



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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W. Taylor Murphy, Jr.
Secretary of Natural Resources

Robert G. Burnley

Director

(804) 698-4000

1-800-592-5482

March 15, 2002

Mr. Mark L Baker, P. E.
Director of Operations
Combustion Products Management, Inc.
P. O. Box 339
Ithaca, New York 14851

Re: Etheridge Greens Golf Course Project
Chesapeake, Virginia
CCB # 007

Dear Mr. Baker:

The purpose of this letter is to acknowledge receipt of your letter dated March 8, 2002, and the attached information notifying the Department of the Etheridge Greens Golf Course project, located in Chesapeake, Virginia, which uses coal combustion by-products (or Cab's) generated at the Dominion Virginia Power Chesapeake Energy Center in Chesapeake, Virginia as fill material.

An administrative review of this material has been completed. This letter and associated attachment should be retained by CPM to document the Department of Environmental Quality's concurrence that the information submitted complies with the administrative requirements of Part IV of the Virginia Regulation Governing Management of Coal Combustion By-Products, 9 VAC 20-85-150 and 160. This acknowledgement has been given the identification number CCB # 007. The terms and conditions of this acknowledgement are contained in 9 VAC 20-85-30 through 60 and 9 VAC 20-85-150 and 160.

CC: Bobby D. Berardinis - CPM
Steve Benza - CPM
Neil Wallace - CPM
David Bristow - Dominion (fax 3/18/02 @ 1:50 pm)

Mr. Mark L. Baker, P. E.
CPM, Inc.
Page 2 of 2

If you have any questions, please do not hesitate to contact Don Brunson at (804) 698-4239, or Paul Farrell at (804) 698-4214.

Sincerely,

Jessie A. Romanich

f Robert G. Burnley

Attachment

- cc: Harold Winer, TRO, DEQ
- Milton Johnston, TRO, DEQ
- E. Paul Farrell, Jr., OPM, DEQ
- Don Brunson, OPM, DEQ
- John Godfrey, OPM, DEQ
- Artie Kapell, OWP, DEQ

ATTACHMENT I
SITE DESCRIPTION

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF PERMITTING MANAGEMENT
COAL COMBUSTION BY-PRODUCTS (CCB) #007

Site Name: Etheridge Greens Golf Course

Facility Type: Contouring Fill of CCB

Latitude: 36°68'84" North

Site Location: Chesapeake, Virginia

Longitude: 76°17'57" West

Owner/Operator:

Combustion Products Management "CPM" Virginia LLC

Mailing Address:

Combustion Products Management, LLC
P. O. Box 339
Ithaca, N.Y. 14851

Location Description: The project is located on a 220-acre site at the corner of the Centerville Turnpike and Whittamore Road in Chesapeake, Virginia.

Background: Etheridge Greens Golf Course is a link-style golf course that is developed, owned, and operated by CPM. The championship length 18-hole golf course will also include a driving range, full-service clubhouse, and pro shop. CPM will utilize coal combustion by-products (or CCB's) amended with a cementitious binder as an engineered fill material on the course to enhance the topography of the site. The material shall be placed to achieve maximum compaction at optimum moisture. Full-time construction supervision combined with third-party quality control will provide assurance that the facility is constructed in an environmentally sound manner. All CCB's used for this project will be obtained from the Dominion Virginia Power Chesapeake Energy Center in Chesapeake, Virginia. CCB's from the daily operation of the energy center, as well as CCB's previously disposed of in the on-site landfill will be available for use. The cementitious binder and water will be added to the CCB's in a pugmill at the power plant prior to hauling to the golf course. No stockpiling of CCB will occur at the site as the amended material will upon arrival be immediately graded into place and rolled to achieve compaction. It is anticipated that the project will require approximately 1.5 million tons of amended CCB's over the life of the project. The entire project should be completed by the end of 2006.

Submission Highlights: The Department is in receipt of information that contains the following documents, all of which are contained in the report entitled "Submission Information, Regulations Governing Management of coal Combustion By-Products, 9 VAC 20-85, for Etheridge Greens Golf Course" prepared by Combustion Products Management, Inc., and dated March 7, 2002:

1. Demonstration of legal control of the site in the form of a certificate signed by Mr. Robert DiBerardinis, CPM's National Director of Golf Development, certifying that CCM Virginia, LLC has legal control of the subject project, and dated March 8, 2002. This is a required submission under 9 VAC 20-85-150.1. A Purchase Agreement dated January 14, 2001 is also included attached (see Tab 4).

2. A certificate signed by Mr. Dale Ware, Zoning Inspector for the City of Chesapeake, certifying that the project is consistent with all applicable local ordinances, as required by 9 VAC 20-85-150.2, (see Tab 7).
3. A general description of the intended use, reuse, or reclamation of CCB, as required by 9 VAC 20-85-150.3 and which includes the information required by 9 VAC 20-85-150.3 a. through d, (see Table of Contents Tab).
4. A certificate signed by Mr. Wymer W. Manning, III, P.E., of Hassell & Folks, P.C., and dated March 4, 2002, certifying that the project meets the location restrictions of 9 VAC 20-85-70. This is a required submission in accordance with 9 VAC 20-85-150.4, (see Tab 9 of the report).
5. A certificate signed by Mr. Wymer W. Manning, III, P.E., of Hassell & Folks, P.C., and dated March 4, 2002, certifying that the project has been designed in accordance with the standards 9 VAC 20-85-80. This is a required submission in accordance with 9 VAC 20-85-150.5, (see Tab 10 of the report).
6. An operation plan describing how the standards of 9 VAC 20-85-90 will be met. This is a required submission in accordance with 9 VAC 20-85-150.6, (see Item 6, In Table of Contents Tab of the report).
7. A closure plan describing how the standards of 9 VAC 20-85-100 through 140 will be met. This is a required submission in accordance with 9 VAC 20-85-150.7, (see Item 7, in Table of contents Tab of the report).
8. A signed statement (Statement of Access) that the owner or operator shall allow authorized representatives of the Commonwealth, upon presentation of appropriate credentials, to have access to areas in which the activities covered by 9 VAC 20-85-10, et.seq. will be, are being, or have been conducted to insure compliance. The statement is signed by Mr. Mark Baker, Director of Operations for CPM, LLC, and dated March 7, 2002. This is a required submission in accordance with 9 VAC 20-85-150.8], (see Tab 14 of the report).

COMBUSTION PRODUCTS MANAGEMENT



A Wallace Corporation

March 8, 2002

Ms. Karen J. Sismour
Director, Waste Division
Department of Environmental Quality
P. O. Box 10009
Richmond, VA 23240

RE: City of Chesapeake – Etheridge Greens Golf Course

Dear Ms. Sismour:

CPM Virginia LLC is planning to construct a new links style golf course in the City of Chesapeake. Approximately 1.5 million cubic yards of coal combustion byproducts from Dominion's Chesapeake Energy Center will be utilized during construction. All of the coal combustion byproducts will be amended with a cementitious binder.

In accordance with discussions held with you and your staff during a meeting on February 28, 2002, the attached information is submitted pursuant to Part IV of the Regulation Governing Management of Coal Combustion By-Products. We would appreciate anything you could do to expedite the agency's review of this submittal to something less than the 30 days referenced in the regulations. As you will recall from our meeting, activities associated with the construction of the golf course are ongoing and we expect that delivery of coal combustion byproducts will be ready to begin on March 25, 2002.

As you know, it is CPM and Dominion's position that this submittal is not required by the regulations on the grounds that this project falls under the conditional exemption to the Solid Waste Management Regulations found at 9 VAC 20-80-160.B.2. Dominion will be submitting under separate cover a written legal justification for this position. Should the Department of Environmental Quality agree with the information provided by Dominion, it is understood that the project could proceed without regard to the 30-day review period referenced in the CCB regulations.

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

COMBUSTION PRODUCTS MANAGEMENT



A Wallace Corporation

If you have any questions or desire additional information, please contact me at (864) 859-9090, (864) 380-8244, or by email at mbaker@cpmash.com.

Sincerely,

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

cc: (w/attach.)
Paul Farrell - VDEQ
David Bristow - Dominion
Steve Benza - CPM
Bobby DiBerardinis - CPM
File

C:/word/golfcourse1.doc

**Submission Information
Regulations Governing Management
Of
Coal Combustion By-Products
9 VAC 20-85**

For:

**Etheridge Greens Golf Course
Chesapeake, Virginia**

Prepared by:

**Combustion Products Management,
Inc.
Chesapeake, Virginia**

March 7, 2002

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1.	Site Vicinity Map
2.	Topographic Map
3.	Soil Map
4.	Property Control Documents
5.	Fly Ash TCLP
6.	Bottom Ash TCLP
7.	Local Government Ordinance Certification and Council Minutes
8.	Wetlands Letter
9.	Locational Certification
10.	Design Certification
11.	VPDES Stormwater General Permit
12.	Endangered Species Letter
13.	Construction Quality Assurance Plan
14.	Site Access Authorization
15.	Erosion and Sedimentation Control Plans
16.	Topographic Survey
17.	Base Grade Plan
18.	Closure Plan

1. Project Description

Etheridge Greens Golf Course is a proposed links-style golf course that is being planned, developed, owned, and will be operated by Combustion Products Management ("CPM") Virginia LLC in Chesapeake, Virginia. Situated on a 220-acre site at the corner of Centerville Turnpike and Whittamore Road, the championship length 18-hole course will also include a driving range, full-service clubhouse, and pro shop. The links style course will utilize mounds, fairway bunkers, greenside bunkers, rough, and two lakes to recreate the feel of an old Scottish golf course.

CPM will utilize coal combustion by-products ("CCB") amended with a cementitious binder as an engineered fill material on the course, achieving enhanced topographical interest for the players. Great care will be taken in placing the fill material to achieve maximum compaction at optimum moisture so that the proposed contours are created accurately and maintain their shape under course management and mowing. Full-time construction supervision combined with third-party quality control will provide the necessary assurance that the project is constructed in an environmentally sound manner.

Mr. Robert DiBerardinis, CPM's National Director of Golf Development, moved to Chesapeake in 2000 to oversee all phases of the project, from site selection through course operation. Mr. DiBerardinis is a registered PGA Golf Professional, with many years of golf course design and management experience. By living in Chesapeake, Mr. DiBerardinis gives his assurance that all phases of the project, from construction through operation, will meet the highest standards and have a positive impact on the community.

The CCB's will be from the daily operation and existing disposal area of Dominion's Chesapeake Energy Center in Chesapeake, Virginia. The cementitious binder and water will be added to the CCB's in a pugmill at the power plant prior to hauling to the golf course site. Once received at the golf course site, the amended material will be quickly graded into place and rolled to achieve compaction. No stockpiling of CCB at the project site is expected. It is anticipated that the Etheridge Greens Golf Course will utilize approximately 1.5 million tons of amended CCB's over the life of the project.

A "Site Vicinity Map" (Attachment No. 1), "Topo Map" (Attachment No. 2), "Soil Map" (Attachment No. 3), and "Property Control Documents" (Attachment No. 4) are included.

2. Description of CCB Utilized

All CCB's utilized in the construction of the Etheridge Greens Golf Course will come from Dominion's Chesapeake Energy Center. Fly ash from daily production silos, and fly ash commingled with small amounts of bottom ash will be excavated from the existing plant disposal area for use as pugmill feed at the plant. The cementitious binder will be stored in a silo at the plant for use in the pugmilling operation. The Etheridge Greens Golf Course will not manage any CCB's that contain any constituent at a level exceeding those shown in Table I of the regulations.

TCLP test results are included for both the fly ash (Attachment No. 5) and bottom ash (Attachment No. 6) from the Chesapeake Energy Center.

3. Construction Schedule

Construction activities are anticipated to begin at the site in March, 2002, with first ash placement beginning March 25, 2002. It is hoped to have the driving range open for public use by mid-2004 to create public interest in the course. The first nine holes are scheduled to open in 2005, with the entire course completed by the end of 2006.

4. City of Chesapeake Approvals

CPM approached the City of Chesapeake about the construction of this project in early 2001. After site selection, a public meeting was held on March 27, 2001, to invite comment and participation from nearby citizens, and City of Chesapeake and local VDEQ officials. A second public meeting was held with the City of Chesapeake Planning Commission on April 11, 2001. On June 20, 2001, the Chesapeake City Council voted unanimously to approve the Etheridge Greens Golf Course project.

A signed "Local Government Ordinance Certification" and the minutes from the June 20, 2001 City Council meeting are included as Attachment No. 7.

5. Design and Construction Standards

A. Locational Restrictions

The following locational restrictions were used for determining the placement areas of CCB's on the site:

- 1) Not in areas subject to base floods.
- 2) With a vertical separation between the CCB and maximum seasonal water table or bedrock of minimum 2'-0". McCallum Testing Laboratories, Inc. performed a series of twelve (12) test borings on the site during March 14-16, 2001, to determine the water table location during the wettest season of the year. A "Base Grading Plan," Attachment No. 17, was developed based upon the results of these borings to maintain a minimum 2'-0" vertical separation.
- 3) Not closer than 100 feet of any perennial stream.
- 4) Not closer than 100 feet of any existing water well.
- 5) Not closer than 25 feet of any bedrock outcrop.
- 6) Not closer than 100 feet of any sinkhole.
- 7) Not within 25 feet of any property boundary.
- 8) Not within any wetlands, unless applicable federal, state and local permits are obtained. On November 1, 2001, the Corps of Engineers visited the site and determined that approximately 750 feet of channelized stream located on the southeastern portion of the site, and 330 feet of channelized stream located on the northeastern portion of the site qualify as waters of the United States. These areas are not being disturbed, and therefore no permitting is necessary. A letter from the Corps of Engineers dated November 5, 2001, is included as Attachment No. 8.
- 9) On the site of an active or inactive dump, unpermitted landfill, lagoon, or similar facility, even if such facility is closed.

A letter from a professional engineer licensed to practice by the Commonwealth of Virginia certifying that the Etheridge Greens Golf Course project meets these locational restrictions is included as Attachment No. 9. A letter from a professional engineer licensed to practice by the Commonwealth of Virginia certifying that the project meets the design standards of the regulations is included as Attachment 10.

B. Survey Benchmark

A survey benchmark was located by Hassell & Folkes, PC at the corner of Centerville Turnpike and Whittamore Road, and is noted on Attachment No. 16, "Topographic Survey."

C. Endangered Species

The Virginia Department of Conservation and Recreation's Division of Natural Heritage (DCR) researched its Biological and Conservation Data System (BCD), and found that the canebrake rattlesnake had been documented within 0.25 miles of the Etheridge Greens Golf Course site. A site visit was performed by the Virginia Department of Game and Inland Fisheries (VGDIF) in November, 2001, and they found no appropriate habitat for and do not anticipate significant adverse impact on the canebrake rattlesnake.

A copy of the VGDIF response dated December 3, 2001, is included as Attachment No. 12.

