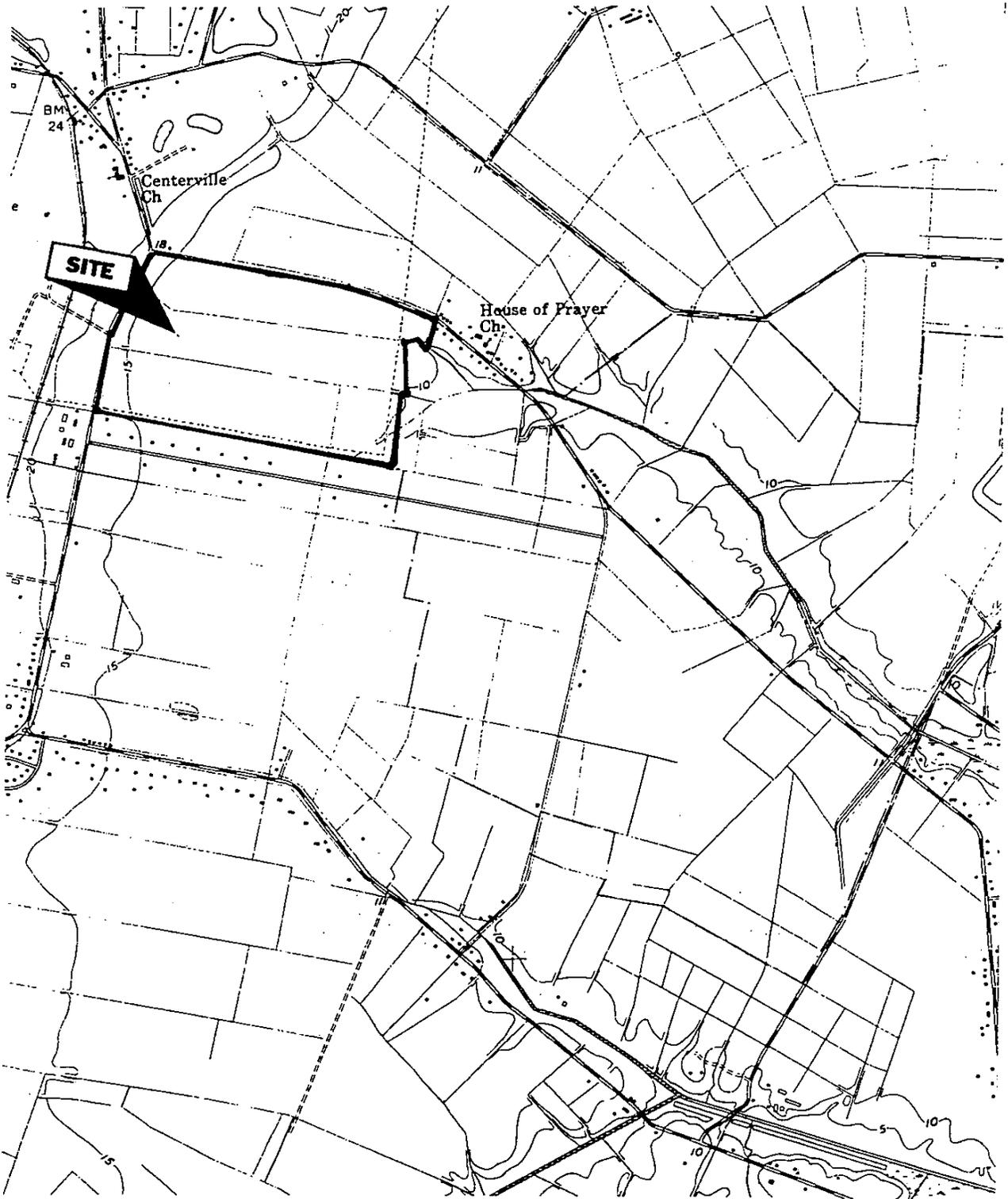


**APPENDIX SECTION**

## **APPENDIX A – MAPS AND AERIAL PHOTOGRAPHS**

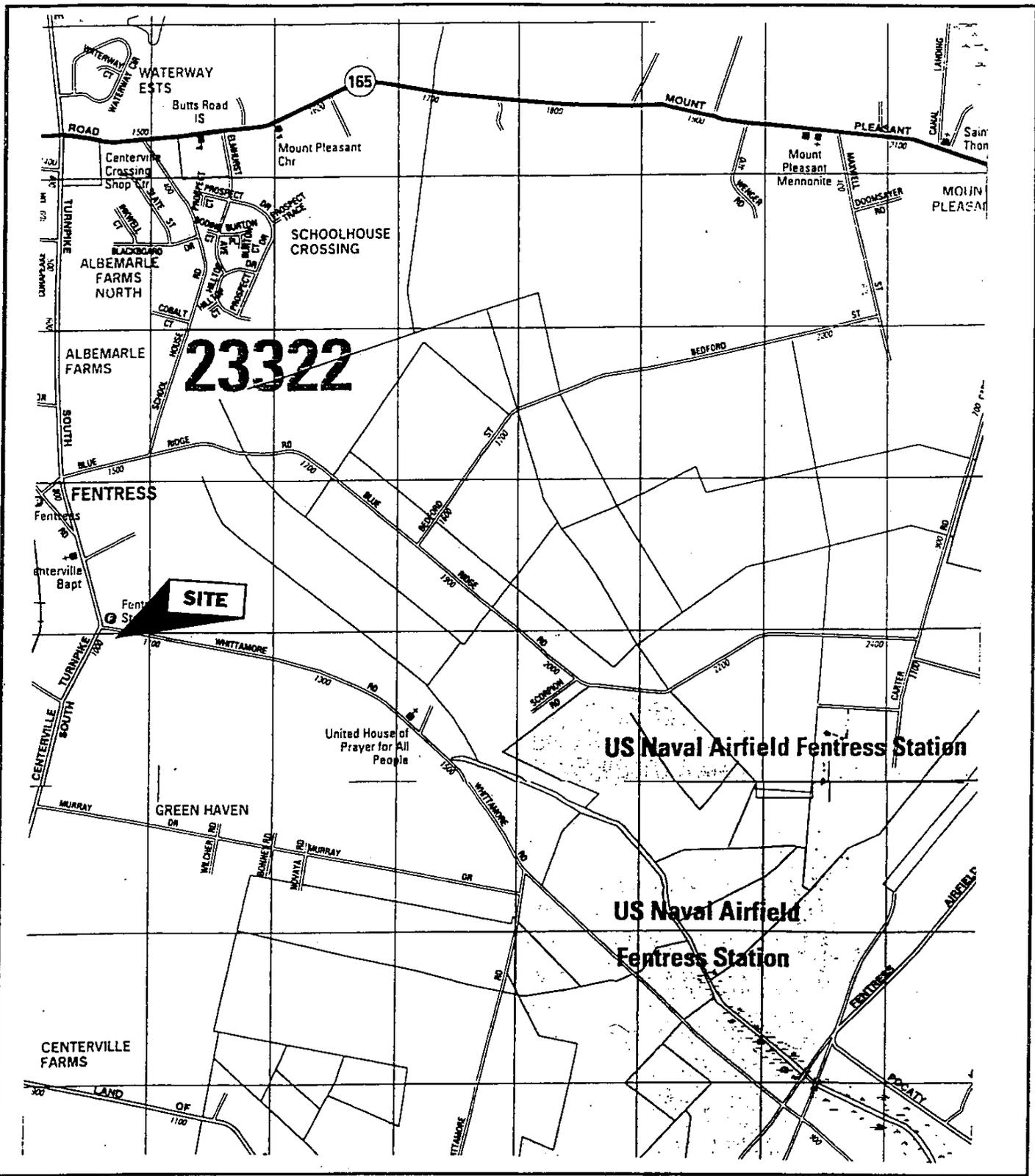
Project Number SEA 01-1359, 23 August 2001



**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**TOPOGRAPHIC MAP**

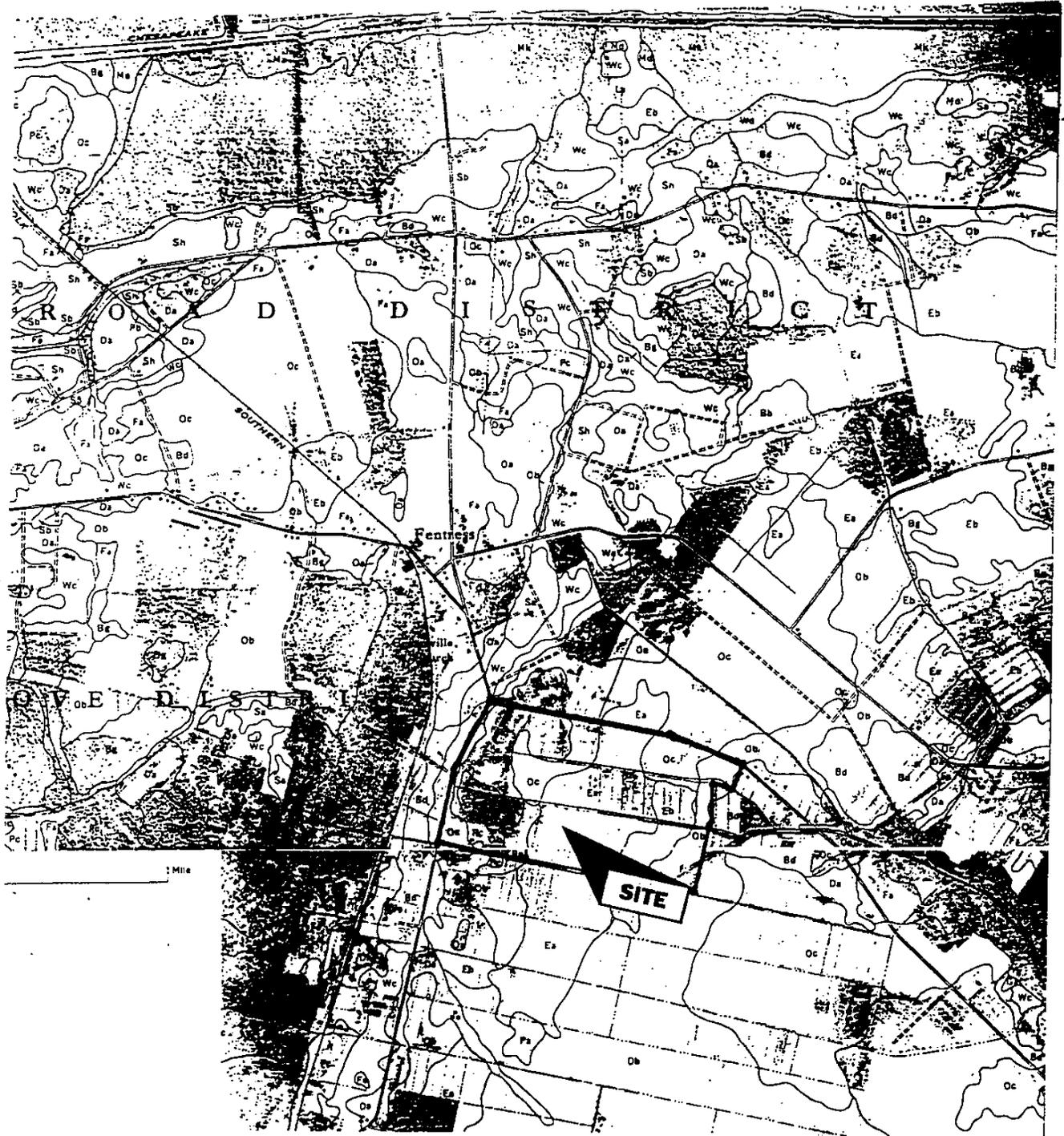
PROJECT NAME: Etheridge Green  
PROJECT NUMBER: SEA 01-1359  
SCALE: 1:24000  
DATE: 1954 (photorevised 1986)  
SOURCE: USGS Fentress Va, 7.5 minute quadrangle



**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**SITE VICINITY MAP**

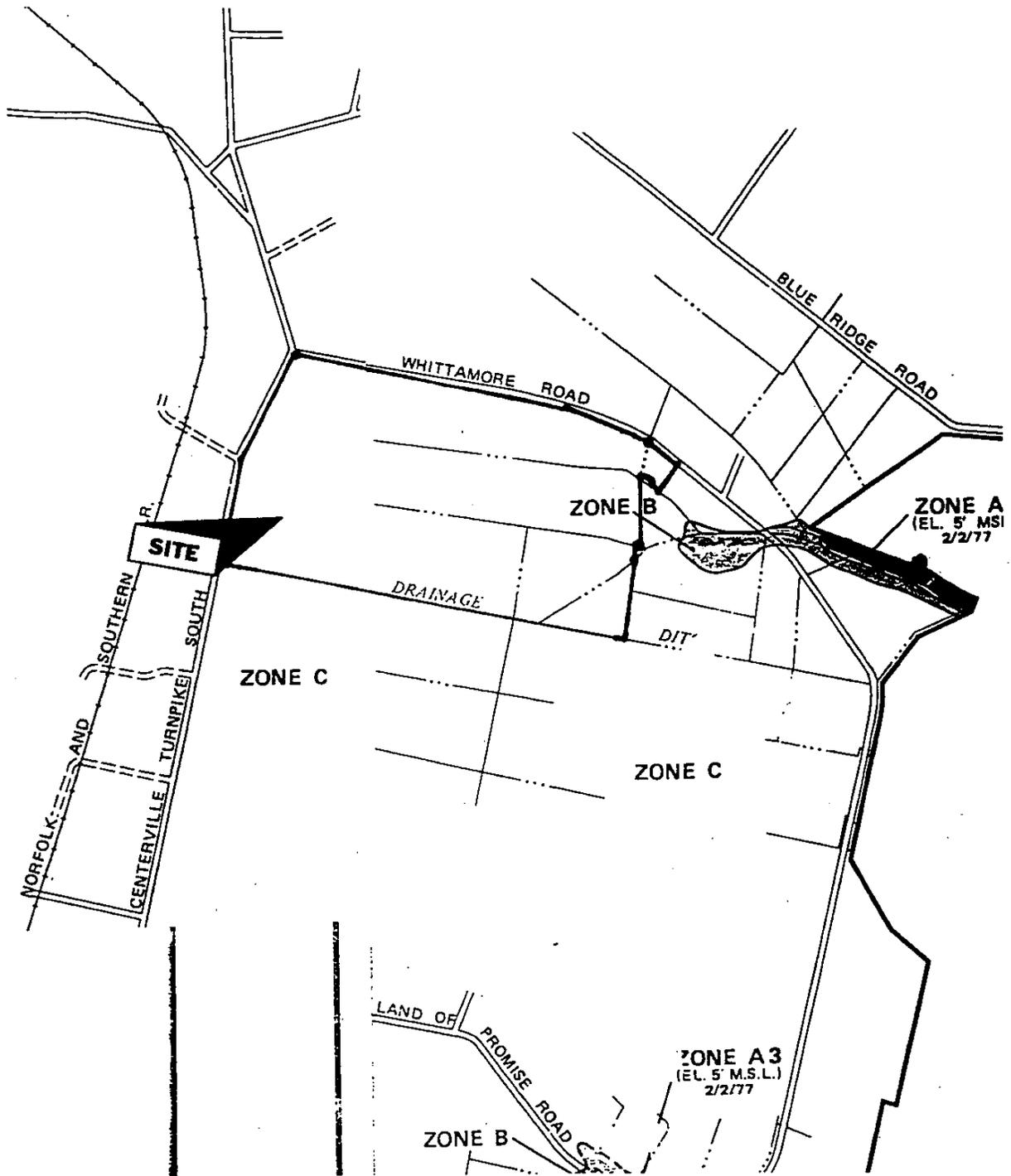
PROJECT NAME: Etheridge Green  
 PROJECT NUMBER: SEA 01-1359  
 SCALE: 1" = 2000'  
 DATE: 2000  
 SOURCE: ADC Map of Greater Hampton Roads, 2000



**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**SOIL SURVEY MAP**

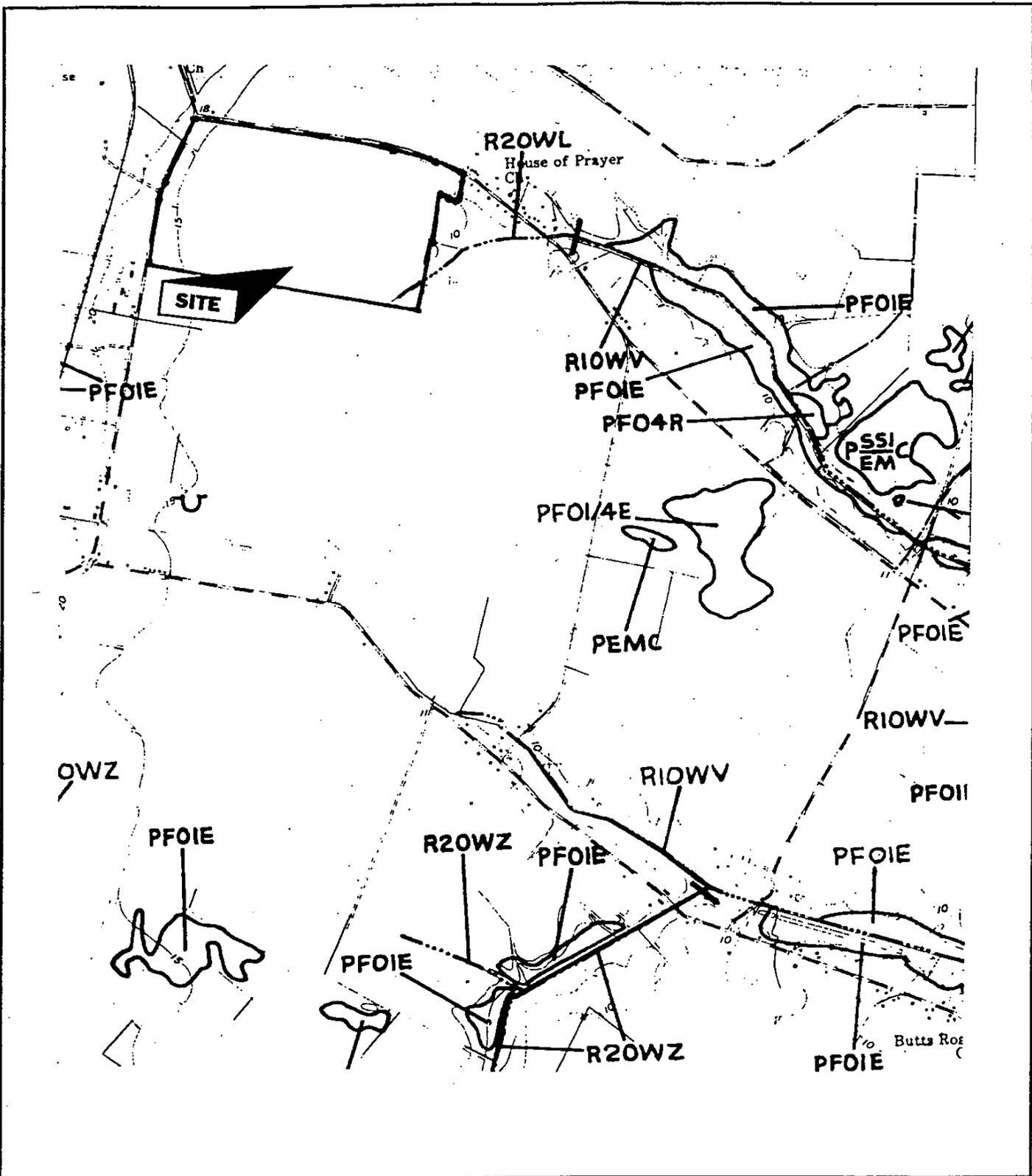
PROJECT NAME: Etheridge Green  
 PROJECT NUMBER: SEA 01-1359  
 SCALE: 1:20000  
 DATE: 1959  
 SOURCE: Soil Survey for Norfolk County, Virginia  
 USDA Natural Resources Conservation Service



**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**FLOOD INSURANCE RATE MAP**

PROJECT NAME: Etheridge Green  
 PROJECT NUMBER: SEA 01-1359  
 SCALE: 1" = 1620'  
 DATE: 1977  
 SOURCE: City of Chesapeake Public Library, Map H-17



**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**NATIONAL WETLAND INVENTORY MAP**

PROJECT NAME: Etheridge Green  
 PROJECT NUMBER: SEA 01-1359  
 SCALE: 1:24000  
 DATE: 1973  
 SOURCE: FWS NWI Fentress, Virginia Quadrangle Map

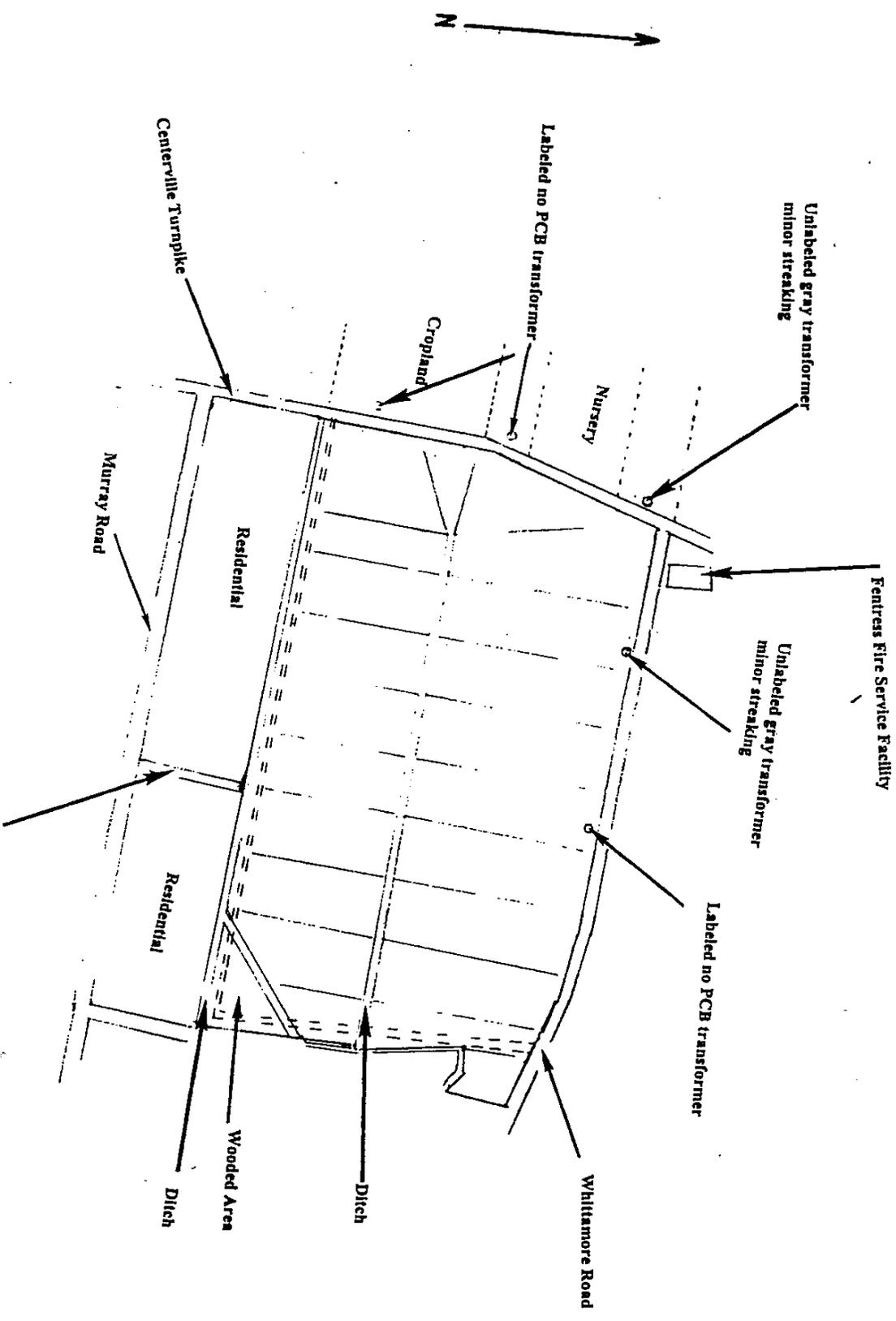


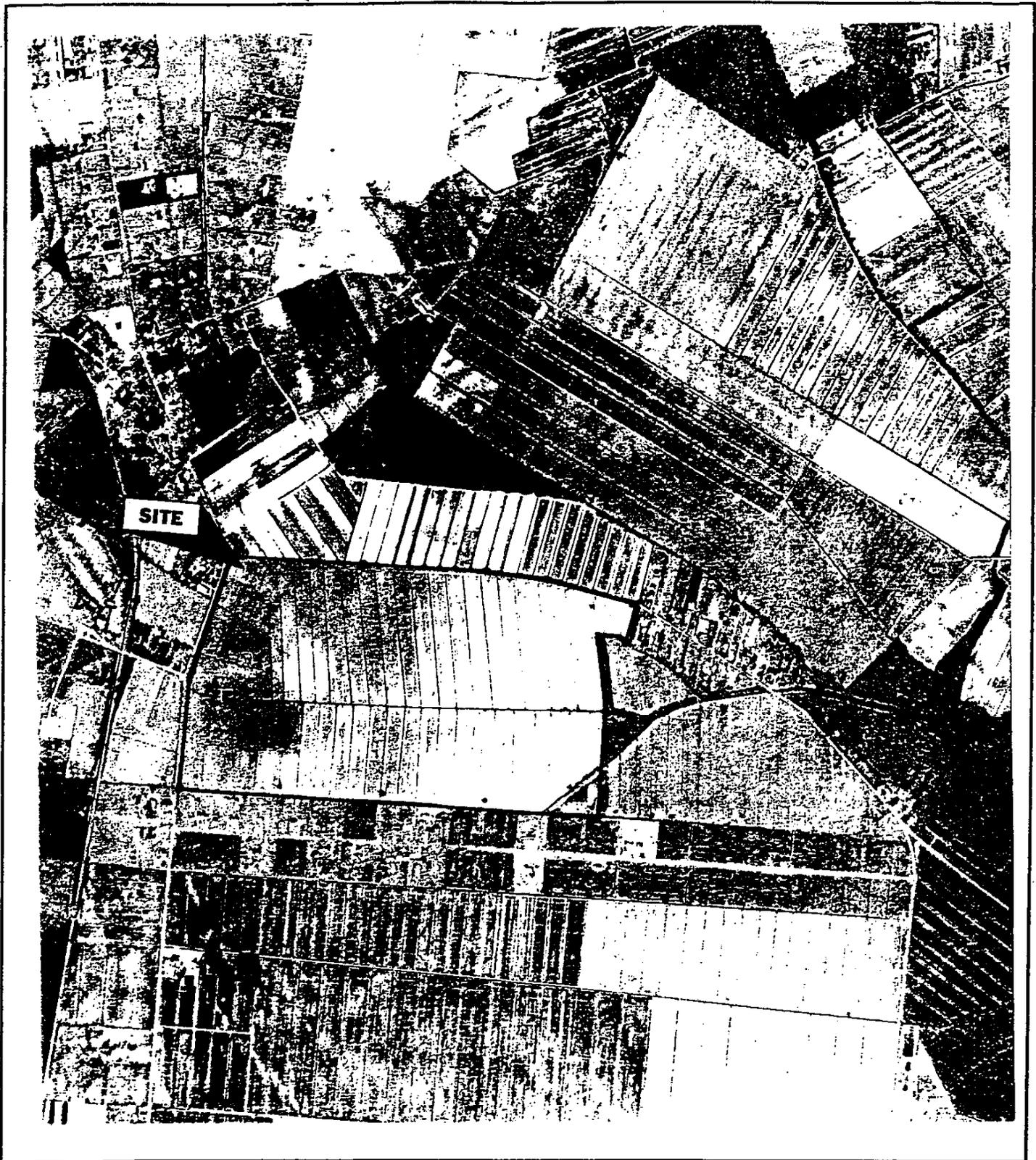
**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

PROJECT NAME:  
PROJECT NUMBER:  
SKETCH BY:

Etheridge Green  
SEA 0101359  
Jesse Redd

**SITE SKETCH**





**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**AERIAL PHOTOGRAPH**

PROJECT NAME: Etheridge Green  
PROJECT NUMBER: SEA 01-1359  
SCALE: 1"=1320'  
DATE: 1981  
SOURCE: City of Chesapeake, Natural Resource Conservation Office



**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**AERIAL PHOTOGRAPH**

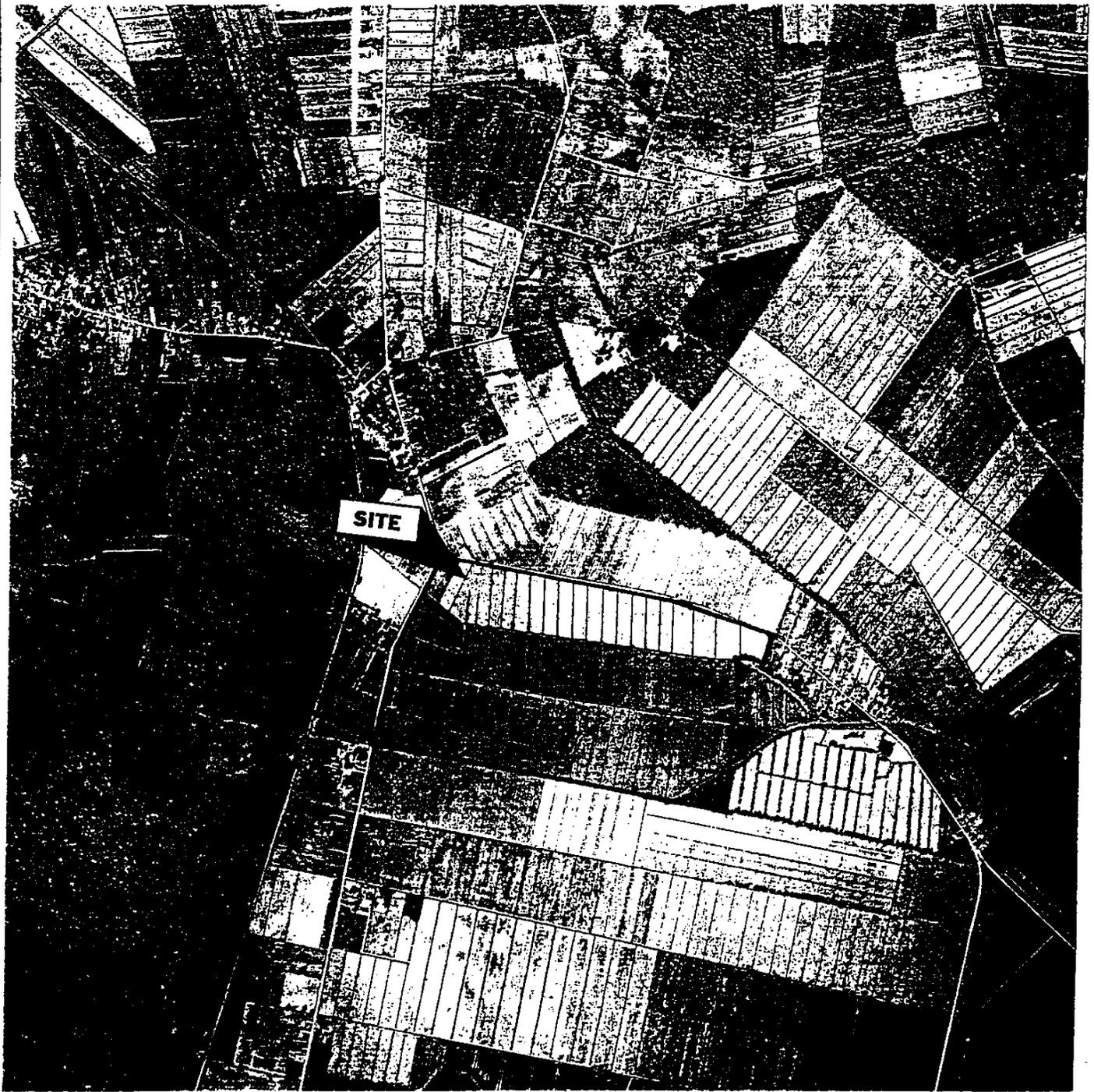
PROJECT NAME: Etheridge Green  
PROJECT NUMBER: SEA 01-1359  
SCALE: 1"=1250'  
DATE: 1949  
SOURCE: City of Chesapeake, Natural Resource Conservation Office



**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

**AERIAL PHOTOGRAPH**

PROJECT NAME: Etheridge Green  
PROJECT NUMBER: SEA 01-1359  
SCALE: 1"=1650'  
DATE: 1958  
SOURCE: City of Chesapeake, Natural Resource Conservation Office



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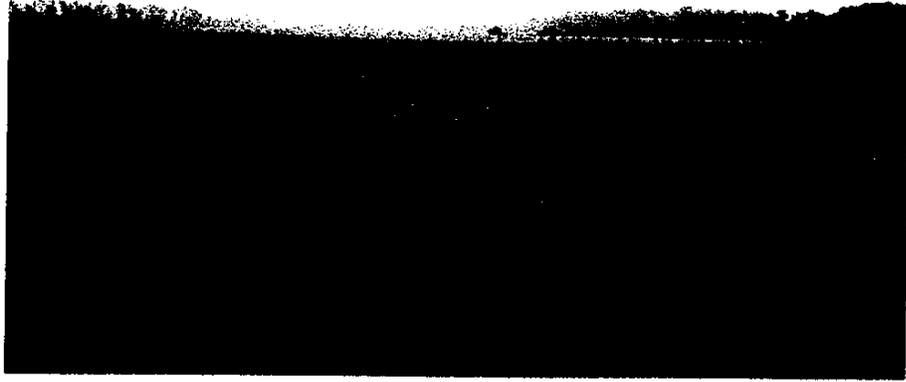
**AERIAL PHOTOGRAPH**

PROJECT NAME: Etheridge Green  
PROJECT NUMBER: SEA 01-1359  
SCALE: 1"=1650'  
DATE: 1964  
SOURCE: City of Chesapeake, Natural Resource Conservation Office

## **APPENDIX B – SITE PHOTOGRAPHS**

Project Number SEA 01-1359, 23 August 2001

**STOKES ENVIRONMENTAL ASSOCIATES, LTD.** • 4101 Granby Street, Suite 404, Norfolk, Virginia 23504 • TEL (757) 623-0777 • FAX (757) 623-2785



**PHOTO 1:** Overview of the 216 acres of farmland.

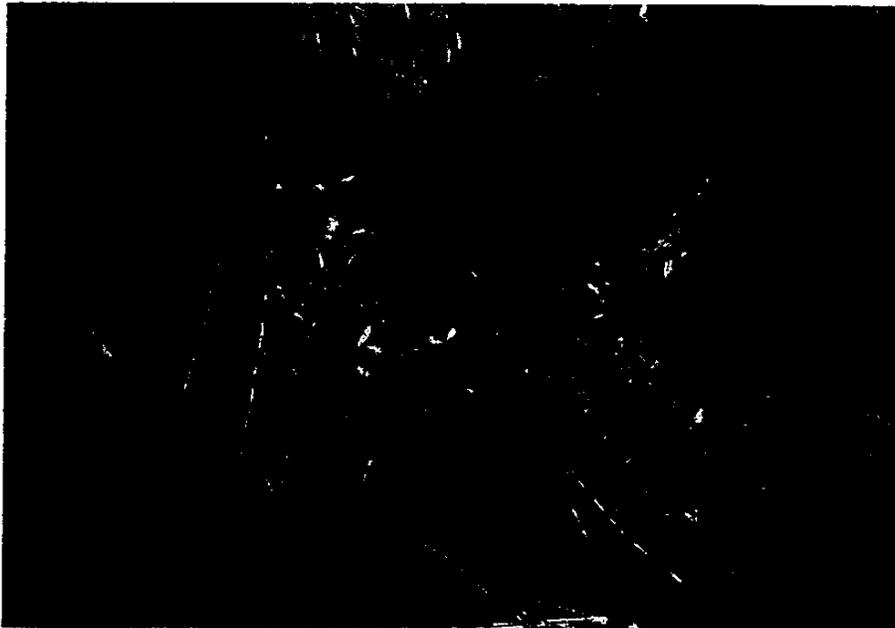


**PHOTO 2:** View of high transmission power line easement.

Etheridge Green  
PROJECT #: SEA 01-1359



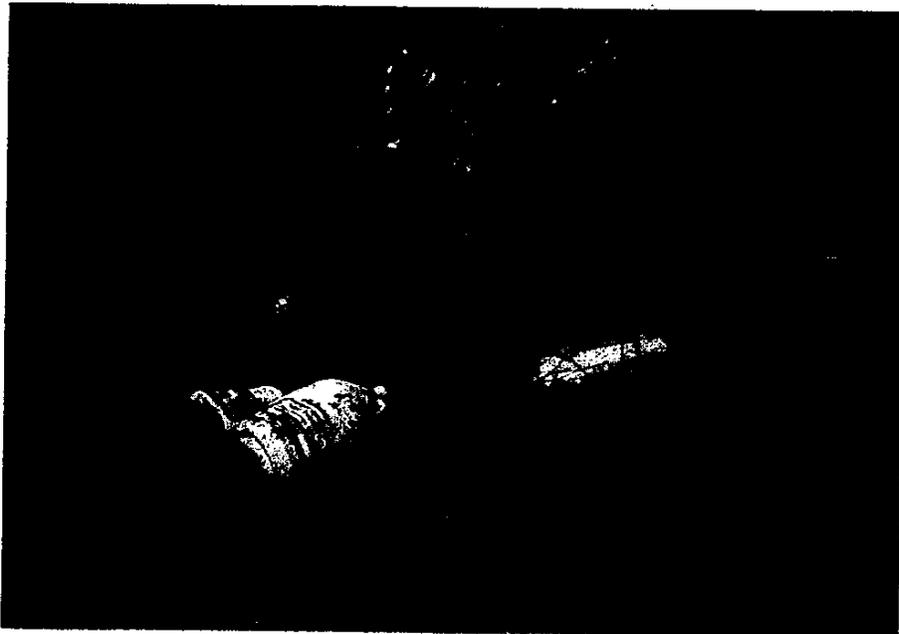
**PHOTO 3:** View of main ditch running down the center of the property.