6. **Operational Plan**

A. Fugitive Dusting

Care must be taken to avoid creating fugitive dust at the site so that it does not constitute a nuisance or hazard. The following steps will be taken to reduce and/or eliminate fugitive dusting:

- 1) CCB's will be conditioned with water close to the optimum moisture level at the power plant site before being placed in the dumptruck for transport.
- 2) The transport dumptrucks have tarping which completely covers the truck bed.
- 3) As the transport dumptrucks arrive on the site and deposit the CCB's, a bulldozer quickly rough grades the material to avoid having piles on the active area.
- 4) The ash is compacted with a smooth-drum roller to achieve a tight surface.
- 5) A 4500 gallon water truck is available on site at all times to water all haul roads and add moisture (as needed) to the CCB's to achieve compaction.
- 6) Water for the water truck is available from site wells and lakes.
- 7) At the end of each working day the CCB's are compacted with a smooth-drum roller to have a tight surface which inhibits the creation of fugitive dusting.
- 8) The CCB working surface can be no more than 4 acres.
- 9) As the CCB's reach final grade, they will be soil covered within 7 days.
- 10) Soil covering will be seeded as soon as possible to create a vegetation layer.
- 11) Soil cover material will be excavated from on-site materials.
- 12) Site haul roads will be covered with an aggregate to reduce dusting.

In the event fugitive dusting becomes a nuisance problem on the project, the following contingency measures will be taken:

- 1) Add an additional water truck to provide extra coverage on haul roads and the active placement area.
- 2) Reduce the amount of exposed CCB's in the active working area.
- 3) Suspend or reduce work during high wind periods.
- 4) Install irrigation sprinklers to water active working area.

B. Tracking of Mud

The CCB's will be transported from the plant to the Etheridge Greens Golf Course site by dumptruck. All trucks will limit their loads to prevent spillage of the sides of the beds. Truck tailgates will be sufficiently tight to prevent loss of material during travel. At the site, the tracking of mud onto public roads shall be controlled by the uses of a gravel construction entrance as detailed in the attached Erosion and Sedimentation Plans. The site water truck will be used as necessary to wash the road and construction entrance.

C. Nuisance Noise

CPM realizes that the Etheridge Greens Golf Course project is situated within a rural/residential area. To reduce the amount of nuisance noise present to the site neighbors, the perimeter berms will be constructed first, covered and vegetated to reduce the transmission of noise from the construction area to the surrounding homes. Construction will be limited to normal working hours, typically Monday to Friday from 7:00 AM to 5:00 PM, to avoid disturbing neighboring homes as much as possible.

D. Placement Standards

CCB's shall be placed in accordance with the following standards:

- 1) All fill placed in 12" loose lifts and compacted as soon after placement as possible.
- 2) Fill shall be compacted to at least 95% maximum dry density as determined by the Standard Proctor (ASTM D698).
- 3) Field compaction tests shall be taken for each 5,000 cubic yards placed.

Refer to the "Construction Quality Assurance Plan" for the Etheridge Greens Golf Course, included as Attachment No. 13, for a more thorough plan of construction assurance.

E. Stormwater

Run-on consists of any stormwater from areas outside the CCB fill site, which if left uncontrolled would flow onto the fill site. It is essential that run-on waters be prevented from entering the CCB site by the use of ditches and/or berms. These ditches and/or berms shall be installed at any location where stormwater may flow onto a CCB placement area, and are designed to route the anticipated flow from a 25-year, 24-hours storm event away from the CCB site.

Run-off consists of stormwater that falls directly onto the active CCB fill area, and is routed over the fill to a stormwater control device(s). Run-off must be controlled properly to prevent the erosion of the CCB's or earthen fills, and to protect the quality of nearby surface waters. Run-off is controlled by the proper sloping of the fill areas and the use of sedimentation and erosion control devices such as silt fencing and rock check dams. All active CCB fill areas shall be graded to a minimum top slope of 2% and a maximum top slope of 5%, with finished side slopes no steeper than 33%. During placement operations, the CCB's shall be graded smoothly to provide for sheet flow of run-off water which shall be collected in sedimentation ponds for use in compaction or the control of fugitive dusting.

An integral part of an effective stormwater control program is the use of periodic inspections. All inspections shall be the responsibility of CPM's Site Manager. The proper placement, compaction, and grading of the CCB fills must be examined daily. All stormwater control devices shall be inspected at least once every fourteen-calendar days and within 48 hours of the end of a storm event that is 0.5 inches or greater. Ditches shall be inspected for signs of erosion, inadequate flow, and ponded water. Dikes shall be inspected for erosion, sloughing, breaching, and signs of overflow. Silt fencing should be inspected for breaks, tears, filling with sediment, and deterioration of the fabric. Ponds shall be inspected to ensure adequate storage capacity remains for future storm events. Any problems found during these inspections shall be corrected within seven days of the inspection.

A more complete program for stormwater control is included in the approved "VPDES General Permit for Storm Water Discharges from Construction Sites, Number VAR450741" dated February 13, 2002, for the site (Attachment No. 11).

E. Erosion and Sediment Control

The Etheridge Greens Golf Course has been designed in accordance with the Virginia Sedimentation and Erosion Control Regulations and the City of Chesapeake regulations. A "Sedimentation and Erosion Control Plan" for the site has been approved by the City of Chesapeake, included as Attachment No. 15. All construction shall be done in accordance with this approved plan, and no earthwork operations shall commence prior to the installation of these measures.

7. Closure Plan

A. Introduction

The CPM Site Manager shall be responsible for all operational aspects of the facility in accordance with the provisions of this plan, and a copy of this plan shall be kept on site at all times. Refer to Attachment No. 18, "Closure Plan," for a detailed view of the final cover grades.

B. Cover Placement

Prior to placement of CCB fill at the site, soils shall be excavated and stockpiled to provide adequate cover material. Additional cover material, if required, is available on the site and may be excavated from other areas within the site. Upon completion of CCB placement and compaction, a 12" earthen infiltration layer will be placed directly above the CCB fill, followed by a 12" earthen erosion control layer capable of sustaining the growth of indigenous plants and grasses. After the erosion control layer is in place, the entire fill area will be seeded in accordance with the approved Erosion and Sediment Control Plan.

Protection will be provided to maintain the integrity of the final covered areas, including controlling motorized access to the site. The CPM Site Manager shall inspect the final cover monthly for signs of erosion or deterioration, and shall make repairs promptly.

C. Survey Plat

A survey plat of the Etheridge Greens Golf Course shall be prepared by a professional land surveyor registered in the Commonwealth of Virginia. The plat shall contain a note prominently displayed which restricts the owner's or operator's future obligation to restrict disturbance of the site. The note shall be worded as follows:

NOTE: This property has been constructed by the use of coal combustion by-products as a structural fill product. Virginia Regulation 9 VAC 20-85-120 contains a restriction on the disturbance of the final cover placed on the property unless the disturbance is for the purpose of constructing buildings, paved roadways, paved parking surfaces, paved walkways and sidewalks, or other similar structures.

This survey plat shall be submitted to the local land recording authority within 90 days after the placement of the final cover is complete.

D. Statement of Completion

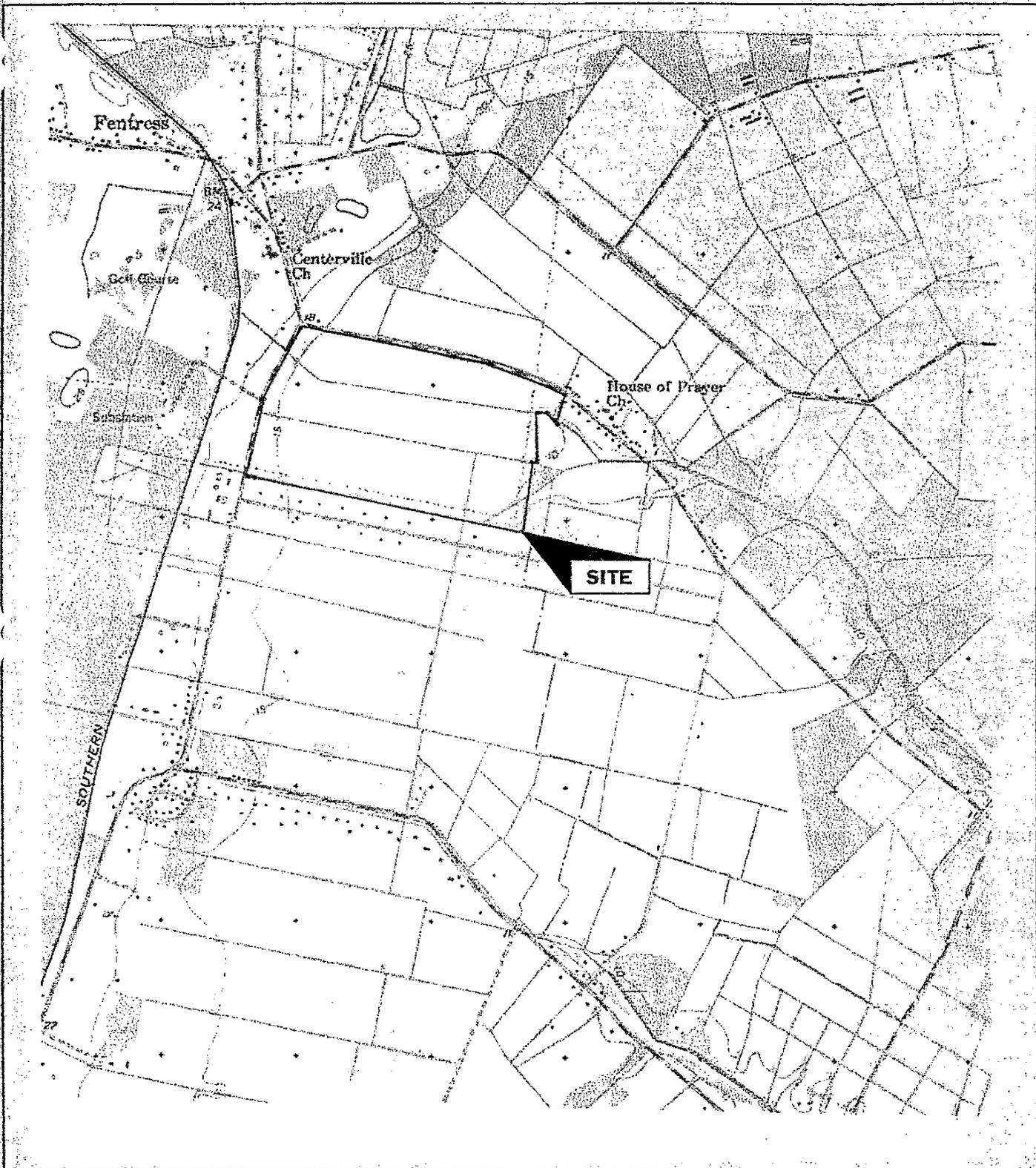
Upon completion of placement of the final cover, a registered Professional Engineer licensed to practice in the Commonwealth of Virginia shall inspect the Etheridge Greens Golf Course for compliance with the operational and closure requirements of 9 VAC 20-85-90 through 140. Any noted deficiencies shall be corrected immediately. Said engineer shall then make a signed statement to the Virginia Department of Environmental Quality within 90 days of placement of the final cover that construction has been completed and cover placed in accordance with design plans.

8. Site Access Authorization

Combustion Products Management ("CPM") Virginia LLC, as owner and operator of the proposed Etheridge Greens Golf Course facility in Chesapeake, Virginia, allows authorized representatives of the Commonwealth of Virginia, upon presentation of appropriate credentials, access to areas in which the activities covered by Virginia Regulation 9 VAC 20-85 will be, are being, or have been conducted to ensure compliance. This authorization letter is included as Attachment No. 14.

1

2

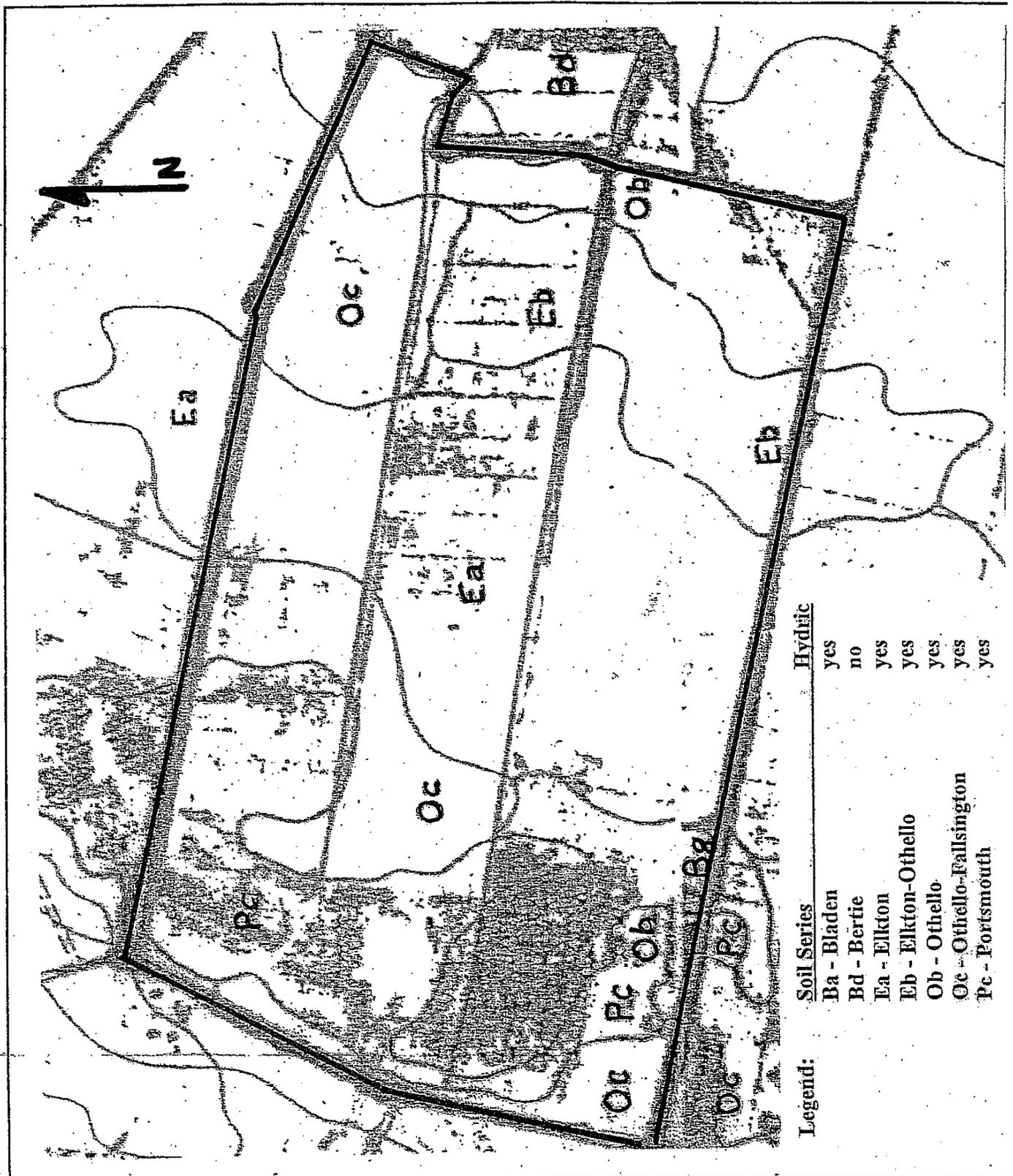


**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

TOPOGRAPHIC MAP

Project Name: Etheridge Greens Site
Project Number: SEA 01-1359.3
Date: 1954; photorevised 1986
Scale: 1" = 2,000'
Source: USGS Topographic Quadrangle Map, Fentress
7.5 minute series

3



**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

SOIL MAP

(Soil Survey Map)

Project Name: Etheridge Greens Site

Project Number: SEA 01-1359.3

Date: 1959

Scale: 1" = 330'

Source: USDA, Soil Conservation Service, Norfolk County,
Virginia

4

PURCHASE AGREEMENT

THIS AGREEMENT is made as of the _____ day of January, 2001 by and between WEAVER FERTILIZER COMPANY, INC. ("Seller"); and COMBUSTION PRODUCTS MANAGEMENT, INC, or assigns ("Purchaser"), collectively the "Parties", and individually, a "Party".

WITNESSETH:

For and in consideration of the sum of Ten Dollars (\$10.00), cash in hand paid, the receipt and sufficiency of which are hereby acknowledged, and the mutual covenants and agreements hereinafter set forth the parties hereto do hereby agree as follows:

1. Sale. Seller agrees to sell and convey to Purchaser, and Purchaser agrees to purchase from Seller, on the terms and conditions herein provided, all that certain parcel of land, containing approximately 210 acres, located at the corner of Centerville Turnpike and Whittamore Road, east of Centerville Turnpike and south of Whittamore Road, in the City of Chesapeake, Virginia., together with all rights, easements, reversions, privileges and appurtenances relating thereto (collectively, the "Property"), including without limitation, all of Seller's right, title and interest in and to adjacent streets, alleys, rights of way and easements appurtenant thereto, which parcel of land is shown outlined in red on a planametric attached hereto as Exhibit A, initialed by Seller and Purchaser for purposes of identification and by this reference made a part hereof. The exact legal description of Property shall be as shown on a subdivision plat or deed to be provided by Purchaser.

2. Purchase Price.

- (a) The total purchase price ("Purchase Price") for the Property shall be the amount of
- (1) The sum of Five thousand dollars (\$5,000) used to option the property shall be paid by the seller to Pioneer Title as escrow agent (the "Escrow Agent"), upon receipt by Purchaser of a fully executed copy of this Agreement. Upon receipt, Escrow Agent shall deposit said sum in an interest bearing account and shall hold and apply said sum and all interest thereon (collectively, the "Deposit") in accordance with the provisions of subparagraph 2(b); and
 - (2) The balance of the Purchase Price (subject to closing adjustments) shall be payable on the Closing Date (as defined below).
- (b) The Deposit shall be applied toward payment of the Purchase Price on the Closing Date, unless otherwise disbursed in accordance with the terms of the Agreement.

3. Inspection Period

(a) During the period (the "Inspection Period") commencing on the date Purchaser receives a fully executed copy of this Agreement and terminating at 5:00 p.m. on July 31, 2001, Purchaser, its agents, contractors, engineers, surveyors, attorneys, representatives and employees shall have a revocable license to enter upon the Property to conduct and make any and all studies, tests, examinations, inspections and investigations of or concerning the Property (including, without limitation, engineering studies, soil tests, surveys, including topographical surveys and environmental audits) and to confirm any and all matters which Purchaser may desire to confirm with respect to the Property. Any access or inspection shall be conducted in such a manner as to not damage the Property of crops located on the Property. Furthermore, Purchaser agrees to indemnify and hold Seller harmless for any damage to the Property or any claim which results from the Purchaser's access to the Property, including, but not limited to, reasonable attorney's fee and expenses.

(b) If the results of any of the matters referred to in subparagraph (a) above are unsatisfactory to Purchaser for any reason, in the Purchaser's sole and absolute discretion, or if Purchaser determines in its sole and absolute discretion that the Property is not suitable for its intended development or that such development is not economically feasible, Purchaser shall have the right to terminate this Agreement by giving written notice to Seller, in which event this Agreement shall terminate and be of no further force or effect and neither party shall have any further rights, obligations or liabilities under this Agreement, except that the Escrow Agent shall promptly return the deposit to Purchaser and repair any damage to the Property.

4. Contingency Period. As a condition precedent to Purchaser's obligation to consummate the purchase of the Property under this Agreement, Purchaser shall have obtained, on or before October 31, 2001 (the "Contingency Period"): (1) all zoning, rezoning, use permits, conditional use permits, licenses, permits, approvals and consents, including, without limitation, site plan approvals and building permits, necessary or desirable in Purchaser's sole opinion, for Purchaser's development of a golf course and related and associated facilities (the "Project"); (2) Seller and Purchaser shall have obtained any permits, license, approvals, together with acceptable public access and utilities and private utilities in the sole discretion of Purchaser; and (3) Purchaser shall have obtained a signed contract with Virginia Power relating to utilization of their material for construction. In the event that in Purchaser's sole discretion any of the foregoing conditions are not satisfied prior to the expiration of the Contingency Period, Purchaser shall have the right, in its sole discretion, to either: (i) terminate this Agreement by giving written notice to Seller, in which event this Agreement shall terminate and be of no further force of effect, and neither party shall have any further rights, obligations or liabilities under this Agreement, except that Escrow Agent shall promptly return the Deposit to Purchaser, or (ii) extend the Closing Date (as defined below) by an additional 90 days in order to attempt to obtain satisfaction of the foregoing conditions (the "Extension Period"). In the event Purchaser elects to extend the Contingency Period, it shall pay seller the sum of \$25,000 ("Extension Fee"), which is non-refundable. In the event Purchaser elects to Purchase the Property, Seller shall credit the Extension Fee towards the Purchase Price. In the event that in Purchaser's sole discretion any of the foregoing conditions are not satisfied prior to the expiration of the Extension Period, Purchaser shall have the right to terminate this Agreement by giving written

notice to Seller, in which event this Agreement shall terminate and be of no further force of effect, and neither party, except as provided herein, shall have any further rights, obligations or liabilities under this Agreement, except that Escrow Agent shall promptly return the Deposit to Purchaser. Seller shall retain the Extension Fee upon termination pursuant to this Paragraph and Purchaser shall pay for Seller any roll-back taxes triggered as a result of Purchaser's activities, and Purchaser shall transfer to seller any and all rights to engineering, surveys, environmental, economic feasibility, appraisals or other plans prepared by or for the Purchaser and which relate to the Property and the Project.

5. Closing. Unless this Agreement is terminated by Purchaser in accordance with the provisions hereof, the consummation of the sale and purchase of the Property (the "Closing") shall be held at the offices of Pioneer Title upon the earlier to occur of (i) thirty (30) days after the expiration of the Contingency Period, and (ii) the date specified by Purchaser in a written notice given to Seller at least ten (10) days prior to the specified date (the "Closing Date"); provided, unless waived by Purchaser, that (1) title is consistent with Paragraph 8 of this Agreement, (2) all representations and warranties of Seller contained in the Agreement are true and correct in all material respects, (3) all other conditions precedent to Purchaser's obligations under this Agreement have been satisfied in form and substance acceptable to Purchaser or waived pursuant to this Agreement, and (4) Seller has performed all its other obligations under this Agreement.

6. Conveyance and Permitted Exceptions. On the Closing Date, Seller shall convey to Purchaser good and marketable fee simple title to the Property by a recordable general warranty deed (the "Deed") with English covenants of title, subject only to the Permitted Exceptions (as defined in Paragraph 8 below).

7. Initial Documents to be Furnished to Purchaser. Within ten (10) days after the date of execution of this Agreement by Seller, shall furnish to Purchaser : true, complete and correct copies of the last ascertainable real estate tax bills for the Property;

(a)

8. Purchaser's Objection to Title: Defects in Title. In the event, at any time prior to sixty (60) days after the date of this Agreement (the "Title Examination Deadline"), Purchaser delivers to Seller its written objections to any exceptions or conditions to title contained in a title binder or commitment (the "Title Binder") for the Property obtained by Purchaser from a title company (the "Title Company") or any matters ("Survey Matters") disclosed by a survey (the "Survey") of the Property which materially impact the marketability of the Property or use for the Project and the title company will not insure over or delete the exception. Seller shall, within a period of thirty (30) days, use reasonable efforts to correct or remove such title defect, exception or condition to which Purchaser objected. In the event Seller is unable to reasonably correct or remove such title defect, exception or condition within thirty (30) days or without incurring expenses which exceed the amount of the Deposit and to cause the Title Company to delete such exceptions to title and to issue such endorsement, Purchaser, at Purchaser's option may elect to (I) terminate this Agreement, in which event the Escrow Agent shall promptly

return the Deposit to Purchaser, or (ii) accept the condition of title to the Property and the Title Binder with such endorsements as then exist. Any matter of record or an exception or conditions to title listed in the Title binder which are not objected to by Purchaser, in writing, prior to the Title Examination Deadline shall constitute "Permitted Exceptions." Notwithstanding anything else herein to the contrary, the existence and limitation of air rights over the Property, and the oral lease agreement to the farm the Property is considered a Permitted Exception

9. Title Insurance Policy. At the Closing, the Title Company shall issue to Purchaser

and ALTA Form B extended coverage owner's title insurance policy (the "Title Policy") insuring title to the Property in favor of Purchaser in the amount of the Purchase Price. The Title Policy shall insure good, marketable and indefeasible fee simple title to the Property, subject only to the Permitted Exceptions. Purchaser shall have the right to require such endorsements to the Title Policy as Purchaser may desire and in form and substance acceptable to Purchaser including without limitation, an endorsement insuring over or deleting the standard printed exceptions to be contained in the Title Policy, an ALTA 3.1 broad form zoning endorsement, an ALTA comprehensive endorsement, and a survey endorsement. The costs and expenses of the Title Policy shall be paid by Purchaser. In the event the Title Company has not agreed to provide the requested endorsements to the Purchaser on or before the Title Examination Deadline, the Purchaser shall be deemed to have accepted the coverage described in the title binder issued by the Title Company.

10. Obligations of Seller Prior to Closing. During the period commencing on the date of this Agreement and ending on the Closing Date, Seller:

(a) shall not enter into any lease, use or occupancy agreement, mortgage, easement, covenant, condition, restriction or other agreement, document or instrument respecting all or any portion of the Property, except for the existing oral lease for the farming of the Property, without the prior written consent of Purchaser which shall not be unreasonably withheld, delayed or conditioned ;

(b) shall not seek the alteration, modification, amendment, termination and/or lapse of any zoning ordinance, permit or other instrument or document respecting all or any portion of the Property, without the prior written consent of Purchaser;

(c) shall not create, grant or accept any option to purchase, right of first refusal, installment sale agreement or other sale agreement other agreement for the leasing or sale of all or any portion of the Property unless contingent upon the termination of this Agreement;

(d) shall not create or suffer any right, claim, lien or encumbrance on all or any portion of the Property except for accrued and unbilled tax obligations or obligations that cannot be satisfied on the Closing Date from the Purchase Price;

shall satisfy or bond off any obligation which could give rise to a mechanics' or material men's lien;

(e) shall pay when due all legitimate real estate and other taxes and all other charges relating to the Property;

(f) shall make all payments when due and keep, perform and observe all provisions with respect to any existing loan affecting the Property or any portion thereof;

(g) shall maintain the Property in material compliance with all applicable laws, statutes, ordinances, rules and regulations;

(i) shall promptly furnish to Purchaser a copy of each notice of proposed assessment and each notice of any proposed action under or violation of any law, statute, ordinance, rule or regulation affecting all or any portion of the Property; and

(j) upon the request of Purchaser, at any time and from time to time, shall perform all reasonable actions which Purchaser may deem necessary or appropriate, including without limitations, the signing of applications and consents for variances, use permits, rezoning, subdivisions, and preliminary and final site plan approvals with the municipal authority.

11. Documents and Instruments to be Furnished by Seller. Seller shall furnish Purchaser the following documents, each of which shall be in form and substance reasonable satisfactory to Purchaser's counsel and copies of which shall have been provided to Purchaser's counsel for review at least five (5) business days prior to the Closing Date:

(a) The Deed;

(b) A Certification of Non-Foreign Status conforming with the requirements of Section 1445 of the Internal Revenue Code;

(c) An ALTA Statement and Affidavit of Title in customary form executed by Seller showing no exceptions to title other than Permitted Exceptions; and

(d) Any and all other documentation and opinions of Seller's counsel reasonably required by Purchaser's counsel, lender, and/or the title insurance company to consummate Purchaser's acquisition of the Property and issuance of the Title Policy to Purchaser provided, however, the Seller's counsel shall have no obligation to provide any opinion as to matters of title survey, zoning, access to utilities or other matters which are or could be covered by Title Insurance and the survey

12. Purchaser's Obligations. Provided that Seller performs all of Seller's obligations

under this Agreement, and all conditions described in Paragraphs 4 and 5 above have been satisfied, Purchaser shall, on the closing Date, pay Seller the balance of the Purchase Price, plus or minus net prorations and adjustments to the Purchase Price.

13. Prorations: Closing Costs.

(a) General real estate taxes assessed against the Property for the current fiscal year shall be prorated as of the Closing Date.

(b) Seller shall pay the grantor's tax payable in connection with the recording of the Deed, and Purchaser shall pay the other costs of recording the Deed and any documents in connection with any mortgage to be placed on the Property by Purchaser. Each party shall pay its own attorneys' fees incurred in connection with this Agreement and the consummation of the transaction contemplated hereby.