**PHOTO 4:** View of the large drainage ditch at the southern boundary of the property.

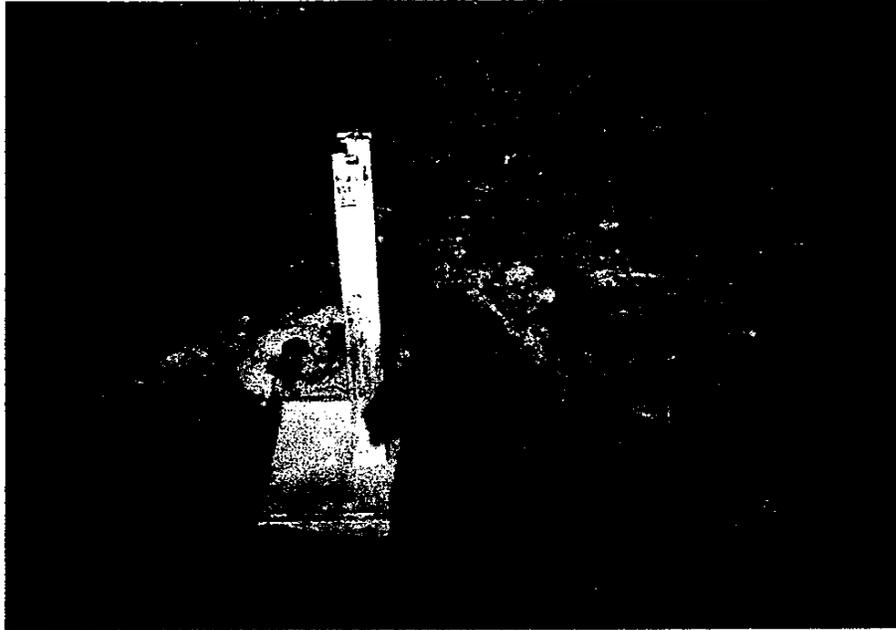


**PHOTO 5:** View of five gallon buckets on neighboring property to the south.



**PHOTO 6:** View of agriculture chemical containers located on the ditch bank of the property.

Etheridge Green  
PROJECT #: SEA 01-1359



**PHOTO 7:** View of recently installed monitoring well located on the property.



**PHOTO 8:** View of recently installed piece of PVC piping.

**APPENDIX C – ENVIRONMENTAL DATABASES**

Project Number SEA 01-1359, 23 August 2001

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## **The EDR Radius Map with GeoCheck®**

**Etheridge Green  
Centerville Tnpk/Whitamore Rd  
Chesapeake, VA 23322**

**Inquiry Number: 669047.1s**

**August 15, 2001**

## ***The Source For Environmental Risk Management Data***

**3530 Post Road  
Southport, Connecticut 06490**

### **Nationwide Customer Service**

**Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)**

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Government Records Searched/Data Currency Tracking.....	GR-1
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Physical Setting Source Summary.....	A-2
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Physical Setting Source Records Searched.....	A-8

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

### TARGET PROPERTY INFORMATION

#### ADDRESS

CENTERVILLE TNP/WHITAMORE RD  
CHESAPEAKE, VA 23322

#### COORDINATES

Latitude (North): 36.690100 - 36° 41' 24.4"  
Longitude (West): 76.178500 - 76° 10' 42.6"  
Universal Transverse Mercator: Zone 18  
UTM X (Meters): 394713.0  
UTM Y (Meters): 4060939.8

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 2436076-F2 FENTRESS, VA  
Source: USGS 7.5 min quad index

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ( "reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

#### FEDERAL ASTM STANDARD

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System  
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned  
CORRACTS..... Corrective Action Report  
RCRIS-TSD..... Resource Conservation and Recovery Information System  
RCRIS-LQG..... Resource Conservation and Recovery Information System  
RCRIS-SQG..... Resource Conservation and Recovery Information System  
ERNS..... Emergency Response Notification System

#### STATE ASTM STANDARD

SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list.  
SWF/LF..... Solid Waste Management Facilities  
LUST..... Leaking Underground Storage Tank Information System  
UST..... Registered Petroleum Storage Tanks

## EXECUTIVE SUMMARY

VA VRP..... Voluntary Remediation Program

### FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees  
ROD..... Records Of Decision  
Dellisted NPL..... National Priority List Deletions  
FINDS..... Facility Index System/Facility Identification Initiative Program Summary Report  
HMIRS..... Hazardous Materials Information Reporting System  
MLTS..... Material Licensing Tracking System  
MINES..... Mines Master Index File  
NPL Liens..... Federal Superfund Liens  
PADS..... PCB Activity Database System  
RAATS..... RCRA Administrative Action Tracking System  
TRIS..... Toxic Chemical Release Inventory System  
TSCA..... Toxic Substances Control Act  
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

### STATE OR LOCAL ASTM SUPPLEMENTAL

AST..... Registered Petroleum Storage Tanks  
VA Spills..... Pollution Complaint Database  
CEDS..... Comprehensive Environmental Data System  
LTANKS..... Leaking Petroleum Storage Tanks

### EDR PROPRIETARY DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

## EXECUTIVE SUMMARY

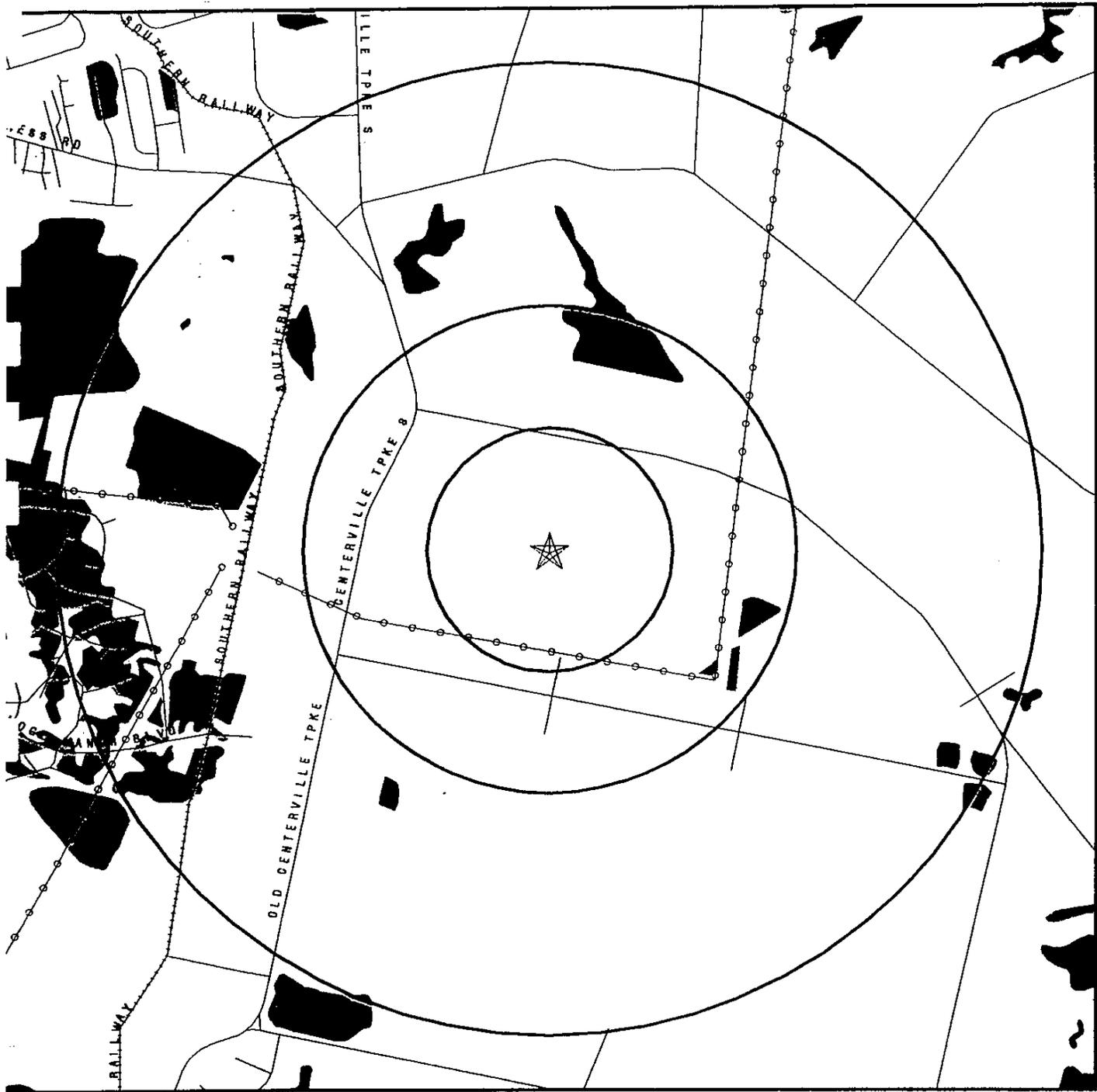
Due to poor or inadequate address information, the following sites were not mapped:

Site Name

HRSD GEOTECHNICAL SURVEY  
WALLACETON SERVICE CENTER  
J N EDYE & SON  
GREEN MEADOW POINT SUBDIVISION

Database(s)

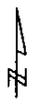
UST, LUST, LTANKS  
UST, LUST, LTANKS  
UST  
CEDS



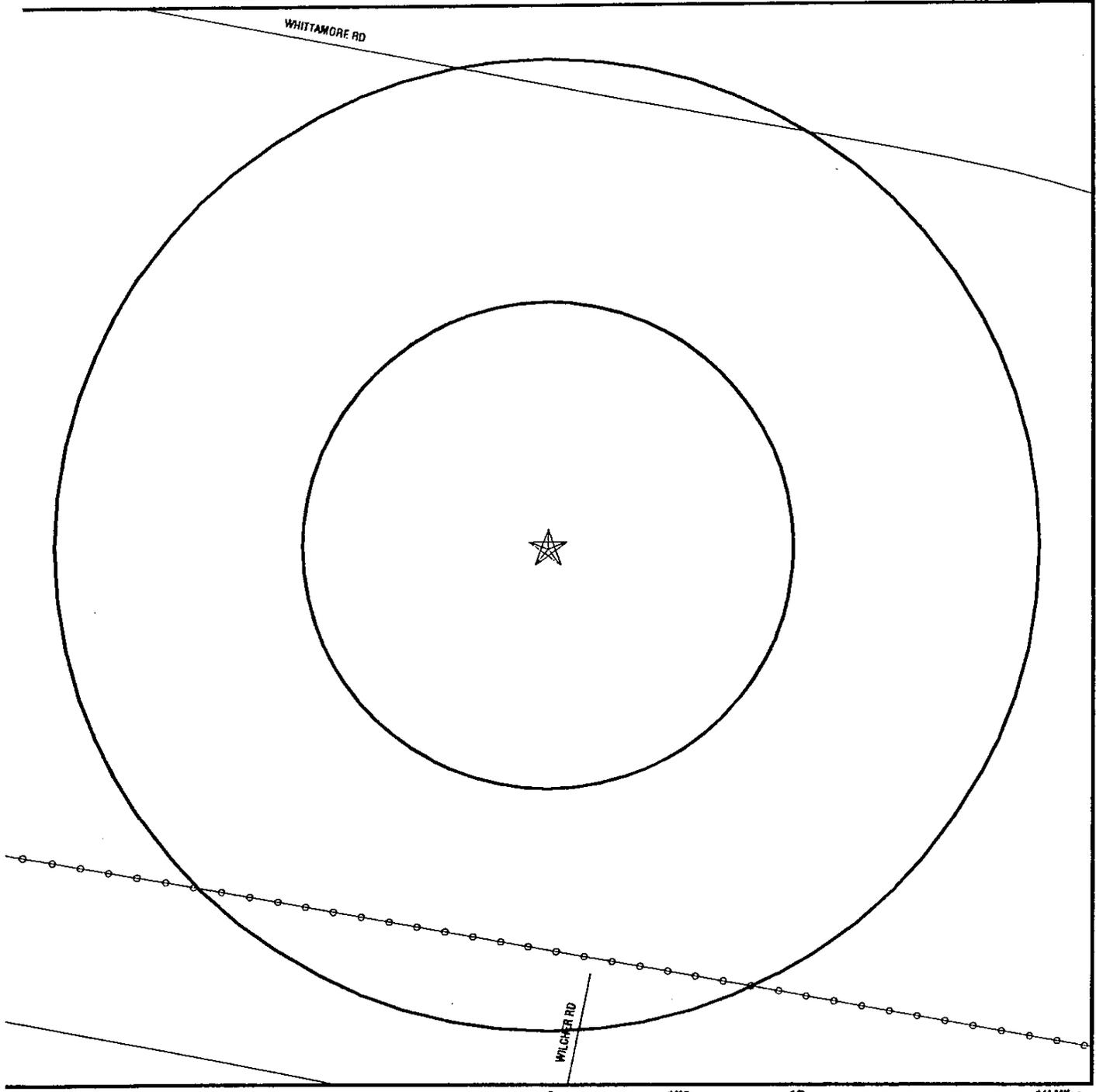
- ★ Target Property
- Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- National Priority List Sites
- Landfill Sites



- ~ Power transmission lines
- ~ Oil & Gas pipelines
- Wetlands



<b>TARGET PROPERTY:</b> Etheridge Green <b>ADDRESS:</b> Centerville Trpk/Whitmore Rd <b>CITY/STATE/ZIP:</b> Chesapeake VA 23322 <b>DATE/ONG:</b> 36 6901 / 76 17R5	<b>CUSTOMER:</b> Stokes Env. Associates, Ltd. <b>CONTACT:</b> Jesse Redd <b>INQUIRY #:</b> 669047.1s <b>DATE:</b> August 15 2001 1:22 pm
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- ★ Target Property
  - Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites

 Power transmission lines  
 Oil & Gas pipelines



<b>TARGET PROPERTY:</b> Etheridge Green <b>ADDRESS:</b> Centerville Tnpk/Whitmore Rd <b>CITY/STATE/ZIP:</b> Chesapeake VA 23322 <b>CONTACT:</b> 36 6901 / 76 1785	<b>CUSTOMER:</b> Stokes Env. Associates, Ltd. <b>CONTACT:</b> Jesse Redd <b>INQUIRY #:</b> 669047.1s <b>DATE:</b> August 15, 2001 1:22 pm
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## MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b><u>FEDERAL ASTM STANDARD</u></b>								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
<b><u>STATE ASTM STANDARD</u></b>								
State Haz. Waste		N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0
VRP		0.500	0	0	0	NR	NR	0
<b><u>FEDERAL ASTM SUPPLEMENTAL</u></b>								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
<b><u>STATE OR LOCAL ASTM SUPPLEMENTAL</u></b>								
AST		TP	NR	NR	NR	NR	NR	0
VA Spills		TP	NR	NR	NR	NR	NR	0
CEDS		TP	NR	NR	NR	NR	NR	0
LTANKS		0.500	0	0	0	NR	NR	0
<b><u>EDR PROPRIETARY DATABASES</u></b>								
Coal Gas		1.000	0	0	0	0	NR	0
AQUIFLOW - see EDR Physical Setting Source Addendum								

TP = Target Property

NR = Not Requested at this Search Distance

\* Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

---

NO SITES FOUND

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
CHESAPEAKE	S105028893	GREEN MEADOW POINT SUBDIVISION	BRUCE ROAD		CEDS	01-0258
CHESAPEAKE	U003696591	HRSD GEOTECHNICAL SURVEY	CENTERVILLE PIKE & MT PEASANT	23322	UST, LUST, LTANKS	19952249
CHESAPEAKE	U003690367	J N EDYE & SON	3913 GEO. WASHINGTON HWY. SO.	23322	UST	5009423
CHESAPEAKE	U003690368	WALLACETON SERVICE CENTER	3830 GEO. WASHINGTON HWY. S.	23322	UST, LUST, LTANKS	19992275

ZIP EDR-ID Facility ID Name Address Map/Dtr/Dist City State Databases

ZIP	EDR-ID	Facility ID	Name	Address	Map/Dtr/Dist	City	State	Databases
33322	2000659254		WHITLEY'S GAS ETALS	1507 - 1511 S. BATTLEFIELD BLV	..	CHESAPEAKE	VA	ERNS
33322	U003698957	5021095	WALLACETON-DISMAL SWAMP CANAL	U.S. 17 N.	..	CHESAPEAKE	VA	UST
33322	U0036990280	5009116	BALLAHACK ROAD - BRIDGE REPLACEMENT	BALLAHACK RD, 4,400 FEET WEST	..	CHESAPEAKE	VA	UST
33322	S104582298	95-0523	US NAVY - NAVAL SECURITY GROUP ACT	BALLAHACK ROAD	..	CHESAPEAKE	VA	CEDS
33322	S103846047	200000067477	NAVAL SECURITY GROUP ACTIVITY NW	BALLAHACK ROAD	..	CHESAPEAKE	VA	CEDS
33322	S104741407	19891488	NAVAL SECURITY GROUP ACTIVITY NW	BALLAHACK ROAD	..	CHESAPEAKE	VA	LUST
33322	S104742783	20005219	NAVAL SECURITY ACTIVITY NW BLDG 35	BALLAHACK ROAD	..	CHESAPEAKE	VA	LTANKS
33322	S104744588	20005219	NAVAL SECURITY ACTIVITY NW BLDG 35	BALLAHACK ROAD	..	CHESAPEAKE	VA	LTANKS
33322	S104178726	200000194668	PETROPLUS AMOCO / HANBURY AMOCC	1040 SOUTH BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	S1003745805	200000194668	SMITHSON TOM PROPERTY	2829 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	LUST, LTANKS
33322	1002821604	000008444024	ABANDONED SERVICE STATION	2829 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	1001601551	19882224	HICKORY	2750 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	U0036990295	5009166	AT&T HICKORY SITE	2750 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	FINDS
33322	U001982184	VAR000014902	DAVES CABINETS	2750 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	LUST, LTANKS
33322	U0036992336	19972416	LEWIS GARAGE	3016 BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	S104742382	200000195746	BANK OF AMERICA	313 SOUTH BATTLEFIELD BOULEVARD	..	CHESAPEAKE	VA	RCRIS/SQG, FINDS
33322	U0036990023	19962226	SENTRY FOOD MART #16	3161 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	LUST, LTANKS, UST
33322	U0036992458	5024184	BATTLEFIELD BUILDING ASSOCIATES	3360 SOUTH BATTLEFIELD BLVD.	..	CHESAPEAKE	VA	LUST, LTANKS, UST
33322	U003691875	5020286	MAXIES SADDLERY	3401 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	U0036990632	5011942	NORTHWEST RIVER WATER TREATMENT	3550 SOUTH BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	U0036991652	5018717	SOUTHERN PACKING CORPORATION	4004 SOUTH BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	S103847029	VPA01069	SOUTHERN PACKING CORPORATION	4004 SOUTH BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	S104741971	19972419	MT AUTO	4042 SOUTH BATTLEFIELD BLVD	..	CHESAPEAKE	VA	CEDS
33322	U003692005	5021127	NORTHWEST TEXACO	4042 SOUTH BATTLEFIELD BLVD	..	CHESAPEAKE	VA	LUST, LTANKS
33322	U003692006	5021129	SLEMP PROPERTY	4044 BATTLEFIELD BLVD; S	..	CHESAPEAKE	VA	UST
33322	U0036990831	5011941	RAW WATER INTAKE STRUCTURE - PUMP	4243 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	U0036989852	19901039	GREAT BRIDGE MIDDLE SCHOOL	441 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	LUST, LTANKS, UST
33322	U0036989270	5004211	PRINCESS ANNE EQUIPMENT CORP	6453 S BATTLEFIELD BLVD	..	CHESAPEAKE	VA	UST
33322	U0036989519	5002378	HICKORY HERBERT	1055 BEDFORD ST.	..	CHESAPEAKE	VA	UST
33322	U0036989951	5000857	HICKORY ELEMENTARY SCHOOL	108 BENEFIT RD	..	CHESAPEAKE	VA	UST
33322	S104915948	200000091179	CHESAPEAKE CITY OF - PUBLIC WORKS	149 BENEFIT ROAD	..	CHESAPEAKE	VA	LUST
33322	S104915950	200000091178	CHESAPEAKE CITY OF - PUBLIC WORKS	149 BENEFIT ROAD	..	CHESAPEAKE	VA	LUST
33322	S104862267	20015094	CHESAPEAKE CITY OF - PUBLIC WORKS	149 BENEFIT ROAD	..	CHESAPEAKE	VA	LTANKS
33322	A100143232		HICKORY YARD	149 BENEFIT ROAD	..	CHESAPEAKE	VA	AST
33322	U003691336	5015773	FIRE STATION #13	2900 BENEFIT ROAD	..	CHESAPEAKE	VA	UST
33322	1000148336	VAS170027267	US NAVAL SECURITY GROUP ACTIVITY	1320 NORTHWEST BLVD BLDG 402	..	CHESAPEAKE	VA	UST
33322	S104541350		DALE OLD BORROW PIT	P.O. BOX 105	..	CHESAPEAKE	VA	FINDS
33322	U0036989140	5001505	TRIPLE R RANCH	3531 BUNCH WALNUTS ROAD	..	CHESAPEAKE	VA	CEDS
33322	U0036989893	5000859	GREAT BRIDGE PRIMARY SCHOOL	408 CEDAR RD	..	CHESAPEAKE	VA	UST
33322	984364811		1508 SOUTH CENTERVILLE TURNPIKE	1508 SOUTH CENTERVILLE TURNPIKE	..	CHESAPEAKE	VA	ERNS
33322	984364810		1508 SOUTH CENTERVILLE TURNPIKE	1508 SOUTH CENTERVILLE TURNPIKE	..	CHESAPEAKE	VA	ERNS
33322	94378334		2245 SOUTH CENTERVILLE TURNPIKE	2245 SOUTH CENTERVILLE TURNPIKE	..	CHESAPEAKE	VA	ERNS
33322	U0036989164	5001648	CROSSROADS BP	337 S. CENTERVILLE TURNPIKE	..	CHESAPEAKE	VA	UST
33322	U0036989591	1965249	HRSD GEOTECHNICAL SURVEY	CENTERVILLE PIKE / MT PLEASANT	..	CHESAPEAKE	VA	LUST, LTANKS, UST
33322	U0036989366	1968275	WALLACETON SERVICE CENTER	3830 GEO. WASHINGTON HWY. S.	..	CHESAPEAKE	VA	LUST, LTANKS, UST
33322	U0036990367	5009423	J N EDYE & SON	3913 GEO. WASHINGTON HWY. SO.	..	CHESAPEAKE	VA	UST
33322	U0036992204	5022531	BUREAU PARKS & FORESTRY	425 HARRELL RD	..	CHESAPEAKE	VA	UST
33322	1001818911	5004630	NORFOLK ST BRIDES FARM CITY OF	201 HICKORY RD. WEST	..	CHESAPEAKE	VA	RCRIS/SQG, FINDS
33322	1001458451	01-0024	NORTHWEST RIVER WTP SLUDGE LAGO	1012 INDIAN CREEK ROAD	..	CHESAPEAKE	VA	UST
33322	S104232857	98-1049	ENTRY AUTO PARTS	867 JOANNE CIRCLE	..	CHESAPEAKE	VA	CEDS
33322	S104540804	99-2015	BERKSHIRE FOREST SUBDIVISION	KINGSBURY DRIVE	..	CHESAPEAKE	VA	CEDS
33322	U003691022	5013151	DEALS GROCERY	1601 LAND OF PROMISE ROAD	..	CHESAPEAKE	VA	CEDS
33322	S104742849	19930691	U.S. NAVAL AIRFIELD FENTRESS STA	500 LOCKHEED ROAD	..	CHESAPEAKE	VA	LTANKS
33322	S103846981	VPA01003	U.S. NAVAL AIRFIELD FENTRESS STA	500 LOCKHEED ROAD	..	CHESAPEAKE	VA	CEDS
33322	S104741680	200000091810	U.S. NAVAL AIRFIELD FENTRESS STA - F	500 LOCKHEED ROAD	..	CHESAPEAKE	VA	UST
33322	1003028571	VA0009922815	CHESAPEAKE FIRE SHOP	1233 LONG RIDGE ROAD	..	CHESAPEAKE	VA	LUST
33322	1000103434	VAB1700900015	USN AUXILIARY LANDING FIELD FENT	3-4 MLE S PRINCESS ANN CTHOUSE	..	CHESAPEAKE	VA	FINDS
33322	U0036971552	5017483	7-ELEVEN STORE 20277	1473 MOUNT PLEASANT RD	..	CHESAPEAKE	VA	CERCLIS
33322	U0036989701	5005128	FORMER SAUNDERS OIL GAS STATION	860 OAK GROVE ROAD	..	CHESAPEAKE	VA	UST
33322	U003029654	VA0001540467	ACE SERVICES	2025 POGATY RD.	..	CHESAPEAKE	VA	UST
33322	U0036989345	5003330	M W McDONALD FARMS	3721 RIVERWOOD CRESENT	..	CHESAPEAKE	VA	FINDS
33322	S103844610	94-5289	SCHAFER WILLIAM T RESIDENCE	3-4 MI S PRINCESS ANN CTHOUSE	..	CHESAPEAKE	VA	CEDS
33322	1003051055	VAB1700900015	USN AUXILIARY LANDING FIELD FEN	521 SABER DRIVE	..	CHESAPEAKE	VA	FINDS
33322	U004904355	2000000197846	GRUBBS D RESIDENCE	701 SANDERSON ROAD	..	CHESAPEAKE	VA	LUST, LTANKS
33322	S103846366	VA00060526	DOC - ST. BRIDES CORRECTIONAL CENTI	701 SANDERSON ROAD	..	CHESAPEAKE	VA	CEDS
33322	U003692179	19931412	ST BRIDES CORRECTIONAL CENTER	701 SANDERSON ROAD	..	CHESAPEAKE	VA	LUST, LTANKS, UST

\* - Indicates location may or may not be in requested radius. Site has not been assigned a latitude/longitude coordinate. Further review recommended.

ZIP	EDR-ID	Facility ID	Name	Address	Map/Dir/Dist	City	State	Databases
23322	1003033120	VAD088228787	VDOC ST. BRIDES CORRECTIONAL CENT	701 SANDERSON ROAD		CHESAPEAKE	VA	FINDS
23322	U003691614	5018146	HELPS, RICHARD B SR	308 E. ST. BRIDES RD.		CHESAPEAKE	VA	UST
23322	1002662327	000007152820	WATSON ELECTRICAL CONSTRUCTION C	NO STREET ADDRESS	..	CHESAPEAKE	VA	FINDS
23322	1002832191	000009707012	HART, MICHAEL	1480 TAFT RD		CHESAPEAKE	VA	FINDS
23322	1003032464	VAD0881903983	LEBANON CHEMICAL CORP.	500 TIDEWATER CHEMICAL RD.		CHESAPEAKE	VA	FINDS
23322	U003691743	19930505	TIDEWATER AGRICORP INC	500 TIDEWATER CHEMICAL ROAD	..	CHESAPEAKE	VA	LUST, LTANKS, UST
23322	1002828926	000009669884	US NAVY - AUXILIARY LANDING FIELD - F	VARIOUS BUILDINGS	..	CHESAPEAKE	VA	FINDS
23322	U003691765	5018383	NAVAL SECURITY GROUP ACTIVITY NOR	VARIOUS BUILDINGS	..	CHESAPEAKE	VA	UST
23322	U003692733	5026613	US NAVAL AIRFIELD, FENTRESS STA	VARIOUS BUILDINGS	..	CHESAPEAKE	VA	AST, UST
23322	1000448327	VAD0058624487	R K CHEVROLET GEO INC	2661 VIRGINIA BEACH BLVD		CHESAPEAKE	VA	FORIS/SQG, FINDS, LUST, LTANKS
23322	99626671		128 WATERFRONT DRIVE PAULS CREEK	128 WATERFRONT DRIVE PAULS CREEK	..	CHESAPEAKE	VA	ERNS

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Elapsed ASTM days:** Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

## FEDERAL ASTM STANDARD RECORDS

### **NPL:** National Priority List

Source: EPA

Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC).

Date of Government Version: 04/17/01

Date Made Active at EDR: 08/06/01

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 05/09/01

Elapsed ASTM days: 89

Date of Last EDR Contact: 08/06/01

### **Proposed NPL:** Proposed National Priority List Sites

Source: EPA

Telephone: N/A

Date of Government Version: 04/17/01

Date Made Active at EDR: 08/06/01

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 05/09/01

Elapsed ASTM days: 89

Date of Last EDR Contact: 08/06/01

### **CERCLIS:** Comprehensive Environmental Response, Compensation, and Liability Information System

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/16/01

Date Made Active at EDR: 04/30/01

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/26/01

Elapsed ASTM days: 35

Date of Last EDR Contact: 06/25/01

### **CERCLIS-NFRAP:** CERCLIS No Further Remedial Action Planned

Source: EPA

Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 03/16/01

Date Made Active at EDR: 04/30/01

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/26/01

Elapsed ASTM days: 35

Date of Last EDR Contact: 06/25/01

### **CORRACTS:** Corrective Action Report

Source: EPA

Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/27/01  
Date Made Active at EDR: 05/16/01  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 04/11/01  
Elapsed ASTM days: 35  
Date of Last EDR Contact: 06/12/01

## **RCRIS: Resource Conservation and Recovery Information System**

Source: EPA/NTIS

Telephone: 800-424-9346

Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 06/21/00  
Date Made Active at EDR: 07/31/00  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 07/10/00  
Elapsed ASTM days: 21  
Date of Last EDR Contact: 07/02/01

## **ERNS: Emergency Response Notification System**

Source: EPA/NTIS

Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 08/08/00  
Date Made Active at EDR: 09/06/00  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 08/11/00  
Elapsed ASTM days: 26  
Date of Last EDR Contact: 08/10/01

## **FEDERAL ASTM SUPPLEMENTAL RECORDS**

### **BRS: Biennial Reporting System**

Source: EPA/NTIS

Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/97  
Database Release Frequency: Biennially

Date of Last EDR Contact: 06/18/01  
Date of Next Scheduled EDR Contact: 09/17/01

### **CONSENT: Superfund (CERCLA) Consent Decrees**

Source: EPA Regional Offices

Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A  
Database Release Frequency: Varies

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

### **ROD: Records Of Decision**

Source: NTIS

Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/30/99  
Database Release Frequency: Annually

Date of Last EDR Contact: 07/10/01  
Date of Next Scheduled EDR Contact: 10/08/01

### **DELISTED NPL: National Priority List Deletions**

Source: EPA

Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/17/01  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/06/01  
Date of Next Scheduled EDR Contact: 11/05/01

**FINDS:** Facility Index System/Facility Identification Initiative Program Summary Report

Source: EPA  
Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/07/00  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/09/01  
Date of Next Scheduled EDR Contact: 10/08/01

**HMIRS:** Hazardous Materials Information Reporting System

Source: U.S. Department of Transportation  
Telephone: 202-366-4526

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/00  
Database Release Frequency: Annually

Date of Last EDR Contact: 07/23/01  
Date of Next Scheduled EDR Contact: 10/22/01

**MLTS:** Material Licensing Tracking System

Source: Nuclear Regulatory Commission  
Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/30/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/09/01  
Date of Next Scheduled EDR Contact: 10/08/01

**MINES:** Mines Master Index File

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959

Date of Government Version: 08/01/98  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 07/02/01  
Date of Next Scheduled EDR Contact: 10/01/01

**NPL LIENS:** Federal Superfund Liens

Source: EPA  
Telephone: 205-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 05/23/01  
Date of Next Scheduled EDR Contact: 08/20/01

**PADS:** PCB Activity Database System

Source: EPA  
Telephone: 202-260-3936

PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/30/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 05/18/01  
Date of Next Scheduled EDR Contact: 08/13/01

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## **RAATS: RCRA Administrative Action Tracking System**

Source: EPA

Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95

Database Release Frequency: No Update Planned

Date of Last EDR Contact: 06/11/01

Date of Next Scheduled EDR Contact: 09/10/01

## **TRIS: Toxic Chemical Release Inventory System**

Source: EPA

Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/98

Database Release Frequency: Annually

Date of Last EDR Contact: 06/27/01

Date of Next Scheduled EDR Contact: 09/24/01

## **TSCA: Toxic Substances Control Act**

Source: EPA

Telephone: 202-260-1444

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98

Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 07/09/01

Date of Next Scheduled EDR Contact: 09/10/01

## **FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/00

Database Release Frequency: Quarterly

Date of Last EDR Contact: 06/26/01

Date of Next Scheduled EDR Contact: 09/24/01

## **FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**

Source: EPA

Telephone: 202-564-2501

Date of Government Version: 08/10/00

Database Release Frequency: Quarterly

Date of Last EDR Contact: 06/26/01

Date of Next Scheduled EDR Contact: 09/24/01

## **STATE OF VIRGINIA ASTM STANDARD RECORDS**

**SHWS:** This state does not maintain a SHWS list. See the Federal CERCLIS list.

Source: EPA

Telephone: 703-413-0223

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Date Made Active at EDR: N/A  
Database Release Frequency: N/A

Date of Data Arrival at EDR: N/A  
Elapsed ASTM days: N/A  
Date of Last EDR Contact: 07/24/01

## **SWF/LF: Solid Waste Management Facilities**

Source: Department of Environmental Quality  
Telephone: 804-698-4238

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 04/01/01  
Date Made Active at EDR: 05/09/01  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/10/01  
Elapsed ASTM days: 29  
Date of Last EDR Contact: 07/09/01

## **UST: Registered Petroleum Storage Tanks**

Source: Department of Environmental Quality  
Telephone: 804-527-5249

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 05/07/01  
Date Made Active at EDR: 07/26/01  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 07/02/01  
Elapsed ASTM days: 24  
Date of Last EDR Contact: 07/02/01

## **VRP: Voluntary Remediation Program**

Source: Department of Environmental Quality  
Telephone: 804-698-4232

The Voluntary Cleanup Program encourages owners of elected contaminated sites to take the initiative and conduct voluntary cleanups that meet state environmental standards.

Date of Government Version: 04/01/01  
Date Made Active at EDR: 06/01/01  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 05/02/01  
Elapsed ASTM days: 30  
Date of Last EDR Contact: 07/31/01

## **STATE OF VIRGINIA ASTM SUPPLEMENTAL RECORDS**

### **AST: Registered Petroleum Storage Tanks**

Source: Department of Environmental Quality  
Telephone: 804-698-4317  
Registered Aboveground Storage Tanks.

Date of Government Version: 05/07/01  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 07/02/01  
Date of Next Scheduled EDR Contact: 10/01/01

### **SPILLS: Pollution Complaint Database**

Source: Department of Environmental Quality  
Telephone: 804-527-5200

Pollution Complaints Database. The pollution reports contained in the PC database include the initial release reporting of Leaking Underground Storage Tanks and all other releases of petroleum to the environment as well as releases to state waters. The database is current through 12/1/93. Since that time, all spill and pollution reporting information has been collected and tracked through the DEQ regional offices.

Date of Government Version: 06/01/96  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/25/96  
Date of Next Scheduled EDR Contact: N/A

### **CEDS: Comprehensive Environmental Data System**

Source: Department of Environmental Quality  
Telephone: 804-698-4077

Virginia Water Protection Permits, Virginia Pollution Discharge System (point discharge) permits and Virginia Pollution Abatement (no point discharge) permits.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/16/01  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 07/09/01  
Date of Next Scheduled EDR Contact: 10/08/01

**LTANKS:** Leaking Petroleum Storage Tanks  
Source: Department of Environmental Quality  
Telephone: 804-898-4269  
A list of all current leaking petroleum storage tanks.

Date of Government Version: 05/07/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/02/00  
Date of Next Scheduled EDR Contact: 10/01/01

## Department of Environmental Quality (DEQ) LUST Records

**LUST REG NO:** Leaking Underground Storage Tank Tracking Database  
Source: Department of Environmental Quality Northern Regional Office  
Telephone: 703-490-8922

Date of Government Version: 05/18/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/06/01  
Date of Next Scheduled EDR Contact: 10/01/01

**LUST REG PD:** Leaking Underground Storage Tank Sites  
Source: Department of Environmental Quality Piedmont Regional Office  
Telephone: 804-527-5020

Date of Government Version: 07/01/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/06/01  
Date of Next Scheduled EDR Contact: 09/03/01

**LUST REG SW:** Leaking Underground Storage Tank Database  
Source: Department of Environmental Quality Southwest Regional Office  
Telephone: 504-676-5507

Date of Government Version: 05/31/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 05/15/01  
Date of Next Scheduled EDR Contact: 08/13/01

**LUST REG TD:** Leaking Underground Storage Tank Sites  
Source: Department of Environmental Quality Tidewater Regional Office  
Telephone: 757-518-2199

Date of Government Version: 05/01/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/02/01  
Date of Next Scheduled EDR Contact: 10/01/01

**LUST REG VA:** Leaking Underground Storage Tank List  
Source: Department of Environmental Quality Valley Regional Office  
Telephone: 540-574-7800

Date of Government Version: 05/01/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/02/01  
Date of Next Scheduled EDR Contact: 10/01/01

**LUST REG WC:** Leaking Underground Storage Tank List  
Source: Department of Environmental Quality West Central Regional Office  
Telephone: 540-562-6700

Date of Government Version: 07/01/01  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 07/02/01  
Date of Next Scheduled EDR Contact: 10/01/01

## EDR PROPRIETARY DATABASES

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

### **Disclaimer Provided by Real Property Scan, Inc.**

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

## HISTORICAL AND OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

**Oil/Gas Pipelines/Electrical Transmission Lines:** This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

### **Virginia Public Water Supplies**

Source: Department of Health, Office of Water Programs  
Telephone: 804-786-1756

# GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

## TARGET PROPERTY ADDRESS

ETHERIDGE GREEN  
CENTERVILLE TNP/WHITAMORE RD  
CHESAPEAKE, VA 23322

## TARGET PROPERTY COORDINATES

Latitude (North): 36.690102 - 36° 41' 24.4"  
Longitude (West): 76.178497 - 76° 10' 42.8"  
Universal Transverse Mercator: Zone 18  
UTM X (Meters): 394713.0  
UTM Y (Meters): 4060939.8

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### **USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE**

Target Property: 2436076-F2 FENTRESS, VA  
Source: USGS 7.5 min quad index

### **GENERAL TOPOGRAPHIC GRADIENT AT TARGET PROPERTY**

Target Property: General ESE

Source: General Topographic Gradient has been determined from the USGS 1 Degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

### **FEMA FLOOD ZONE**

<u>Target Property County</u> CHESAPEAKE CITY, VA	<u>FEMA Flood Electronic Data</u> Not Available
Flood Plain Panel at Target Property:	Not Reported
Additional Panels in search area:	Not Reported

### **NATIONAL WETLAND INVENTORY**

<u>NWI Quad at Target Property</u> FENTRESS	<u>NWI Electronic Data Coverage</u> YES - refer to the Overview Map and Detail Map
--	---

## HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## *Site-Specific Hydrogeological Data\*:*

Search Radius: 2.0 miles  
Status: Not found

## AQUIFLOW®

Search Radius: 2.000 Miles.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

## GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

## GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

### GEOLOGIC AGE IDENTIFICATION

Geologic Code: Qp  
Era: Cenozoic  
System: Quaternary  
Series: Pleistocene

### ROCK STRATIGRAPHIC UNIT

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

## DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

\* 01996 Site-specific hydrogeological data gathered by CERCLIS Meris, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Component Name: TETOTUM

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (ln/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 5.50 Min: 3.60
2	9 inches	48 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COURSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
3	48 inches	72 inches	stratified	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 0.60	Max: 5.50 Min: 3.60

## OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: sandy loam  
loam  
loamy sand

Surficial Soil Types: sandy loam  
loam  
loamy sand

Shallow Soil Types: fine sandy loam

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

clay

Deeper Soil Types: sand  
loamy sand

## ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

## FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

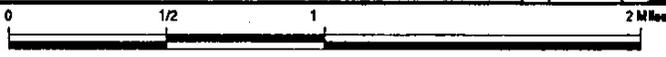
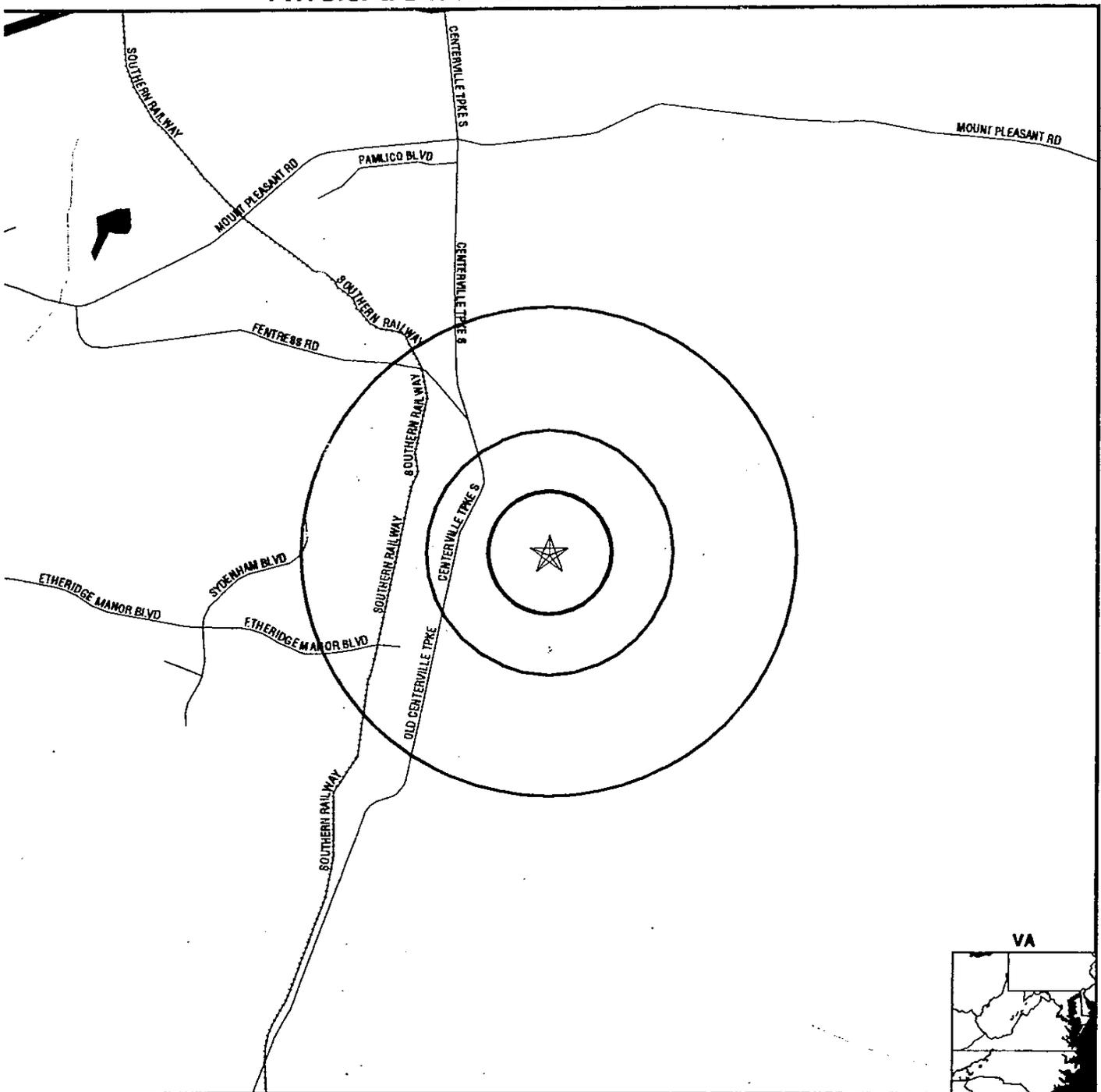
## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

## STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		



- ✓ Major Roads
- / Contour Lines
- ) Water Wells
- ⊕ Public Water Supply Wells
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- ⊖ Groundwater Flow Varies at Location
- ~ Cluster of Multiple Icons

- ★ Earthquake epicenter, Richter 5 or greater
- (HD) Closest Hydrogeological Data



No contour lines were detected within this map area.

<b>TARGET PROPERTY:</b> Etheridge Green <b>ADDRESS:</b> Centerville Tnpk/Whitmore Rd <b>CITY/STATE/ZIP:</b> Chesapeake VA 23322 <b>ATTN:</b> 36 6901 / 76 1785	<b>CUSTOMER:</b> Stokes Env. Associates, Ltd. <b>CONTACT:</b> Jesse Redd <b>INQUIRY #:</b> 669047.1s <b>DATE:</b> August 15 2001 1:22 pm
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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

Federal EPA Radon Zone for CHESAPEAKE County: 3

- Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

1996 Radon Information:

Zip Code: 23322

Number of sites tested: 7.

Maximum Radon Level: 1.0 pCi/L.

Minimum Radon Level: -0.2 pCi/L.

pCi/L <4	pCi/L 4-10	pCi/L 10-20	pCi/L 20-50	pCi/L 50-100	pCi/L >100
7 (100.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

### **AQUIFLOW<sup>®</sup> Information System**

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### **Geologic Age and Rock Stratigraphic Unit**

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### **STATSGO: State Soil Geographic Database**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the national Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

## ADDITIONAL ENVIRONMENTAL RECORD SOURCES

### **FEDERAL WATER WELLS**

#### **PWS: Public Water Systems**

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### **PWS ENF: Public Water Systems Violation and Enforcement Data**

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

**USGS Water Wells:** In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## STATE RECORDS

### Virginia Public Water Supplies

Source: Department of Health, Office of Water Programs  
Telephone: 804-786-1756

## RADON

**Area Radon Information:** The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

**EPA Radon Zones:** Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

**Statistical Summary Readings:** Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia. EPA Region 3.

## OTHER

**Epicenters:** World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

## **QUALIFICATIONS**

Project Number SEA 01-1359, 23 August 2001

# STOKES ENVIRONMENTAL ASSOCIATES, LTD.

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**Thomas L. Stokes, Jr.**  
President

**Education:** Degree(s), Year, Specialization, Institution

M.B.A., 1988, Statistics, *New York University*, New York, New York  
M.S., 1982, Biology, *Old Dominion University*, Norfolk, Virginia  
B.A., 1979, Biology, *Hampden-Sydney College*, Hampden-Sydney, Virginia

**Registration, Certification, and License:** Discipline/Years Registered

Registered Environmental Manager, REM 5854, 1993 - Current  
National Registry of Environmental Professionals.  
Hazardous Waste Site Operations and Emergency Response, 1991 - Current  
OSHA 1910.120 Worker and Supervisor Certifications  
Asbestos Inspector/Management Planner, 1992 - 1999  
ASTM, Environmental Assessment Committee Member, 1996 - Current  
Virginia Association of Wetlands Professionals, Member, 1996 - Current  
Society of Wetland Scientists, Member, 1992 - Current

**Continuing Education**

Wetland Functions, Assessment, and Management, Society of Wetland Scientists, 40 hrs., 1999  
Wetland Mitigation: Preservation Seminar, 8-hr., 2000  
Managing Growth-Frontier for Environmental Law, William & Mary Law School, April 1999  
Environmental Business Council, 8-hr., ECS, Exton, PA, May 1999  
ISO 14000 - Environmental Management System Seminar, 16-hr ODU, 1997  
Environmental Risk Reduction Seminar, ECS Risk Management, 1997  
Asbestos Inspector/Management Planner Annual 8-hr Refreshers, 1992 - 1998  
Hazardous Waste Site Operations/Emergency Response Annual 8-hr Refreshers, 1991 - 1999  
DC Briefing on Environmental Due Diligence, 8-hr Seminar, 1996  
Assessment, Control and Remediation of LNAPL Contaminated Sites, 40-hr, 1994  
Environmental Regulatory Updates, ODU, EPA, and Other Courses and Seminars, 48 hours 1992-1997  
Environmental Site Assessments Conferences, 80 hrs, 1991 and 1992  
Interagency Multimedia Pollution Prevention and Toxic Release Inventory Workshops, 16-hr, 1992  
Wetlands Delineation, Soils, Hydrology, Vegetation, Winter Botany, Functional Assessment, and Regulation Seminars, VIMS, VAWP, SWS Courses and Seminars, 192 hours 1990-1997

**Experience**

Mr. Stokes has over 20 years of progressive responsible experience in the environmental field, including areas of Phase I/II/III environmental assessments, environmental compliance audits, UST/AST closures and management, preparation of SPCC and other oil discharge contingency plans, environmental regulatory management, NPDES permit application and implementation, sludge management, wetlands delineation and permitting, endangered species surveys and permits, preparation and evaluation of NEPA documents such

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4101 Granby Street • Suite 404 • Norfolk, Virginia 23504 • Office (757) 623-0777 • FAX (757) 623-2785

**Thomas L. Stokes, Jr.**

**President**

**Page 2**

as environmental assessments and environmental impact statements, asbestos and lead inspections and management plans, remedial programs, litigation support and related work.

A listing of prior employment history, showing dates of employment and last position held, is as follows:

- ◆ **Stokes Environmental Associates, Ltd., Norfolk, Virginia, 1990-Present/President**
- ◆ **Department of Environmental Protection, New York, New York, 1984-1990/Chief, *Water Quality Section***
- ◆ **Hampton Roads Sanitation District, Virginia Beach, Virginia, 1982-1984/*Water Quality Technician***
- ◆ **Old Dominion University, Biology Department, Norfolk, Virginia, 1980-1982/*Research Assistant***

**STOKES  
ENVIRONMENTAL  
ASSOCIATES, LTD.**

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**Jesse A. Redd**  
Environmental Scientist

**Education**

B.S., Environmental Resource Management from the College of Forestry, Virginia Polytechnic Institute and State University (2001)

Minor in Crop, Soil, and Environmental Science from the College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University (2001)

**Prior Employment History**

Stokes Environmental Assoc., Ltd., Norfolk, VA, July 2001- Present, Environmental Scientist

USDA Forest Service, Center for Forested Wetlands Research, Charleston, SC, 2000, Biological Science Technician

Tidewater Research and Extension Center, Holland VA, 1996-1999, Agricultural Technician

**Selected Project Experience**

- ◆ Project Assistant for Groundwater movement study around Carolina Bays for the USDA Forest Service, Center for Forested Wetlands Research. Duties included collection of well samples, analysis of samples, and data entry.
- ◆ Project Assistant for organic matter decomposition study for the USDA Forest Service, Center for Forested Wetlands Research. Duties included design, installation, and data collection.



# COMBUSTION PRODUCTS MANAGEMENT

A Wallace Corporation

File

September 14, 2001

Mr. Troy Breathwaite  
Air Permit Department  
Virginia Department of Environmental Quality  
5636 Southern Boulevard  
Virginia Beach Virginia 23462

Subject: Request to Transfer Air Permit, Registration No. 61367, AIRS ID. 51-550-00203  
Combustion Products Management, Inc. Facility, Chesapeake, Virginia

Dear Mr. Breathwaite:

Combustion Products Management, Inc. ("CPM") operated a portable fly ash pugmill at the Virginia Electric and Power Company/Chesapeake Energy Center in Chesapeake, Virginia, until the contract ended on June 1, 2001. CPM recently sold the pugmill to the new contractor at the Chesapeake Energy Center, VFL Technologies, with the transaction being completed on September 1, 2001.

CPM requests to transfer the pugmill air permit, Registration Number 61367, dated October 26, 2000, to Virginia Electric and Power Company/Chesapeake Energy Center. New "Document Certification" and "General Information" forms are attached to provide contact information for Virginia Electric and Power.

Please contact me at (864) 859-9090 if you have questions or comments about this request.

Sincerely,

Mark L. Baker, P.E.  
Director of Operations  
Combustion Products Management, Inc.

## Attachments

Cc: Bob Bisha, Dominion  
Dave Bristow, Dominion  
~~Steve Bristow, CPM~~  
Ken Foster, CPM  
File

C:/word/transperchesapeakeairpermittovepco091401.doc

105 Cherry Street • P.O. Box 339 • Ithaca, N.Y. 14851  
607-273-1222 • FAX 607-273-8730

COMMONWEALTH OF VIRGINIA  
Department of Environmental Quality



*General information*

CHECK ALL FORMS THAT APPLY AND LIST ALL ATTACHED DOCUMENTS.

- |  |   |
|--|---|
| MAP AND LOCALITIES LIST (information), Pages iii-vi  | <input type="checkbox"/> CRITERIA POLLUTANT EMISSIONS, Page 14    |
| CONFIDENTIAL INFORMATION, Page vii   | <input type="checkbox"/> TOXIC OR HAP OR OTHER EMISSIONS, Page 15 |
| FORMULA-BASED HAZARDOUS AIR POLLUTANT INFORMATION, Page viii                                   | <input type="checkbox"/> OPERATING PERIODS, Page 16               |
| HAZARDOUS AIR POLLUTANT LIST (information), Pages ix-x   | LIST ATTACHED DOCUMENTS   |
| <input type="checkbox"/> REQUEST FOR LOCAL GOVERNMENT CERTIFICATION FORM, Pages xi-xii         | <input type="checkbox"/> MAP of SITE LOCATION                     |
| <input checked="" type="checkbox"/> CONTENTS AND DOCUMENT CERTIFICATION, Page 1                | <input type="checkbox"/> FACILITY SITE PLAN                       |
| <input checked="" type="checkbox"/> GENERAL INFORMATION, Page 2                                | <input type="checkbox"/> PROCESS FLOW DIAGRAM/SCHEMATIC           |
| <input type="checkbox"/> GENERAL INFORMATION (continued), Page 3                               | <input type="checkbox"/> MSDS SHEETS                              |
| <input type="checkbox"/> FUEL-BURNING EQUIPMENT, Page 4  | <input type="checkbox"/> ESTIMATED EMISSIONS CALCULATIONS         |
| <input type="checkbox"/> PROCESSING, Page 5  | <input type="checkbox"/> STACK TESTS                              |
| <input type="checkbox"/> INKS, COATINGS, STAINS, AND ADHESIVES, Page 6                         | <input type="checkbox"/> AIR MODEL DATA                           |
| <input type="checkbox"/> INCINERATORS, Page 7  | <input type="checkbox"/> LOCAL GOVERNING BODY CERTIFICATION FORM  |
| <input type="checkbox"/> VOLATILE ORGANIC COMPOUND/PETROLEUM STORAGE TANKS, Page 8             | _____   |
| <input type="checkbox"/> VOLATILE ORGANIC COMPOUND/PETROLEUM STORAGE TANKS - CONTINUED, Page 9 | _____   |
| <input type="checkbox"/> LOADING RACKS AND OIL-WATER SEPARATORS, Page 10                       | _____   |
| <input type="checkbox"/> STACK PARAMETERS AND FUEL DATA, Page 11                               | _____   |
| <input type="checkbox"/> AIR POLLUTION CONTROL AND MONITORING EQUIPMENT, PAGE 12               | _____   |
| <input type="checkbox"/> AIR POLLUTION CONTROL/SUPPLEMENTAL INFORMATION, PAGE 13               | _____   |
|  | _____   |
|  | _____   |
|  | _____   |
|  | _____   |
|  | _____   |
|  | _____   |
|  | _____   |

Note added form sheets above; also indicate the number of copies of each form in blank provided.

DOCUMENT CERTIFICATION FORM  
(see other side for instructions)

*I certify under penalty of law that this document and all attachments [as noted above] were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

SIGNATURE: Mark L. Baker DATE: September 14, 2001

NAME: Mark L. Baker

TITLE: Director of Operations REGISTRATION

COMPANY: Combustion Products Management, Inc. NUMBER: 61367

References: Virginia Regulations, 9 VAC 5-80-10.D.4. See reverse of this form for instructions.

COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY  
 AIR PERMIT APPLICATION GENERAL INFORMATION

PERSON COMPLETING FORM	DATE	REGISTRATION NUMBER
MAPX L. BAKER	9/14/01	61367

REASON(S) FOR SUBMISSION:

OPERATING PERMIT

RENEWAL OF OPERATING PERMIT (CURRENT PERMIT EXPIRATION DATE: \_\_\_\_\_)

MODIFICATION

NEW SOURCE

EXEMPTION

REGISTRATION UPDATE

OWNERSHIP OR NAME CHANGE - EFFECTIVE DATE: Invoice date for sale 8/13/01  
 (COMPLETE PAGES 1 AND 2 ONLY)

OTHER (SPECIFY) Permit transfer to Virginia Electric Power Company, Registration No. 60163

THIS PERMIT IS APPLIED FOR PURSUANT TO THE FOLLOWING PROVISION(S) OF THE VIRGINIA REGULATIONS OR FEDERAL REGULATIONS (IF KNOWN):

9 VAC 5-80-10 (NEW AND MOD. SOURCES)

9 VAC 5 Chapter 80, Article 8 (PSD, MAJOR SOURCES)

9 VAC 5 Chapter 80, Article 9 (NON-ATTAINMENT MAJOR SOURCES)

9 VAC 5 Chapter 80, Article 5 (STATE OPERATING PERMITS)

Would you be interested in a DEQ Pollution Prevention (P2) site visit to discuss the potential benefits of implementing P2 practices at your facility? Please note that there is no charge for this service and that the site visit is not limited to air pollution issues. Site visits can yield air/water pollution or waste minimization recommendations that can benefit your facility. The purpose of these visits is not to assess compliance with applicable regulatory requirements.

Yes  No

If yes, would you prefer:

Before permit issuance  After permit issuance

COMPANY AND DIVISION NAME:  
 Virginia Electric and Power Company / Chesapeake Energy Center

MAILING ADDRESS:  
 5000 Dominion Blvd., Glen Allen, VA 23060

TELEPHONE NUMBER: 757-485-6754	NUMBER OF EMPLOYEES AT SITE: 128	PROPERTY AREA AT SITE: 231 acres
-----------------------------------	-------------------------------------	-------------------------------------

EXACT SOURCE LOCATION - INCLUDE NAME OF CITY (COUNTY) AND FULL STREET ADDRESS OR DIRECTIONS:  
 2701 Vepco Street, Chesapeake, VA 23323

PERSON TO CONTACT ON AIR POLLUTION MATTERS - NAME AND TITLE: Pamela Faggert VP - Chief Environmental Officer	PHONE NUMBER: 804-273-3467
	FAX NUMBER, IF AVAILABLE: 804-273-3410

Please check here if you obtained this form from the DEQ website.

FOR OFFICIAL USE ONLY

COUNTY CODE:	PLANT ID NUMBER:	UTM NUMBERS:
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# COMBUSTION PRODUCTS MANAGEMENT

A Wallace Corporation

February 29, 2000

Mr. Troy D. Breathwaite  
Virginia Department of Environmental Quality  
Tidewater Regional Office  
5636 Southern Boulevard  
Virginia Beach, Virginia 23462

RECEIVED  
MAR 03 2000

***Sent via Return Receipt Mail***

Subject: Combustion Products Management Air Permit in Chesapeake, Virginia  
Registration Number 61367, AIRS I.D. Number 51-550-00203

Dear Mr. Breathwaite:

This letter will serve as the "Initial Notifications" required in Combustion Products Management's ("CPM") air permit referenced above for the temporary facility in Chesapeake, Virginia.

Because of the portable nature of the equipment utilized at the Chesapeake site, very little time was required to actually assemble and construct the facility. Thus, the dates for "Anticipated Start-Up" and "Actual Start-Up" of the equipment are the same.

Construction of the fly ash pugmilling facility started on February 7, 2000. The first load of cement kiln dust ("CKD") was loaded into the silo on February 9, 2000.

The actual start-up date of the fly ash pugmilling facility was February 15, 2000.

Sincerely,

*Mark L. Baker*

Mark L. Baker, P.E.  
Project Engineer

Cc: ~~Steve Berza - CPM~~  
Richard Mackow - CPM  
Whitehall file  
File

C:/word/vepco/vepcodriggsalrpermitnotificationss022900.doc

105 Cherry Street • P.O. Box 339 • Ithaca, N.Y. 14851  
607-273-1222 • FAX 607-273-8730

**DRAFT PERMIT APPROVAL FORM**

Department of Environmental Quality  
Tidewater Regional Office  
5636 Southern Blvd.  
Virginia Beach, Virginia 23462

**Instructions:**

The "Draft Permit Approval Form" provides the owner or certified company official an opportunity to accept or suggest appropriate changes to a draft permit. If a signed form is not received within one (1) week of the date of receipt of the draft permit, DEQ will assume that the draft permit is considered acceptable and will proceed with processing the permit. **Please check the applicable statement(s) below after thoroughly reviewing the draft permit. Forms may be returned by facsimile to 757-518-2123, attention Troy D. Breathwaite or Ms. Jane A. Workman.**

The owner or certified company official agrees with the conditions of the draft permit dated 2/4/00 Please proceed to issue the permit with no change.

The owner or certified company official finds condition number(s)     of the draft permit dated   /  /   unacceptable.

The suggested changes are attached for your consideration.

The owner or certified company official requests further discussion with DEQ regarding the above referenced condition(s).

Signature: Mark L. Baker, P.E.

Name: MARK L. BAKER

Title: PROJECT ENGINEER

Facility: CPM - CHESAPEAKE

Date: 2/7/00



# DEQ

## VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Tidewater Regional Office  
5636 Southern Blvd.  
Virginia Beach, Virginia 23462

Date: 2/4/00  
To: Mark L. Baker, P.E.  
Location: Combustion Products Management

These pages are from:

Name: Troy Breathwaite

Comments: Please find attached the draft permit for the proposed Chesapeake facility. Please review the draft permit and the enclosed Draft Permit Approval Form (DPAF). Please complete and return the DPAF to my attention. Fax is acceptable — fax # 757-518-2123.

Total number of pages including this cover letter: 12

We are transmitting from a Murata F75.  
If you do not receive all pages, please call:

Office Phone Number:	1 (757) 518-2000
Facsimile Number:	1 (757) 518-2123

February 4, 2000

Mr. Mark L. Baker, P.E.  
Project Engineer  
Combustion Products Management Incorporated  
502 Huntington Road  
Easley, SC 29642

Location: Chesapeake  
Registration No.: 61367  
AIRS ID No. 51-550-00203

Dear Mr. Baker:

Attached is a permit to construct and operate a temporary facility for the pugmill blending of fly ash, cement kiln dust & water for use as a roadway sub-base material in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on December 28, 1999.

This approval to construct and operate shall not relieve Combustion Products Management Incorporated of the responsibility to comply with all other local, state, and federal permit regulations.

Mr. Mark L. Baker, P.E.

DRAFT

Page 2

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provides that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-180 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of service of this decision (the date you actually received this decision or the date on which it was mailed to you, whichever occurred first), within which to initiate an appeal of this decision by filing a Notice of Appeal with:

Dennis H. Treacy, Director  
Department of Environmental Quality  
P. O. Box 10009  
Richmond, VA 23240-0009

In the event that this decision is served on you by mail, three days are added to the period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decision of administrative agencies.

If you have any questions concerning this permit, please call Troy D. Breathwaite at the regional office at (757) 518-2006.

Sincerely,

Karen Jackson Sismour  
Regional Permit Manager

KJS/TDB/CPM\_MIN

Attachment: Permit

cc. Director, OAPP (electronic file submission)  
Manager, Data Analysis (electronic file submission)

**COMMONWEALTH OF VIRGINIA  
STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE**

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution.

Combustion Products Management Incorporated  
502 Huntington Road  
Easley, SC 29642  
Registration No.: 61367  
AIRS ID No.: 51-550-00203

is authorized to construct and operate

a temporary facility for the pugmill blending of fly ash, cement  
kiln dust & water for use as a roadway sub-base material

located at

Virginia Power, Chesapeake Energy Center  
2701 Vepco Street  
Chesapeake, Virginia 23323

in accordance with the Conditions of this permit.

Approved on            DRAFT.

---

Director, Department of Environmental Quality

Permit consists of 8 pages.  
Permit Conditions 1 to 22.

Combustion Products Management Incorporated

Registration Number: 61367

DRAFT

Page 2

**PERMIT CONDITIONS** - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

### **APPLICATION**

1. Except as specified in this permit, the permitted facility is to be constructed and operated as represented in the permit application dated December 23, 1999. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.  
(9 VAC 5-50-390 and 9 VAC 5-80-10 K 4)

### **PROCESS REQUIREMENTS**

2. **Equipment List** - Equipment to be constructed at this facility consists of:
  - one scalping screen rated at 300 tons per hour;
  - one pugmill (Pugmill Systems, Inc., Model 1000) rated at 1000 tons per hour; and
  - one cement kiln dust storage silo with a storage capacity of 1,806 cubic feet.(9 VAC 5-80-10 A)
3. **Emission Controls** - Particulate emissions from the cement kiln dust silo shall be controlled by a fabric filter or equivalent. The control device shall be provided with adequate access for inspection.  
(9 VAC 5-50-260)
4. **Fugitive Dust Emission Controls** - Fugitive dust emission controls shall include the following, or equivalent, as a minimum:
  - a. Dust from material handling, open storage stockpiles, conveying equipment, and load-outs, shall be controlled by wet suppression or equivalent (as approved by the DEQ).
  - b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
  - c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.

Combustion Products Management Incorporated

Registration Number: 61367

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Page 3

- d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-50-260, 9 VAC 5-50-20, and 9 VAC 5-50-90)

5. **Monitoring Devices** - The fabric filter shall be equipped with a device to measure and record the differential pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when filling the cement kiln dust silo.

(9 VAC 5-80-10 H, 9 VAC 5-50-20 C, and 9 VAC 5-50-260)

6. **Monitoring Device Observation** - The monitoring device used to measure and record the differential pressure drop across the fabric filter shall be observed by the permittee with a frequency sufficient to ensure good performance of the fabric filter. The permittee shall record measurements from the monitoring device during filling of the cement kiln dust silo.

(9 VAC 5-50-50 II)

#### **OPERATING/EMISSION LIMITATIONS**

7. **Throughput** - The throughput of the fly ash/cement kiln dust mixture shall not exceed 309,000 tons per year, calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-10 H)

Combustion Products Management Incorporated

Registration Number: 61367

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8. **Emission Limits** - Emissions from the operation of the fly ash pugmilling facility shall not exceed the limits specified below:

PM-10

10.6 lbs/hr

5.6 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number 7.

(9 VAC 5-50-260 and 9 VAC 5-50-180)

9. **Visible Emission Limit** - Visible emissions from the fabric filter shall not exceed 5 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10 percent opacity, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). Visible emissions from the fly ash pugmill shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
- (9 VAC 5-50-260 and 9 VAC 5-50-80)

## **RECORDS**

10. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Tidewater Regional Office. These records shall include, but are not limited to:

- a. Annual throughput of the fly ash/cement kiln dust mixture, calculated monthly as the sum of each consecutive 12-month period.
- b. Calculated PM-10 air pollutant emissions, using a calculation method approved by the Tidewater Regional Office to verify compliance with the pound per hour and annual PM-10 limits in Condition Number 8.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50)

Combustion Products Management Incorporated

Registration Number: 61367

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11. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the fabric filter stack.  
(9 VAC 5-50-30 F)

### NOTIFICATIONS

12. **Initial Notifications** - The permittee shall furnish written notification to the Director, Tidewater Regional Office:
- a. The actual date on which construction of the fly ash pugmilling facility commenced within 30 days after such date.
  - b. The anticipated start-up date of the fly ash pugmilling facility postmarked not more than 60 days nor less than 30 days prior to such date.
  - c. The actual start-up date of the fly ash pugmilling facility within 15 days after such date.
- (9 VAC 5-50-50)

### GENERAL CONDITIONS

13. **Permit Invalidation** - This permit to construct the fly ash pugmilling facility shall become invalid, unless an extension is granted by the DEQ, if:
- a. A program of continuous construction is not commenced before the latest of the following:
    - i. 18 months from the date of this permit;
    - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
    - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or
  - b. A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.
- (9 VAC 5-80-10 K)

Combustion Products Management Incorporated

Registration Number: 61367

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14. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
  - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
  - c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
  - d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.  
(9 VAC 5-170-130)

15. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Director, Tidewater Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
  - b. The expected length of time that the air pollution control equipment will be out of service;
  - c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
  - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.
- (9 VAC 5-20-180 B)

Combustion Products Management Incorporated

Registration Number: 61367

DRAFT

Page 7

**16. Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Tidewater Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours of the malfunction. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify Director, Tidewater Regional Office in writing. (9 VAC 5-20-180 C)

**17. Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated. (9 VAC 5-20-180 I)

**18. Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request. (9 VAC 5-50-20 E)

- 19. Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:
- a. Knowingly makes material misstatements in the application for this permit or any amendments to it;
  - b. Fails to comply with the conditions of this permit;

Combustion Products Management Incorporated

Registration Number: 61367

DRAFT

Page 8

- c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;
- f. Fails to construct or operate this facility in accordance with the application for this permit or any amendments to it; or
- g. Allows the permit to become invalid.

(9 VAC 5-80-10 K)

20. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Tidewater Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-10 O)

21. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

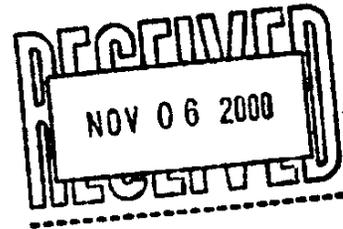
(9 VAC 5-170-60 and 9 VAC 5-20-160)

22. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-170-160)

## MEMORANDUM

**TO:** Rich Mackow  
**FROM:** Mark L. Baker *MLB*  
**CC:** Steve Benza  
Larry Perryman  
Tami Lintner – Project File  
File



**DATE:** October 31, 2000

**SUBJECT:** Revised Air Permit Received for VEPCO Fly Ash Pugmilling Operation

---

I finally received the revised air permit for the VEPCO fly ash pugmilling operation on October 26, 2000. The application was "deemed complete" on September 14, but it took several weeks for the accompanying paperwork to be processed and mailed by the Virginia Department of Environmental Quality (VDEQ). The revised permit supersedes the original permit issued last March. The specific conditions of the revised permit are summarized below, but please be sure to read the entire permit (attached) to insure that CPM is operating in an acceptable manner.

1. Equipment and process rating:
  - Scalping screen rated at 350 tons/hour
  - Pugmill rated at 1000 tons/hour
  - Silo rated at 1806 cubic feet of storage
  - Total throughput not to exceed 480,000 tons/year
  
2. Fugitive dust controls:
  - Process equipment dust to be controlled by wet suppression or equivalent
  - Dump trucks hauling final product to have tarp-covered beds
  - Dust from haul roads and traffic areas to be controlled
  - "Reasonable precautions" taken to prevent deposition of dirt on public roads
  
3. Silo bag house dust control:
  - Shall have a device to "measure and record" differential pressure drop
  - Shall be operated in accordance with manufacturer's specifications
  - Pressure drop shall be recorded during filling of the silo
  - Have adequate access for inspection
  
4. Record keeping:
  - Monthly record of throughput of fly ash/kiln dust mixture from the site
  - Record of all scheduled and non-scheduled bag house maintenance
  - Written operating procedures for equipment
  - Written records of employee training in the proper operation of equipment
  - Record of pressure monitoring during each silo filling operation

Call me if you have any questions.  
C:/vepc/revisedairpermitconditions103100.doc



RECEIVED  
OCT 30 2000

BY:.....

## COMMONWEALTH of VIRGINIA

### DEPARTMENT OF ENVIRONMENTAL QUALITY

James S. Gilmore, III  
Governor

John Paul Woodley, Jr.  
Secretary of Natural Resources

5636 Southern Boulevard  
Virginia Beach, VA 23462  
Tel# (757) 518-2000  
<http://www.deq.state.va.us>

Dennis H. Treacy  
Director

Francis L. Daniel  
Tidewater Regional Director

October 26, 2000

Mr. Mark L. Baker, P.E.  
Project Engineer  
Combustion Products Management Incorporated  
502 Huntington Road  
Easley, South Carolina 29642

Location: Chesapeake  
Registration Number: 61367  
**AIRS ID No. 51-550-00203**

Dear Mr. Baker:

Attached is a modified permit to construct and operate a temporary facility for the pugmill blending of fly ash, cement kiln dust & water for use as a roadway sub-base material in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. This permit supersedes the permit dated March 7, 2000.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on September 14, 2000.

This approval to construct and operate shall not relieve Combustion Products Management Incorporated of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provides that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-180 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of service of this decision (the date you actually received this decision or the date on which it was mailed to you, whichever occurred first), within which to initiate an appeal of this decision by filing a Notice of Appeal with:

Dennis H. Treacy, Director  
Department of Environmental Quality  
PO Box 10009  
Richmond, Virginia 23240-0009

In the event that this decision is served on you by mail, three days are added to the period in which to file an appeal. Please refer to Rule 2A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decision of administrative agencies.

If you have any questions concerning this permit, please call Troy D. Breathwaite at the regional office at (757) 518-2006.

Sincerely,



Francis L. Daniel

FLD/WMC/TDB/cpm1000\_min.doc

Attachment: Permit

cc. Director, OAPP (electronic file submission)  
Manager, Data Analysis (electronic file submission)



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

James S. Gilmore, III  
Governor

John Paul Woodley, Jr.  
Secretary of Natural Resources

5636 Southern Boulevard  
Virginia Beach, VA 23462  
Tel# (757) 518-2000  
<http://www.deq.state.va.us>

Dennis H. Treacy  
Director

Francis L. Daniel  
Tidewater Regional Director

### COMMONWEALTH OF VIRGINIA

### STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Combustion Products Management Incorporated  
502 Huntington Road  
Easley, South Carolina 29642  
Registration Number: 61367  
**AIRS ID No.: 51-550-00203**

is authorized to construct and operate

a temporary facility for the pugmill blending of fly ash, cement kiln dust & water for use as a roadway sub-base material

located at

Virginia Power, Chesapeake Energy Center  
2701 Veeco Street  
Chesapeake, Virginia 23323

in accordance with the Conditions of this permit.

Approved on **October 26, 2000.**

  
\_\_\_\_\_  
Director, Department of Environmental Quality

Permit consists of 8 pages.  
Permit Conditions 1 to 21.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

**APPLICATION**

1. Except as specified in this permit, the permitted facility is to be constructed and operated as represented in the permit applications dated December 23, 1999, and September 12, 2000. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.  
(9 VAC 5-50-390 and 9 VAC 5-80-10 K 4)

**PROCESS REQUIREMENTS**

2. **Equipment List** - Previously permitted equipment at this facility consists of:
  - one scalping screen rated at 350 tons per hour;
  - one pugmill (Pugmill Systems, Inc., Model 1000) rated at 1000 tons per hour; and
  - one cement kiln dust storage silo with a storage capacity of 1,806 cubic feet.(9 VAC 5-80-10 A)
3. **Emission Controls** - Particulate emissions from the cement kiln dust silo shall be controlled by a fabric filter or equivalent. The control device shall be provided with adequate access for inspection.  
(9 VAC 5-50-260)
4. **Fugitive Dust Emission Controls** - Fugitive dust emission controls shall include the following, or equivalent, as a minimum:
  - a. Dust from material handling, open storage stockpiles, conveying equipment, and load-outs, shall be controlled by wet suppression or equivalent (as approved by the DEQ). Dump trucks hauling final product offsite shall be equipped with tarp-covered beds.
  - b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
  - c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.

d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-50-260, 9 VAC 5-50-20, and 9 VAC 5-50-90)

5. **Monitoring Devices** - The fabric filter shall be equipped with a device to measure and record the differential pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when filling the cement kiln dust silo.

(9 VAC 5-80-10 H, 9 VAC 5-50-20 C, and 9 VAC 5-50-260)

6. **Monitoring Device Observation** - The monitoring device used to measure and record the differential pressure drop across the fabric filter shall be observed by the permittee with a frequency sufficient to ensure good performance of the fabric filter. The permittee shall record measurements from the monitoring device during filling of the cement kiln dust silo.

(9 VAC 5-50-50 H)

#### **OPERATING/EMISSION LIMITATIONS**

7. **Throughput** - The throughput of the fly ash/cement kiln dust mixture shall not exceed 480,000 tons per year, calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-10 H)

8. **Emission Limits** - Emissions from the operation of the fly ash pugmilling facility shall not exceed the limits specified below:

PM-10	17.4 lbs/hr	12.1 tons/yr
-------	-------------	--------------

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number 7.

(9 VAC 5-50-260 and 9 VAC 5-50-180)

9. **Visible Emission Limit** - Visible emissions from the fabric filter shall not exceed 5 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10 percent opacity, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). Visible emissions from the fly ash pugmill shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.  
(9 VAC 5-50-260 and 9 VAC 5-50-80)

### RECORDS

10. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Tidewater Regional Office. These records shall include, but are not limited to: Annual throughput of the fly ash/cement kiln dust mixture, calculated monthly as the sum of each consecutive 12-month period.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50)

11. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the fabric filter stack.  
(9 VAC 5-50-30 F)

**GENERAL CONDITIONS**

12. **Permit Invalidation** - This permit to construct the fly ash pugmilling facility shall become invalid, unless an extension is granted by the DEQ, if:
- a. A program of continuous construction is not commenced before the latest of the following:
    - i. 18 months from the date of this permit;
    - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
    - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or
  - b. A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.  
(9 VAC 5-80-10 K)

**13. Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
- b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
- c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
- d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130)

**14. Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Director, Tidewater Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B)

**15. Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Tidewater Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours of the malfunction. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify Director, Tidewater Regional Office in writing. (9 VAC 5-20-180 C)

**16. Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated. (9 VAC 5-20-180 I)

**17. Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request. (9 VAC 5-50-20 E)

**18. Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

- a. Knowingly makes material misstatements in the application for this permit or any amendments to it;
- b. Fails to comply with the conditions of this permit;

- c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;
- f. Fails to construct or operate this facility in accordance with the application for this permit or any amendments to it; or
- g. Allows the permit to become invalid.

(9 VAC 5-80-10 K)

19. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Tidewater Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-10 O)

20. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

(9 VAC 5-170-60 and 9 VAC 5-20-160)

21. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-170-160)

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

May 17, 2002

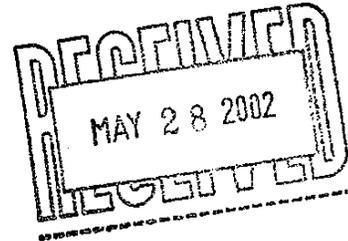
**Combustion Products Management, Inc.**

P.O. Box 2814

Easley, South Carolina 29641

Attention: **Mark L. Baker, P.E.**

Subject: **Laboratory Test Results**  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086



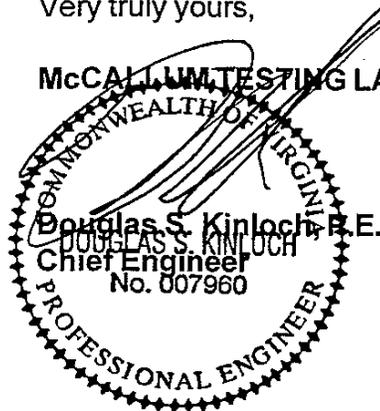
Dear **Mr. Baker:**

Attached are the results of a Moisture Density Test (ASTM D 698 Procedure A), a Moisture Content Test (ASTM D 2216), an Atterberg Limits Test (ASTM D 4318) and a Percent Finer Than a #200 Sieve Test (ASTM D 1140) performed on the flyash/cement kiln dust mixture sampled by a representative of Combustion Products, Inc. and delivered to this office on May 7, 2002, for the above referenced project. We understand the sample represents coal combustion by-product from the Chesapeake Energy Center blended with cement kiln dust at 2 percent by weight.

Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



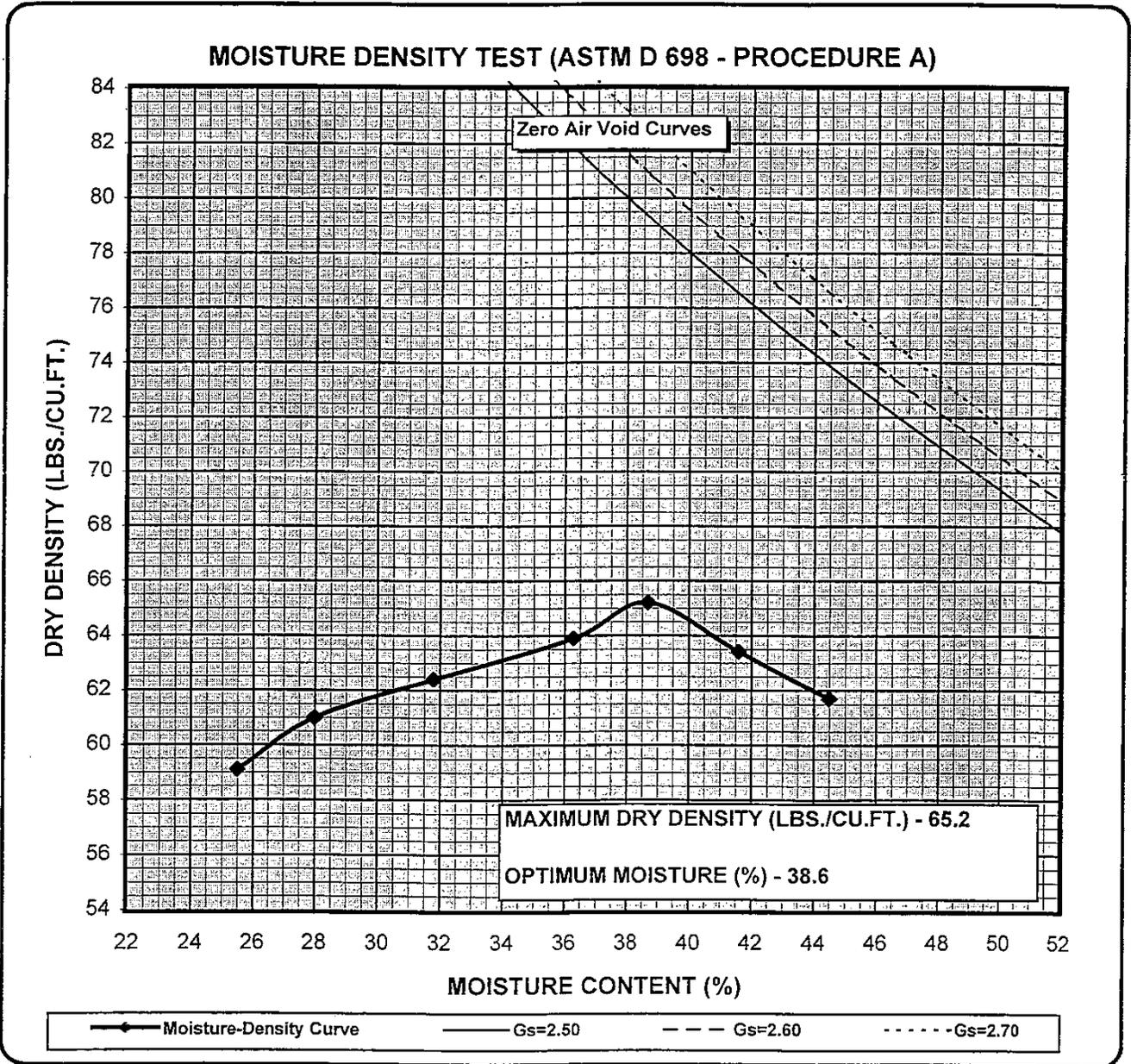
CC: Jerry Wilson  
Bobby DiBerardinis  
~~Steve Benza~~  
Rich Mackow

1808 HAYWARD AVENUE, CHESAPEAKE, VA 23320 ♦ P.O. BOX 13337, CHESAPEAKE, VA 23325-0337  
PHONE (757) 420-2520 ♦ FAX (757) 424-2874

**McCALLUM TESTING LABORATORIES, INC.**

**LABORATORY TEST RESULTS  
ETHERIDGE GREENS  
CHESAPEAKE, VIRGINIA  
MTL PROJECT 02-3086**

SAMPLE NO.	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Flyash with 2% Cement Kiln Dust	5/7/2002	Dark gray, clayey fine sandy silt with traces of medium sand



NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN A #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
39.9	49	30	19	77.6	ML

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

November 15, 2002

CPM  
P.O. Box 2814  
Easley, SC 29641

Attention: Mark L. Baker

Subject: Proctor Sampling - 10/22/02  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Baker:

On this date, our technician, Alan Spik, was on site to obtain a sample of the proposed fill for the subject project. A bag sample of the fly ash being placed was obtained and transported to our laboratory for Moisture-Density Testing.