14. Representations, Warranties, and Covenants. Seller represents and warrants to Purchaser on the date hereof (all of which shall be deemed to be remade on the closing Date and shall survive Closing) as follows:

(a) The execution and delivery of the agreement, consummation of the transactions described herein, and the fulfillment of and compliance with the terms and provisions here of, do not violate any judicial or administrative order, award, judgment or decree applicable to Seller, nor conflict with any of the terms, provisions or conditions of any other agreement, contract or indenture to which Seller is a party, or by which Seller is bound, or which is applicable to the Property or any part thereof. All consents, approvals, authorizations or orders required of Seller, or any other party, for the authorization, execution or delivery of, and for the consummation of the transactions contemplated by, this Agreement, have been, or before the Closing Date will be, obtained;

(b) To the best of the Seller's knowledge, Seller owns good and marketable fee simple title to the Property and subject to all matters of record, an oral lease and limitation on air rights. Seller has not entered into any agreement (other than this Agreement) to sell or further encumber or dispose of any interest in the Property or any portion thereof or any agreement which imposes restriction on the ability or right of Seller to sell and/or transfer the Property of any interest therein, including without limitation, any options or rights of first refusal in favor of third parties;

(c) Other than this Agreement, matters of record, the oral lease containing farming rights, the limitation on air rights and the existence of ALCUZ, there are no agreements, contracts, licenses, leases, rental agreements, invoices, bills, undertakings, or understandings affecting all or any portion of the Property;

(d) Seller has full power and authority to enter into this Agreement and to perform Seller's obligations hereunder. This Agreement is a legal and valid obligation of Seller, binding upon and enforceable against Seller in accordance with its terms;

to the best of Seller's knowledge, all information furnished to Purchaser by Seller or its agents in connection with the Property is and will be complete, accurate and correct;

(e) to the best of the Seller's knowledge, the Property is currently zoned A1;

The Property to the best of the Seller's knowledge, has not at any time during Seller's ownership nor, prior to Seller's ownership, been used for the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of any flammable materials, explosives, radioactive materials, corrosive, reactive, or poisonous materials, hazardous wastes or toxic substances, including, without limitations, any substances now defined as or now included in the definition of "hazardous substances", "hazardous wastes", "hazardous materials", or "toxic substances" under any applicable federal, state, or local law, ordinances, statute, code, rule or regulation in effect on or prior to Closing. Seller is not, nor has Seller ever been subject to any administrative plan, order, decree or judgement relating to any of the foregoing. To the best of Seller's knowledge, (i) there have been no underground storage tanks present on the Property, and (ii) no petroleum products have spilled leaked upon or in the Property,

(f) To the best of the Seller's knowledge, there is not any condition, event or circumstance existing or threatened, or any litigation, arbitration, governmental or administrative proceeding, action, examination, claim or demand of any kind (including without limitation, any condemnation or eminent domain proceedings) pending or threatened, affecting the Seller or all or any portion of the Property of which would affect the ability of Purchaser to acquire the Property and construct, develop, maintain and operate the Project.

(i) To the best of Seller's knowledge, the Property presently does not violate any laws, statutes, ordinances, rules, orders or regulations of any kind whatsoever, any contractual arrangements with third parties or any covenants, conditions, proffers, easements, right-of-way or restrictions of record, and Seller and Seller's agents have not received notice written otherwise, alleging any such violations;

(j)

(k) the Property is subject to roll-back taxes and is currently assessed under the land use program;

(l) Seller has received no notices and is not aware of any moratoriums regarding construction, development, connection to or use of utility services or systems now provided to the Property or which would otherwise affect Purchaser's intended use of the Property; and

(m) To the best of Seller's knowledge the conveyance of the Property to Purchaser will be in compliance with all applicable subdivision and related ordinances. The Property is not serviced by public sanitary sewer.

Buyer's Remedy Upon Default. Purchaser reserves the right to terminate this Agreement any environmental liabilities prior to the Closing Date if Seller has breached any representations set forth in this Agreement. If purchaser purchases the Property, then all obligations and liabilities, with exception of any environmental liabilities or warranties expressly set forth in the Deed shall merge into the deed.

15. Condemnation. Upon receipt of an offer or any notice or communication from any governmental or quasi-governmental body seeking to take under its power of eminent domain all or any part of the Property, Seller shall promptly notify Purchase of receipt of same and shall promptly send such communication, or a copy thereof, to Purchaser. Upon receipt of such notice, Purchaser shall have the right to rescind this Agreement by delivery of written notice thereof to Seller within thirty (30) days thereafter. If the Closing Date would occur prior to the expiration of said thirty (30) day period, then the Closing Date shall be automatically extended to the date which is five (5) days after the expiration of said thirty (30) days period. In the event the Purchaser elects to rescind, then this Agreement shall be null and void and of no further force and effect and the Deposit shall be immediately returned to Purchaser. In the event the Purchaser does not elect to rescind and the portion of the Property so required by the condemnation or sale in lieu thereof shall be retained by Seller and the Purchase Price to be paid by Purchaser hereunder shall be reduced by a pro rata amount of the Purchase Price for the Property so taken or sold, and (ii) the Property so taken or sold shall not be subject to this Agreement. In the event that Purchaser does not elect to rescind and portion of Property so required by the condemning authority is taken after Closing, then all Proceeds of such condemnation or sale in lieu thereof shall be sole and exclusive Property of Purchase. Seller and Purchaser agree to cooperate with each other to obtain the highest and best price for the condemned Property.

16. Seller's Remedy Upon Default. In the event Purchaser fails to keep or observe any covenant, agreement or obligation to be kept or observed by Purchaser under this Agreement and Purchaser does not cure such failure within thirty (30) days after written notice from Seller, Seller, may terminate this Agreement by giving written notice prior to that effect to Purchaser, in which event the Deposit shall be forfeited by Seller and Purchaser shall pay any roll-back taxes which are assessed as a result of any filings made by or on behalf of Purchaser, and Purchaser shall deliver to Seller all surveys, engineering studies and title information acquired by the Purchaser on the Property.

17. Purchaser's Remedies Upon Default. In the event Seller is unable to furnish Purchase with good and marketable title to the Property in fee simple in accordance with the provisions of the Agreement, Purchaser may, at its election, accept such title as Seller can convey, may terminate this Agreement, or purchaser may enforce specific performance of this Agreement in addition to any other remedy available to Purchase at law or in equity. In the event that this Agreement is terminated by Purchaser pursuant to this Paragraph 19, Purchaser's shall receive the Deposit and have no further remedies against the seller except to recover the cost of survey and the title binder.

18. Survival. The representations, warranties, indemnities, provision, covenants and

Agreements contained in this Agreement shall survive the Closing and shall not be merged into any deed or document, except for any environmental representations of warranties in the Deed which shall survive Closing

19. Notices. Any notices required or permitted to be given hereunder shall be deemed given whom personally or desisted in the United States mail, postage prepaid, certified mail, return receipt requested, addressed to Purchaser or Seller, as the case may be, as follows:

If to Purchaser

Combustion Products Management, Inc.
1229 Kingsbury Drive
Chesapeake, VA 23322
Attn: Robert DiBerardinis

If to Seller:

Weaver Fertilizer Company, Inc.
First Virginia. Tower
555 Main Street, Suite 1609
Norfolk, VA 23510
Attn: C.W. Bradshaw, President & CEO

Any party to this Agreement may change its address for notice purposes by giving notice thereof to the other parties hereto, except that such change of address notice shall not be deemed to have given until actually received by the addresses thereof.

20. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, legatees, legal representatives, successors and assign.

23. Counterparts. This Agreement may be executed and delivered in any number of counterparts, each constituting an original but all together only one Agreement.

24. Entire Agreement. This agreement constitutes the entire agreement and understanding between the parties hereto and it is agreed that any change in, addition to, amendment or modification of the terms here of shall be of no effect unless reduced to writing and executed by Seller and Purchaser.

25. Captions. The captions used in connection with the Paragraphs of this Agreement are for convenience of reference only and shall not be deemed to construe or limit the meaning or language of this Agreement.

26. Risk of Loss. Prior to transfer of title, the risk of loss of or damage to the Property or any portion thereof, by casualty, or the taking of the Property or any portion thereof by eminent domain, shall remain with Seller.

27. Time. In the event that the last day for performance of any obligation hereunder occurs on a Saturday, Sunday or legal holiday, the time for performance shall be extended to the next following business day.

28. Serviceability. If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provision of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

29. Third Party Rights. Nothing in this Agreement, express or implied, is intended to confer upon any person, other than the parties hereto and their respective successors and assigns, any rights or remedies whatsoever.

30. Assignment. Purchaser may assign this Agreement without the prior written consent of Seller.

31. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

32. Expiration. Anything contained herein to the contrary notwithstanding, this Agreement shall be deemed to be an offer until accepted by the Purchaser and its execution hereof and may be withdrawn by Purchaser at anytime prior to its acceptance hereof as evidenced by Purchaser's execution hereof.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement.

SELLER

WEAVER FERTILIZER COMPANY, INC.

Date of Execution

C.W. Bradshaw, President & CEO

PURCHASER

COMBUSTION PRODUCTS
MANAGEMENT, INC.

Date of Execution

By: _____
National Director
Golf Course Development

ESCROW AGENT

PIONEER TITLE

Date of Execution

By: _____
Its: _____

Escrow Agent joins in the execution of this Agreement to acknowledge receipt of the Deposit

FIRST AMENDMENT TO PURCHASE AGREEMENT

THIS FIRST AMENDMENT TO PURCHASE AGREEMENT ("Agreement") is made as of January 31, 2002, by and between WEAVER FERTILIZER COMPANY, INC. ("Seller") and COMBUSTION PRODUCTS MANAGEMENT, INC. ("Purchaser").

Background:

A. Purchaser and Seller previously entered into a Purchase Agreement dated as of February 12, 2001 ("Purchase Agreement").

B. All capitalized terms not defined in this Agreement shall have the meaning set forth in the Purchase Agreement.

C. Seller and Purchaser have reached an agreement with respect to the modification of the Purchase Agreement as more particularly set forth below.

Agreement:

For and in consideration of the agreements more particularly set forth below, and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the parties agree as follows:

1. Paragraph 5 of the Purchase Agreement is deleted in its entirety and the following is substituted in its place and stead:

5. Closing. The consummation of the sale and purchase of the Property (the "Closing") shall be held at the offices of Kaufman & Canoles, One Commercial Place, Norfolk, Virginia, on March 15, 2002, time being of the essence (the "Closing Date"); provided, unless waived by Purchaser, that (1) title shall be consistent with the condition in which such title existed as of the Title Examination Deadline, (2) all representations and warranties of Seller contained in the Agreement are true and correct in all material respects, unless waived under this Agreement, (3) all other conditions precedent to Purchaser's obligations under this Agreement have been satisfied in form and substance acceptable to Purchaser or waived pursuant to this Agreement, and (4) Seller has performed all its other obligations under this Agreement.

2. In exchange for Seller's Agreement to extend the Closing Date as provided above, Purchaser shall pay to Seller, contemporaneously with its execution of this Agreement, the amount of \$10,000 ("Second Extension Fee"), which amount shall be non-refundable (except for in the event of Seller's default, in which event the Second Extension Fee shall be paid to Purchaser) and shall not be credited to the Purchase Price nor considered part of the Deposit. The parties also agree that the Extension Fee of Fifteen Thousand and No/100 Dollars (\$15,000.00) previously paid shall not be considered part of the Deposit and shall not be applied

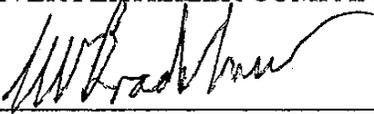
to the Purchase Price and shall not be refundable (except upon Seller's default, in which event the \$15,000 Extension Fee shall be paid to Purchaser).

3. Except as expressly modified by this Agreement, the Purchase Agreement shall remain in full force and effect according to its original terms.

Witness the following signatures and seals:

SELLER

WEAVER FERTILIZER COMPANY, INC.

By: 

C.W. Bradshaw, President & CEO

PURCHASER:

COMBUSTION PRODUCTS
MANAGEMENT, INC.

By: 

Robert DiBerardinis, National Director of
Golf Course Development

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DOMINION SYSTEM LABORATORY

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REPORT PRODUCED ON 9/21/2001

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ENV 50

TCLP TOXICITY TEST RESULTS

The TCLP Procedure simulates the leaching a waste will undergo if disposed of in an improperly designed sanitary landfill. In this test a representative sample is extracted with extraction fluid in a rotary agitation device for 20 hours. The extract obtained from the TCLP extraction procedure is then digested and analyzed for the eight (8) metals; arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. If the TCLP extract contains any one of the eight metals in an amount equal to or exceeding the levels set in 40 CFR 261.24, then the waste has the characteristics of Extraction Procedure Toxicity, and is a hazardous waste.

The TCLP Toxicity maximum for the eight (8) metals is as follows

Arsenic as As	5000 ppb	Lead as Pb	5.0 PPM
Barium as Ba	100.0 PPM	Mercury as Hg	200 ppb
Cadmium as Cd	1.0 PPM	Selenium as Se	1000 ppb
Chromium as Cr	5.0 PPM	Silver as Ag	5000 ppb

Location: CHESAPEAKE

Submitter: BRUCE SHRADER

Unit: 0

Sample Date: 8/21/2001

Description : CONDITIONED FLY ASH FROM ASH STRUCTURE FILL (TRUCK)

System Laboratory Number: 285796

Parameter	Result
-----	-----
Arsenic as As, ppb	< 10.
Barium as Ba, PPM	< 0.91
Cadmium as Cd, PPM	< 0.05
Chromium as Cr, PPM	< 0.15
Lead as Pb, PPM	< 0.65
Mercury as Hg, ppb	< 1.
Selenium as Se, ppb	74.
Silver as Ag, ppb	< 0.4

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DOMINTON SYSTEM LABORATORY

REPORT PRODUCED ON 9/21/2001

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ENV 50

TCLP TOXICITY TEST RESULTS

The TCLP Procedure simulates the leaching a waste will undergo if disposed of in an improperly designed sanitary landfill. In this test a representative sample is extracted with extraction fluid in a rotary agitation device for 20 hours. The extract obtained from the TCLP extraction procedure is then digested and analyzed for the eight (8) metals; arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. If the TCLP extract contains any one of the eight metals in an amount equal to or exceeding the levels set in 40 CFR 261.24, then the waste has the characteristics of Extraction Procedure Toxicity, and is a hazardous waste.

The TCLP Toxicity maximum for the eight (8) metals is as follows

Arsenic as As	5000 ppb	Lead as Pb	5.0 PPM
Barium as Ba	100.0 PPM	Mercury as Hg	200 ppb
Cadmium as Cd	1.0 PPM	Selenium as Se	1000 ppb
Chromium as Cr	5.0 PPM	Silver as Ag	5000 ppb

Location: CHESAPEAKE

Submitter: BRUCE SHRAUER

Unit: 0

Sample Date: 9/21/2001

Description : BOTTOM ASH FROM BOTTOM ASH POND

System Laboratory Number: 285794

Parameter	Result
Arsenic as As, ppb	< 10.
Barium as Ba, PPM	1.17
Cadmium as Cd, PPM	< 0.05
Chromium as Cr, PPM	< 0.15
Lead as Pb, PPM	< 0.65
Mercury as Hg, ppb	< 1.
Selenium as Se, ppb	< 10.
Silver as Ag, ppb	< 0.4

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Local Government Ordinance
Certification

Chesapeake, Virginia
Etheridge Greens Golf Course

This is to certify that the placement of Coal Combustion By-Products in accordance with Regulation 9 VAC 20-84-1 et seq., regulation governing management of Coal Combustion By-Products as proposed by Combustion Products Management at the Etheridge Greens Golf Course, is consistent with all local ordinances.

Signature: Dale Warr

Title: Zoning Inspector

Date: 3/04/2002

Governing Authority: UP-01-03
Stipulation #12

Address: Chesapeake Office of
Zoning Administration
300 Cedar Road
Chesapeake, VA 23322

June 25, 2001

James R. Bradford
Hassell & Folkes, P.C.
325 Volvo Parkway
Chesapeake, VA 23320

Re: UP-01-03: PROJECT: Etheridge Greens. APPLICANT: Robert S. Diberardinis. AGENCY: Hassell & Folkes, P.C. PROPOSAL: A conditional use permit to construct & operate a golf course, golf driving range & related facilities on a 217+ acre site. ZONE: A-1 Agricultural District. SIC CODE: 7992, 7999. LOCATION: Southeast corner of the intersection of Centerville Turnpike & Whittamore Road. TAX MAP SECTION/PARCEL: 062000000020. BOROUGH: Butts Road.

Dear Mr. Bradford:

The application for the above referenced Conditional Use Permit Application was considered and approved with stipulations by City Council at its meeting on June 20, 2001. Enclosed are the appropriate papers that have been processed in this regard.

In addition, the Chesapeake Zoning Ordinance establishes time limitations for use permits, and after the time period the permit will expire unless the use commences or extensions are granted. The Zoning Ordinance provides for an initial time limit of two years (unless a shorter time is specified by City Council at the time of issuance), during which time period the use authorized must commence or the use permit will automatically expire. Specific questions concerning these time limitations and procedures for extending time limitations should be directed to the Zoning Administrator, who is located in the Chesapeake Department of Inspections in the City Hall Building. The telephone number is 382-6240.

As a reminder, the sign posted at this site for the purpose of advertising the proposed action must be removed from the property within five (5) days following the action taken by Council (Chapter 16, Section 105(A)(6) of the City of Chesapeake Zoning Ordinance). Failure to do so is in violation of the City's Zoning Ordinance. Also, a final construction plan may be required prior to the issuance of a building permit. Please contact the Chesapeake Planning Department if you have any questions or need assistance with this matter.

Sincerely,



Dolores A. Moore, CMC/AAE
City Clerk

DAM:blp
cc: Planning, Public Works, Real Estate, Zoning

Docket Letter: G

FOR PLANNING DEPARTMENT USE ONLY

DATE APPLICATION FILED: February 12, 2001
APPLICATION #: UP-01-03
AMOUNT OF APPLICATION FEE PAID: \$225.00
PIV NUMBER: 194490
DATE APPLICATION DETERMINED TO BE COMPLETE: February 14, 2001
APPLICATION REVIEWED/ACCEPTED BY: Gary Pusey

PLANNING COMMISSION ACTION:

DATE OF PUBLIC HEARING: April 11, 2001

ACTION: Continued to the May 9, 2001 Public Hearing

DATE OF PUBLIC HEARING: May 9, 2001

ACTION: Approved with the following stipulations:

- *1. As agreed upon by the applicant, the applicant shall be responsible for providing a left turn lane on Centerville Turnpike at Whittamore Road prior to the initial delivery of fly ash to the site.
- *2. As agreed upon by the applicant, the applicant shall be responsible for providing a minimum twenty-four (24) foot width of pavement on Whittamore Road from the project entrance to the intersection of Centerville Turnpike. These improvements shall be completed prior to the initial delivery of fly ash to the site.
3. A subdivision plat shall be submitted for recordation prior to final site plan approval for the purpose of providing a 45 foot right-of-way reservation along Centerville Turnpike and any right-of-way dedication that may be necessary for ditch and shoulder improvements along Centerville Turnpike, as determined by the Department of Public Works.
4. As agreed upon by the applicant, the applicant shall implement corrective measures to ensure the safety of motorists along Centerville Turnpike and Whittamore Road from errant golf balls if required by the Department of Public Works.

Chesapeake Planning Commission
May 9, 2001 Public Hearing

UP-01-03 Etheridge Greens (continued)

5. As agreed upon by the applicant, an enhanced street buffer varying from 10 feet to 50 feet in width will be provided along Centerville Turnpike and Whittamore Road in order to soften the appearance from the public rights-of-way and to avoid a rigid linear effect. Landscaping shall be subject to approval by the City Arborist.
6. The applicant agrees that a 5 percent tree canopy coverage of the property shall be provided prior to finalization and formal opening of the golf course. The canopy coverage shall be accomplished through a combination of reforestation areas, street buffers and plantings internal to the golf course, subject to approval by the City Arborist. Reforestation areas shall be planted with large and small canopy tree seedlings a minimum of 6" to 12" in height at the time of planting and at a spacing of one tree per 400 sq. ft., subject to approval by the City Arborist. Street buffer trees and internal golf course trees shall be in accordance with the specifications of the Chesapeake Zoning Ordinance.
7. A dry hydrant shall be provided drawing supply from the proposed lake in accordance with the PFM prior to the issuance of a certificate of occupancy.
8. If approved by the City Council, the building setback for the Maintenance Building shall be at least 50 feet from the right-of-way reservation line along Whittamore Road. Landscaping, subject to approval by the City Arborist, shall be provided that screens the Maintenance Building from public view from the street if the setback is approved to be less than 150 feet.
9. A 12' x 35' loading space shall be indicated on the final site plan and provided prior to the issuance of a certificate of occupancy.
10. In the event any private potable well located within a 2,000 foot radius of the subject property's boundaries fails due to contamination or diminution of groundwater, the applicant agrees to promptly provide a replacement well equal in water quality to the failed well. The applicant agrees that he will provide such replacement wells upon receiving a complaint of well damage unless professional hydraulic and/or water quality studies show conclusively that the diminution of groundwater and/or contamination was not caused or contributed to by the construction or operation of the golf course and related facilities. The applicant agrees to post and maintain a twenty-four hour telephone number at the entrance to the site during construction of the golf course to ensure an immediate response to local

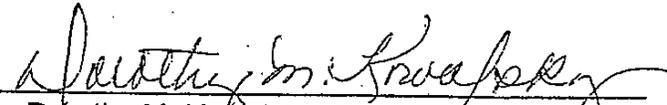
UP-01-03 Etheridge Greens (continued)

- inquiries. The applicant's obligations under this stipulation shall apply only to potable wells existing at the time that construction of the golf course begins and shall expire seven (7) years from the date of the approval of this conditional use permit (UP-01-03).
11. The applicant acknowledges that it is his legal responsibility to ensure safe public drinking water to his patrons. As such the developer agrees that he shall monitor the domestic water supply for the clubhouse and have prepared water quality reports by an independent consultant on a semi-annual basis. Such report shall be filed with the State Water Control Board with a copy provided to the City of Chesapeake Health Department. The term of these reports shall extend from six (6) months from the date of the initial land disturbance to two (2) years after the formal opening of the golf course.
 12. The applicant shall fully comply with all applicable state, local, and federal laws relating to the use of "fly ash" or other coal combustion byproduct in the construction and maintenance of the golf course and related features. The applicant further agrees that no more than four (4) acres of uncovered fly ash or similar byproduct will be exposed at any given time and that the maximum period of exposure, from the time of delivery to the time of topsoil coverage will be seven (7) days. In addition, the applicant shall take all necessary action to prevent the fly ash from being carried by winds to neighboring properties by maintaining the condition of the fly ash, to include, at a minimum, watering on a regular basis.
 13. As agreed upon by the applicant, the clubhouse and maintenance building will be constructed with either brick, block with brick appearance, split block or other stone/masonry veneer, with colors and materials to be approved by the Planning Director or designee prior to the issuance of a building permit.
 14. In accordance with Section 12-406.E. of the Chesapeake Zoning Ordinance, prior to the issuance of a building permit associated with this conditional use, the building plan must be certified by an acoustical engineer as meeting the noise level reduction (NLR) standards established by the U.S. Navy for buildings located within AICUZ noise zone greater than 75 dB Ldn (noise zone 3). Certification by an acoustical engineer that such sound abatement procedures have been installed shall be provided prior to issuance of a certificate of occupancy for such building or structure.

Chesapeake Planning Commission
May 9, 2001 Public Hearing

UP-01-03 Etheridge Greens (continued)

15. In accordance with Section 12-407 of the Chesapeake Zoning Ordinance, the following statement shall be included on the final site plan: "This development is located partially or wholly within an aircraft noise and/or accident zone and may be subject to above average noise levels (including noise levels experienced in United States Navy AICUZ noise zone greater than 75 dB Ldn, noise zone 3) or to aircraft accidents."


Dorothy M. Kowalsky, Recording Secretary

CITY COUNCIL ACTION:

DATE OF PUBLIC HEARING: _____ June 20, 2001

ACTION: Approved with above stipulations.


Dolores A. Moore, CMC/AEE, City Clerk



U.S. Army Corps of Engineers
Norfolk District, Eastern Virginia Regulatory Section
803 Front Street
Norfolk, Virginia 23510

Project Number: 01-R1971

Waterway: Pocaty Creek

1. Participant:
Etheridge Green
c/o Stokes Environmental Associates, Ltd.
4101 Granby Street Suite 404
Norfolk, Va 23504-1117

2. Authorized Agent:
Stokes Environmental Associates, Ltd.
4101 Granby Street Suite 404
Norfolk, Va 23504-1117

3. Address of Job Site:
Located east of Centerville Turnpike, south of Whittamore Rd, and north of Murray Dr. in Chesapeake (TMN 062000000020)

4. Project Description:
You requested a jurisdictional determination on 215 acres of cropland and 1 acre of woodland. This parcel is being considered for development as a golf course.

5. Findings

On November 1, 2001, Mr. Steven Martin of my staff met with a representative of Stokes Environmental Associates to examine the property described in part 3 above.

After evaluating both offsite data (Norfolk County Soil Survey, NWI maps, and multiple years of aerial photography) and on site data, we have determined that there are no jurisdictional wetlands regulated under Section 404 of the Clean Water Act present on this property. However, there are portion of 2 channelized headwater streams located on this property. These headwater streams are considered waters of the United States and are tributaries of Pocaty Creek, a tributary of the North Landing River. The location and extent of these headwater streams are depicted on the attached aerial photograph.

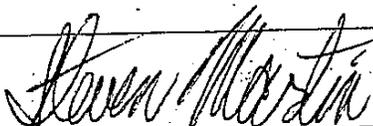
Work in these headwater streams is regulated under Section 404 of the Clean Water Act. The waters on this parcel are waters of the United States and part of a tributary system to interstate waters (33 CFR 328.3(a)).

This jurisdictional determination is valid for a period of five years from the date of this letter unless new information warrants revision of the determination before the expiration date. Please be advised that this letter does not constitute authorization to fill waters of the United States on these parcels.

Copy Furnished :

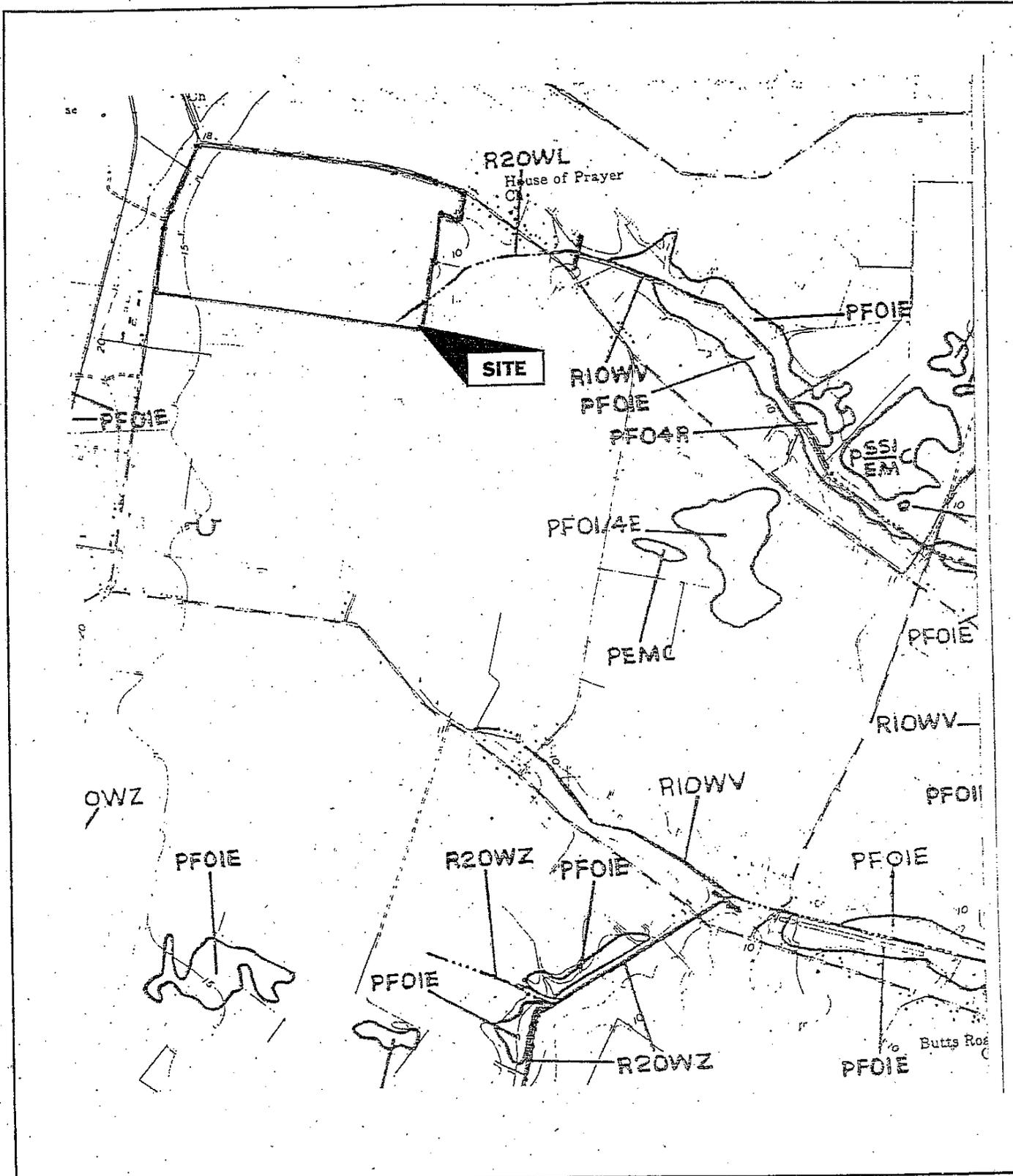
Planning Department, Chesapeake
DEQ, Virginia Beach
Natural Resources Conservation Service, Chesapeake