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

**RECEIVED**  
NOV 25 2002

BY: ML Baker



cc: Bobby D.  
Rich M.  
File

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

October 30, 2002

CPM  
P.O. Box 2814  
Easley, SC 29641

Attention: **Mark L. Baker**

Subject: **Laboratory Test Results**  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

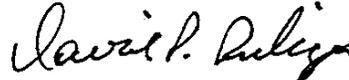
Dear **Mr. Baker**:

Attached are the results of a Moisture Density Test (ASTM D 698 Procedure A), a Moisture Content Test (ASTM D 2216), a Percent Finer Than a #200 Sieve Test (ASTM D 1140) and an Atterberg Limits Test (ASTM D 4318) performed on the off-site material sampled from the above referenced project by our technician, Al Spik, on October 25, 2002. We understand the sample represents fly ash material from the Chesapeake Energy Center in Chesapeake, Virginia.

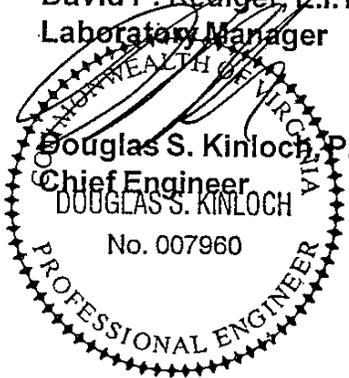
Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



David P. Rediger, E.I.T.  
Laboratory Manager



Douglas S. Kinloch, P.E.  
Chief Engineer

DOUGLAS S. KINLOCH  
No. 007960

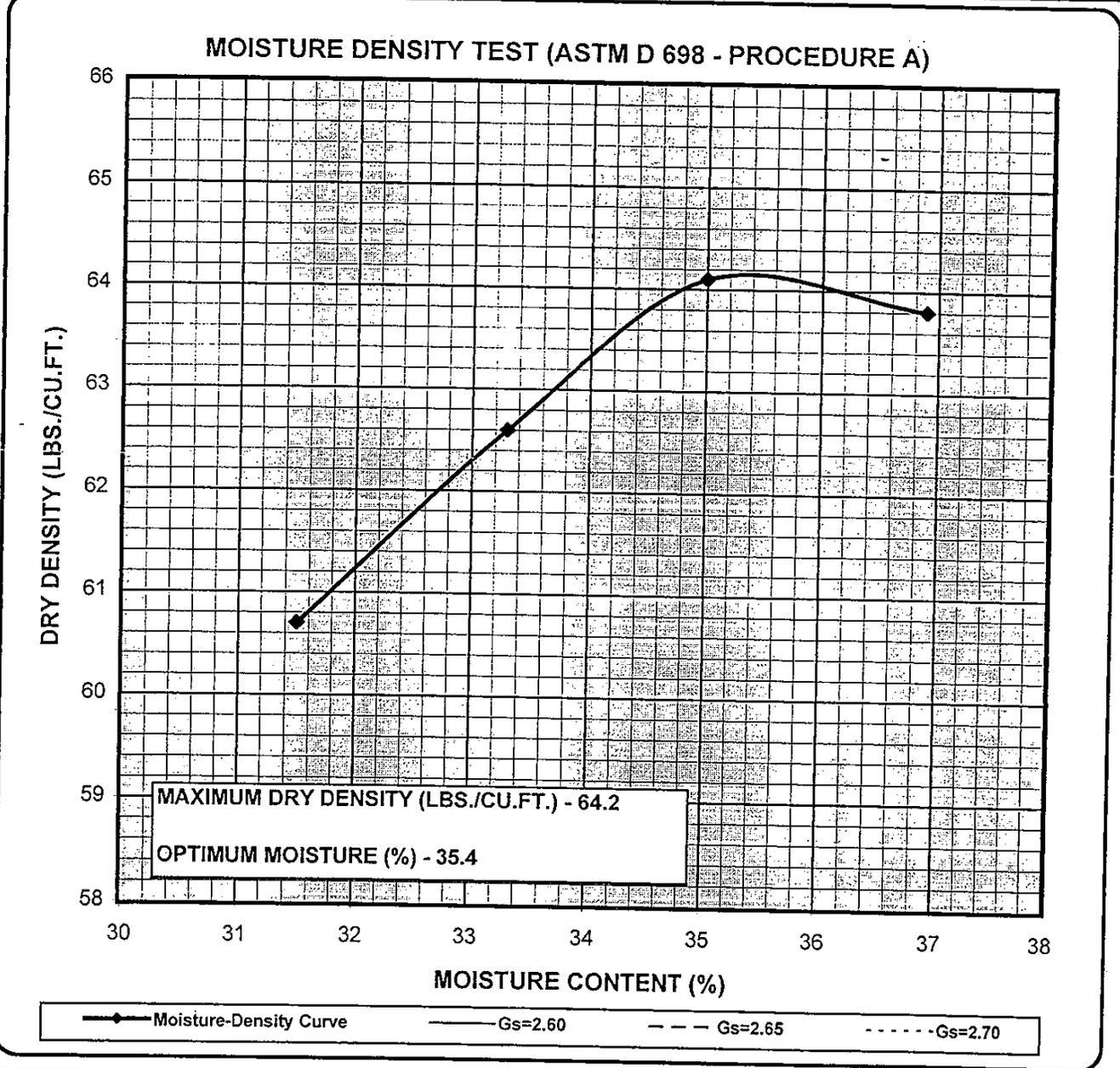
**RECEIVED**  
NOV 25 2002

BY:.....

McCALLUM TESTING LABORATORIES, INC.

LABORATORY TEST RESULTS  
 ETHERIDGE GREENS  
 CHESAPEAKE, VIRGINIA  
 MTL PROJECT 02-3086

SAMPLE NO	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Off-Site Material - Chesapeake Energy Ctr.	10/22/2002	Dark gray, clayey fine sandy silt with traces of medium sand



NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN A #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
44.2	44	29	15	78.8	ML

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

June 8, 2005

CPM

180 Golf Road  
Reinholds, PA 17569

Attention: **Richard Mackow**

Subject: **Laboratory Test Results**  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

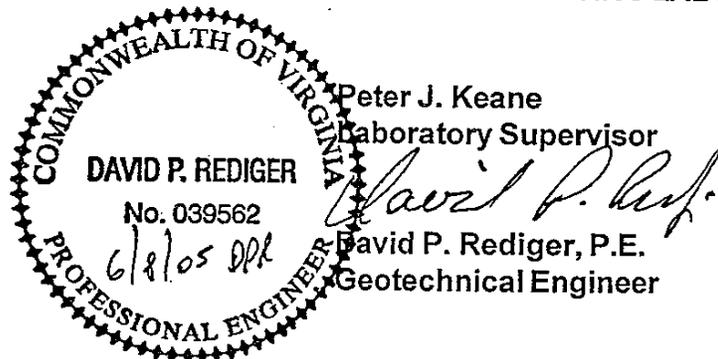
Dear **Mr. Mackow**:

Attached are the results of a Moisture Density Test (ASTM D 698 Procedure A), a Moisture Content Test (ASTM D 2216), a Percent Finer Than a #200 Sieve Test (ASTM D 1140) and an Atterberg Limits Test (ASTM D 4318) performed on the proposed fill material sampled from the above referenced project by our technician, Alex Swafford, on April 11, 2005. We understand that the sample represents flyash material from the Chesapeake Energy Center in Chesapeake, Virginia.

Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



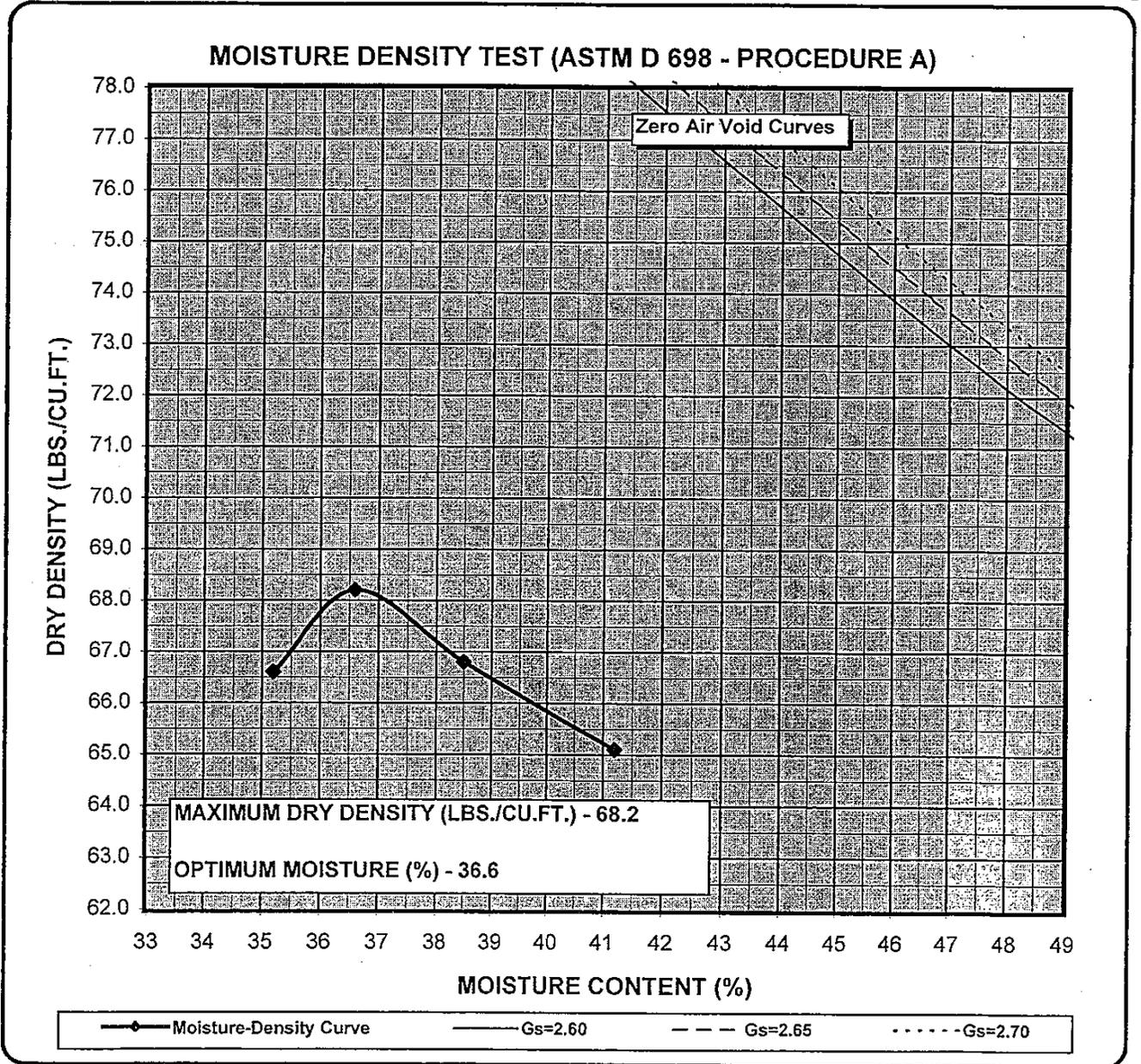
cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

1808 HAYWARD AVENUE, CHESAPEAKE, VA 23320 ♦ P.O. BOX 13337, CHESAPEAKE, VA 23325-0337  
PHONE (757) 420-2520 ♦ FAX (757) 424-2874

**McCALLUM TESTING LABORATORIES, INC.**

**LABORATORY TEST RESULTS  
ETHERIDGE GREENS  
CHESAPEAKE, VIRGINIA  
MTL PROJECT 02-3086**

SAMPLE NO.	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Flyash Material - Chesapeake Energy Ctr.	4/11/05	Very dark gray, fine sandy clayey silt with traces of medium sand



NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN A #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
34.7	45	NP	NP	87.2	ML

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

June 23, 2005

**CPM**

180 Golf Road  
Reinholds, PA 17569

Attention: **Richard Mackow**

Subject: **Laboratory Test Results**  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

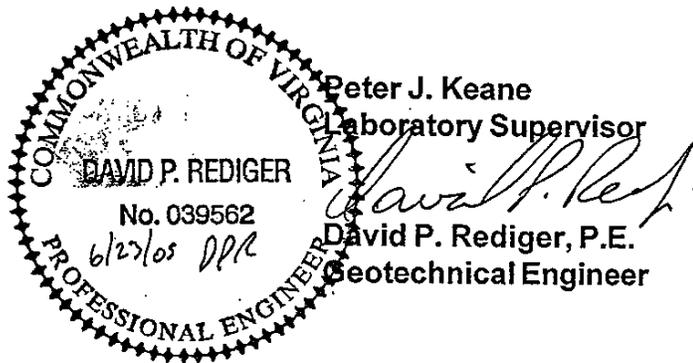
Dear **Mr. Mackow**:

Attached are the results of a Moisture Density Test (ASTM D 698 Procedure A), a Moisture Content Test (ASTM D 2216), a Percent Finer Than a #200 Sieve Test (ASTM D 1140) and an Atterberg Limits Test (ASTM D 4318) performed on the proposed fill material sampled from the above referenced project by our technician, Lou Madray, on June 13, 2005. We understand that the sample represents flyash material supplied by the Chesapeake Energy Center in Chesapeake, Virginia.

Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

**McCALLUM TESTING LABORATORIES, INC.**



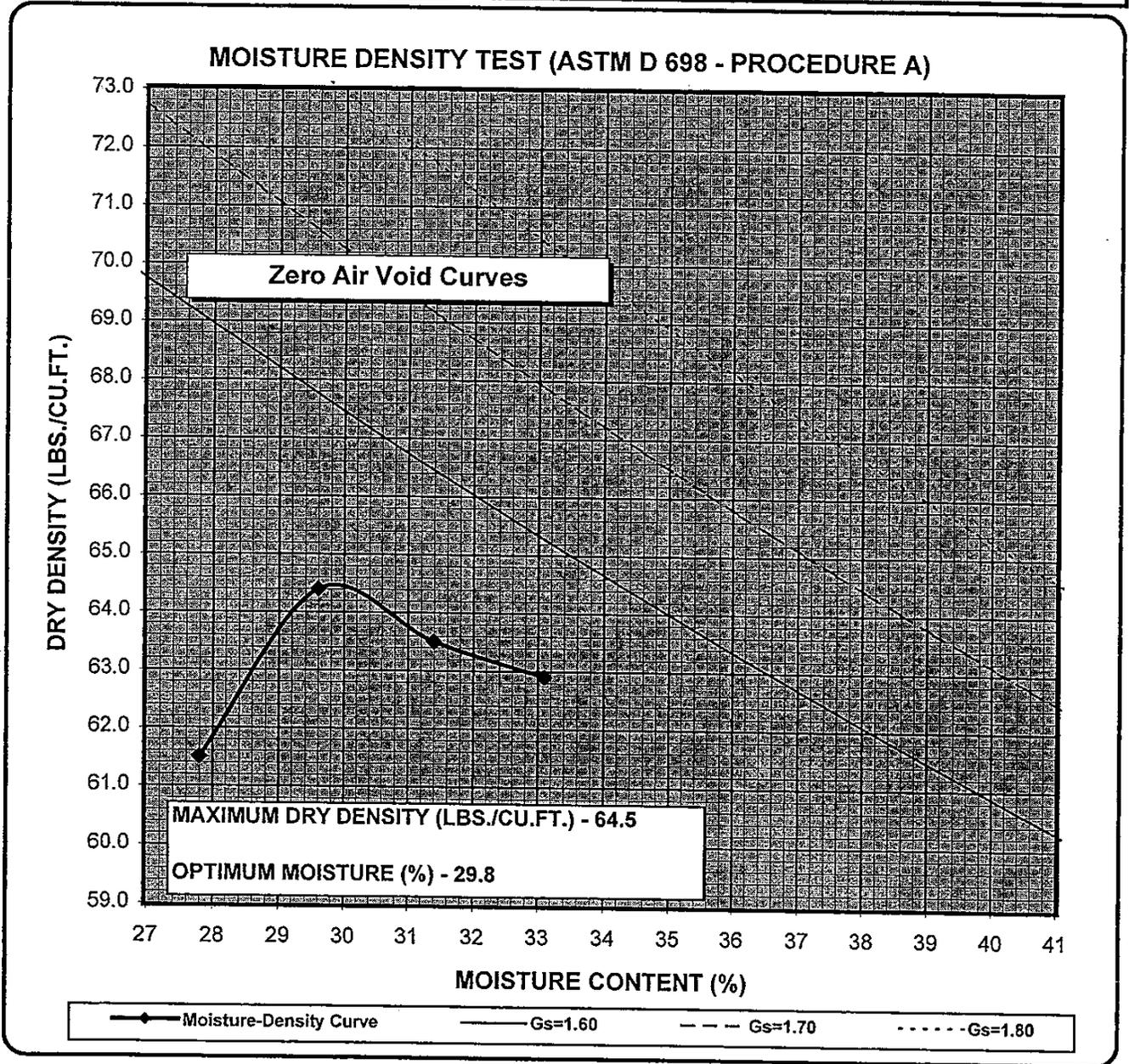
cc: **Dominion Energy - Chesapeake / Ms. Louise Wallin**

1808 HAYWARD AVENUE, CHESAPEAKE, VA 23320 ♦ P.O. BOX 13337, CHESAPEAKE, VA 23325-0337  
PHONE (757) 420-2520 ♦ FAX (757) 424-2874

McCALLUM TESTING LABORATORIES, INC.

LABORATORY TEST RESULTS  
 ETHERIDGE GREENS  
 CHESAPEAKE, VIRGINIA  
 MTL PROJECT 02-3086

SAMPLE NO.	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Proposed Fill Material - Flyash	6/13/05	Dark gray, fine sandy clayey silt with traces of medium sand



NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
40.0	47	NP	NP	84.9	ML

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

November 30, 2005

**CPM**  
180 Golf Road  
Reinholds, PA 17569

Attention: **Richard Mackow**

Subject: **Laboratory Test Results**  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

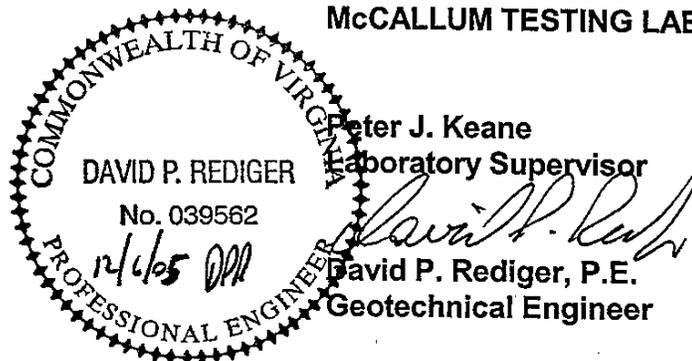
Dear **Mr. Mackow**:

Attached are the results of a Moisture Density Test (ASTM D 698 Procedure A), a Moisture Content Test (ASTM D 2216), a Percent Finer Than a #200 Sieve Test (ASTM D 1140) and an Atterberg Limits Test (ASTM D 4318) performed on the proposed fill material sampled from the above referenced project by our technician, Dave Cropp, on November 14, 2005. We understand that the sample represents flyash material from the Chesapeake Energy Center in Chesapeake, Virginia.

Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

**McCALLUM TESTING LABORATORIES, INC.**



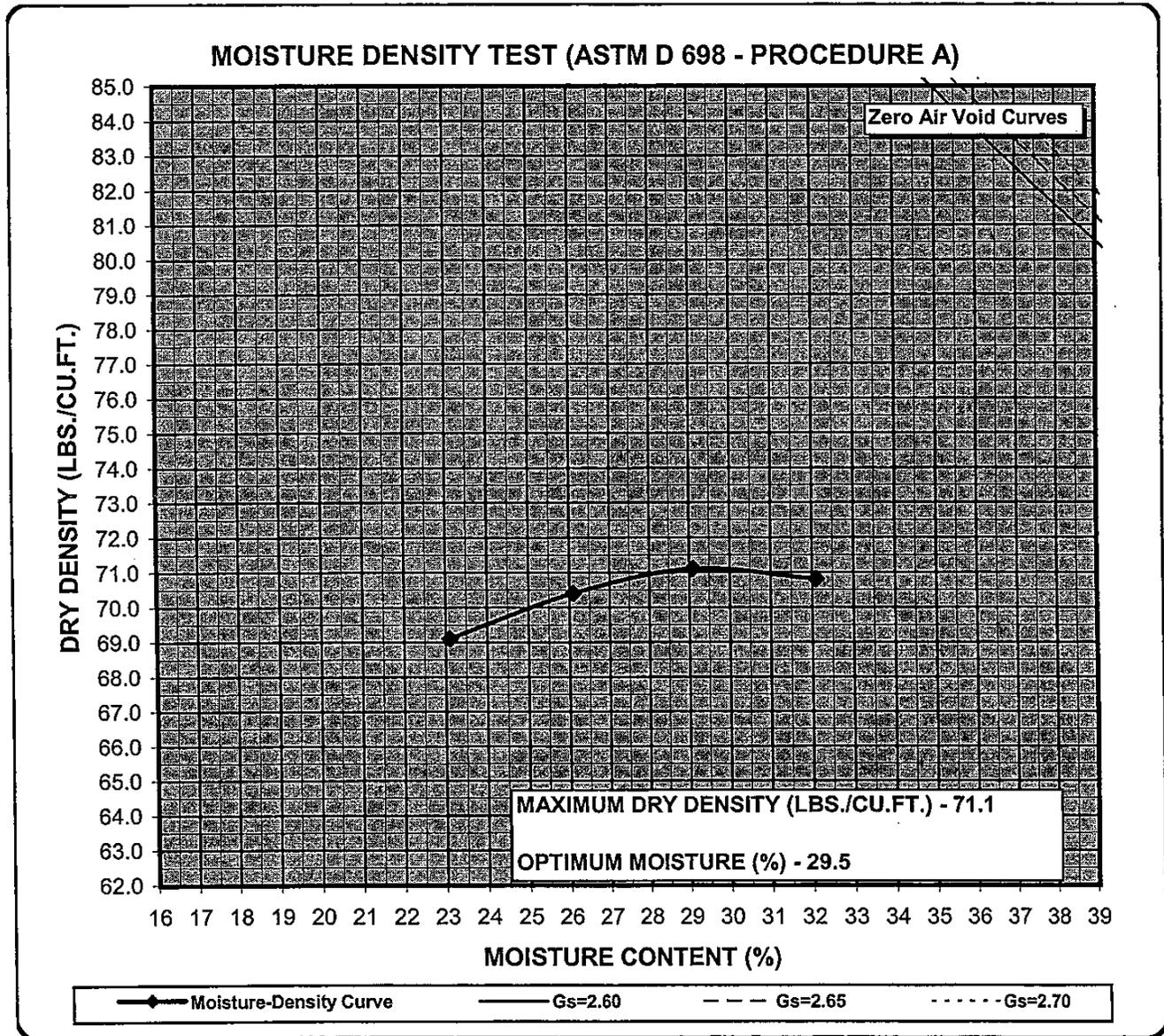
cc: **Dominion Energy - Chesapeake / Ms. Louise Wallin**

1808 HAYWARD AVENUE, CHESAPEAKE, VA 23320 ♦ P.O. BOX 13337, CHESAPEAKE, VA 23325-0337  
PHONE (757) 420-2520 ♦ FAX (757) 424-2874

# McCALLUM TESTING LABORATORIES, INC.

## LABORATORY TEST RESULTS ETHERIDGE GREENS CHESAPEAKE, VIRGINIA MTL PROJECT 02-3086

SAMPLE NO	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Flyash Material - Chesapeake Energy Ctr.	11/14/05	Dark gray, fine sandy clayey silt with traces of medium and coarse sand



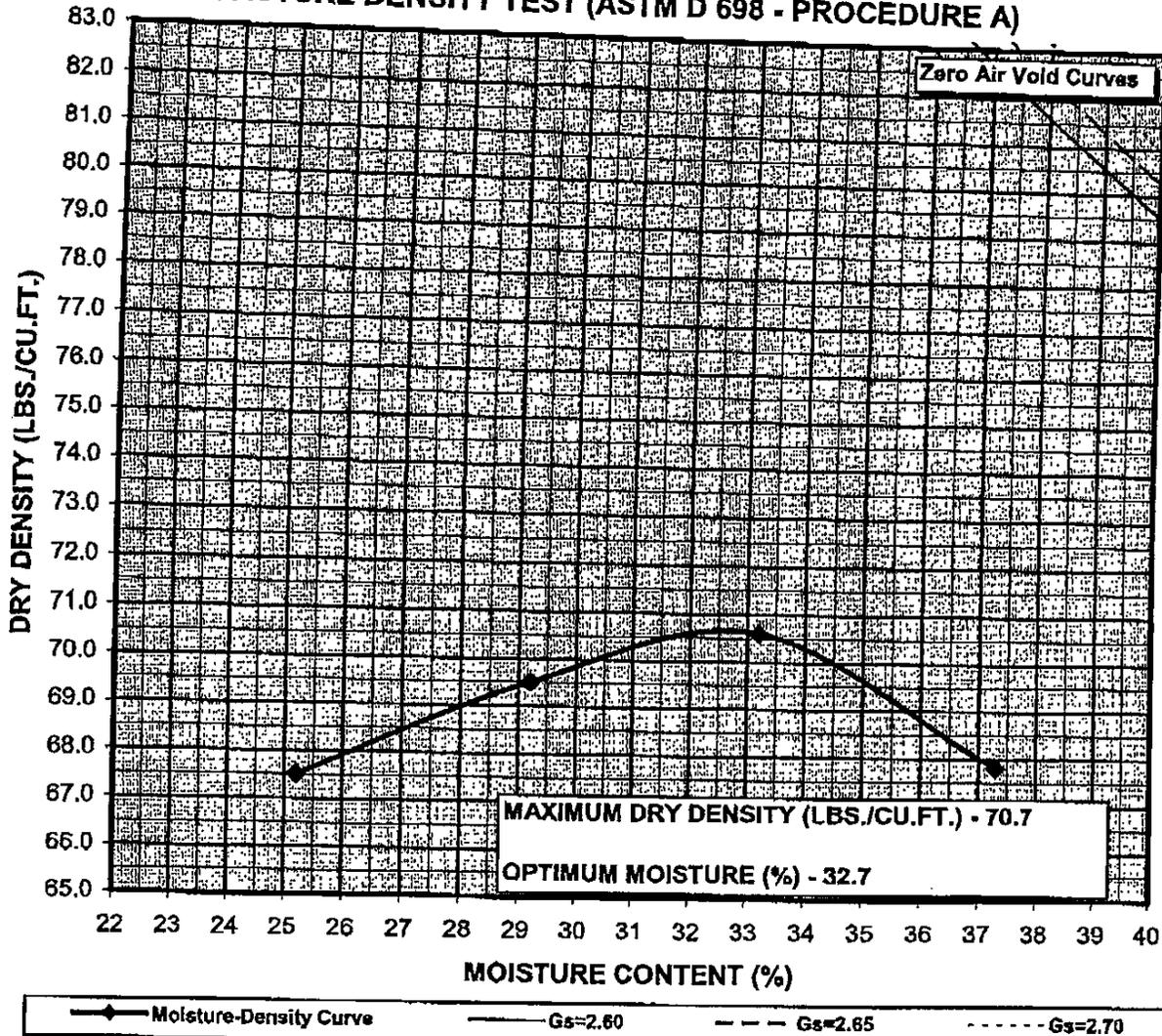
NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
26.1	41	NP	NP	75.1	ML

**McCALLUM TESTING LABORATORIES, INC.**

**LABORATORY TEST RESULTS  
ETHERIDGE GREENS  
CHESAPEAKE, VIRGINIA  
MTL PROJECT 02-3086**

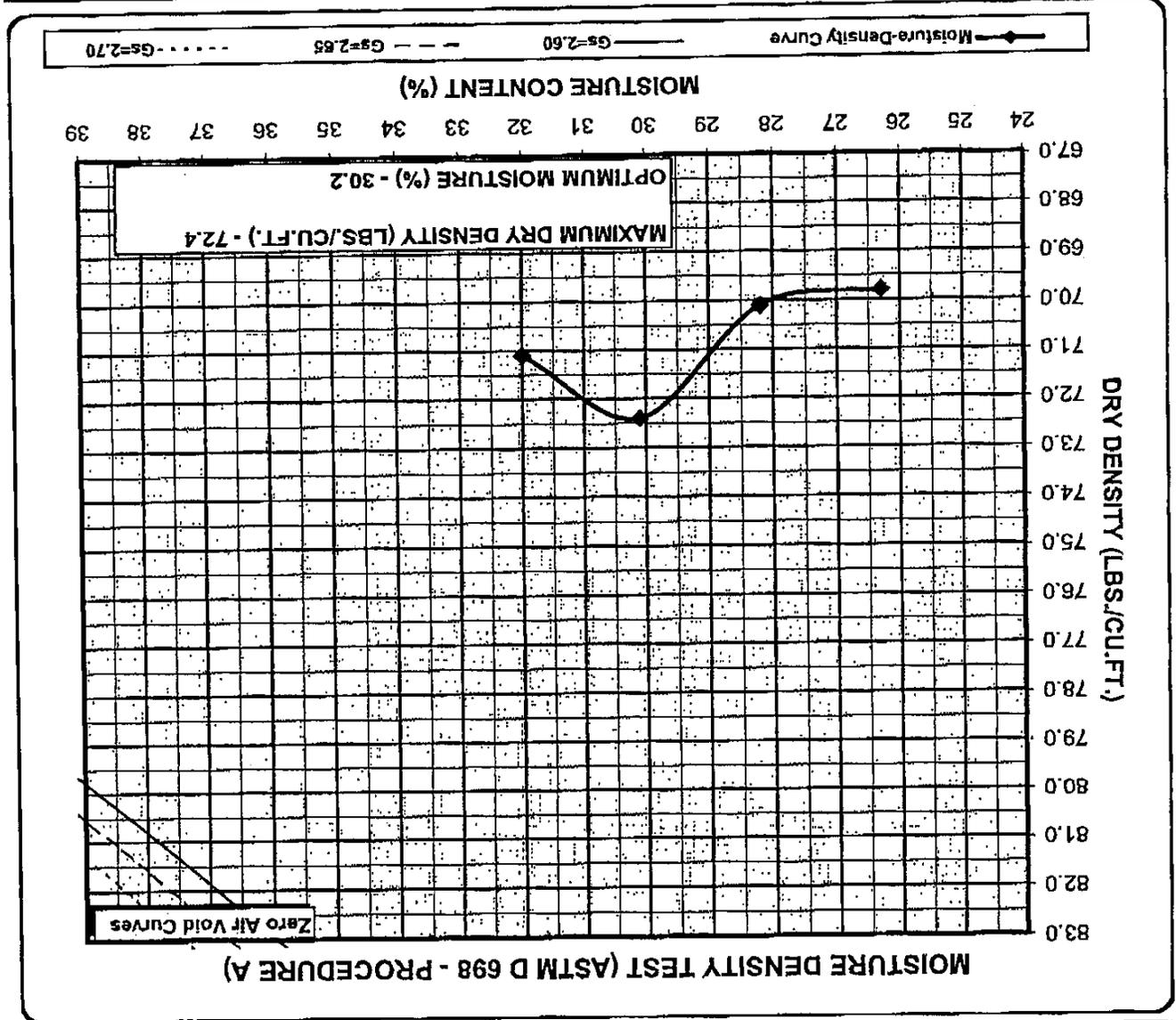
NO.	DESCRIPTION	DATE RECEIVED	VISUAL DESCRIPTION
1	Flyash Material	9/9/05	Dark gray, clayey silt with traces of fine and medium sand

**MOISTURE DENSITY TEST (ASTM D 698 - PROCEDURE A)**



MOISTURE CONTENT (%)	LIQUID LIMIT (%)	ATTERBERG LIMITS		PERCENT FINER THAN #200 SIEVE (%)	SOIL CLASSIFICATION (ASTM D 1586)
		PLASTICITY INDEX (PI)	PLASTICITY INDEX (PI)		
25.0	52	NP	NP	77.4	MH

Moisture Percent	25.2	39	NP	NP	78.5	ML
Atterberg Limits						
Liquid Limit (ASTM D 2008)						
Plasticity Index (ASTM D 2008)						
Moisture Content (ASTM D 2487)						
Soil Classification						



SAMPLE NO.	1	3/15/06	Dark gray, fine sandy clayey silt with traces of medium and coarse sand
SOURCE	Flyash Material - Chesapeake Energy Ctr.	RECEIVED	VISUAL DESCRIPTION

**McCALLUM TESTING LABORATORIES, INC.**  
**LABORATORY TEST RESULTS**  
**ETHERIDGE GREENS**  
**CHESAPEAKE, VIRGINIA**  
**MTL PROJECT 02-3086**

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

May 25, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: **Richard Mackow**

Subject: **Laboratory Test Results**  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

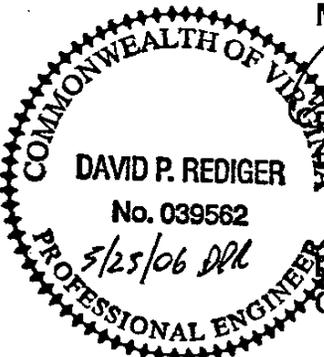
Dear **Mr. Mackow**:

Attached are the results of a Moisture Density Test (ASTM D 698 Procedure A), a Moisture Content Test (ASTM D 2216), a Percent Finer Than a #200 Sieve Test (ASTM D 1140) and an Atterberg Limits Test (ASTM D 4318) performed on the flyash material sampled from the above referenced project by our technician, Lou Madray, on May 19, 2006.

Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

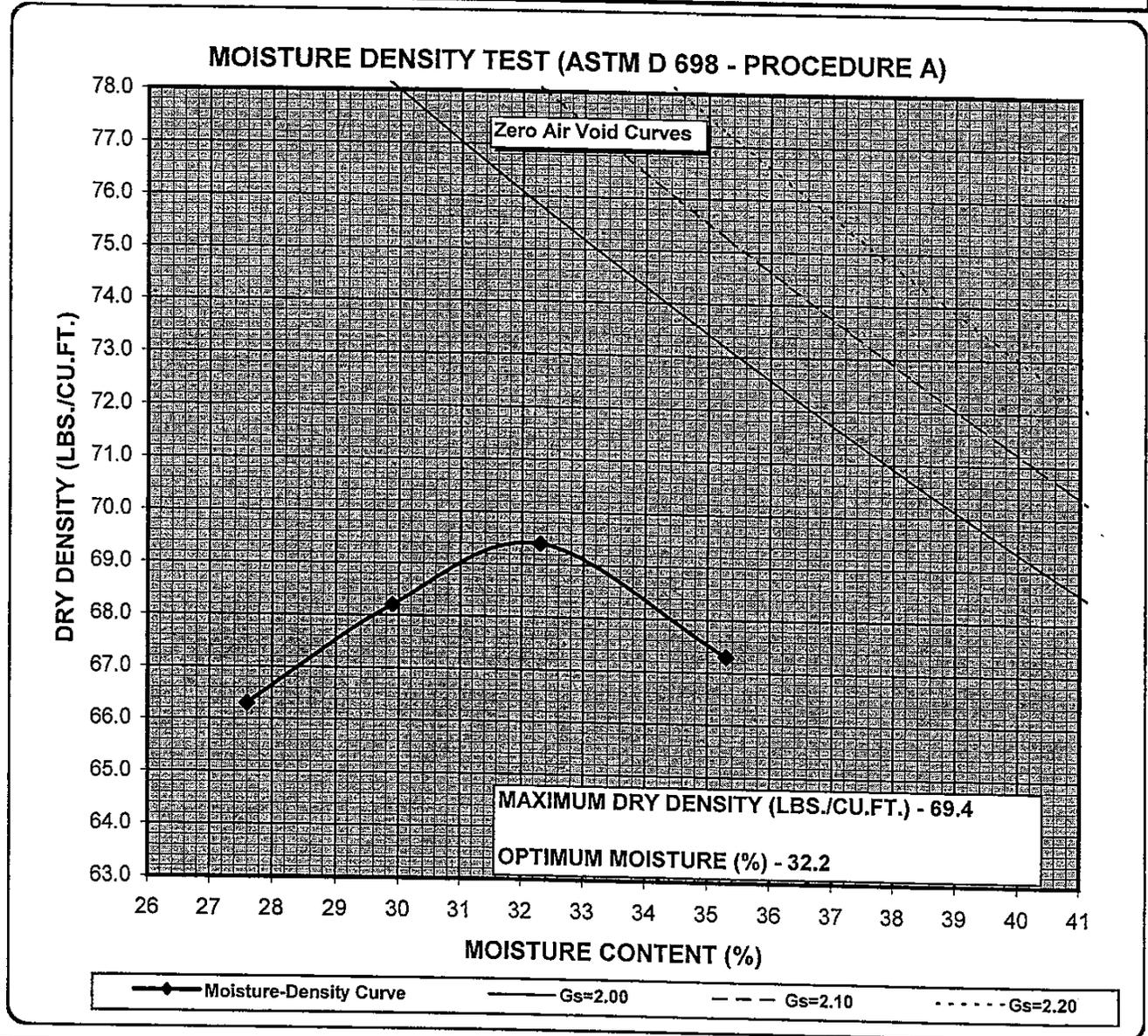
  
*[Signature]*  
Peter J. Keane  
Laboratory Supervisor  
*[Signature]*  
David P. Rediger, P.E.  
Geotechnical Engineer

cc: **Dominion Energy - Chesapeake / Ms. Louise Wallin**

McCALLUM TESTING LABORATORIES, INC.

LABORATORY TEST RESULTS  
 ETHERIDGE GREENS  
 CHESAPEAKE, VIRGINIA  
 MTL PROJECT 02-3086

SAMPLE NO.	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Flyash Material - Chesapeake Energy Ctr.	5/19/2006	Dark gray, fine to medium sandy clayey silt with traces of coarse sand



NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN A #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
30.0	44	NP	NP	71.1	ML

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

September 14, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: **Richard Mackow**

Subject: **Laboratory Test Results**  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

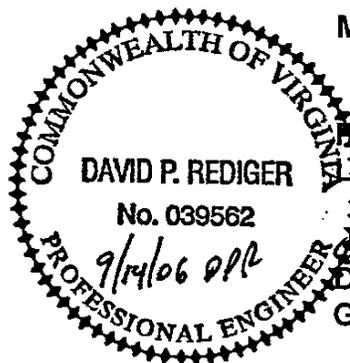
Dear **Mr. Mackow**:

Attached are the results of a Moisture Density Test (ASTM D 698 Procedure A), a Moisture Content Test (ASTM D 2216), a Percent Finer Than a #200 Sieve Test (ASTM D 1140) and an Atterberg Limits Test (ASTM D 4318) performed on the flyash material sampled from the above referenced project by our technician, Al Spik, on September 8, 2006.

Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



Peter J. Keane  
Laboratory Supervisor

David P. Rediger, P.E.  
Geotechnical Engineer

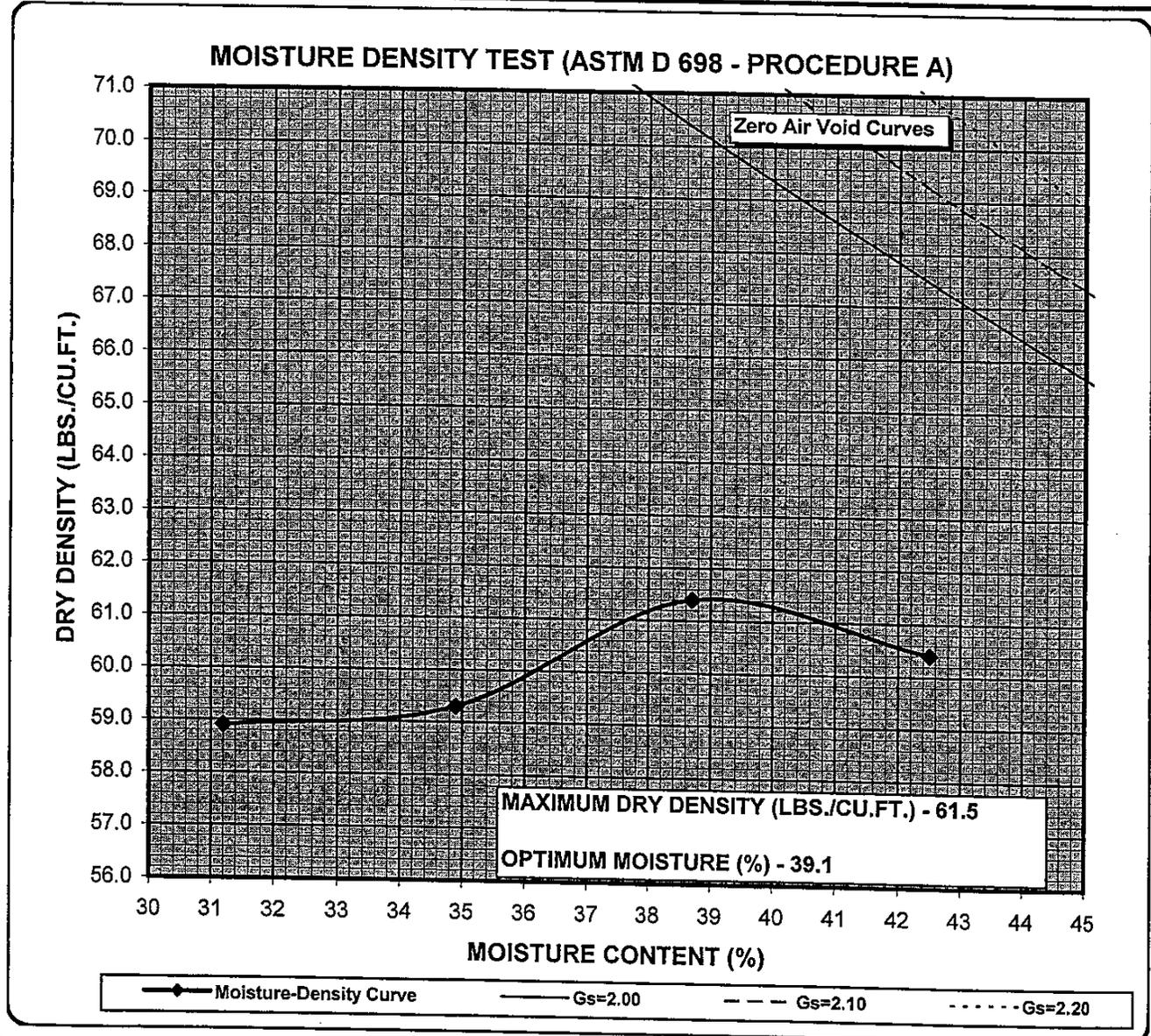
cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

1808 HAYWARD AVENUE, CHESAPEAKE, VA 23320 • P.O. BOX 12227, CHESAPEAKE, VA 23312

# McCALLUM TESTING LABORATORIES, INC.

## LABORATORY TEST RESULTS ETHERIDGE GREENS CHESAPEAKE, VIRGINIA MTL PROJECT 02-3086

SAMPLE NO.	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Flyash Material - Chesapeake Energy Ctr.	9/8/2006	Dark gray, fine sandy clayey silt with traces of medium sand

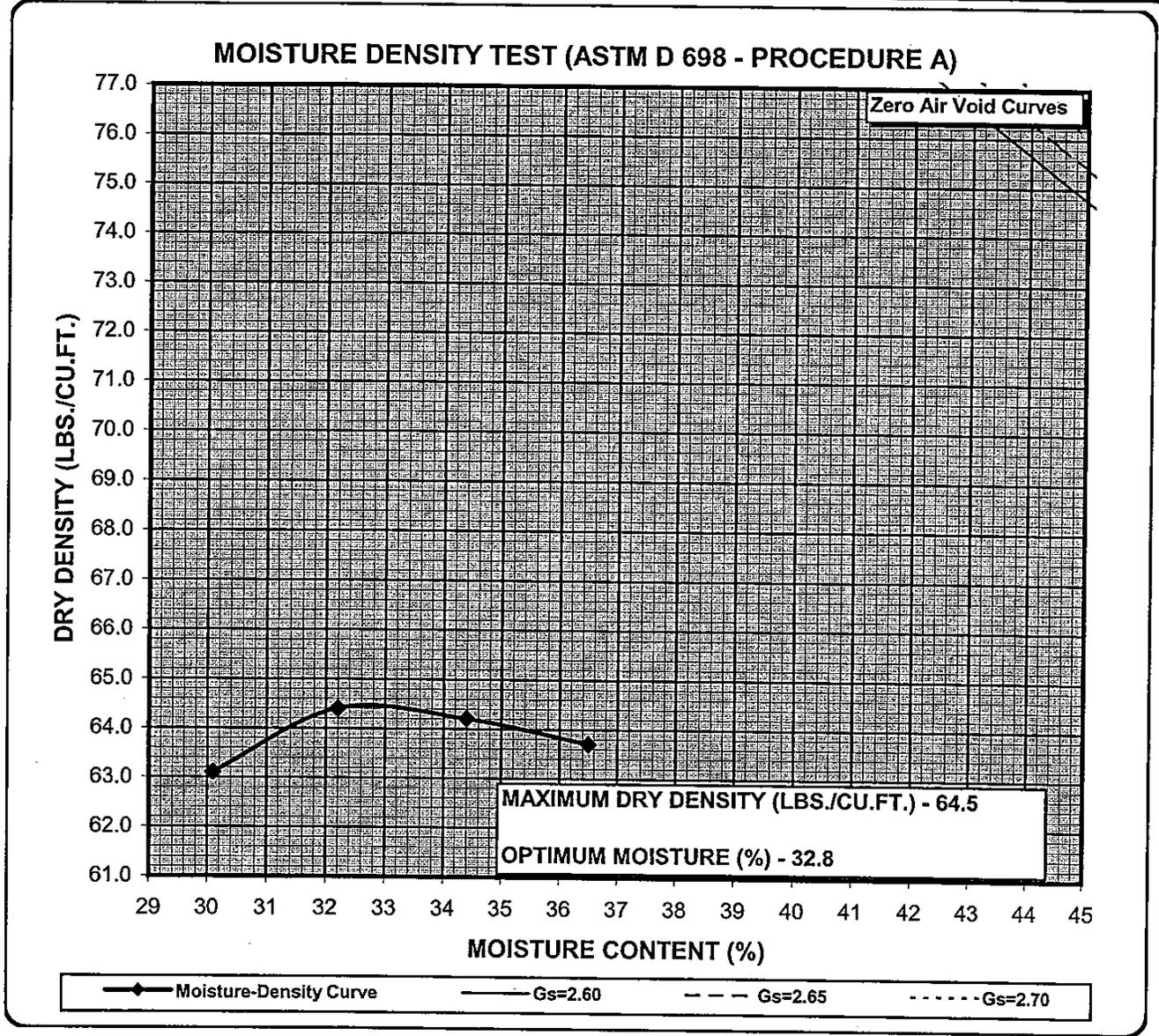


NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN A #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
35.0	18	NP	NP	75.2	ML

**McCALLUM TESTING LABORATORIES, INC.**

**LABORATORY TEST RESULTS  
ETHERIDGE GREENS  
CHESAPEAKE, VIRGINIA  
MTL PROJECT 02-3086**

SAMPLE NO.	SOURCE	DATE RECEIVED	VISUAL DESCRIPTION
1	Chesapeake Energy Center - Flyash	01/17/2007	Dark gray, fine to medium sandy silt with traces of coarse sand



NATURAL PERCENT MOISTURE (ASTM D 2216)	ATTERBERG LIMITS (ASTM D 4318)			PERCENT FINER THAN #200 SIEVE (ASTM D 1140)	SOIL CLASSIFICATION (ASTM D 2487)
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
41.7	49	NP	NP	66.7	ML

	1	2	3	4	5
Weight of Mold and Soil	13.53	13.61	13.61	13.56	
Weight of Mold	9.55	9.55	9.55	9.55	9.62
Weight of Wet Soil	<b>3.98</b>	<b>4.06</b>	<b>4.06</b>	<b>4.01</b>	<b>-9.62</b>
Volume of Mold	0.0333	0.0333	0.0333	0.0333	0.0333
Wet Unit Weight	<b>119.5</b>	<b>121.9</b>	<b>121.9</b>	<b>120.4</b>	<b>-288.9</b>
Weight Wet Sample and Tare	369.7	405.3	394.6	467.8	
Weight Dry Sample and Tare	340.1	363.2	351.8	410.5	---
Weight of Tare	67.2	68.4	68.7	65.5	
Moisture Content	<b>10.8</b>	<b>14.3</b>	<b>15.1</b>	<b>16.6</b>	
Dry Unit Weight	<b>107.9</b>	<b>108.2</b>	<b>106.2</b>	<b>103.3</b>	
Corrected Moisture	10.8	12.7	14.8	16.6	

Graph Data

M%	Dry Unit Weight	ZAV	ZAV	ZAV
		2.6	2.65	2.7
30.1	63.1	91.0	92.0	92.9
32.2	64.4	88.3	89.2	90.1
34.4	64.2	85.6	86.5	87.3
36.5	63.7	83.2	84.1	84.9
37		82.7	83.5	84.3
37.5		82.1	82.9	83.7
38		81.6	82.4	83.2
38.5		81.1	81.9	82.6
39		80.6	81.3	82.1
39.5		80.0	80.8	81.5
40		79.5	80.3	81.0
40.5		79.0	79.8	80.5
41		78.5	79.3	80.0
41.5		78.0	78.8	79.5
42		77.6	78.3	79.0
42.5		77.1	77.8	78.5
43		76.6	77.3	78.0
43.5		76.1	76.8	77.5
44		75.7	76.3	77.0
44.5		75.2	75.9	76.5
45		74.8	75.4	76.1
45.5		74.3	75.0	75.6
46		73.9	74.5	75.1

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

March 1, 2007

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 2/5/07  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

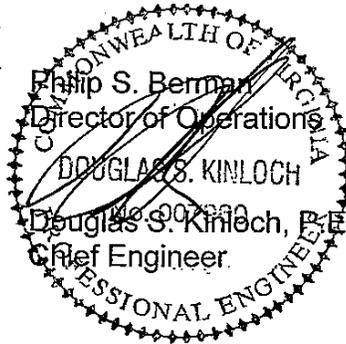
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12	12	
MEASURED MOISTURE (%)	30.1	29.6	33.1	29.9	32.1	
OPTIMUM MOISTURE (%)*	32.8	32.8	32.8	32.8	32.8	
MEASURED DRY DENSITY (PCF)	65.9	66.1	64.2	65.5	62.2	
MAXIMUM DRY DENSITY (PCF)*	64.5	64.5	64.5	64.5	64.5	
MEASURED COMPACTION (%)	100	100+	99.5	100	100+	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. 30-H, Final						
2. 30-I, Final						
3. 30-J, Final						
4. 30-K, Final						
5. 30-L, Final						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● ————— Compaction test



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

February 13, 2007

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 1/17/07  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

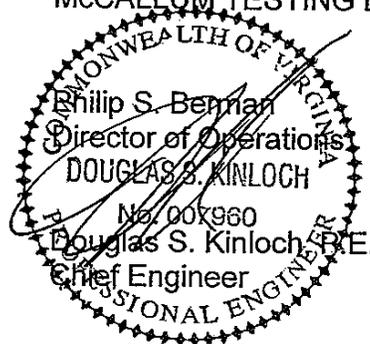
On this date, our technician, Jeff Ortega, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12	12	
MEASURED MOISTURE (%)	21.4	23.8	20.6	22.5	23.0	
OPTIMUM MOISTURE (%)	32.8	32.8	32.8	32.8	32.8	
MEASURED DRY DENSITY (PCF)	64.6	62.4	63.8	62.0	63.2	
MAXIMUM DRY DENSITY (PCF)	64.5	64.5	64.5	64.5	64.5	
MEASURED COMPACTION (%)	100+	96.7	98.9	96.1	98.0	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. E.5, 26, final						
2. E.5, 27, final						
3. E.5, 28, final						
4. E.5, 29, final						
5. E.5, 30, final						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Compaaction Test Area 1/17/07



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

February 2, 2007

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 1/23/07  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

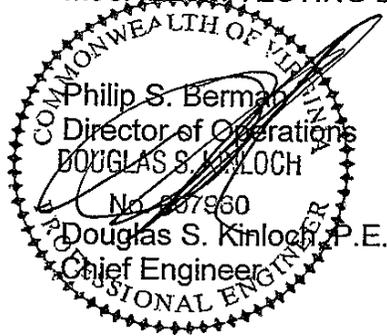
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO	1	2	3	4	5	6
PROBE DEPTH (IN)	12	12	12	12	12	12
MEASURED MOISTURE (%)	28.6	30.1	29.9	29.1	32.1	32.9
OPTIMUM MOISTURE (%)	32.8	32.8	32.8	32.8	32.8	32.8
MEASURED DRY DENSITY (PCF)	68.6	69.2	67.1	70.6	66.9	67.6
MAXIMUM DRY DENSITY (PCF)	64.5	64.5	64.5	64.5	64.5	64.5
MEASURED COMPACTION (%)	100+	100+	100+	100+	100+	100+
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	95
<b>TEST LOCATIONS</b>						
1. 23 - I.5, Final						
2. 23 - H.5, Final						
3. 23 - G.5, Final						
4. 26.5 - L.5, Final						
5. 26.5 - M.5, Final						
6. 26.5 - N.5, Final						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

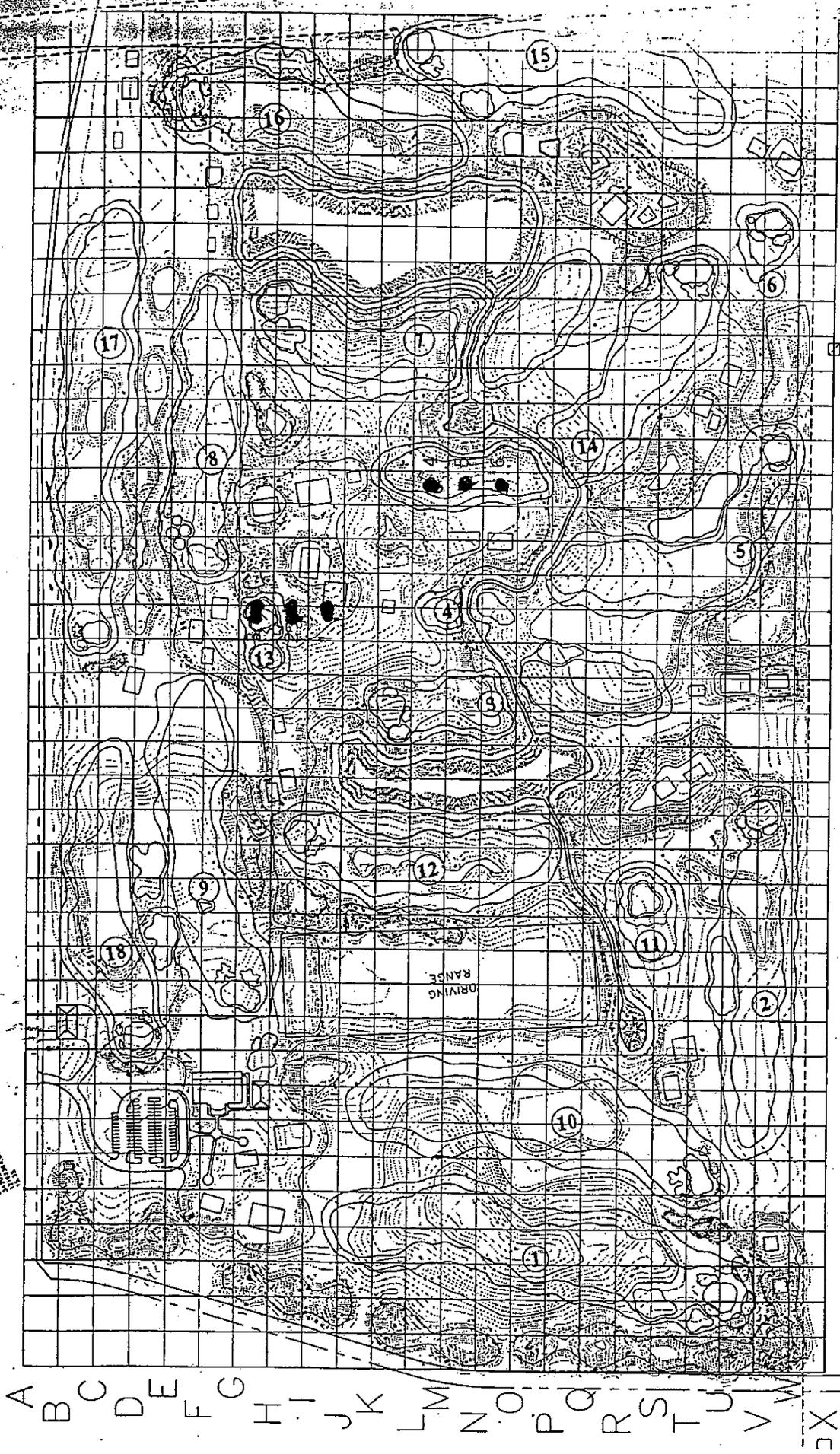
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● — Compaction Test 1/23/07



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

January 12, 2007

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 12/11/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

On this date, our technician, Jeff Gilliam, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	8	8	8	8	8	
MEASURED MOISTURE (%)	30.3	27.5	29.6	29.4	31.2	
OPTIMUM MOISTURE (%)	39.1	39.1	39.1	39.1	39.1	
MEASURED DRY DENSITY (PCF)	60.2	59.5	59.3	63.6	60.7	
MAXIMUM DRY DENSITY (PCF)	61.5	61.5	61.5	61.5	61.5	
MEASURED COMPACTION (%)	97.8	96.7	96.4	100+	98.6	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. C-24, Final Lift						
2. C-25, Final Lift						
3. C-26, Final Lift						
4. C-27, Final Lift						
5. C-28, Final Lift						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

November 14, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 11/3/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

On this date, our technician, Jeff Gilliam, was on site to perform compaction testing of the fly ash fill at the 18th hole of the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12		
MEASURED MOISTURE (%)	22.7	33.1	32.5	34.0		
OPTIMUM MOISTURE (%)	39.1	39.1	39.1	39.1		
MEASURED DRY DENSITY (PCF)	60.2	63.9	62.1	59.7		
MAXIMUM DRY DENSITY (PCF)	61.5	61.5	61.5	61.5		
MEASURED COMPACTION (%)	97.8	100+	100+	97.0		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. Final Lift						
2. Final Lift						
3. Final Lift						
4. Final Lift						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

November 13, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 10/23/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

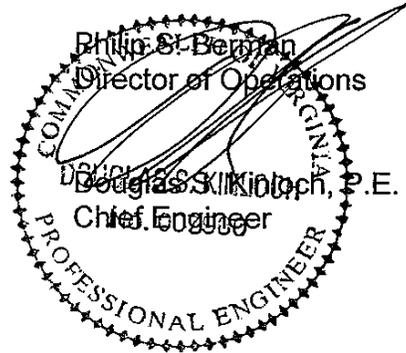
On this date, our technician, John Bradshaw, was on site to perform compaction testing of the flyash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12		
MEASURED MOISTURE (%)	30.3	28.5	29.0	29.4		
OPTIMUM MOISTURE (%)*	39.1	39.1	39.1	39.1		
MEASURED DRY DENSITY (PCF)	61.9	62.1	62.0	62.3		
MAXIMUM DRY DENSITY (PCF)*	61.5	61.5	61.5	61.5		
MEASURED COMPACTION (%)	100+	100+	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. Grid # E-26, Final Lift						
2. Grid # E-25, Final Lift						
3. Grid # E-24, Final Lift						
4. Grid # E-23, Final Lift						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

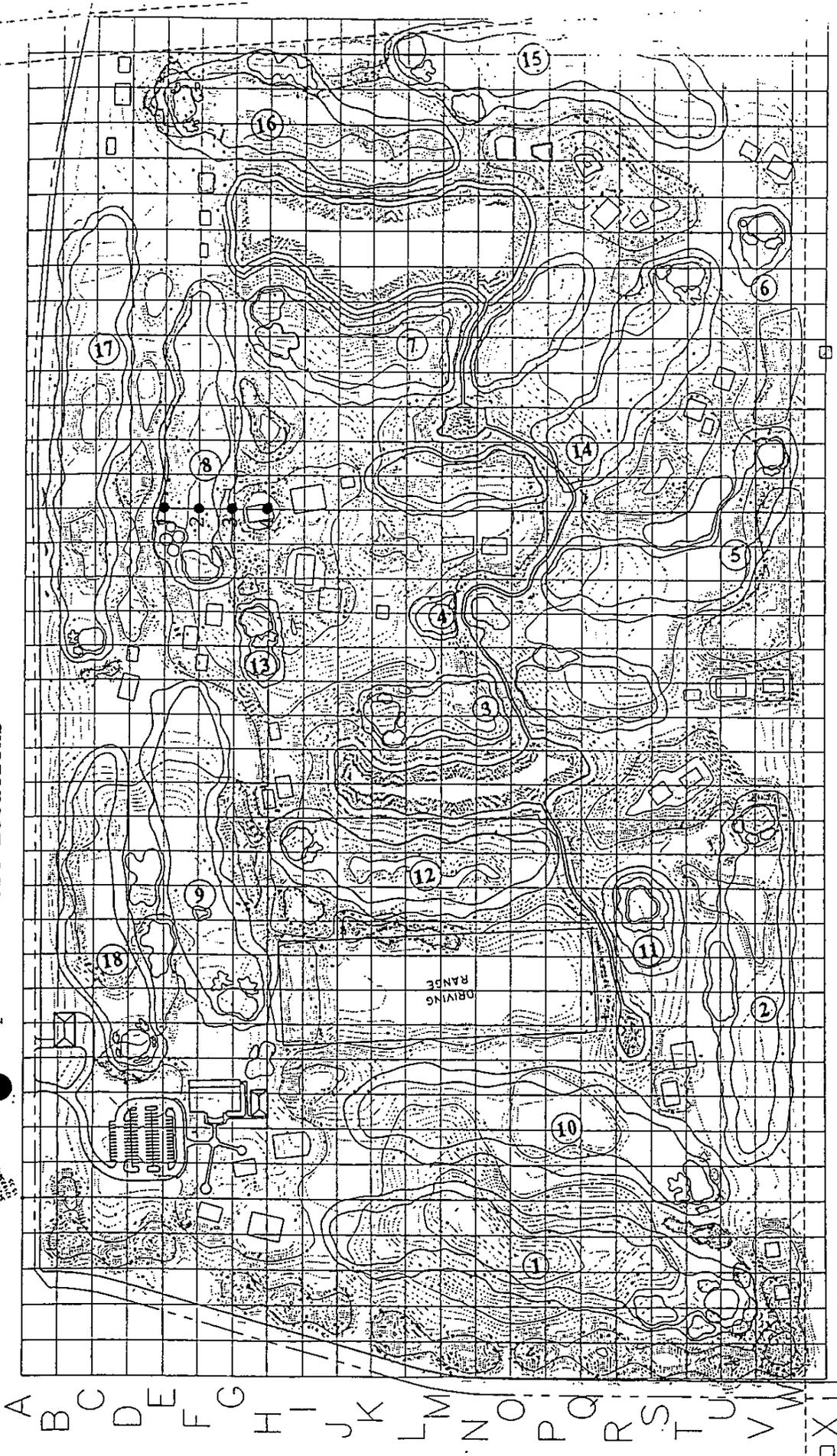
McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● Compaction Test Locations

●



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

October 19, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 10/12/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

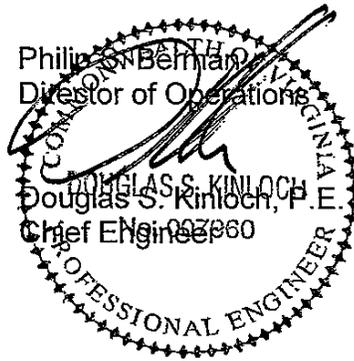
On this date, our technician, Jeff Ortega, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	8	8	8	8		
MEASURED MOISTURE (%)	32.2	31.1	32.6	29.8		
OPTIMUM MOISTURE (%)	39.1	39.1	39.1	39.1		
MEASURED DRY DENSITY (PCF)	63.2	60.8	62.3	65.7		
MAXIMUM DRY DENSITY (PCF)	61.5	61.5	61.5	61.5		
MEASURED COMPACTION (%)	100+	98.9	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. E 23, Final						
2. F 23, Final						
3. G 23, Final						
4. H 23, Final						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

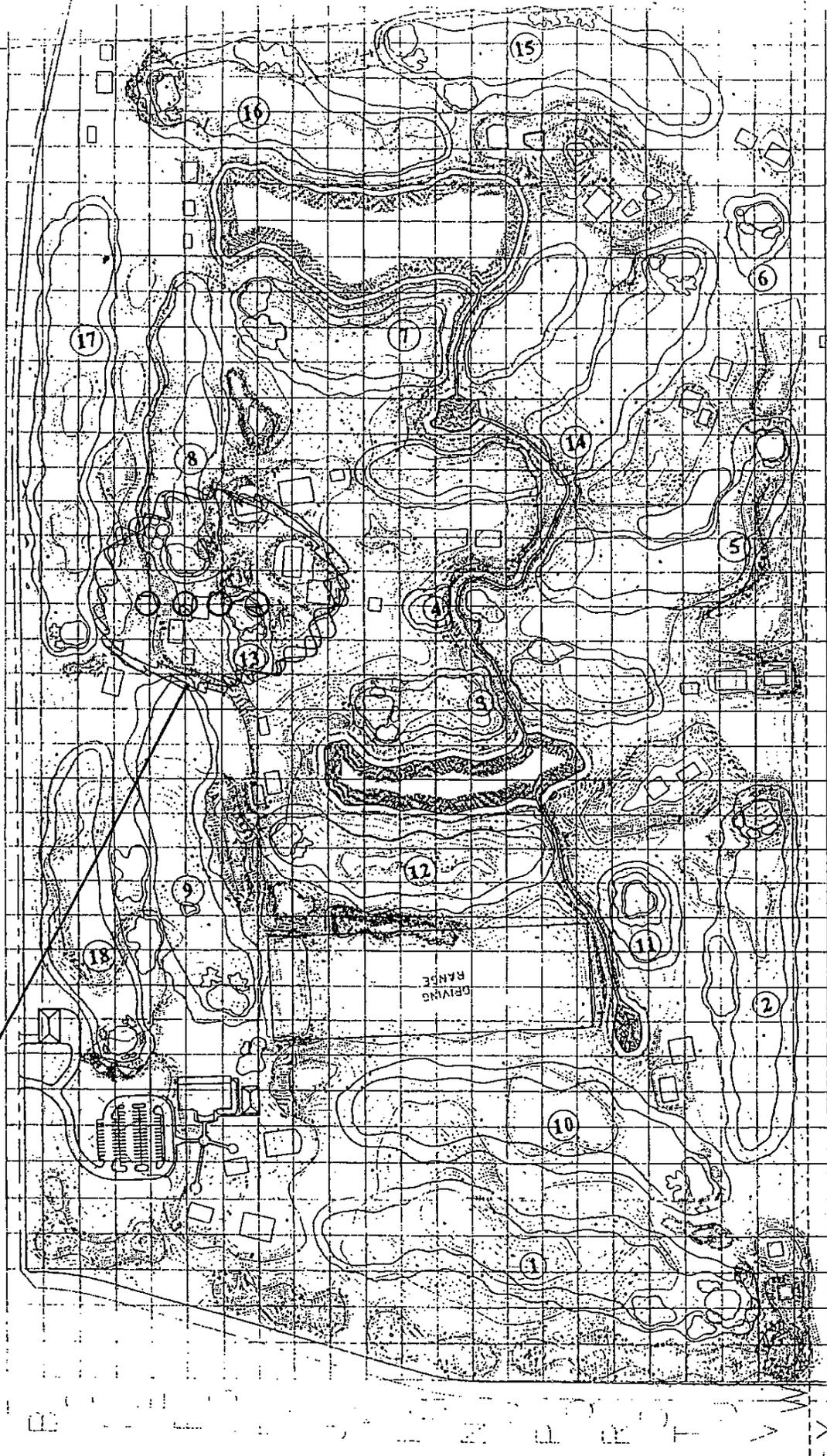
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

# - compaction test # & location 10/12/06



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

September 29, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

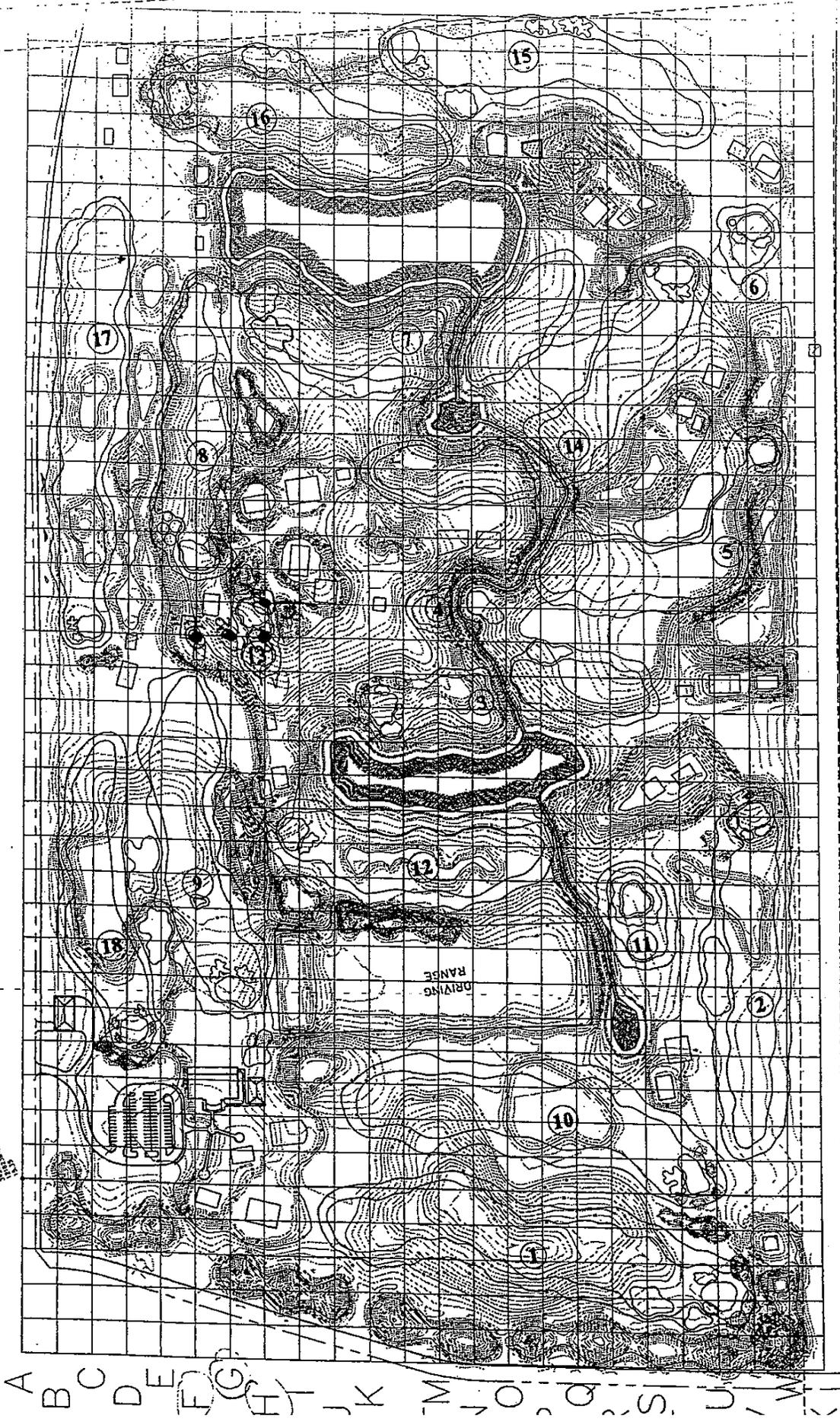
Subject: Compaction Testing - 9/8/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

On this date, our technician, Alan Spik, was on site to perform compaction testing of the fly ash for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	12	12	12	12		
MEASURED MOISTURE (%)	33.7	30.9	32.4	30.8		
OPTIMUM MOISTURE (%)	39.1	39.1	39.1	39.1		
MEASURED DRY DENSITY (PCF)	72.1	70.5	69.8	70.4		
MAXIMUM DRY DENSITY (PCF)	61.5	61.5	61.5	61.5		
MEASURED COMPACTION (%)	100+	100+	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
TEST LOCATIONS						
1. F 22						
2. G 22						
3. H 22						
4. H 23						
5.						
6.						
*ASTM D 698						

• Compaction Test



# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

October 5, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 9/29/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

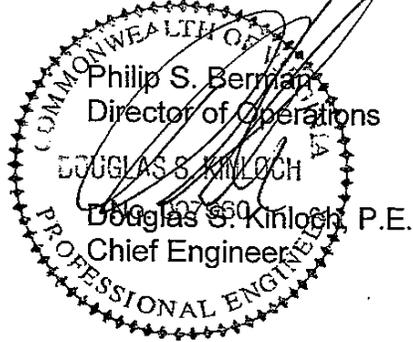
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	6	6	6	6	6	
MEASURED MOISTURE (%)	37.6	36.2	35.1	34.2	37.9	
OPTIMUM MOISTURE (%)	39.1	39.1	39.1	39.1	39.1	
MEASURED DRY DENSITY (PCF)	62.1	63.0	61.2	64.2	60.6	
MAXIMUM DRY DENSITY (PCF)	61.5	61.5	61.5	61.5	61.5	
MEASURED COMPACTION (%)	100+	100+	99.5	100+	98.5	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. 21.5 – G Final						
2. 21.5 – F Final						
3. 21.5 – D Final						
4. 21.5 – E Final						
5. 20 – C Final						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



Philip S. Berman  
Director of Operations

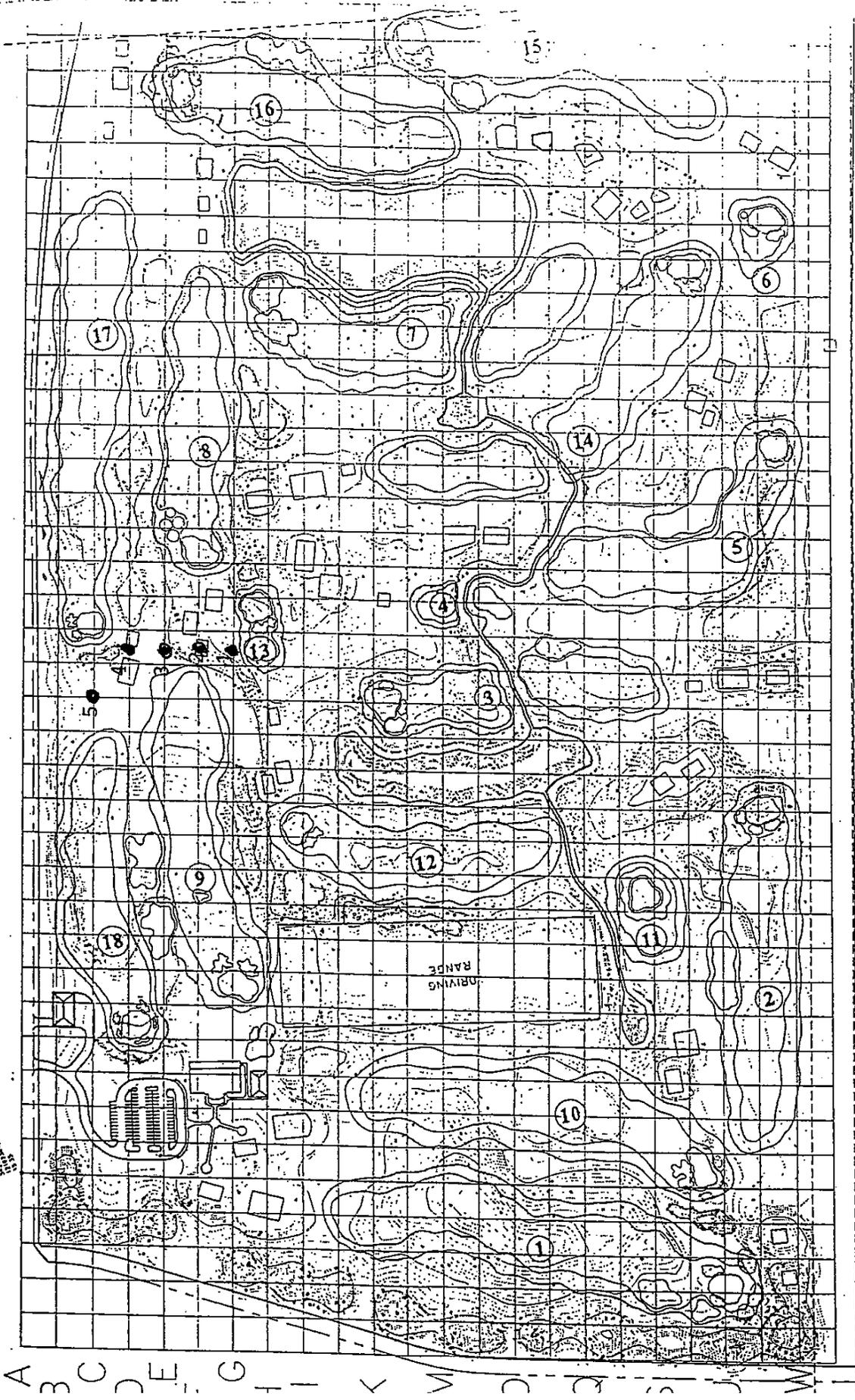
DOUGLAS S. KINLOCH  
Douglas S. Kinloch, P.E.  
Chief Engineer

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Compaction Test 9/29/06



SEE PLAN  
PAGE 100



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

September 20, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 8/30/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

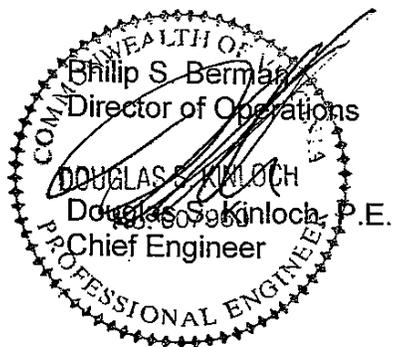
On this date, our technician, John Bradshaw, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	12	12	12	12		
MEASURED MOISTURE (%)	19.2	22.9	22.7	24.3		
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2		
MEASURED DRY DENSITY (PCF)	70.0	69.8	70.8	70.7		
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4		
MEASURED COMPACTION (%)	100+	100+	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. Grid Location H-25, Final Lift						
2. Grid Location H-26, Final Lift						
3. Grid Location H-27, Final Lift						
4. Grid Location H-28, Final Lift						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

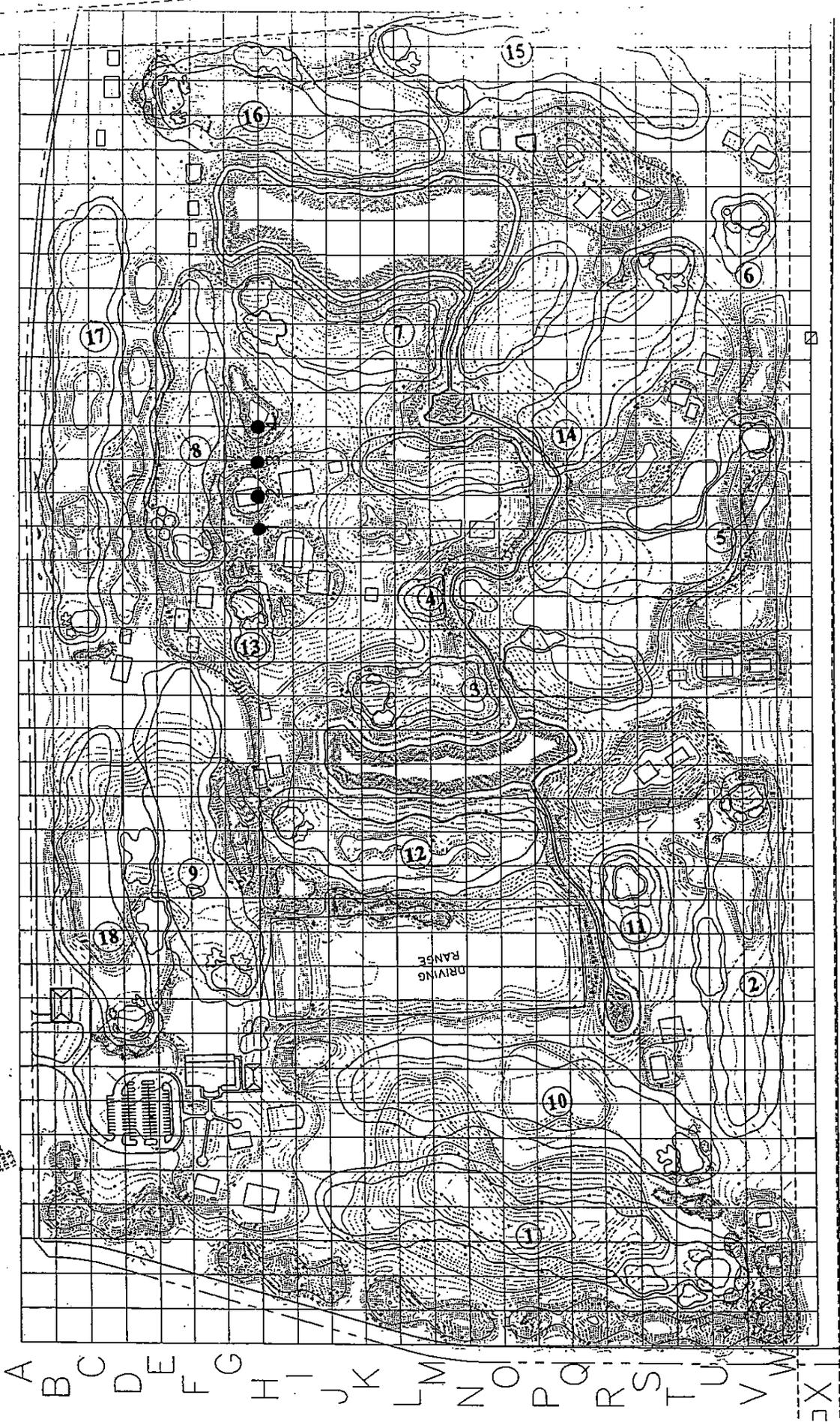


cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Compaction Test Location



1:50,000  
1960  
1:50,000



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

August 30, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 8/14/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