6. Corps Contact: Steven Martin at (757) 441-7787.



Nicholas L. Konchuba
Chief, Eastern Virginia
Regulatory Section

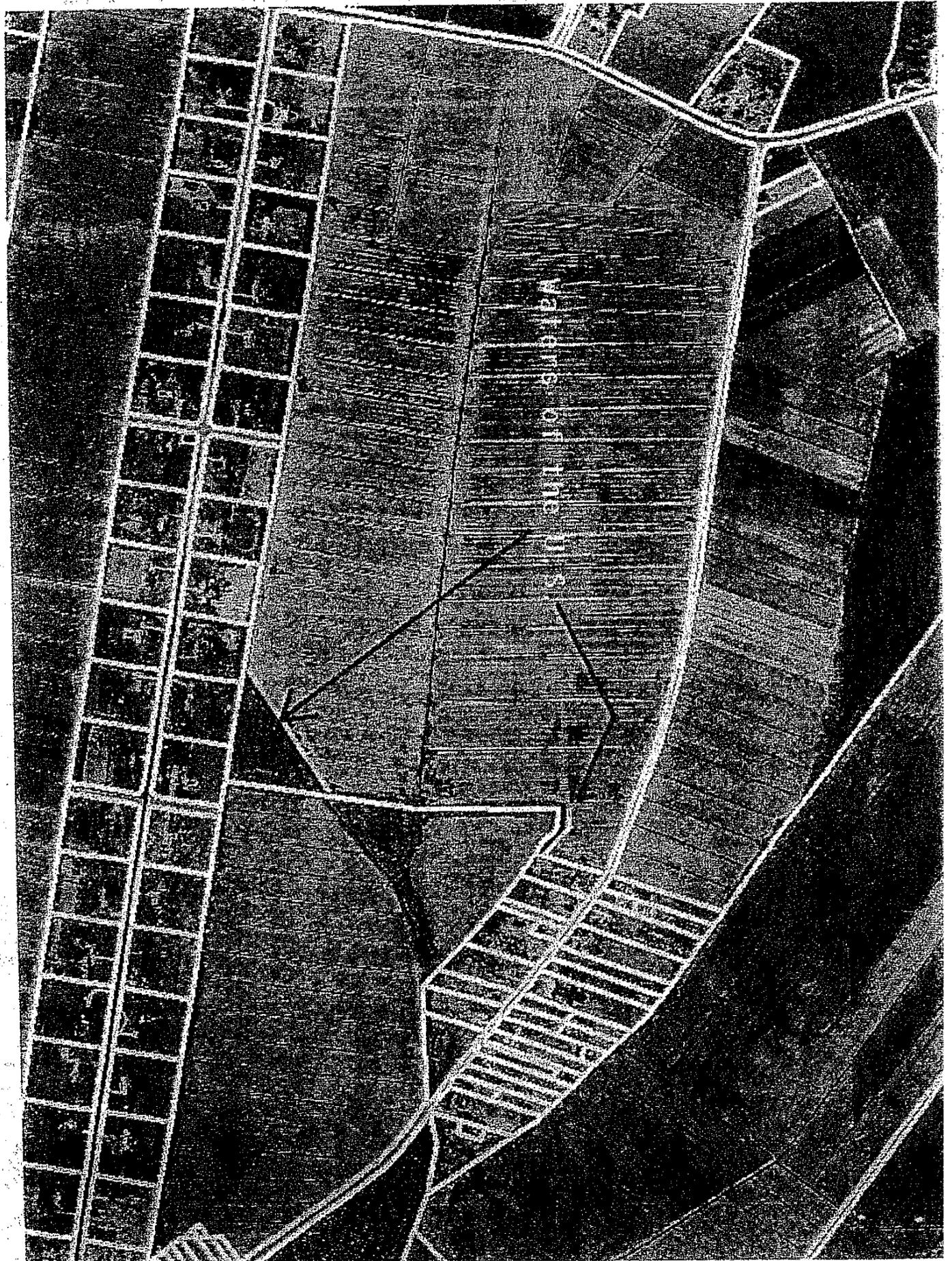
AO FL 13 REVISED DEC 90



**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

WETLANDS MAP
(National Wetlands Inventory Map)

Project Name: Etheridge Greens Site
 Project Number: SEA 01-1359.3
 Date: 1973
 Scale: 1" = 2,000'
 Source: USDI, Fish and Wildlife Service, Fentress Quadrangle



9



Hassell & Folkes, P.C.
Engineers Surveyors Planners

S. Grey Folkes, Jr., P.E.
Leigh Anne Folkes, P.E.
Wymer W. Manning, III, P.E.
John A. O'Connor, P.E.
Greg R. Deubler, P.E.
Donald N. Jennings, P.E.
Christopher D. Capozzi, L.S.
James R. Bradford, C.L.A.

T. Ray Hassell III, L.S.
(1932-1984)
Stradford G. Folkes, P.E.
Consultant

March 4, 2002

Mr. Robert DiBerardinis, PGA GCSAA
National Director of Golf Management
Combustion Products Management
1229 Kingsbury Drive
Chesapeake, VA 23322

RE: ETHERIDGE GREENS GOLF COURSE
(CHESAPEAKE, VIRGINIA)

Dear Mr. DiBerardinis:

We have reviewed the Commonwealth of Virginia, "Regulation Governing Management of Coal Combustion By-Products" (VR 672-20-20) and certify that the referenced project meets the locational restrictions of Part III, Article 1, § 3.1 of this regulation.

Should you have any questions or require additional information, please do not hesitate to contact our office. Trusting this is as you require, we remain,

Very truly yours,

Wymer W. Manning, III, P.E.

WMW/kb

(EGREENS.037)

325 Volvo Parkway, Chesapeake, VA 23320 (757) 547-9531 • FAX (757) 547-9481

10



Hassell & Folkes, P.C.
Engineers Surveyors Planners

S. Grey Folkes, Jr., P.E.
Leigh Anne Folkes, P.E.
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Consultant

March 4, 2002

Mr. Robert DiBerardinis, PGA GCSAA
National Director of Golf Management
Combustion Products Management
1229 Kingsbury Drive
Chesapeake, VA 23322

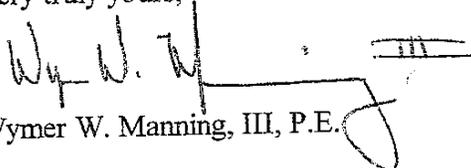
RE: **ETHERIDGE GREENS GOLF COURSE**
(CHESAPEAKE, VIRGINIA)

Dear Mr. DiBerardinis:

We have reviewed the Commonwealth of Virginia, "Regulation Governing Management of Coal Combustion By-Products" (VR 672-20-20) and certify that the referenced project has been designed in accordance with the standards of Part III, Article 2, § 3.2 of this regulation.

Should you have any questions or require additional information, please do not hesitate to contact our office. Trusting this is as you require, we remain,

Very truly yours,


Wymer W. Manning, III, P.E.

WMW/kb

(EGREENS.038)

325 Volvo Parkway, Chesapeake, VA 23320 (757) 547-9531 • FAX (757) 547-9481



RECEIVED
FEB 16 2002

BY:.....

COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY

5636 Southern Boulevard
Virginia Beach, VA 23462
Fax (757) 518-2103
www.deq.state.va.us

Robert G. Burnley
Director

Francis L. Daniel
Tidewater Regional Director
(757) 518-2000

February 13, 2002

Mr. Mark L. Baker, P.E.
Director of Operations
Combustion Products Management
502 Huntington Road
Easley, SC 29642

RE: Permit No. VAR450741 VPDES Storm Water General Permit
Coverage For Etheridge Green Golf Course Development, Chesapeake, VA

Dear Mr. Baker:

The staff has reviewed your complete registration for Storm Water General Permit coverage and determined this facility is eligible for coverage under the VPDES General Permit for Storm Water Discharges From Construction Sites. The effective date of your coverage under this general permit is February 13, 2002. Please read the enclosed permit carefully as you are responsible for meeting all permit conditions. In particular, please note that a site specific Storm Water Pollution Prevention Plan must be developed prior to commencement of land disturbing activity.

Should you have any questions, please do not hesitate to contact Carolyn Putnam at 518-2146.

Sincerely,

James R. McConathy
Water Permit Manager

Enclosure: Permit and Termination Form

cc: DEQ - TRO File
Ms. Cheryl A. Cole, P.E., Stormwater Administrator, Dept. of Public Works, Chesapeake

cc: STOKES ENVIRONMENTAL ASSOC.
Bobby DiBerardinis - CPM

STEVE BENZA - CPM
FILE

**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

**STORMWATER POLLUTION PREVENTION PLAN
ETHERIDGE GREENS SITE
GOLF COURSE DEVELOPMENT
CHESAPEAKE, VIRGINIA**

**PREPARED FOR:
COMBUSTION PRODUCTS MANAGEMENT
C/O MR. MARK L. BAKER, P.E.
502 HUNTINGTON ROAD
EASLEY, SOUTH CAROLINA 29642**

**PREPARED BY:
STOKES ENVIRONMENTAL ASSOCIATES, LTD.
PROJECT NUMBER SEA 01-1359.3
10 JANUARY 2001**

12

Chesapeake - Endangered Species
Page 1 of 1

Subject: Re: Etheridge Green
Date: 12/3/2001 4:54:40 PM Eastern Standard Time
From: twilcox@dgif.state.va.us
To: StokesEA@aol.com
File: TomWilcox.vcf (130 bytes) DL Time (TCP/IP): < 1 minute
Sent from the Internet (Details)

Tom:

I could not remember if you needed this on letterhead of e-mail. Please advise again.

* Pursuant to our 14 November 2001 letter and our follow-up conversation concerning the habitat type at the project site and potential adverse impacts upon the state endangered canebrake rattlesnake, we offer the following comments. Since the appropriate habitat (i.e., forested wetlands) is not available at the project site, we do not anticipate significant adverse impacts upon the canebrake rattlesnake to result from project activities.

Please call me if you have any further questions.

Tom Wilcox
Environmental Services Section
Virginia Dept. of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230
804/367-8998
804/367-2427 (fax)
Pager - 659-3326
twilcox@dgif.state.va.us

>>> <StokesEA@aol.com> 11/16/01 12:51PM >>>
Dear Tom,

As per our discussion, the proposed 215 acre Etheridge Green golf course in Chesapeake, Virginia is within 0.25 mile of a documented canebrake rattlesnake location, as per DGIF letter of 14 November 2001 (ESSLOG #15716).

The property includes an approximate 214 acre intensively cultivated farm field and approximate one acre power line right of way. The farm field and ROW have been reviewed by Stokes Environmental wetland scientists and the U.S. Army Corps of Engineers, and confirmed to contain no jurisdictional wetlands. A portion of the large ditch on the site is considered to be a "waters of the US" due to perennial flow.

The one acre ROW is periodically bush-hogged for maintenance purposes. While several logs are present in the ROW, it does contains no wetlands and does not appear to contain significant hibernacula of the canebrake.

Your confirmation that development of a golf course on the site will not affect state listed endangered or threatened species, or critical habitats of such species, would be greatly appreciated.

Have a great weekend!

Sincerely,
Tom Stokes

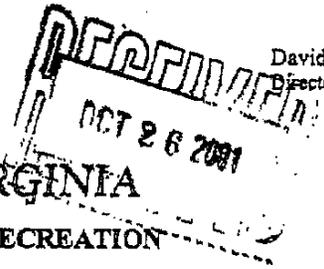
Thomas L. Stokes, Jr.
Stokes Environmental Associates, Ltd.
www.stokesenvironmental.com -
StokesEA@aol.com
4101 Granby Street, Suite 404
Norfolk, Virginia 23504
(757) 623-0777 voice
(757) 623-2785 fax

Chesapeake
Endangered Spec

Jesse

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural
Resources



David G. Brickley
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street, 3rd Floor

TDD (804) 786-2121 Richmond, Virginia 23219 (804) 786-7951 FAX (804) 371-2674

<http://www.state.va.us/~der/vaher.html>

October 24, 2001

Mr. Thomas Stokes
Stokes Environmental Associates, Ltd.
4101 Granby Street, Suite 404
Norfolk, VA 23504

Re: Etheridge Green, Centerville Turnpike, Chesapeake, VA

Dear Mr. Stokes:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biological and Conservation Data System (BCD) for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the canebrake rattlesnake (*Crotalus horridus atricaudatus*, G5TUQ/S1/NF/LE) has been documented within 0.25 miles of the project site. Dispersing individuals may occasionally enter the property, although croplands are not prime habitat for this species.

The canebrake rattlesnake inhabits hardwood and mixed hardwood-pine forests, cane thickets and the ridges and glades of swampy areas. Canebrake rattlesnakes are generally terrestrial and feed on a variety of small animals (Mitchell & Schwab, 1991). This species is widespread throughout the southeast, but reaches the northern limit of its range in Virginia where it is known from only six counties. The primary threats to this species are the loss of habitat due to development activities and persecution (Mitchell, 1994). Please note that this species is currently classified as endangered by the Virginia Department of Game and Inland Fisheries (VDGIF). For this reason, DCR recommends coordination with VDGIF in order to comply with protected species legislation.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-

listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

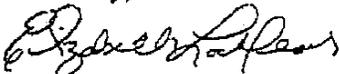
In addition, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is continually added to BCD. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

A fee of \$65.00 has been assessed for the service of providing this information. Please find enclosed an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, Department of Conservation and Recreation, 203 Governor Street, Suite 402, Richmond, VA 23219, ATTN: Cashier. Payment is due within thirty days of the invoice date.

Should you have any questions or concerns, feel free to contact me at 804-692-0984. Thank you for the opportunity to comment on this project.

Sincerely,



Elizabeth Locklear
Locality Liaison

Cc: Ray Fernald, VDGIF

Literature Cited

Mitchell, J.C. 1994. The reptiles of Virginia. Smithsonian Institution Press. Washington, DC. pp. 296 - 302.

Mitchell, J.C. & D. Schwab. 1991. Canebrake rattlesnake. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Construction Quality Assurance Plan

For

Etheridge Greens Golf Course

Chesapeake, Virginia

By

Combustion Products Management, Inc.

March 7, 2002

Revision 2

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1.0 Introduction

The Etheridge Greens Golf Course in Chesapeake, Virginia, is a beneficial use project by Combustion Products Management, Inc. ("CPM") utilizing amended fly ash from the Dominion Generation Chesapeake Energy Center as a structural fill subsoil during construction. This Construction Quality Assurance ("CQA") Plan is a site-specific supporting document to the plans and specifications provided by Hassell & Folkes, P.C. and CPM.

This CQA Plan is a statement of procedures and policies utilized for quality control, sampling, testing and reporting of test results for the amended fly ash used as a subsoil during the construction of mounds, tees, greens, and other earth sculpturing common to a golf course.

2.0 Purpose

2.1 Construction Quality Assurance and Construction Quality Control

The CQA Plan addresses the following: (i) CQA personnel responsibilities, authorities, and qualifications; (ii) inspection, monitoring, and testing activities necessary to ensure that the project is constructed to meet or exceed design criteria, plans, and specifications; and (iii) CQA documentation. Construction Quality Assurance and Construction Quality Control are defined as follows:

Construction Quality Assurance (CQA): A planned and systematic pattern of all means and actions designed to provide adequate confidence that items or services meet contractual and regulatory requirements, and will perform satisfactorily in service.

Construction Quality Control (CQC): Those actions that provide a means to measure and control the characteristics of an item or service to contractual and regulatory requirements.

2.2 Independent Construction Quality Assurance Plan by Dominion Generation

Dominion Generation shall have the option to perform its own Construction Quality Assurance Plan or have a third party perform the Construction Quality Assurance Plan under Dominion Generation's direction. Such expenses to be paid by Dominion Generation.

3.0 Parties to Construction Quality Assurance

3.1 Description of the Parties and Terms

3.1.1 Owner

CPM owns and is responsible for the construction and operation of the Etheridge Greens Golf Course site, and manages all aspects of work on the project.

3.1.2 Golf Course Designer

The Golf Course Designer designs the layout, contours, and details of the golf course. During construction, the Golf Course Designer must approve any deviation from the design requirements of the Construction Drawings or the Construction Specifications.

3.1.3 Design Engineer

The Design Engineer designs the public roadways, drainage ponds, erosion control measures and other specific engineering aspects of the project. The Design Engineer may be an employee of the Owner, and is a registered Professional Engineer in the State of Virginia.

3.1.4 Contractor

The individual, firm, or corporation undertaking the execution of the work under the terms of the contract(s), Construction Drawings, and Specifications. The Contractor may be responsible for constructing all work on the project or only selected components or phases. Any subcontractors working at the direction of the Contractor on the project will be the responsibility of the Contractor.

3.1.5 Project

The Project is the Etheridge Greens Golf Course in Chesapeake, Virginia.

3.1.6 Supplier

The Supplier delivers raw materials or equipment to the Contractor.

3.1.7 Owner's Engineer

The Owner's Engineer is the party, independent from the Contractor, that observes, tests, and documents activities related to the CQA and CQC of the earthworks at the Project. The Owner's Engineer provides technical assistance to the Owner, Golf Course Designer, and Contractor. The Owner's Engineer may be the same as the Design Engineer or Owner.

3.1.8 Quality Assurance Laboratory

The CQA Laboratory is an independent party that conducts tests in the laboratory and on the Project on the soils and structural fill material. The CQA Laboratory will have experience in the physical testing of soils and other drainage materials, meet all regulatory requirements, and be familiar with ASTM and other applicable test standards. The CQA Laboratory will be capable of providing test results in accordance with the Specifications and CQA Plan.

3.2 Responsibilities of the Construction Quality Assurance Personnel

3.2.1 Introduction

The Owner, Golf Course Designer, and Owner's Engineer will be responsible for all CQA duties. Portions of these duties may be delegated or assigned to other qualified parties during the construction of the Project under the supervision of the Owner, Golf Course Designer or Owner's Engineer.

3.2.2 Responsibilities of CQA Personnel

The individual responsible for certifying the Construction Quality Assurance Plan will:

- Provide Construction Drawings and Specifications, soils and ground-water investigation reports, and manufacturer and supplier literature.
- Attend any pre-construction meeting.
- Administer the CQA program by assigning and managing all CQA personnel, reviewing all field reports, and providing technical review of all CQA related issues.
- Become familiar with all designs, plans, and specifications, including but not limited to providing quality control of all CQA personnel, including site visits.
- Be familiar with all changes to the Project design, plans, and specifications.
- Administer the activities of the Quality Assurance Laboratory, including sampling, testing, and reporting.
- Review work being performed on the Project and determine if project parameters are being adequately met.
- Maintain all CQA reports and documents, and will forward copies to Dominion Generation upon Company's request.

4.0 **Meetings**

4.1 Types of Project Meetings

Periodic meetings will be held during construction activities in order to enhance communication between all parties involved in the Project. The meetings to be held are discussed in the following subsections.

4.1.1 Preconstruction Meeting

A meeting will be held to resolve any uncertainties in the Construction Plan and Specifications, or the Construction Quality Assurance Plan prior to the beginning of construction. All parties involved in construction of the Project will attend and be familiarized with the CQA plan and their roles relative to its implementation.

4.1.2 Progress Meeting

Progress meetings will be held onsite at least once every two weeks. At a minimum, the meeting will be attended by the CQA representative and the Contractor. The purpose of the meeting will be to review the previous period's activities and accomplishments, review the planned activities for the period, identify the Contractor's personnel and equipment assignments for the period, and discuss work to be performed and any potential problems anticipated in the upcoming period.

4.1.3 Problem or Work Deficiency Meeting

Special meetings will be held, as necessary, when problems or deficiencies occur. At a minimum, the meetings will be attended by the construction Contractor and CQA representative. The purpose of the meeting will be to define and discuss the problem or deficiency, review alternative solutions, and implement a plan to resolve the problem or deficiency.

5.0 Testing Standards

5.1 Units

In this Construction Quality Assurance Plan, all properties and dimensions are expressed in customary U.S. units.

5.2 Applicable Organizations

Organizations whose standards are referenced in this CQA Plan are as follows:

AASHTO	-	American Association of State Highway and Transportation Officials
ASTM	-	American Society for Testing and Materials
OSHA	-	Occupational Safety and Health Administration
USEPA	-	United States Environmental Protection Agency

5.3 Specific Standards

Specific test standards cited in the CQA Plan are as follows:

ASTM D422	-	Standard Method for Particle-Size Analysis of Soils.
ASTM D698	-	Standard Test Methods for Moisture-Density Relations of Soils and Soil-aggregate Mixtures Using 5.5-lb. Rammer and 12-in. drop.

- ASTM D1556 - Standard Test Method for Density of Soil in Place by the Sand Cone Method
- ASTM D2216 - Standard Method for Laboratory Determination of Water (Moisture) content of Soil, rock, and Soil-aggregate Mixtures.
- ASTM D2487 - Standard Test Method for Classification of Soils for Engineering Purposes.
- ASTM D2922 - Standard Test Method for Density of Soil and Soil-aggregate in Place by Nuclear Methods (Shallow Depth).
- ASTM D4220 - Standard Practices for Preserving and Transporting Soil Samples.

5.4 Applicable Standards

Any reference to standards of any society, institute, association, or governmental agency will pertain to the edition in effect as of the date of this CQA Plan, unless stated otherwise.

6.0 Testing Specifications and Frequency

6.1 Testing Specifications

The following minimum specifications will be required for acceptance on the Project:

Test	Material	Minimum Specification
Compaction	Amended Fly Ash Subsoil	95% Maximum Dry Density as Determined By ASTM D698
Moisture Content	Amended Fly Ash Subsoil	5% +/- Optimum as Received
Lift Thickness	Amended Fly Ash Subsoil	Maximum 12" Thick per Lift

6.2 Testing Frequency

The following minimum testing frequency will be required for acceptance on the Project:

Test	Material	Minimum Frequency
Moisture Content	Amended Fly Ash Subsoil	1 Oven-Dry Test per Day
Compaction	Amended Fly Ash Subsoil	1 Sand Cone Test per 5000 Cubic Yards

Standard Proctor	Amended Fly Ash	1 Laboratory Test per Quarter unless have substantial material change
Nuclear Density Testing	Amended Fly Ash Subsoil	1 Test per Quarter

6.3 Rejected Results

Any test results found to be less than the specified value shall be retested to determine if the low result is due to test error or unsatisfactory construction. If it is found that the low result is a result of unsatisfactory construction, CPM reserves the right to have the Contractor remove the affected material and replace correctly at their expense.

7.0 **Documentation**

7.1 Introduction

An effective CQA Plan depends largely upon the recognition of all construction activities that should be monitored, and on assigning responsibilities for the monitoring of each activity. This is most effectively accomplished and verified by the documentation of construction quality assurance activities. The CQA representative will document that all quality assurance requirements have been addressed and satisfied.

The CQA representative will provide signed descriptive remarks, data sheets, and logs to verify that all monitoring activities have been carried out. The CQA representative will maintain at the site a complete file of Construction Drawings and Specifications, the CQA Plan, applicable test procedures, daily reports, testing logs, and other pertinent documents.

7.2 Daily Recordkeeping

Records will be compiled in the field documenting CQA project administration and other required CQA activities. The following records shall be maintained, at a minimum:

- Daily Activity Report - The Daily Field Report will typically include the day, date, project name, and project identification; a narrative of the events and activities performed that day; weather conditions; personnel working on the site; and the signature of the preparer.
- Laboratory Density Test Log (ASTM D698)
- Moisture Content Test Log (ASTM D2922)
- Sand Cone Density Test Log (ASTM D1556)

7.3 Photographic Documentation

Photographic documentation will serve as a pictorial record of work in progress, problems, and mitigation activities. The photographs will contain color prints with imprinted date stamp; negatives will be stored separately in chronological order. Photographs are to be taken during all aspects of Project construction, at a minimum of once per month.



March 7, 2002

Ms. Karen J. Sismour
Director, Waste Division
Department of Environmental Quality
P.O. Box 10009
Richmond VA 23240

**RE: Access Authorization to Site for Representatives of Commonwealth
Etheridge Greens Golf Course
Chesapeake, Virginia**

Dear Ms. Sismour:

Combustion Products Management ("CPM") Virginia LLC, as owner and operator of the proposed Etheridge Greens Golf Course facility in Chesapeake, Virginia, allows authorized representatives of the Commonwealth of Virginia, upon presentation of appropriate credentials, access to areas in which the activities covered by Virginia Regulation 9 VAC 20-85 will be, are being, or have been conducted to ensure compliance.

Signature: Mark L. Baker

Name: MARK L. BAKER

Title: DIRECTOR OF OPERATIONS

Date: MARCH 7, 2002

C:/word/chesapeakevdeqstatementofaccess030602.doc

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

15

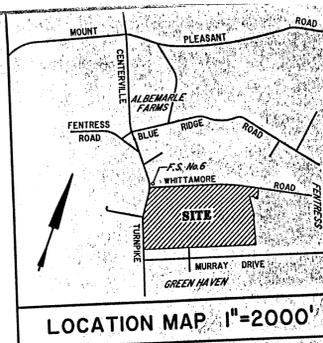
SITE PLAN OF ETHERIDGE GREENS

GOLF COURSE EROSION AND SEDIMENTATION CONTROL PLAN BUTTS ROAD BOROUGH - CHESAPEAKE, VIRGINIA T.P. 062000000020 NOVEMBER, 2001

BENCHMARK DATA

BASED ON CITY OF CHESAPEAKE T.B.M.
GPS # 051. ELEVATION 15.35
LOCATED ON WHITAMORE ROAD
IN FRONT OF FIRE STATION

VERTICAL CONTROL IS ON THE
STATE 1959 ELEVATION ADJUSTMENT
OF THE NGVD 1929 DATUM RELATIVE
TO THE SOURCE BENCHMARK



SCHEDULE OF DRAWINGS:

COVER SHEET	1
PLANSHEETS	2 - 3
NOTES AND DETAILS	4

ENGINEER'S ESTIMATE OF REQUIRED PUBLIC IMPROVEMENTS			
ITEM DESCRIPTION	NUMBER OF UNITS	UNIT PRICE	TOTAL
LAND DISTURBING (EROSION AND SEDIMENT CONTROL)			
LAND DISTURBING	190 AC.	\$250.00 EA.	\$47,500.00
DISTURBED ACREAGE	190 AC.	\$285.00 EA.	\$54,150.00
SILT FENCE	8,600 L.F.	\$5.00 L.F.	\$43,000.00
CONSTRUCTION ENTRANCE	1 EA.	\$500.00 EA.	\$500.00
4" BOTTOM DITCH	6,150 C.Y.	7.00 C.Y.	\$43,050.00
ROCK CHECK DAM	5 EA.	\$400.00 EA.	\$2,000.00
		SUBTOTAL	\$201,650.00
		CONTINGENCY (10% OF TOTAL)	\$20,165.00
		TOTAL	\$221,815.00

THE ABOVE ESTIMATE REPRESENTS ALL PUBLIC IMPROVEMENTS CONTAINED IN PUBLIC RIGHTS-OF-WAY OR PUBLIC EASEMENTS INCLUDING RESTORATION. UNIT PRICES BASED ON CITY SITE PLAN BOND UNIT PRICE LIST DATED 07-01-95. FIGURE REPRESENTS THE MINIMUM SURETY REQUIRED FOR THE ISSUANCE OF DEPARTMENT OF PUBLIC WORKS PERMITS. BOND FIGURE VALID FOR CONSTRUCTION TO BE COMPLETED IN 12 MONTHS OF PLAN APPROVAL.

CITY PERMITS REQUIRED FOR SITE DEVELOPMENT

- LAND DISTURBING
- ENTRANCE / RIGHT-OF-WAY
- CHESAPEAKE BAY PRESERVATION / STORMWATER
- EXCAVATION PERMITS

STORM WATER UTILITY	
BUILDING AREA:	0 SQ. FT.
PAVEMENT AREA	0 SQ. FT.
OTHER IMPERVIOUS AREA	0 SQ. FT.

NOTE: THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CHESAPEAKE CITY CODE AND ALL VOLUMES OF THE CHESAPEAKE "PUBLIC FACILITIES MANUAL".

SIGNED: *Wy W. Manning, III* P.E.