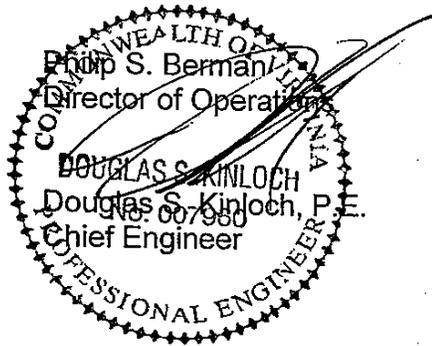
On this date, our technician, Jeff Gilliam, was on site to perform compaction testing of the fly ash fill between 7<sup>th</sup> green and 14<sup>th</sup> tee box for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8		
MEASURED MOISTURE (%)	19.6	22.1	23.3	18.5		
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2		
MEASURED DRY DENSITY (PCF)	66.0	67.7	69.8	68.2		
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4		
MEASURED COMPACTION (%)	95.1	97.5	100+	98.2		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
TEST LOCATIONS						
1. Final Lift - H-26						
2. Final Lift - H-27						
3. Final Lift - H-28						
4. Final Lift - H-29						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

August 15, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 7/31/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

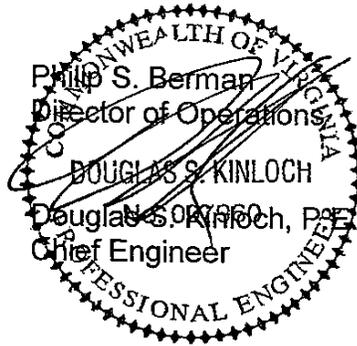
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash backfill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO	1	2	3	4	5	6
PROBE DEPTH (IN)	8	8	8	8		
MEASURED MOISTURE (%)	28.1	27.2	29.1	27.8		
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2		
MEASURED DRY DENSITY (PCF)	67.6	70.1	66.1	67.3		
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4		
MEASURED COMPACTION (%)	97.4	100+	95.2	97.0		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. 23.5 - E, Final						
2. 23.5 - F, Final						
3. 23.5 - G, Final						
4. 23.5 - H, Final						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

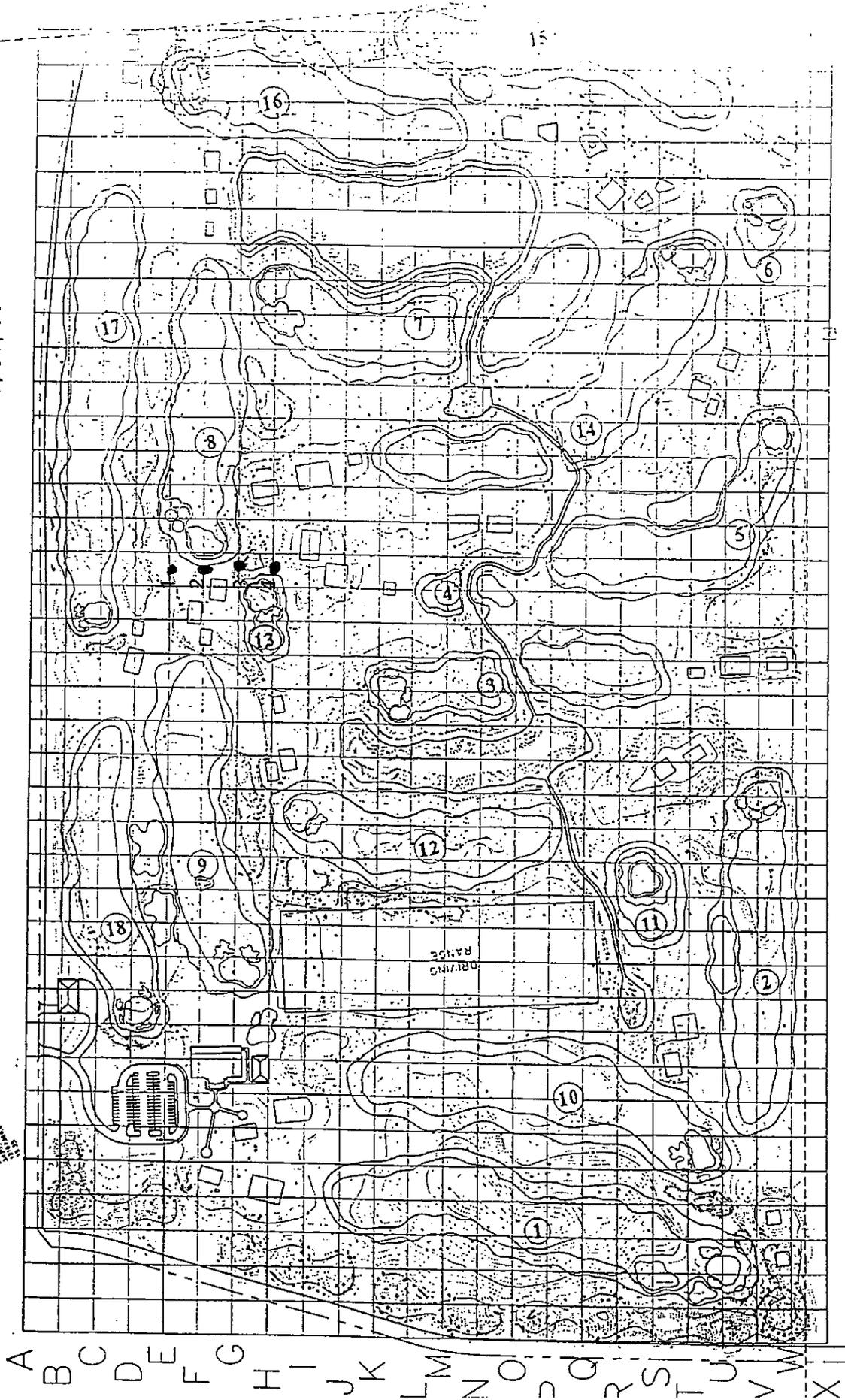
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Compaction Test  
7/31/06



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

July 31, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 7/20/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

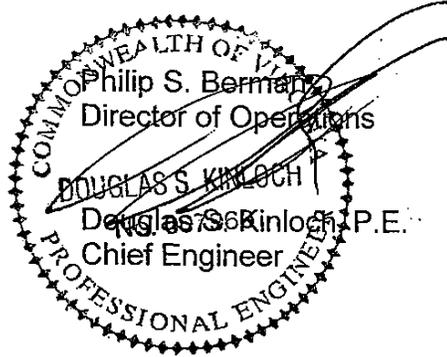
On this date, our technician, Jeff Gilliam, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO	1	2	3	4	5	6
PROBE DEPTH (IN)	8	8	8	8		
MEASURED MOISTURE (%)	15.7	14.3	16.1	17.5		
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2		
MEASURED DRY DENSITY (PCF)	70.2	68.1	69.7	71.2		
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4		
MEASURED COMPACTION (%)	100+	98.1	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS – 14<sup>th</sup> Hole Tee Boxes</b>						
1. I-25 Final Lift						
2. I-26 Final Lift						
3. I-27 Final Lift						
4. I-28 Final Lift						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

# McCALLUM

## TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

July 12, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 7/10/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

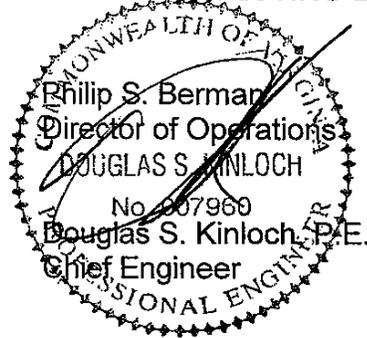
On this date, our technician, Jeff Gilliam, was on site to perform compaction testing of the fly ash fill in the 14th fairway at the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8		
MEASURED MOISTURE (%)	16.7	17.2	21.2	20.6		
OPTIMUM MOISTURE (%)*	32.2	32.2	32.2	32.2		
MEASURED DRY DENSITY (PCF)	71.3	68.8	70.9	69.7		
MAXIMUM DRY DENSITY (PCF)*	69.4	69.4	69.4	69.4		
MEASURED COMPACTION (%)	100+	99.1	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
TEST LOCATIONS						
1. L-26 Final						
2. M-26 Final						
3. N-26 Final						
4. O-26 Final						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

July 17, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 6/23/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

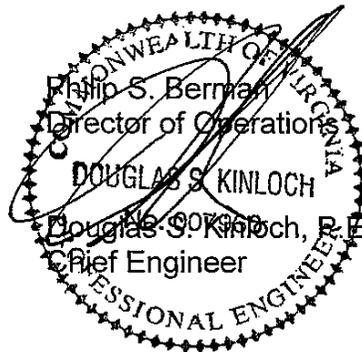
On this date, our technician, Jeff Ortega, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8	8	
MEASURED MOISTURE (%)	17.1	28.8	19.9	24.4	22.6	
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2	32.2	
MEASURED DRY DENSITY (PCF)	69.6	72.4	71.8	73.4	72.9	
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4	69.4	
MEASURED COMPACTION (%)	100+	100+	100+	100+	100+	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. J 26, Final						
2. K 26, Final						
3. L 26, Final						
4. M 26, Final						
5. N 26, Final						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

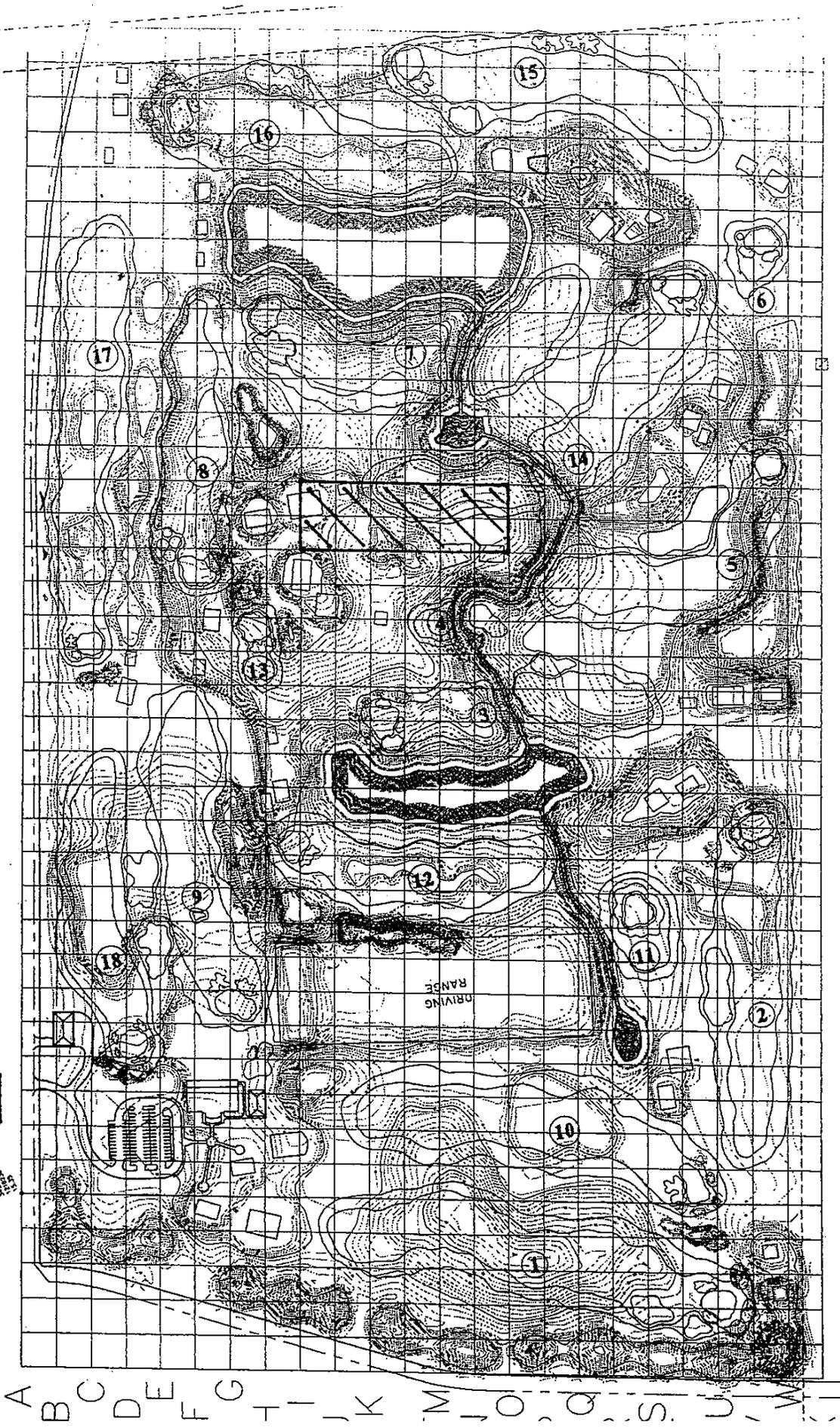


cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Compaction Test  
Area 6/23/06



SEE  
PLAN FOR  
DETAILS



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

June 26, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 6/16/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

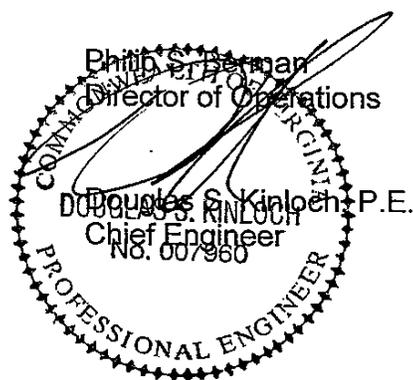
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	6	6	6	6	6	
MEASURED MOISTURE (%)	30.6	32.1	32.6	33	31.9	
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2	32.2	
MEASURED DRY DENSITY (PCF)	71.2	70.1	72.6	68.9	70.8	
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4	69.4	
MEASURED COMPACTION (%)	100+	100+	100+	99.3	100+	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. I-31	Final					
2. J-31	Final					
3. K-31	Final					
4. L-31	Final					
5. M-31	Final					
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

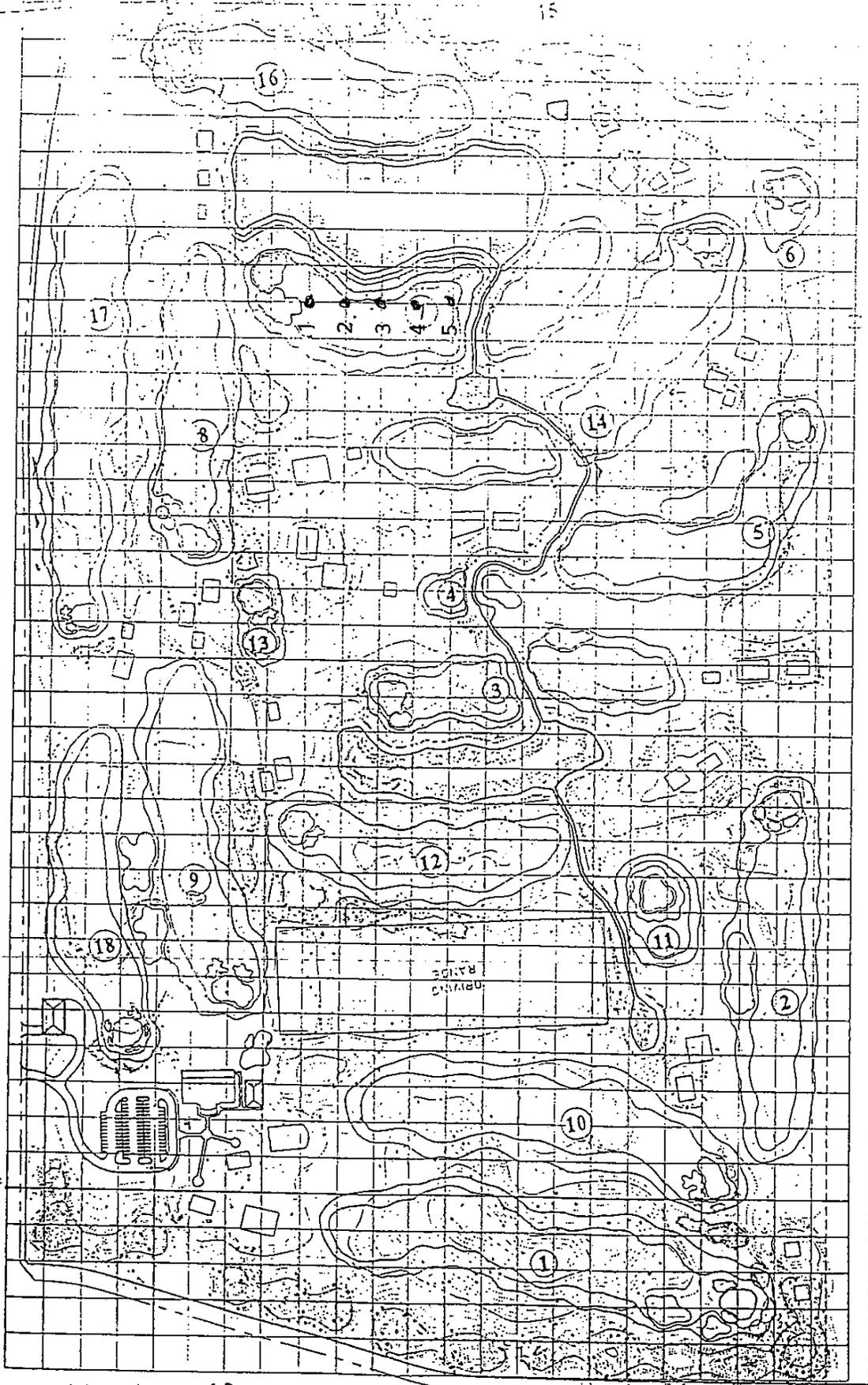
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● ————— Compaction Test  
6/16/06



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

June 5, 2006

CPM  
105 Luffness New  
Williamsburg, VA 23188 8931

Attention: Richard Mackow

Subject: Compaction Testing - 5/26/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

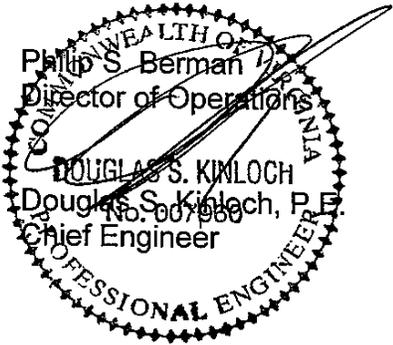
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	6	6	6	6	6	
MEASURED MOISTURE (%)	31.5	28.7	29.0	33.9	32.6	
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2	32.2	
MEASURED DRY DENSITY (PCF)	69.1	68.8	70.1	69.3	68.9	
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4	69.4	
MEASURED COMPACTION (%)	99.6	99.1	100+	99.9	99.3	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. L-25	Final					
2. K-25	Final					
3. J-25	Final					
4. H-25	Final					
5. I-25	Final					
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

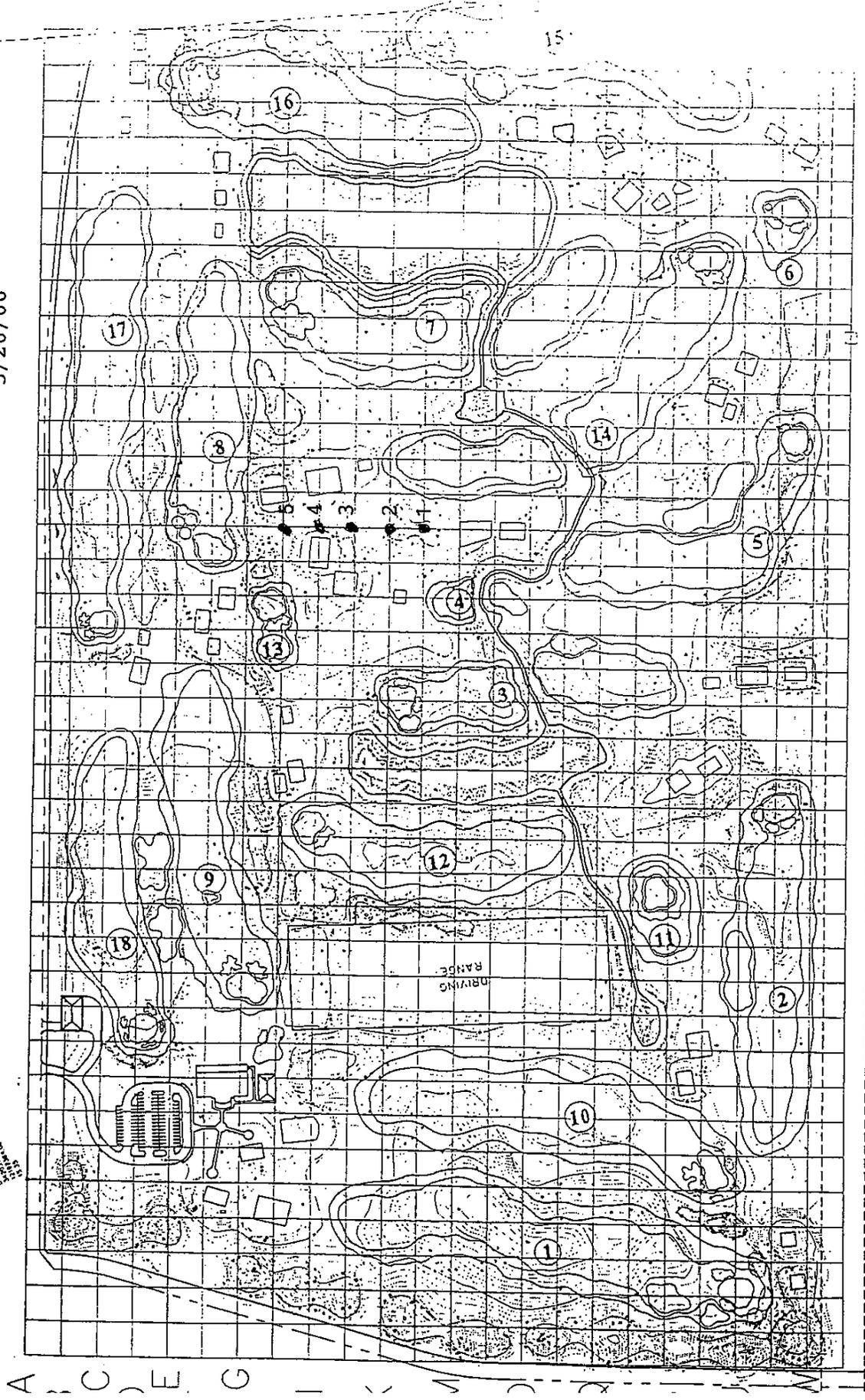
McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

① ——— Compaction Test  
5/26/06

DRIVING RANGE



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

June 26, 2006

CPM Virginia, LLC  
P.O. Box 6902  
Williamsburg, VA 23188

Attention: Neil Wallace

Subject: Compaction Testing - 6/16/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Wallace:

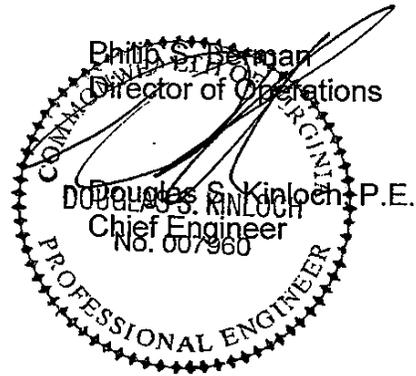
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	6	6	6	6	6	
MEASURED MOISTURE (%)	30.6	32.1	32.6	33	31.9	
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2	32.2	
MEASURED DRY DENSITY (PCF)	71.2	70.1	72.6	68.9	70.8	
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4	69.4	
MEASURED COMPACTION (%)	100+	100+	100+	99.3	100+	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. I-31	Final					
2. J-31	Final					
3. K-31	Final					
4. L-31	Final					
5. M-31	Final					
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

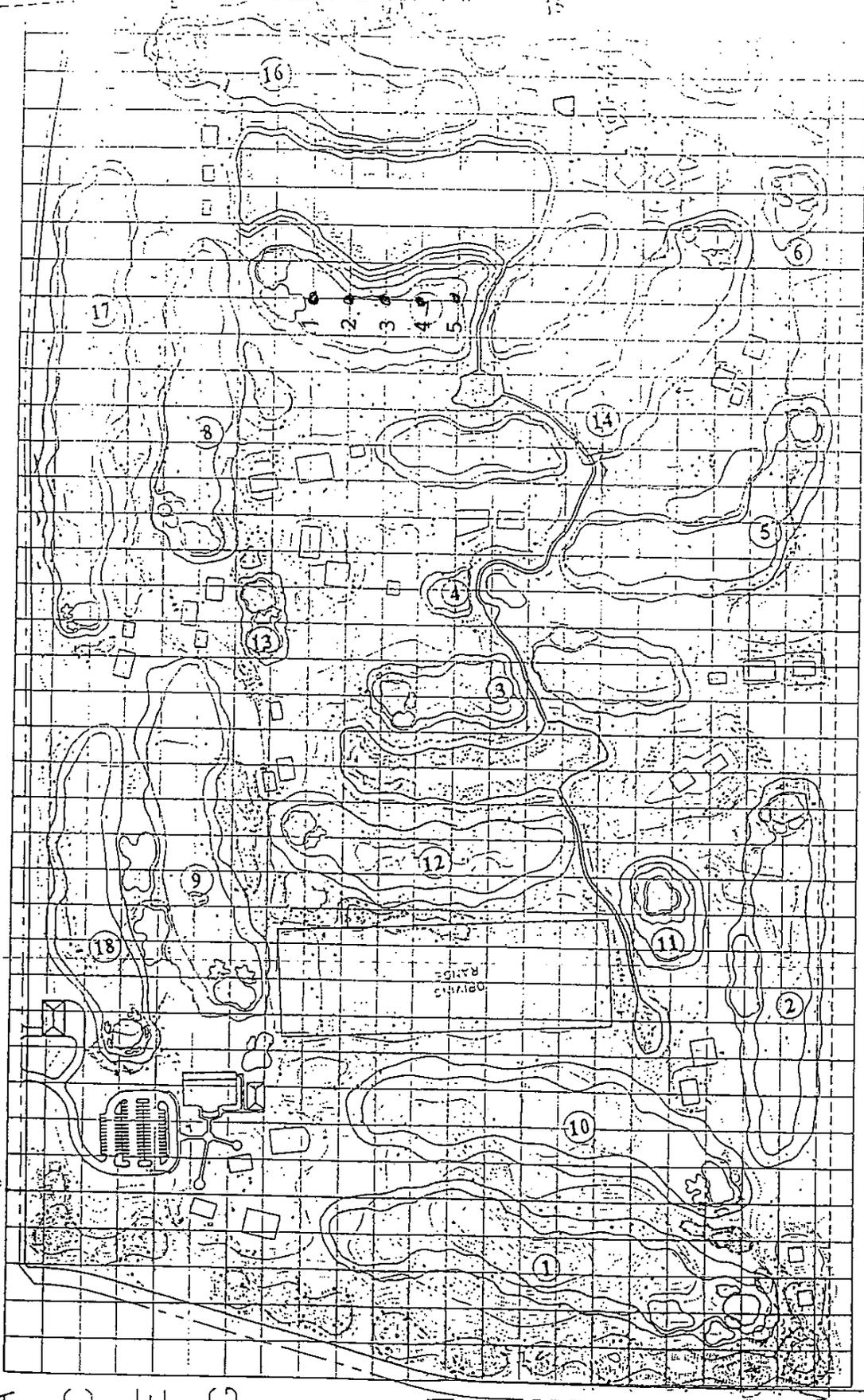
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Compaaction Test  
6/16/06



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

June 8, 2006

CPM  
105 Luffness New  
Williamsburg, VA 23188 8931

Attention: Richard Mackow

Subject: Compaction Testing - 6/2/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

On this date, our technician, Jeff Gilliam, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO	1	2	3	4	5	6
PROBE DEPTH (IN)	12	12	12	12		
MEASURED MOISTURE (%)	31.3	29.8	29.5	30.2		
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2		
MEASURED DRY DENSITY (PCF)	71.4	70.1	69.9	70.5		
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4		
MEASURED COMPACTION (%)	100+	100+	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. L-24	Final Lift					
2. L-25	Final Lift					
3. K-24	Final Lift					
4. K-25	Final Lift					
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

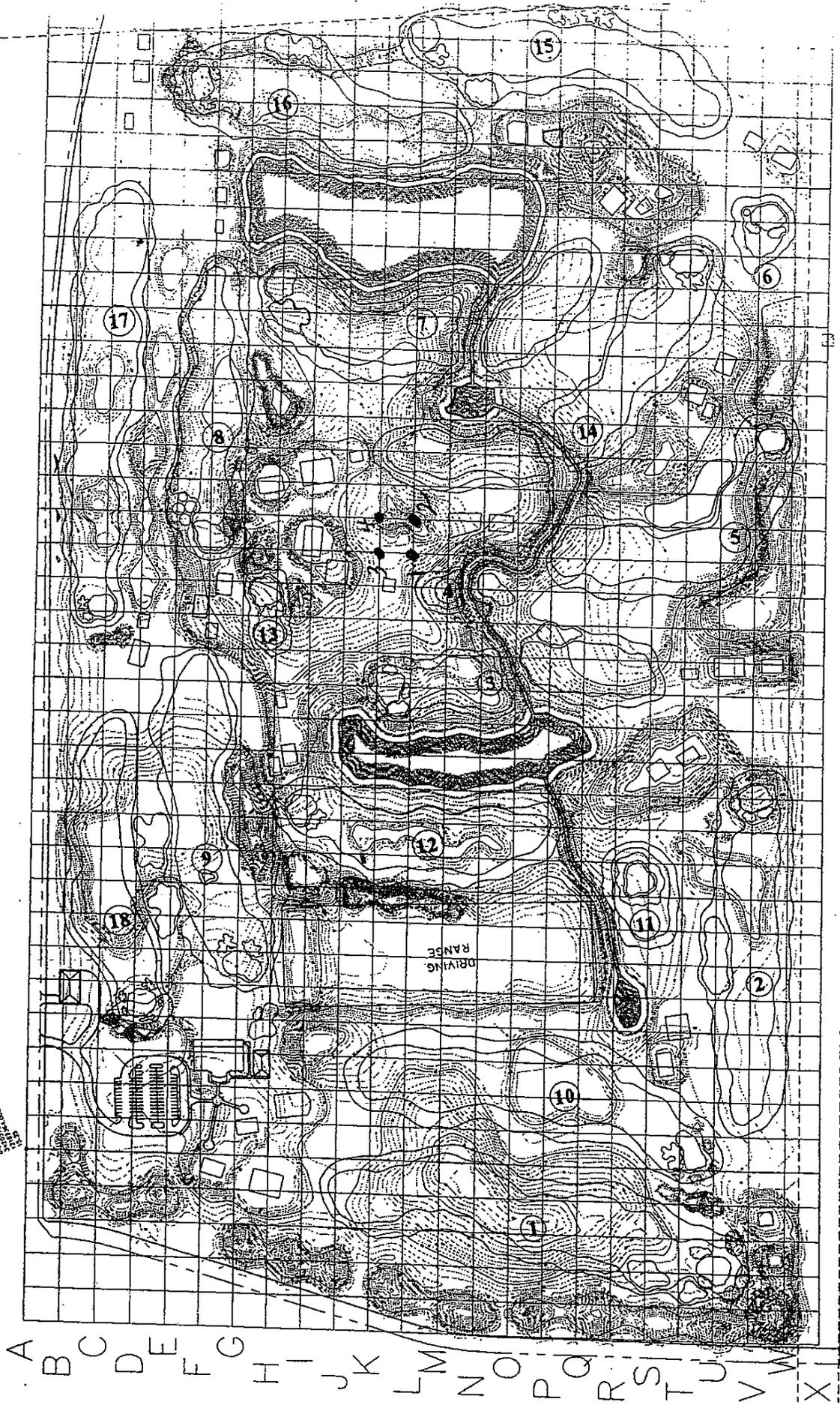
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● Compaction Test Location



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# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

May 26, 2006

CPM  
105 Luffness New  
Williamsburg, VA 23188 8931

Attention: Richard Mackow

Subject: Compaction Testing - 5/19/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

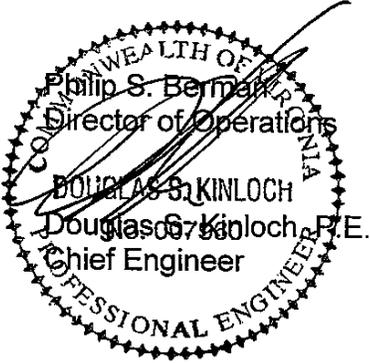
On this date, our technician, Lou Madray, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO	1	2	3	4	5	6
PROBE DEPTH (IN)	8	8	8	8		
MEASURED MOISTURE (%)	33.4	34.1	32.6	31.5		
OPTIMUM MOISTURE (%)	32.2	32.2	32.2	32.2		
MEASURED DRY DENSITY (PCF)	76.3	77.1	74.2	75.8		
MAXIMUM DRY DENSITY (PCF)	69.4	69.4	69.4	69.4		
MEASURED COMPACTION (%)	100+	100+	100+	100+		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. I-22	Final Lift					
2. I-23	Final Lift					
3. I-24	Final Lift					
4. I-25	Final Lift					
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

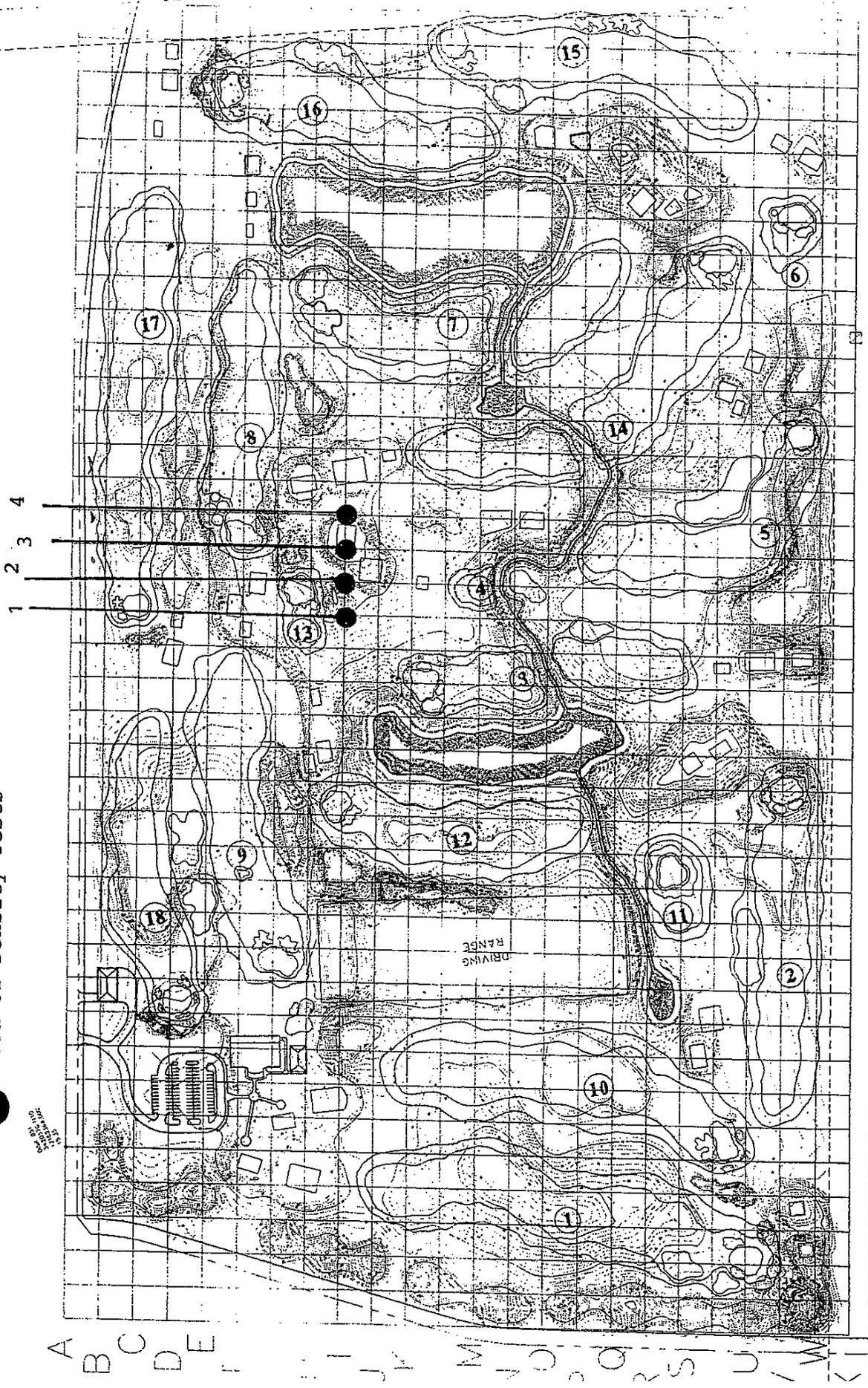
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Area of Density Tests



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# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

May 25, 2006

CPM  
105 Luffness New  
Williamsburg, VA 23188 8931

Attention: Richard Mackow

Subject: Compaction Testing - 5/12/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

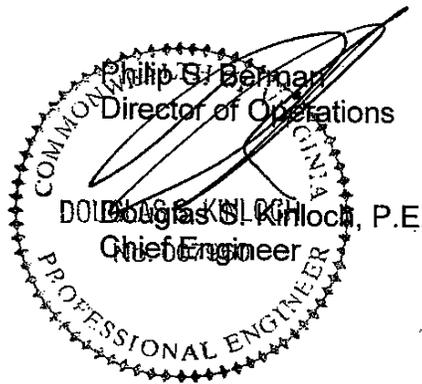
On this date, our technician, Lou Madray, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8		
MEASURED MOISTURE (%)	28.4	31.4	29.9	28.8		
OPTIMUM MOISTURE (%)	30.2	30.2	30.2	30.2		
MEASURED DRY DENSITY (PCF)	79.5	74.8	72.6	71.6		
MAXIMUM DRY DENSITY (PCF)	72.4	72.4	72.4	72.4		
MEASURED COMPACTION (%)	100+	100+	100+	98.9		
MIN. REQUIRED COMPACTION (%)	95	95	95	95		
<b>TEST LOCATIONS</b>						
1. 26-H	Final Lift					
2. 25-H	Final Lift					
3. 24-H	Final Lift					
4. 23-H	Final Lift					
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



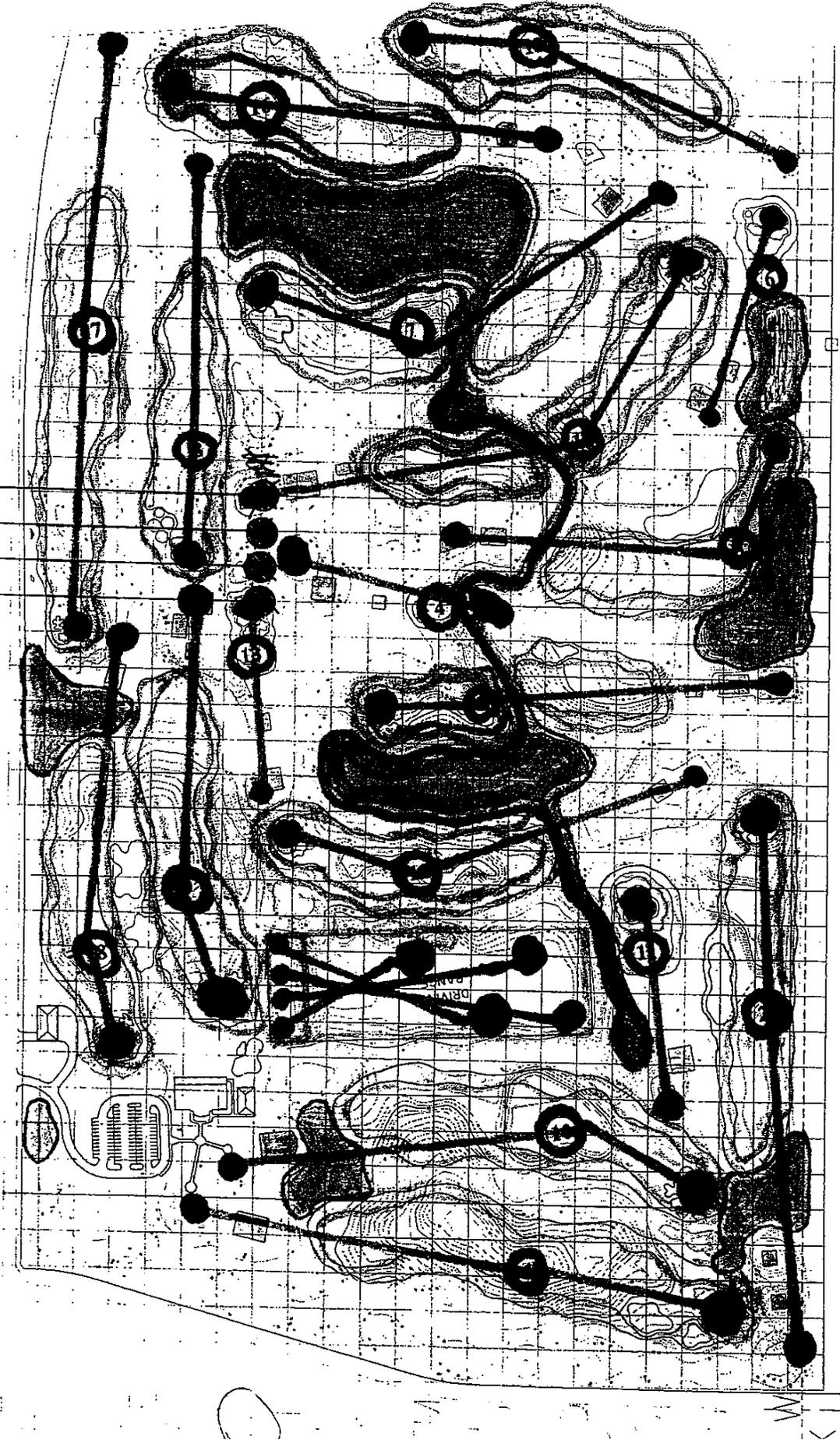
Philip S. Berger  
Director of Operations

Douglas S. Killock, P.E.  
Chief Engineer

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Area of Compactions

4 3 2 1



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

May 10, 2006

CPM  
105 Luffness New  
Williamsburg, VA 23188 8931

Attention: Richard Mackow

Subject: Compaction Testing - 5/1/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8	8	
MEASURED MOISTURE (%)	28.8	30.3	31.3	29.8	30.9	
OPTIMUM MOISTURE (%)*	30.2	30.2	30.2	30.2	30.2	
MEASURED DRY DENSITY (PCF)	70.5	71.1	68.9	69.8	70.3	
MAXIMUM DRY DENSITY (PCF)*	72.4	72.4	72.4	72.4	72.4	
MEASURED COMPACTION (%)	97.4	98.2	95.2	96.4	97.1	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. K-28	Final					
2. L-28	Final					
3. M-28	Final					
4. I-28	Final					
5. I-29	Final					
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

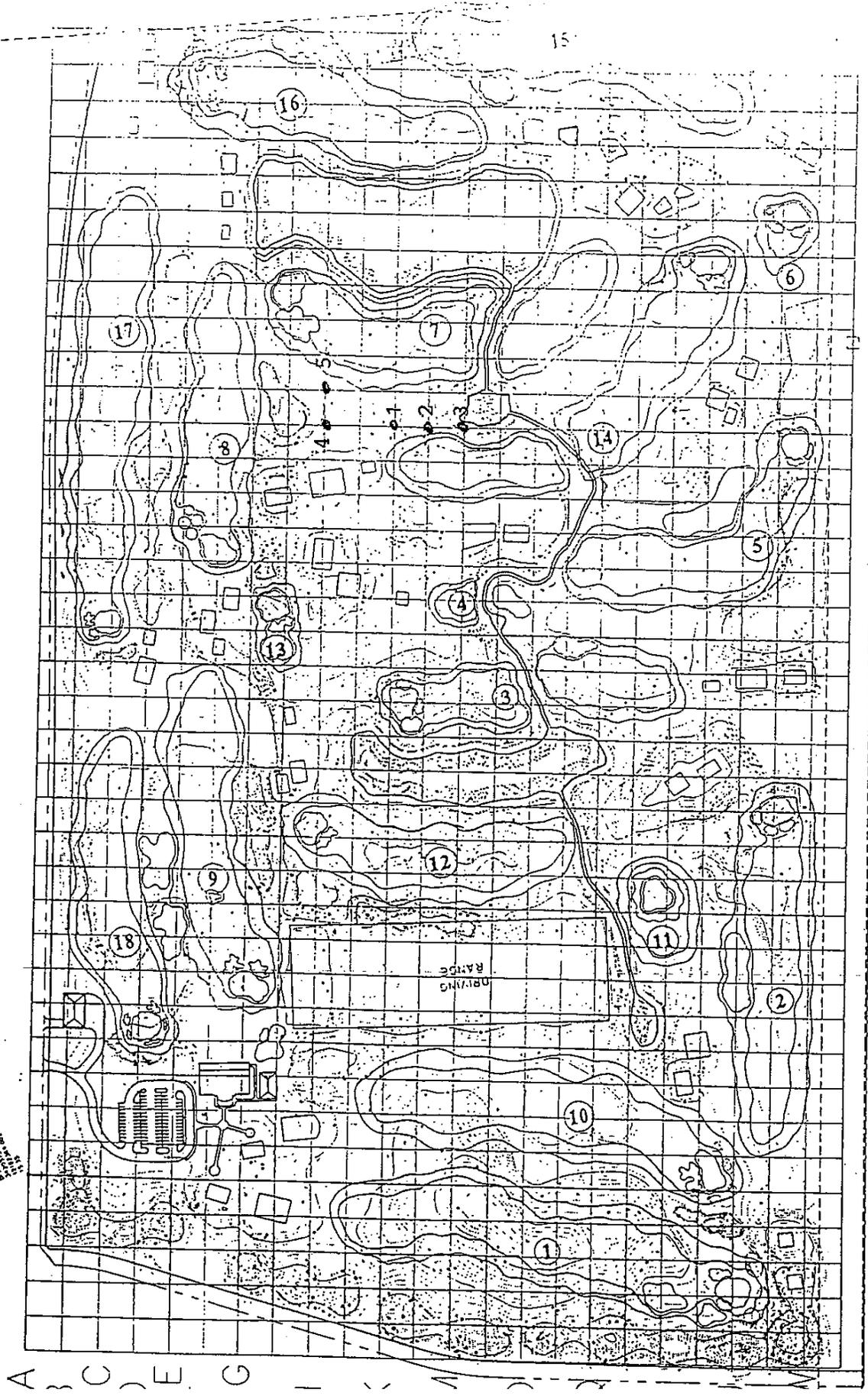
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Compaction Test 5/1/06



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

April 26, 2006

CPM  
105 Luffness New  
Williamsburg, VA 23188 8931

Attention: Richard Mackow

Subject: Compaction Testing - 4/11/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12	12	
MEASURED MOISTURE (%)	30.4	30.1	32.1	29.8	30.6	
OPTIMUM MOISTURE (%)	30.2	30.2	30.2	30.2	30.2	
MEASURED DRY DENSITY (PCF)	73	72.9	68.9	69.1	71.8	
MAXIMUM DRY DENSITY (PCF)	72.4	72.4	72.4	72.4	72.4	
MEASURED COMPACTION (%)	100	100	95.2	95.4	99.2	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. I-23	Final					
2. I-24	Final					
3. I-25	Final					
4. I-26	Final					
5. I-27	Final					
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

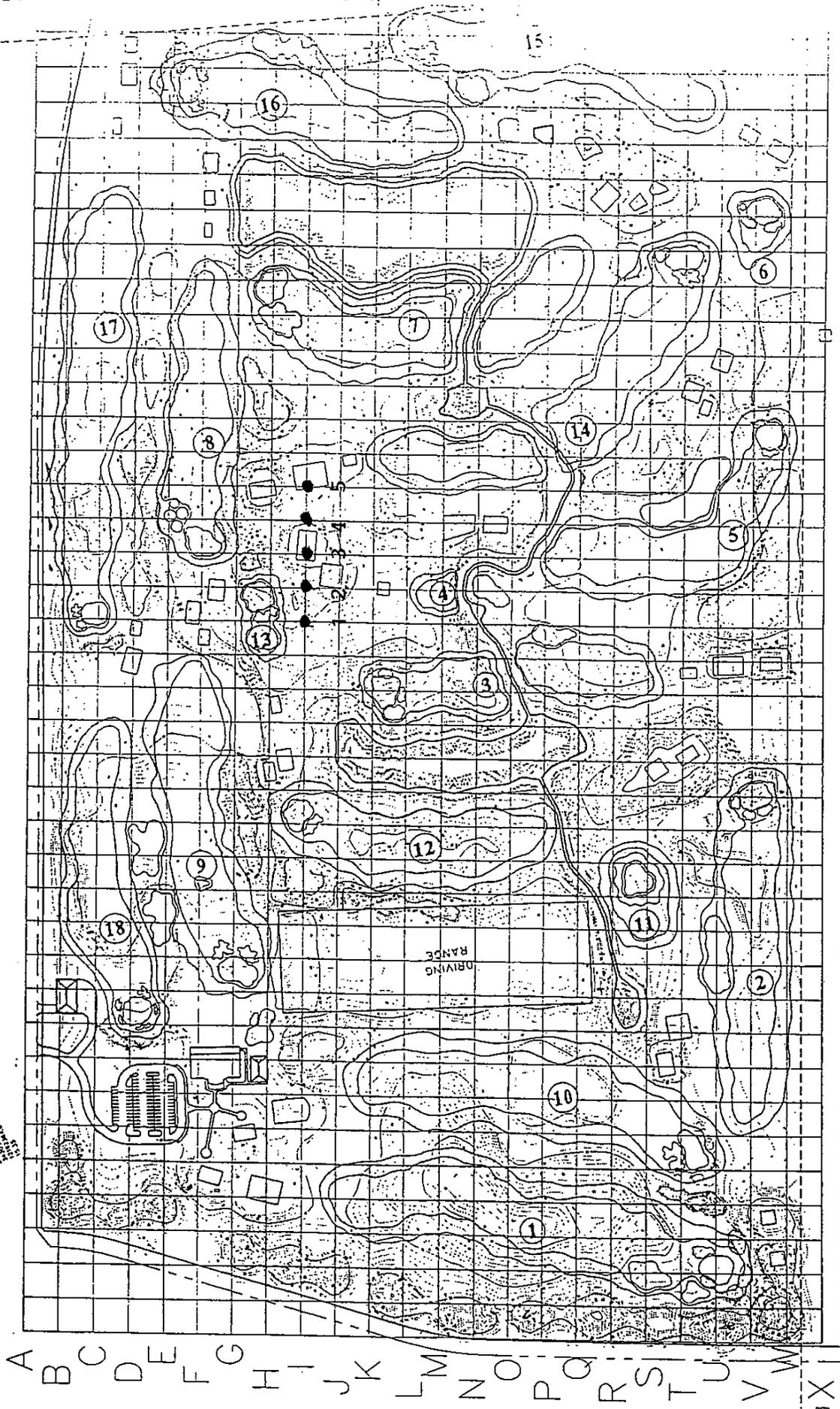
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

← Compaction test 4/11/06



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

April 28, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 4/10/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8	8	
MEASURED MOISTURE (%)	34.1	29.2	29.8	30.3	32.1	
OPTIMUM MOISTURE (%)	30.2	30.2	30.2	30.2	30.2	
MEASURED DRY DENSITY (PCF)	68.8	70.6	73.0	69.5	68.9	
MAXIMUM DRY DENSITY (PCF)*	72.4	72.4	72.4	72.4	72.4	
MEASURED COMPACTION (%)	95	97.5	100+	96.0	95.2	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. F-24	Final					
2. F-25	Final					
3. F-26	Final					
4. F-27	Final					
5. F-28	Final					
6.						
*ASTM D 698						

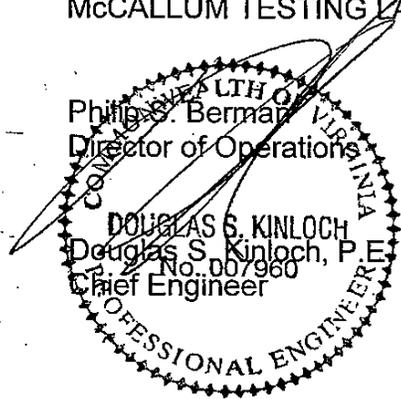
Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

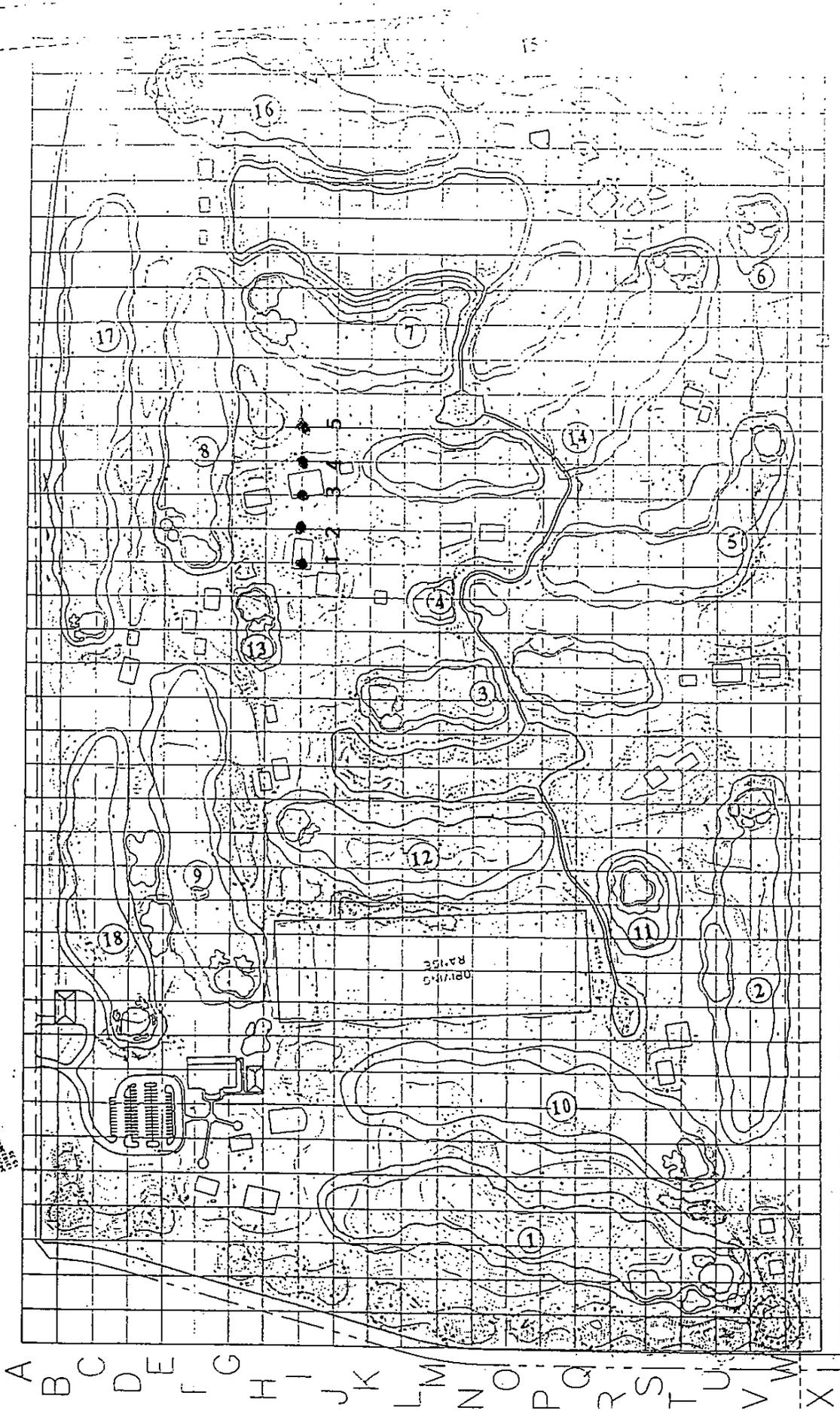
Philip S. Berman  
Director of Operations

DOUGLAS S. KINLOCH  
Douglas S. Kinloch, P.E.  
No. 007960  
Chief Engineer



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

—●— Compaction test



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

April 20, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 3/22/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

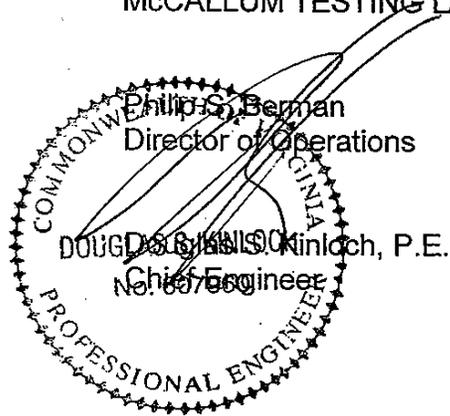
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8					
MEASURED MOISTURE (%)	32.6	33.0	31.9	34.1	30.6	
OPTIMUM MOISTURE (%)*	30.2	30.2	30.2	30.2	30.2	
MEASURED DRY DENSITY (PCF)	69.1	68.8	70.1	71.2	70.5	
MAXIMUM DRY DENSITY (PCF)*	72.4	72.4	72.4	72.4	72.4	
MEASURED COMPACTION (%)	95.4	95	96.8	98.3	97.4	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
<b>TEST LOCATIONS</b>						
1. P-35	Final					
2. Q-35	Final					
3. Q-36	Final					
4. P-36	Final					
5. O-36	Final					
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

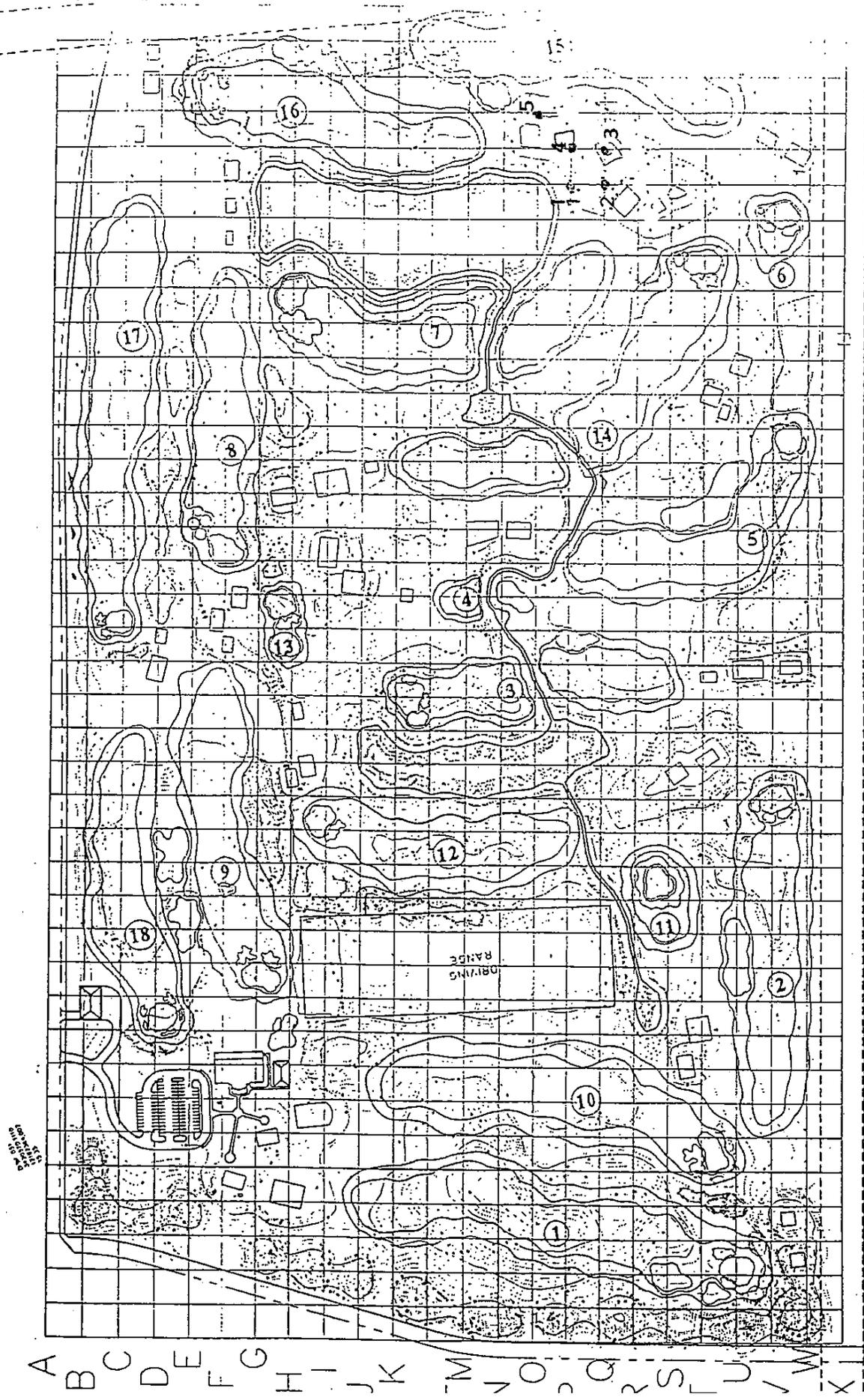
McCALLUM TESTING LABORATORIES, INC.



Philip S. Berman  
Director of Operations

Douglas H. Minloch, P.E.  
Chief Engineer

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

⊗ Compaction test

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

April 20, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 4/5/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

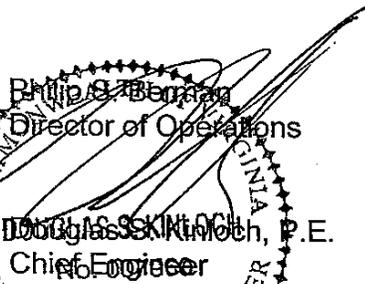
On this date, our technician, Lou Madray, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12	12	
MEASURED MOISTURE (%)	32.0	32.6	36.4	34.6	33.8	
OPTIMUM MOISTURE (%)	30.2	30.2	30.2	30.2	30.2	
MEASURED DRY DENSITY (PCF)	70.6	69.4	74.6	70.1	74.9	
MAXIMUM DRY DENSITY (PCF)	72.4	72.4	72.4	72.4	72.4	
MEASURED COMPACTION (%)	98.0	95.8	100+	97.2	100+	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
TEST LOCATIONS						
1. 36. W.	Final Lift					
2. 36. V.	Final Lift					
3. 36. V.	Final Lift					
4. 37. V.	Final Lift					
5. 36. T.	Final Lift					
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

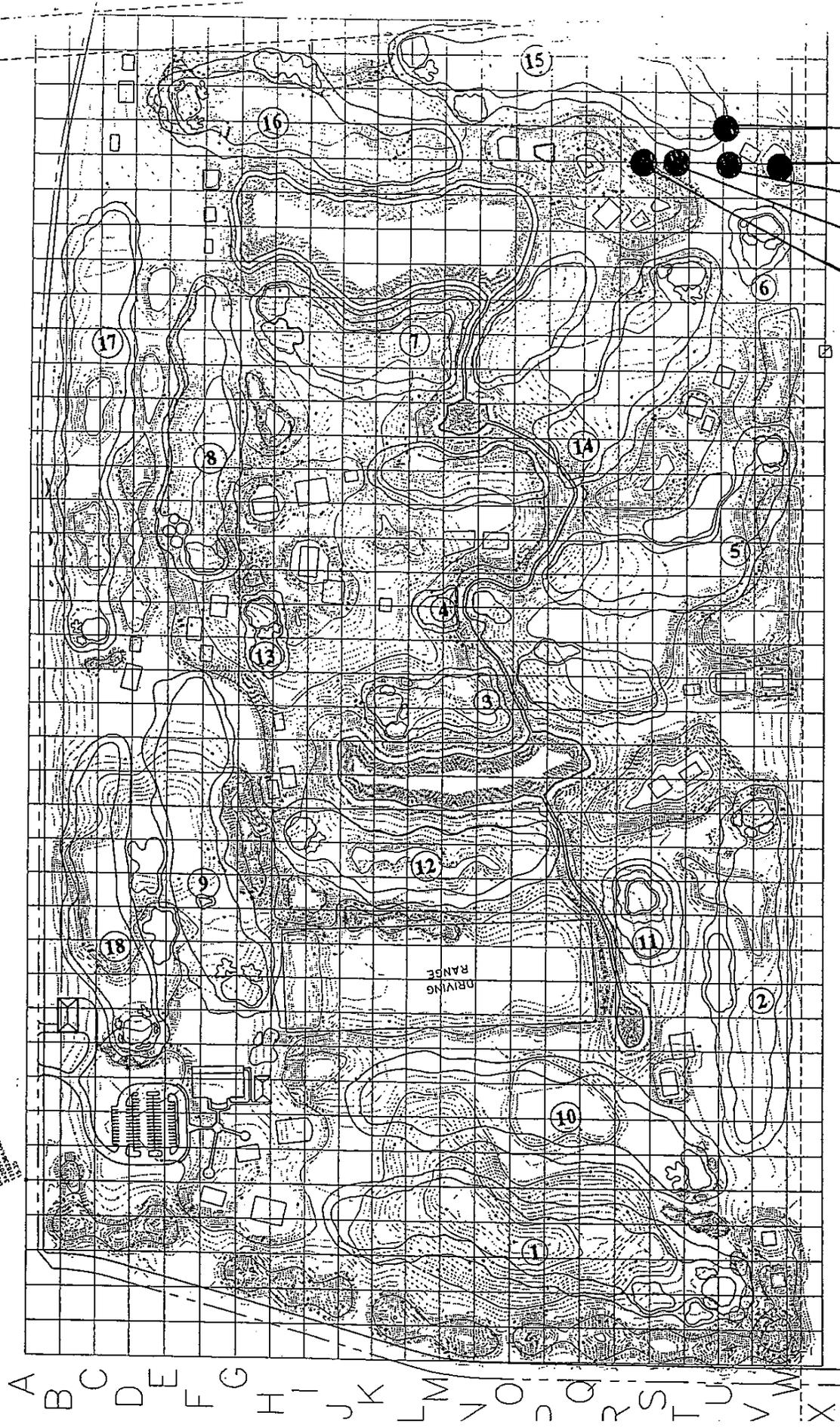
McCALLUM TESTING LABORATORIES, INC.

  
Philip S. Bernier  
Director of Operations  
Douglas Skinnoch, P.E.  
Chief Engineer  


cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Area of Compactions

50 100  
100 200  
200 300  
300 400



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# McCALLUM

TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

April 10, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 3/15/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

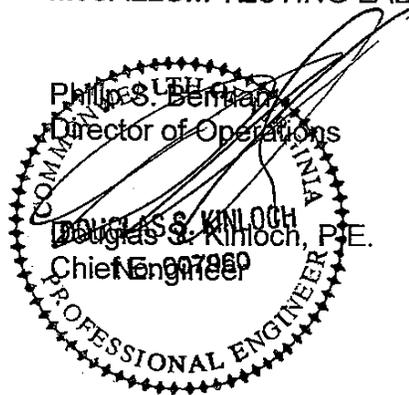
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	6	6	6	6	6	
MEASURED MOISTURE (%)	32.1	29.3	31.2	31.9	32.2	
OPTIMUM MOISTURE (%)	30.2	30.2	30.2	30.2	30.2	
MEASURED DRY DENSITY (PCF)	67.6	72.0	68.2	67.8	69.1	
MAXIMUM DRY DENSITY (PCF)	72.4	72.4	72.4	72.4	72.4	
MEASURED COMPACTION (%)	93.4	99.4	94.2	93.6	95.4	
MIN. REQUIRED COMPACTION (%)	95	95	95	95	95	
TEST LOCATIONS						
1. O - 36						
2. P - 36						
3. Q - 36						
4. P - 35						
5. Q - 35						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

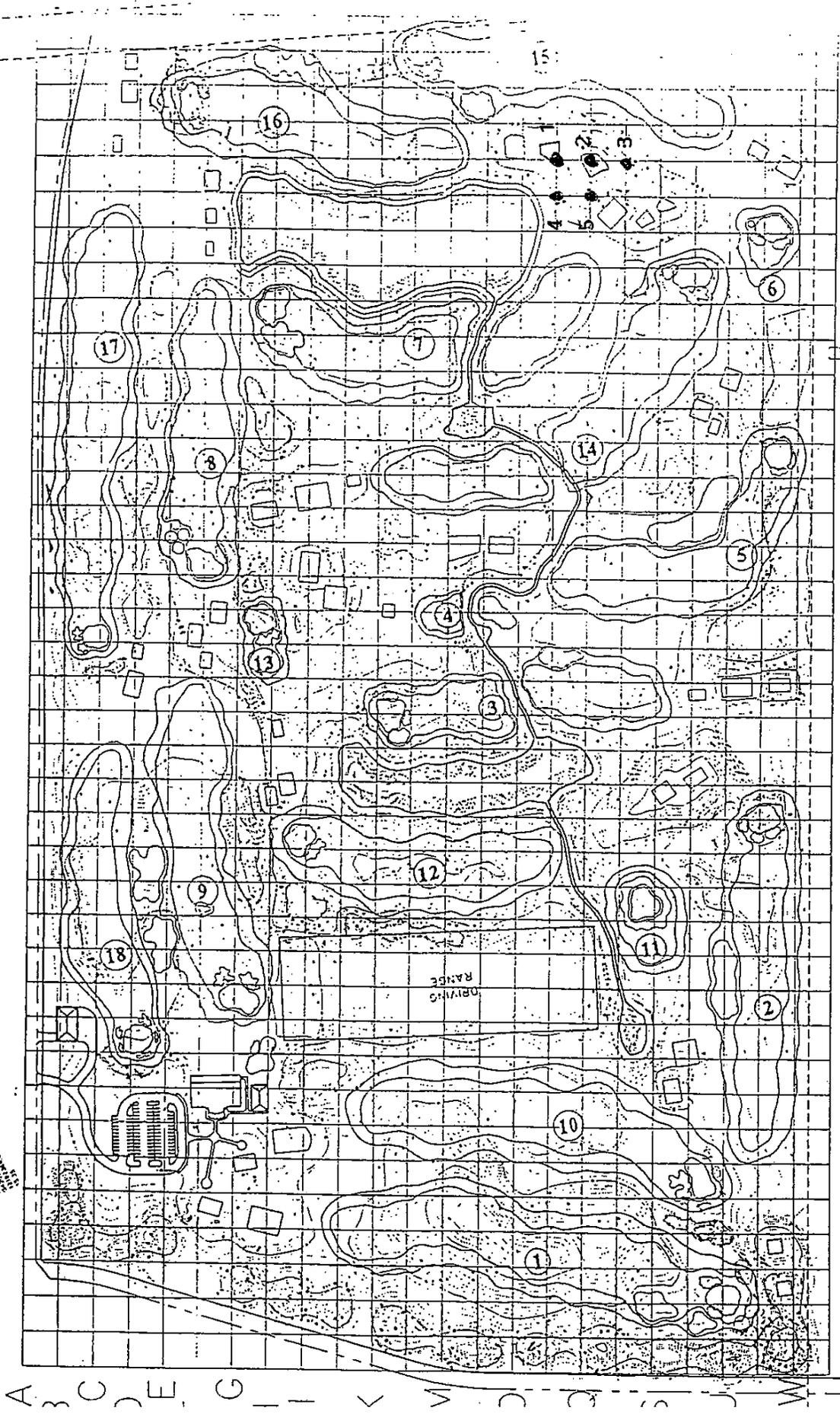
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

  
Philip S. Bernhart  
Director of Operations  
Douglas S. Kinloch, P.E.  
Chief Engineer  
COMMONWEALTH OF VIRGINIA  
PROFESSIONAL ENGINEER  
1607869

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

Scale  
1:50,000  
NAD 83



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Compaction Test - 3/15/06

# McCALLUM

TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

March 24, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 3/7/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

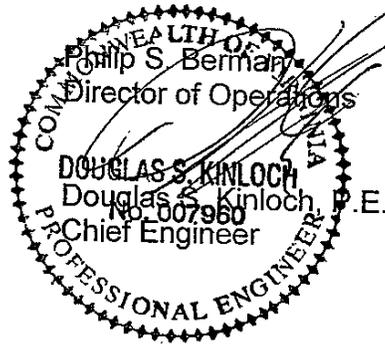
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8	8	
MEASURED MOISTURE (%)	33.1	34.8	31.1	29.9	32.2	
OPTIMUM MOISTURE (%)	29.5	29.5	29.5	29.5	29.5	
MEASURED DRY DENSITY (PCF)	67.7	67.6	68.1	72.0	69.2	
MAXIMUM DRY DENSITY (PCF)*	71.1	71.1	71.1	71.1	71.1	
MEASURED COMPACTION (%)	95.2	95.1	95.8	100+	97.3	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
TEST LOCATIONS						
1. 31-M, Final Lift						
2. 31-L, Final Lift						
3. 31-K, Final Lift						
4. 31-J, Final Lift						
5. 31-I, Final Lift						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

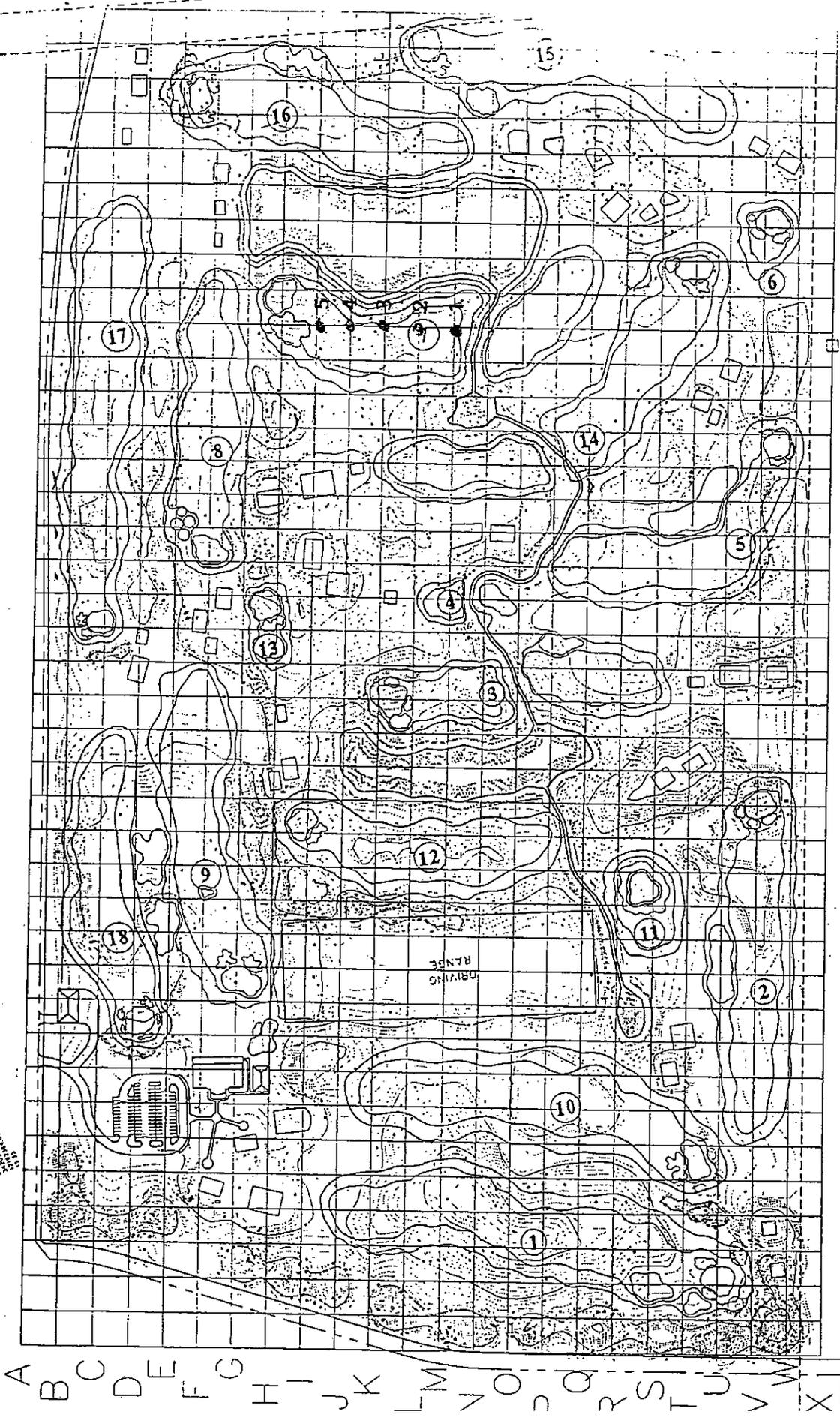
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

— Compaction test



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

March 23, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 2/14/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

On this date, our technician, John Bradshaw, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

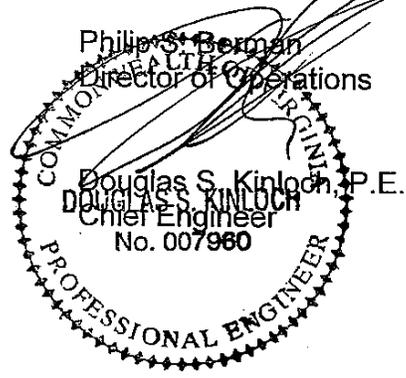
TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12	12	
MEASURED MOISTURE (%)	22.0	19.7	21.3	21.5	21.2	
OPTIMUM MOISTURE (%)*	29.5	29.5	29.5	29.5	29.5	
MEASURED DRY DENSITY (PCF)	71.7	72.5	71.4	72.3	72.4	
MAXIMUM DRY DENSITY (PCF)*	71.1	71.1	71.1	71.1	71.1	
MEASURED COMPACTION (%)	100+	100+	100+	100+	100+	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
TEST LOCATIONS						
1. Grid #R-28, Final Lift						
2. Grid # S-28, Final Lift						
3. Grid # S-29, Final Lift						
4. Grid # S-30, Final Lift						
5. Grid # S-31, Final Lift						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

Philip S. Berman  
Director of Operations

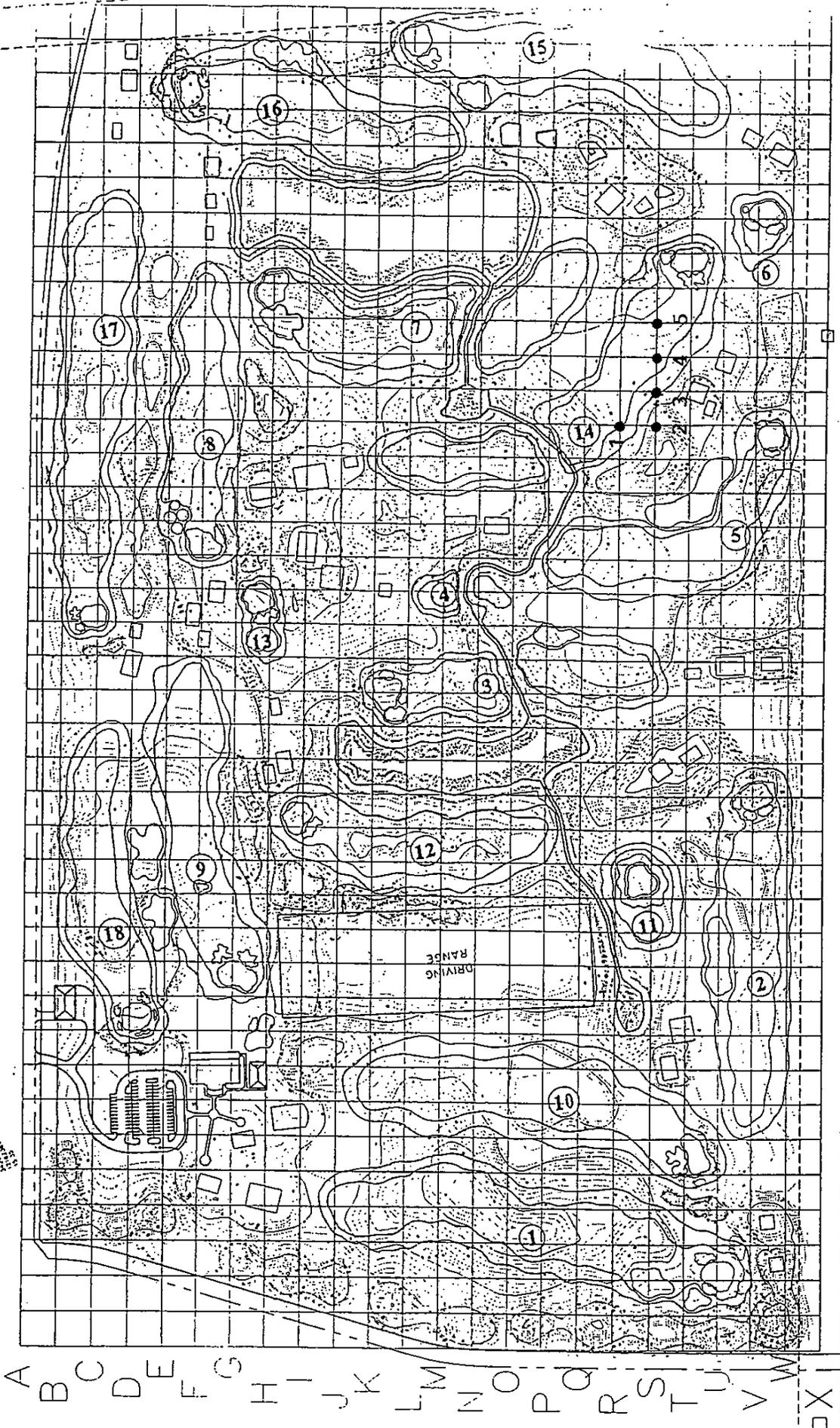


Douglas S. Kinloch, P.E.  
Chief Engineer  
No. 007960

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● Compaction test

DRIVING RANGE



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

March 15, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 1/30/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

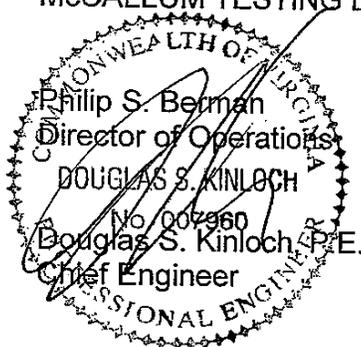
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the site fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	8	8	8	8		
MEASURED MOISTURE (%)	34.6	32.1	33.6	31.8		
OPTIMUM MOISTURE (%)	29.5	29.5	29.5	29.5		
MEASURED DRY DENSITY (PCF)	71.2	67.6	68.1	67.9		
MAXIMUM DRY DENSITY (PCF)	71.1	71.1	71.1	71.1		
MEASURED COMPACTION (%)	100+	95.1	95.8	95.5		
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0		
<b>TEST LOCATIONS</b>						
1. 34-T, Final Lift						
2. 34-U, Final Lift						
3. 34-V, Final Lift						
4. 34-W, Final Lift						
5.						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

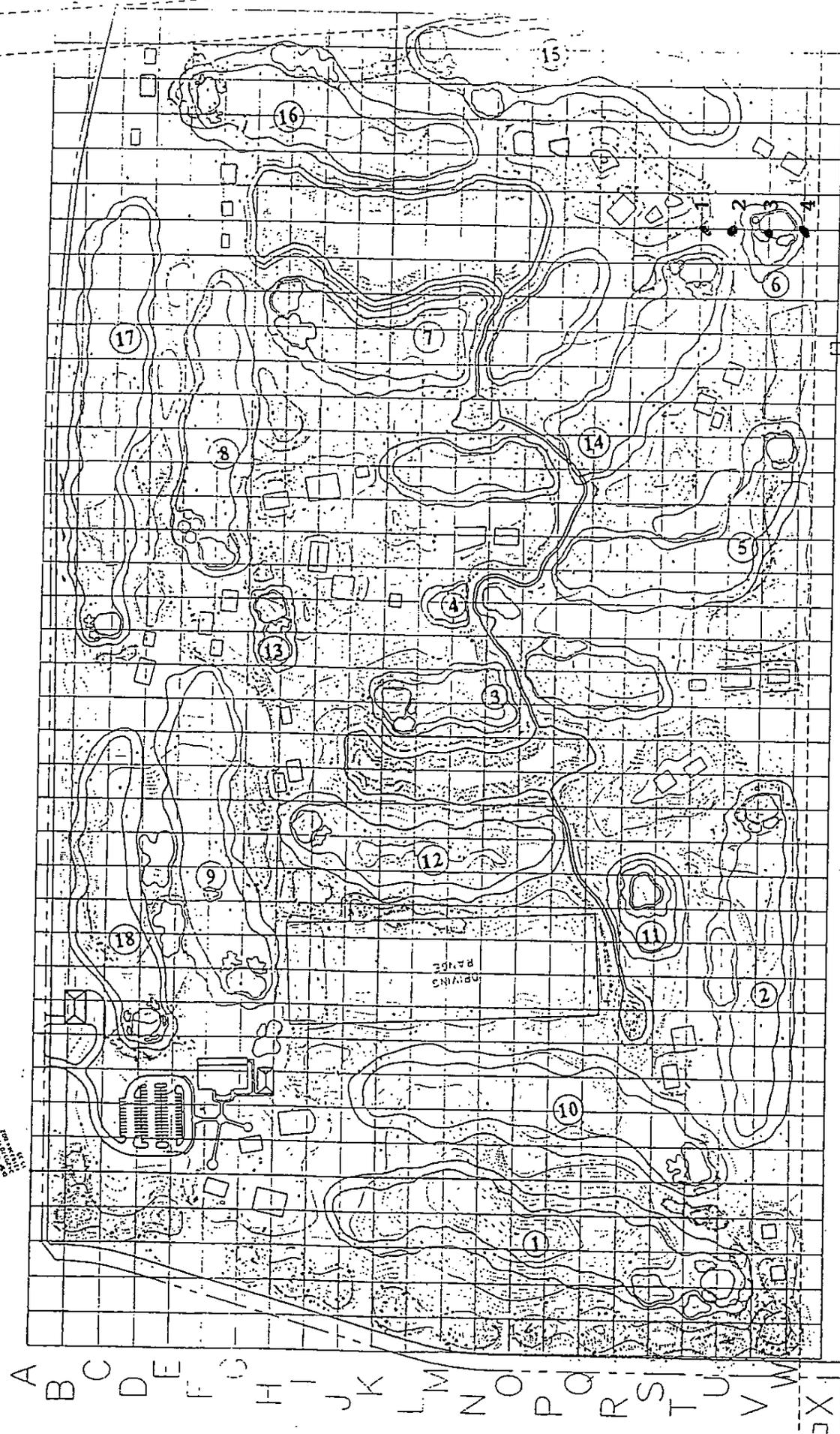
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● ————— Compaction test



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

January 27, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 12/13/05  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

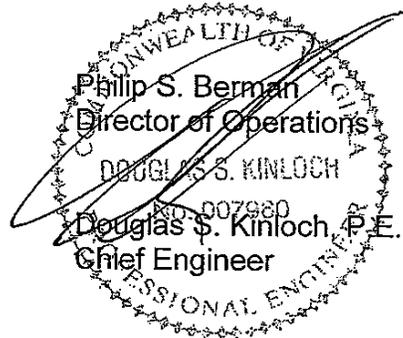
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	6	6	6	6	6	
MEASURED MOISTURE (%)	34.8	34.8	31.3	32.0	30.9	
OPTIMUM MOISTURE (%)*	29.5	29.5	29.5	29.5	29.5	
MEASURED DRY DENSITY (PCF)	72.7	73.1	70.1	72.0	69.2	
MAXIMUM DRY DENSITY (PCF)*	71.7	71.7	71.7	71.7	71.7	
MEASURED COMPACTION (%)	100	100+	98.6	100+	97.3	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
<b>TEST LOCATIONS</b>						
1. H-13, Final Lift						
2. H-14, Final Lift						
3. H-15, Final Lift						
4. H-16, Final Lift						
5. H-17, Final Lift						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

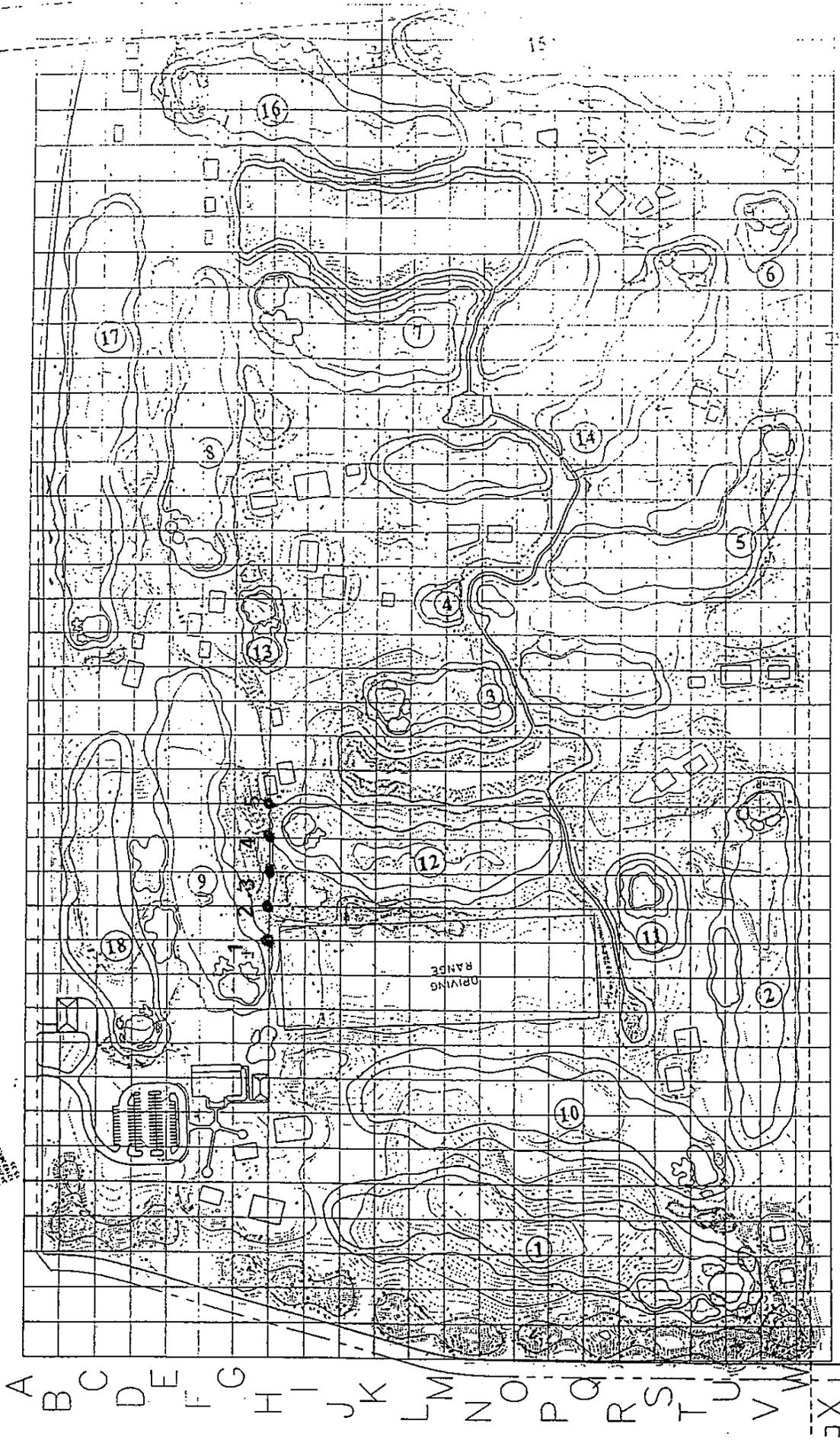
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● ——— Compaction test 12/13/05



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

February 16, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 1/13/06  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

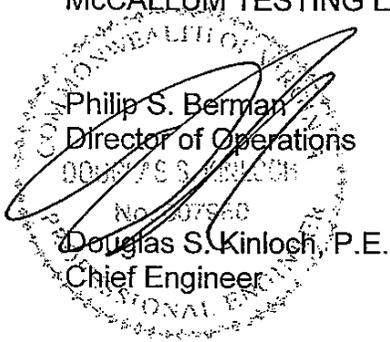
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the site fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8	8	
MEASURED MOISTURE (%)	33.0	33.5	35.3	31.1	34.2	
OPTIMUM MOISTURE (%)*	29.5	29.5	29.5	29.5	29.5	
MEASURED DRY DENSITY (PCF)	73.2	73.2	70.5	71.0	69.3	
MAXIMUM DRY DENSITY (PCF)*	71.1	71.1	71.1	71.1	71.1	
MEASURED COMPACTION (%)	100+	100+	99.1	99.9	97.5	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
<b>TEST LOCATIONS</b>						
1. F-24, 1 <sup>st</sup> Lift						
2. F-25, 1 <sup>st</sup> Lift						
3. F-26, 1 <sup>st</sup> Lift						
4. F-27, 1 <sup>st</sup> Lift						
5. F-28, 1 <sup>st</sup> Lift						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

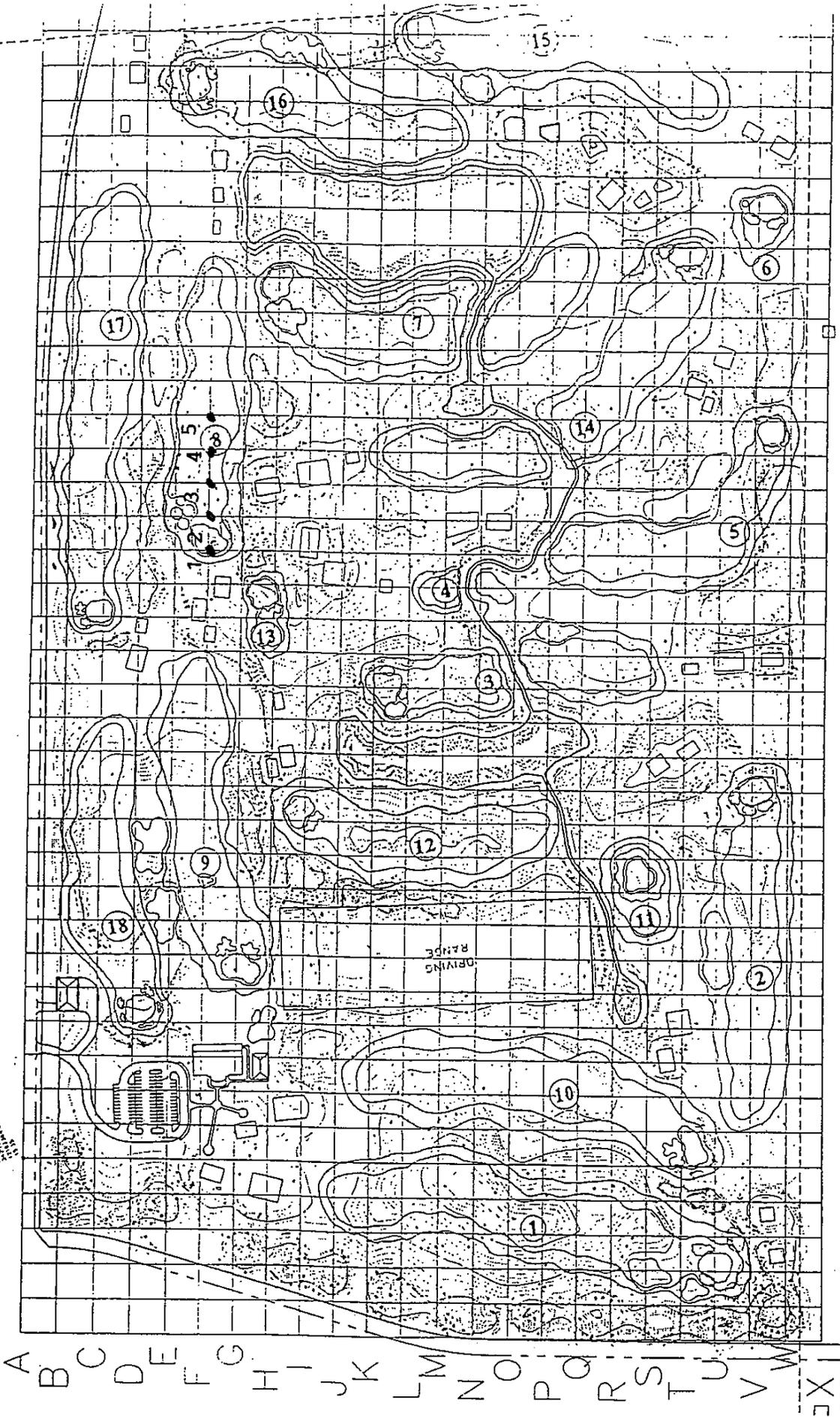
McCALLUM TESTING LABORATORIES, INC.



A circular professional engineer seal for Douglas S. Kinloch, P.E. The seal contains the text: "COMMONWEALTH OF VIRGINIA", "DOUGLAS S. KINLOCH", "No. 2075-AC", and "PROFESSIONAL ENGINEER". The seal is partially obscured by a signature.

Philip S. Berman  
Director of Operations  
Douglas S. Kinloch, P.E.  
Chief Engineer

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

January 24, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 11/28/05  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the fly ash site fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	6	6	6	6	6	
MEASURED MOISTURE (%)	24.6	26.6	24.8	32.1	28.6	
OPTIMUM MOISTURE (%)*	32.7	32.7	32.7	32.7	32.7	
MEASURED DRY DENSITY (PCF)	70.9	71.2	70.5	68.6	67.2	
MAXIMUM DRY DENSITY (PCF)*	70.7	70.7	70.7	70.7	70.7	
MEASURED COMPACTION (%)	100+	100+	99.7	97.0	95.0	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
<b>TEST LOCATIONS</b>						
1. S-20						
2. S-21						
3. S-22						
4. S-23						
5. S-24						
6.						
*ASTM D 698						

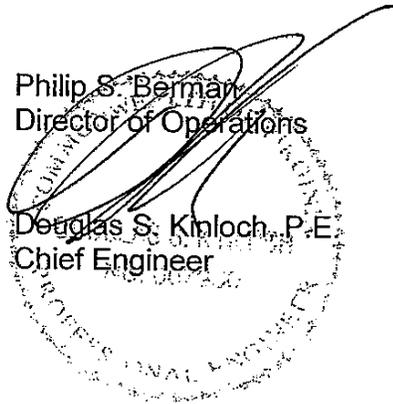
Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

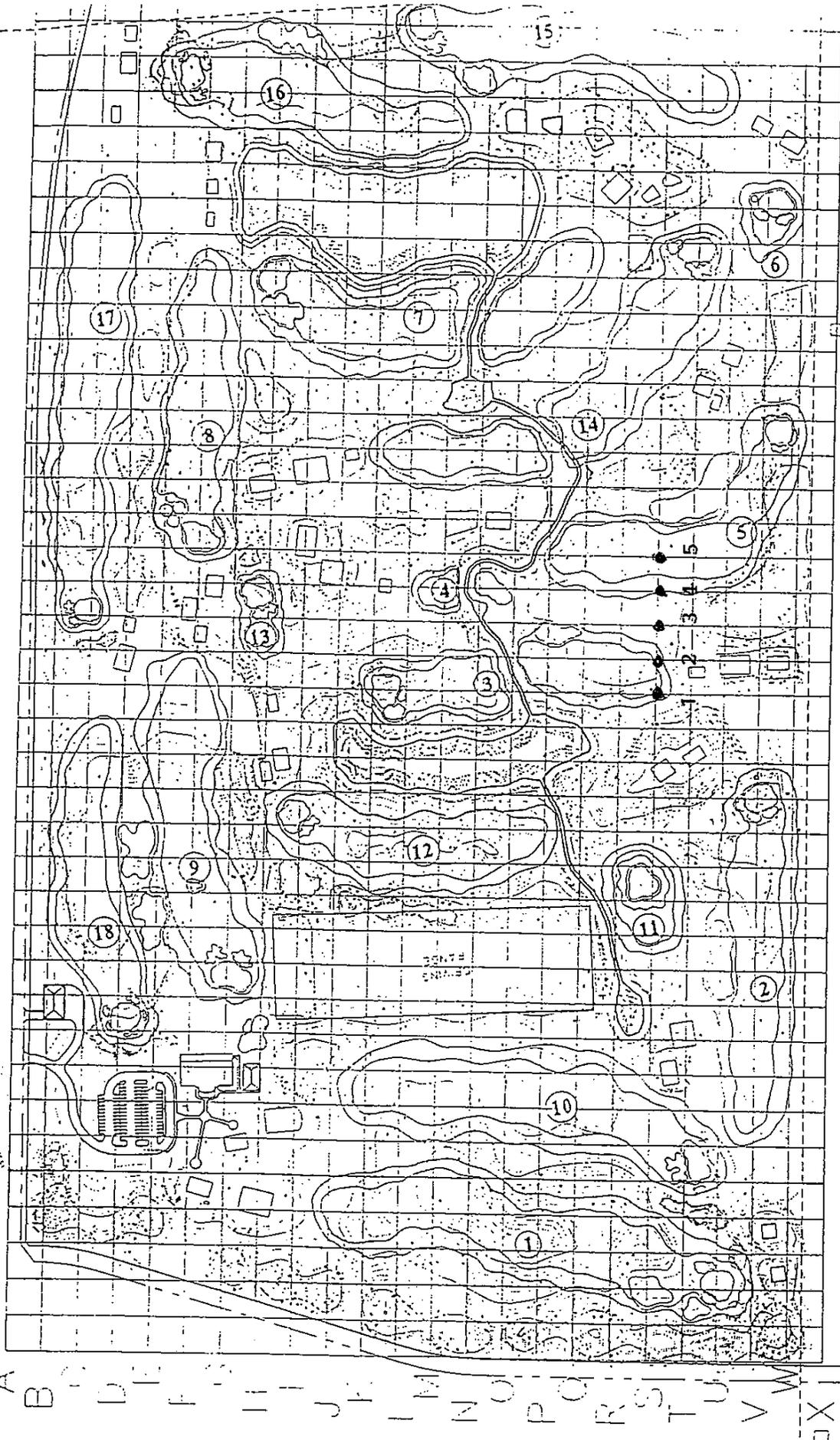
Philip S. Berman  
Director of Operations

Douglas S. Kinloch, P.E.  
Chief Engineer



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

—●— Compaction test 1/28/05



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

January 20, 2006

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 11/14/05  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

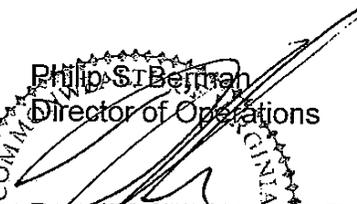
On this date, our technician, David Cropp, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN)	12	12	12	12	12	
MEASURED MOISTURE (%)	31.1	26.6	27.7	20.5	28.3	
OPTIMUM MOISTURE (%)	32.7	32.7	32.7	32.7	32.7	
MEASURED DRY DENSITY (PCF)	69.7	68.4	70.2	68.0	69.2	
MAXIMUM DRY DENSITY (PCF)	70.7	70.7	70.7	70.7	70.7	
MEASURED COMPACTION (%)	98.6	96.7	99.3	96.2	97.9	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
<b>TEST LOCATIONS</b>						
1. 3 <sup>rd</sup> Lift, S/29						
2. 3 <sup>rd</sup> Lift, T/29						
3. 4 <sup>th</sup> Lift, T/30						
4. 4 <sup>th</sup> Lift T/31						
5. 5 <sup>th</sup> Lift, T/31						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

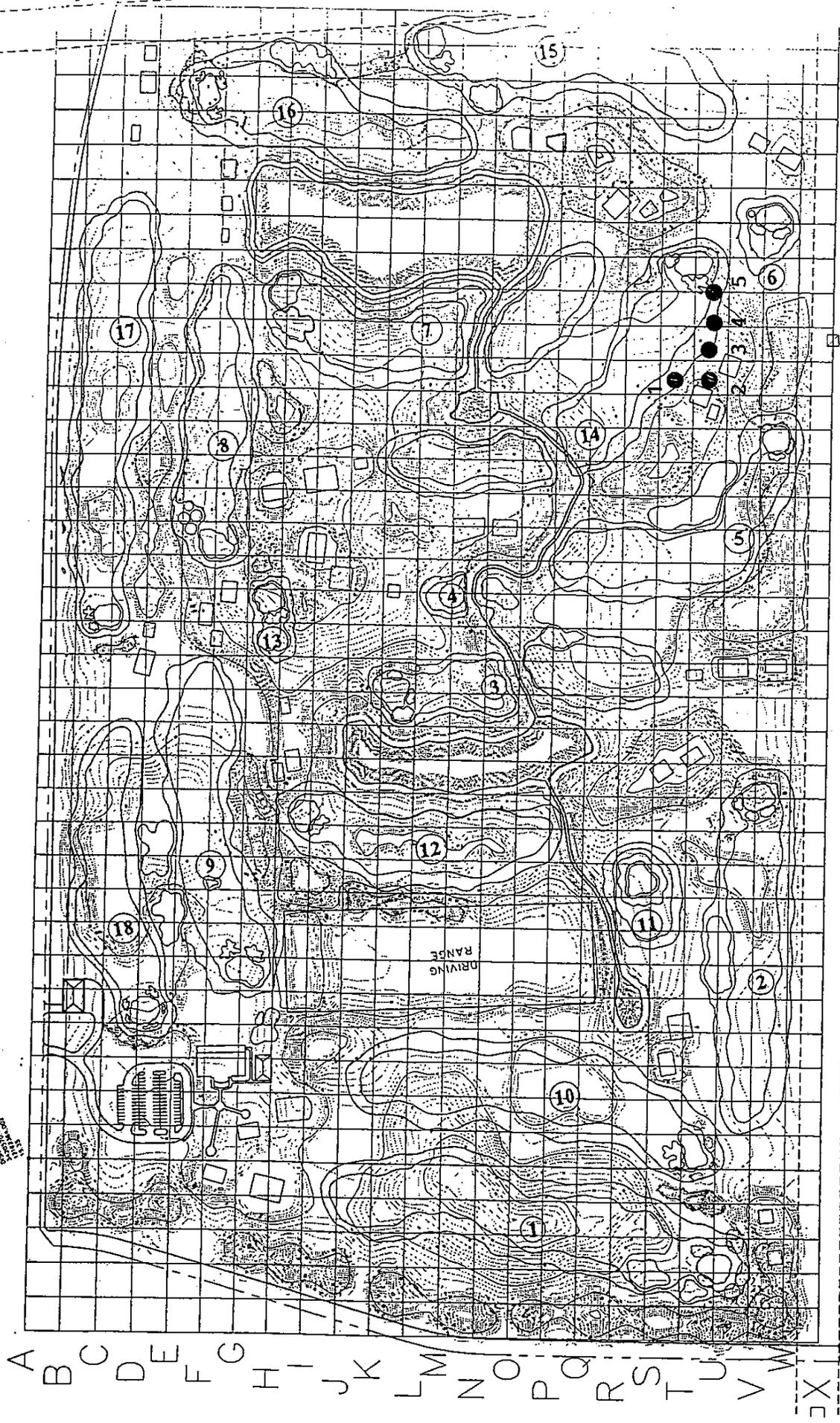
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

  
Philip S. Bertram  
Director of Operations  
  
Douglas S. Knitch, P.E.  
Chief Engineer  
  
The seal is circular with a decorative border. The text inside the seal reads: "COMMERCIAL ENGINEER" at the top, "DOUGLAS S. KNITCH, P.E." in the center, and "PROFESSIONAL ENGINEER" at the bottom.

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● Compaction test location



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

December 1, 2005

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 10/21/05  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

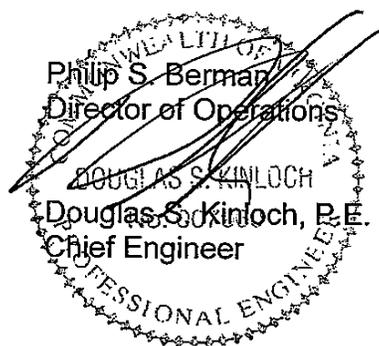
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the site fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	10	10	10	10	10	
MEASURED MOISTURE (%)	30.6	29.6	26.6	26.3	28.7	
OPTIMUM MOISTURE (%)*	32.7	32.7	32.7	32.7	32.7	
MEASURED DRY DENSITY (PCF)	67.2	73.0	72.2	70.5	69.1	
MAXIMUM DRY DENSITY (PCF)*	70.7	70.7	70.7	70.7	70.7	
MEASURED COMPACTION (%)	95.0	100+	100+	99.7	97.7	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
<b>TEST LOCATIONS</b>						
1. D-15, Final Lift						
2. D-14, Final Lift						
3. E-14, Final Lift						
4. E-15, Final Lift						
5. E-16, Final Lift						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.

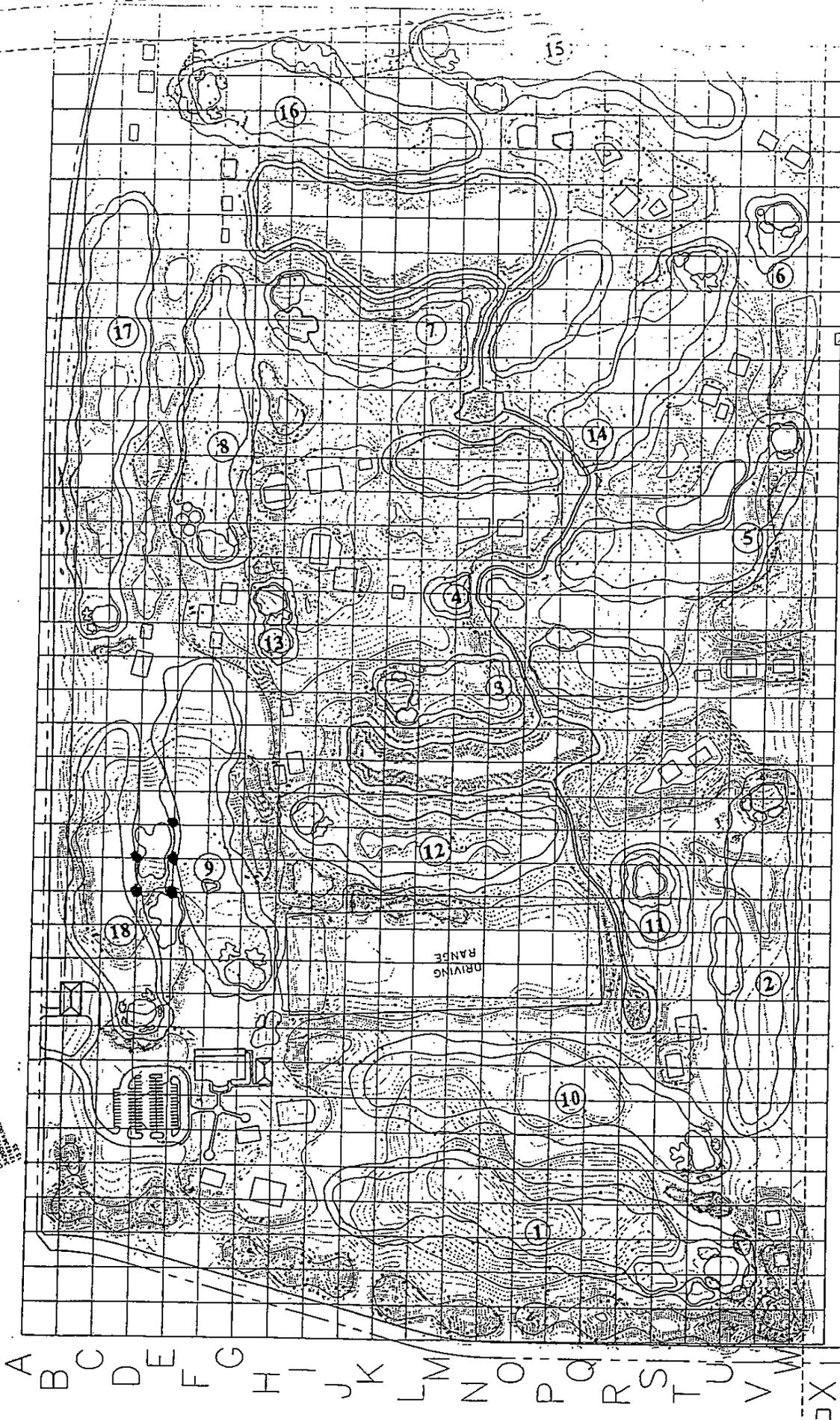


A circular professional engineer seal for Douglas S. Kinloch, P.E., Chief Engineer. The seal contains the text "COMMONWEALTH OF VIRGINIA" at the top and "PROFESSIONAL ENGINEER" at the bottom. The name "DOUGLAS S. KINLOCH" and title "Douglas S. Kinloch, P.E. Chief Engineer" are printed in the center. The seal is crossed out with several diagonal lines.

Philip S. Berman  
Director of Operations  
Douglas S. Kinloch  
Douglas S. Kinloch, P.E.  
Chief Engineer

cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● — Compaction Test - 10/21/05



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

# McCALLUM

TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

November 4, 2005

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 9/28/05  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

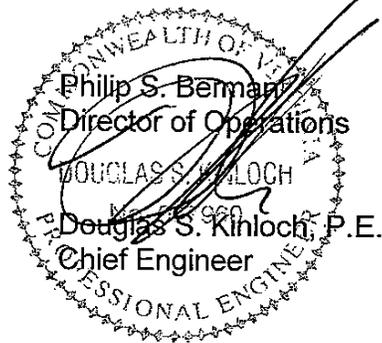
On this date, our technician, David Cropp, was on site to perform compaction testing of the fly ash fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	12	12	12	12	12	
MEASURED MOISTURE (%)	39.2	27.7	29.5	28.3	28.3	
OPTIMUM MOISTURE (%)*	32.7	32.7	32.7	32.7	32.7	
MEASURED DRY DENSITY (PCF)	65.7	64.9	65.0	65.5	64.9	
MAXIMUM DRY DENSITY (PCF)*	70.7	70.7	70.7	70.7	70.7	
MEASURED COMPACTION (%)	100+	100+	100+	100+	100+	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
TEST LOCATIONS						
1. 8 <sup>th</sup> Lift at F/14						
2. 8 <sup>th</sup> Lift at E/14						
3. 8 <sup>th</sup> Lift at E/15						
4. 8 <sup>th</sup> Lift at E/16						
5. 8 <sup>th</sup> Lift at E/17						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

# McCALLUM

## TESTING LABORATORIES, INC.

*Geotechnical Engineering, Materials Testing & Environmental Services*

November 17, 2005

CPM  
180 Golf Road  
Reinholds, PA 17569

Attention: Richard Mackow

Subject: Compaction Testing - 10/4/05  
Etheridge Greens  
Chesapeake, Virginia  
MTL Project 023086

Dear Mr. Mackow:

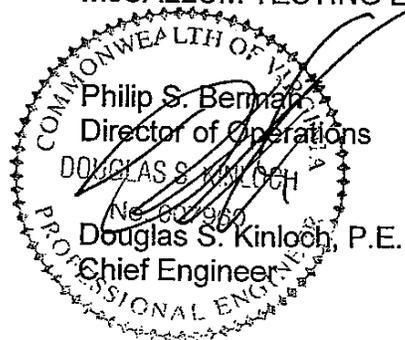
On this date, our technician, Wayne Alexander, was on site to perform compaction testing of the site fill for the above referenced project. All tests were performed according to the procedures outlined by ASTM D 2922.

TEST NO.	1	2	3	4	5	6
PROBE DEPTH (IN.)	8	8	8	8	8	
MEASURED MOISTURE (%)	24.1	21.2	22.3	30.2	32.3	
OPTIMUM MOISTURE (%)	32.7	32.7	32.7	32.7	32.7	
MEASURED DRY DENSITY (PCF)	70.6	67.1	68.3	70.1	68.0	
MAXIMUM DRY DENSITY (PCF)	70.7	70.7	70.7	70.7	70.7	
MEASURED COMPACTION (%)	99.8	94.9	96.6	99.1	96.2	
MIN. REQUIRED COMPACTION (%)	95.0	95.0	95.0	95.0	95.0	
<b>TEST LOCATIONS</b>						
1. D-14, 5 <sup>th</sup> Lit						
2. E-14, 5 <sup>th</sup> Lift						
3. F-14, 5 <sup>th</sup> Lift						
4. G-14, 5 <sup>th</sup> Lift						
5. G-13, 5 <sup>th</sup> Lift						
6.						
*ASTM D 698						

Should you have any questions concerning this report, please contact this office at your convenience.

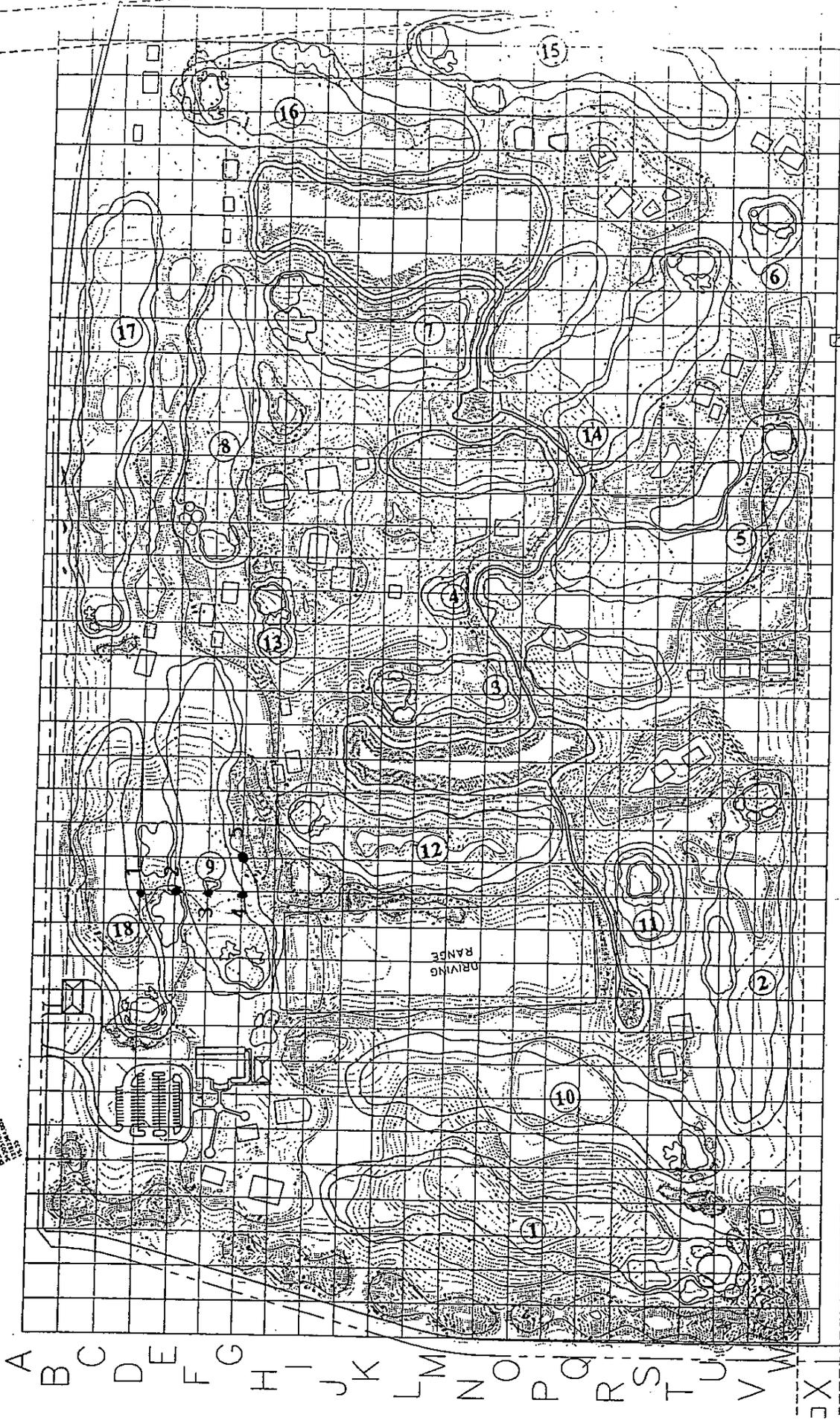
Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



cc: Dominion Energy - Chesapeake / Ms. Louise Wallin

● — Compaction Test - 10/4/05



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39