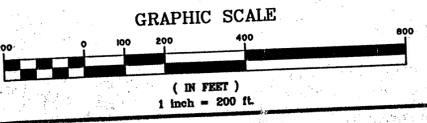
NOTIFY
Miss Utilities At
1-800-552-7001
For Location of Existing

NOTE
THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ALL OWNERS AND RESIDENTS OF PROPERTY ADJACENT TO THIS DEVELOPMENT AND OFFSITE IMPROVEMENTS 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK UNLESS OTHERWISE DIRECTED BY THE CITY. CONSTRUCTION WITHIN EASEMENTS OR ON PUBLIC RIGHT-OF-WAY NECESSITATES NOTICE WHETHER ADJACENT TO OR LOCATED ON THE ADJOINING PROPERTY. ALL TIME TO PROVIDE THE MINIMUM NOTIFICATION TIME WILL

SITE DATA
PROPERTY ZONED: A-1
SITE AREA: 216.91 Ac.
DISTURBED AREA: 190 Ac.
R/W DEDICATION 0 ACRES
USE PERMIT No. UP-01-03
PROPOSED USE
GOLF COURSE - DRIVING RANGE

OWNER
Mr. ROBERT DiBERARDINIS
1229 KINGSBURY DRIVE
CHESAPEAKE, VIRGINIA 23322
PHONE/FAX (757) 546-2462

HASSELL & FOLKES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
325 VOLVO PARKWAY
CHESAPEAKE, VIRGINIA 23320
PHONE: (757) 547-9531 FAX: (757) 547-9481



CONSTRUCTION PLAN ASSIGNMENT

RE: ETHERIDGE GREENS GOLF COURSE - EROSION CONTROL PLAN

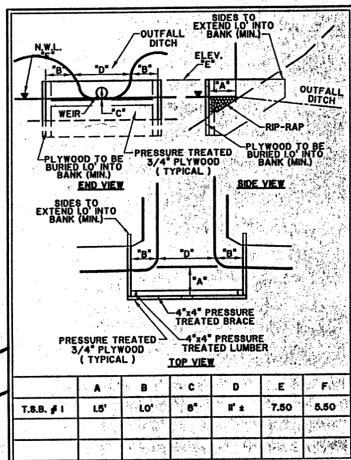
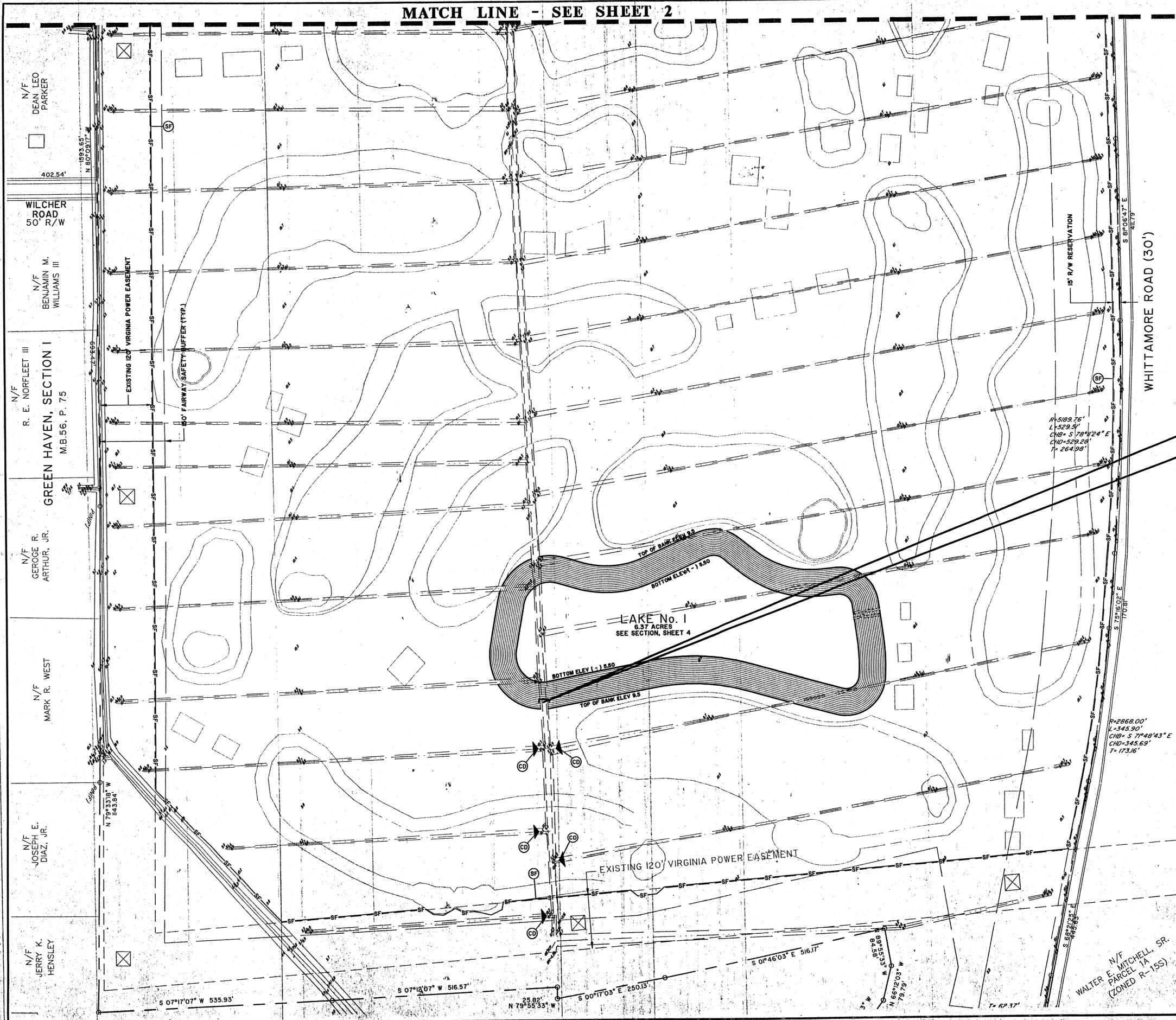
THE UNDERSIGNED ENGINEER/FIRM AGREES THAT THE CITY OF CHESAPEAKE SHALL HAVE THE RIGHT TO USE THESE PLANS TO COMPLETE THE PERMANENT PHYSICAL IMPROVEMENTS IN THE EVENT THAT THE DEVELOPER DEFAULTS IN HIS OBLIGATIONS TO COMPLETE THESE FACILITIES AS REQUIRED BY CITY CODE. THE UNDERSIGNED ENGINEER ALSO AGREES THAT THE CITY MAY USE THESE PLANS FOR THE PREPARATION OF "AS-BUILT" RECORDS AS NECESSARY. THE ENGINEER/FIRM FURTHER AGREES THAT THESE RIGHTS TO USE THE PLANS SHALL BE PROVIDED WITHOUT COST TO THE CITY.

NAME: WYMER W. MANNING, III TITLE: PROJECT MANAGER
FIRM: HASSELL & FOLKES, P.C.
SIGNATURE: *Wy W. Manning, III* DATE: 11/9/01

MARK	REVISION	DATE	APPROV

AUTOCAD FILE NAME: EANDS-CORRECTED.DWG DRAWER No. APPROVAL DATE:

MATCH LINE - SEE SHEET 2

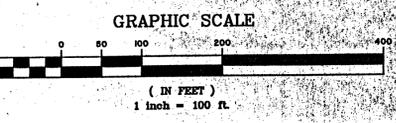


TEMPORARY SEDIMENT BASIN WEIR RESTRICTION DEVICE

SCALE: NONE

- DENOTES SILT FENCE
- DENOTES SILT FENCE TO BE USED AS TREE PROTECTION
- DENOTES CONSTRUCTION ENTRANCE
- DENOTES TEMPORARY SWALE WITH GRAVEL CHECK DAM
- DENOTES INLET PROTECTION

ALL ONSITE STORMWATER RUNOFF SHALL BE DIRECTED TO THE PROPOSED SEDIMENT BASINS



MARK	REVISION	DATE	APPR.
FILE NAME: EANDS-CORRECTED.DWG	DRAWER No.:	APPROVAL DATE:	
SITE PLAN OF ETHERIDGE GREENS 80 L.F. COURSE T.P. 062000000020 BUTTS ROAD BOROUGH CHESAPEAKE, VIRGINIA			
SEDIMENT AND EROSION CONTROL PLAN		DATE: NOV. 2001 SCALE: 1" = 100' SHEET NO. 3 OF 4	
HASSELL & FOLKES, P.C. ENGINEERS-SURVEYORS-PLANNERS CHESAPEAKE, VIRGINIA TELEPHONE (757) 842-9531		DES. G.D.C. DRN. W.W.M. CHK. W.W.M. PRJ. MGR. W.W.M. CONT. NO. 019230	

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EROSION AND SEDIMENT CONTROL NOTES
MANAGEMENT STRATEGIES AND SEQUENCE OF EROSION CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATION OF THE LATEST EDITION OF THE VECBSC AND VECBSC HANDBOOK.

THE FOLLOWING SEQUENCE OF EVENTS AND EROSION CONTROL MEASURES SHALL BE INCORPORATED INTO THE CONSTRUCTION SCHEDULE FOR THIS PROJECT AND SHALL APPLY TO ALL CONSTRUCTION ACTIVITIES WITHIN PROJECT LIMITS:

1. A. TEMPORARY CONSTRUCTION ENTRANCE(S) SHALL BE PROVIDED AT THE LOCATION(S) SHOWN ON THE PLANS. THIS ENTRANCE(S) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, (STD. & SPEC. 3.02). WASHRACKS ARE TO BE PROVIDED WHERE WATER IS AVAILABLE.
- B. WHERE CONSTRUCTION VEHICLES ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT ONTO THE PAVED SURFACE. WHEN SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL SUBDIVISION LOTS AS WELL AS LARGER LAND-DISTURBING ACTIVITIES.
- C. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO ACCESS ROADS. ALL TRAFFIC IS PROHIBITED FROM CROSSING DRAINAGE SWALES AND STREAMS EXCEPT WHERE ABSOLUTELY NECESSARY (STD. & SPEC. 3.24 VECBSC HANDBOOK).
2. TEMPORARY SEDIMENT TRAPS, SEDIMENT BARRIERS, CONSTRUCTION ENTRANCE, AND EROSION CONTROL STONE ARE TO BE PLACED PRIOR TO CLEARING AND GRUBBING OR PRIOR TO THE FIRST PHASE OF CONSTRUCTION.
3. ALL PERMANENT STORM WATER MANAGEMENT FACILITIES INCLUDING EROSION CONTROL ARE TO BE INSTALLED AND MADE OPERATIONAL AT THE START OF CLEARING OPERATIONS, INCLUDING APPROVED SEDIMENT BASINS.
4. THE CONTRACTOR SHALL COMPLETE DRAINAGE FACILITIES WITHIN THIRTY (30) DAYS FOLLOWING COMPLETION OF ROUGH GRADING AT ANY POINT WITHIN THE PROJECT.
5. CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
6. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FENCING, FLAGS, SIGNS, ETC.

7. A. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENuded AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENuded AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN THIRTY (30) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.
- B. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTERNATIONALLY TRANSPORTED FROM THE PROJECT SITE.
- C. A PERMANENT VEGETAL COVER SHALL BE ESTABLISHED ON DENuded AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE LOCAL PROGRAM ADMINISTRATOR OR HIS DESIGNATED AGENT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION. VEGETAL COVER SHALL BE ESTABLISHED AS FOLLOWS:

SEED	PER VOLUME # OF THE PPM
TOPSOIL	4" THICK, PER VDOT SPEC. 602 (CLASS B)
LIME	4000#/AC.
FERTILIZER	1000#/AC. OF 10-10-10
MULCH	2000#/AC.

(HYDROSEEDING MAY BE USED IN PLACE OF MULCHING ON AREAS OTHER THAN DITCH BANKS.) STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIVERSIONS AND DITCH OR WATERCOURSE BEDS AND BANKS IMMEDIATELY AFTER INSTALLATION (STD. & SPEC. 3.36 VECBSC HANDBOOK).

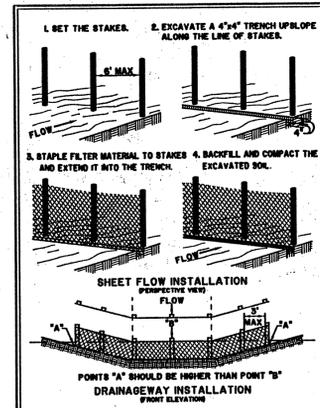
8. A. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- B. BEFORE NEWLY CONSTRUCTED CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
9. A. CUT AND FILL SLOPES SHALL BE DESIGNATED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED, AT NO COST TO THE CITY OF CHESAPEAKE.
- B. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.
10. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED, ESPECIALLY AFTER EACH SIGNIFICANT STORM. THE PROJECT SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
11. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE (1) WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE (1) WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE (1) WEEK PRIOR TO THE FINAL INSPECTION.
12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM ADMINISTRATOR. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

MAINTENANCE:
 IN GENERAL, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED AFTER EACH RAINFALL OR WEEKLY, WHICHEVER IS MOST FREQUENT, AND SHOULD BE CLEANED AND REPAIRED ACCORDING TO THE FOLLOWING SCHEDULE:

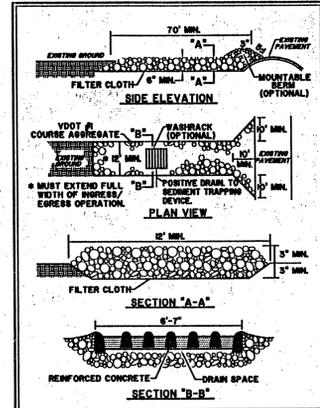
1. THE SEDIMENT TRAPS WILL BE CHECKED REGULARLY FOR SEDIMENT CLEANOUT.
2. THE SEDIMENT BASIN WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT BUILDUP REACHES THE CLEANOUT POINT INDICATED ON THE RIVER PIPE.
3. EROSION AND SEDIMENT CONTROL WILL BE CHECKED REGULARLY FOR UNDERMINING OR DEGRADATION AND BUILDUP OR CLOGGING WITH SEDIMENT. CORRECTIVE ACTION WILL BE TAKEN IMMEDIATELY.
4. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEED AS NEEDED.
5. ALL TEMPORARY EROSION AND SEDIMENT MEASURES SHALL BE DISPOSED OR WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED AND VEGETATION IS ESTABLISHED.

GENERAL NOTES:

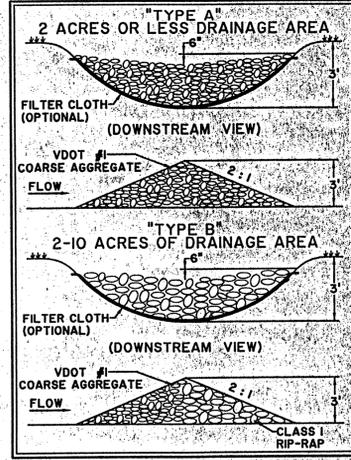
1. VERTICAL CONTROL DATUM IS BASED ON THE 1959 ELEVATION ADJUSTMENT OF THE 1959 DATUM RELATIVE TO THE SOURCE BENCH MARK.
2. POWER LINES, TELEPHONE, GAS, AND OTHER RELATED UTILITIES AND EASEMENTS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ONLY THOSE UNDERGROUND UTILITIES AND EASEMENTS THAT CAN BE VERIFIED FROM SURFACE OBSERVATION HAVE BEEN SHOWN. OTHERS MAY EXIST.
3. CONTRACTOR WILL NOTIFY "MISS UTILITIES", TELEPHONE NO. 1-800-552-7001, 48 HOURS IN ADVANCE OF ANY EXCAVATION WORK IN THE CONSTRUCTION AREA TO VERIFY THE LOCATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGES DUE TO HIS FAILURE TO DO SO.
4. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF CHESAPEAKE STANDARDS AND SPECIFICATIONS, PPM VOLUMES I-IV AND/OR VDOT ROAD AND BRIDGE SPECIFICATIONS DATED JANUARY 1993 AND AS SPECIFIED HEREON.
5. ALL DISTURBED AREAS AFFECTING ROAD SIDE DRAINAGE SHALL BE RESTORED TO EXISTING OR BETTER THAN EXISTING CONDITIONS.
6. TEMPORARY DRAINAGE DURING CONSTRUCTION TO BE PROVIDED BY THE CONTRACTOR TO RELIEVE AREAS THAT MAY BE DAMAGED OR AS DIRECTED BY THE ENGINEER.
7. TOPSOIL, SEED, FERTILIZER, AND MULCH ARE TO BE PLACED IN ACCORDANCE WITH THE VIRGINIA EROSION CONTROL MANUAL. A PERMANENT STAND OF GRASS ADEQUATE TO PREVENT EROSION MUST BE ESTABLISHED.
8. BEFORE ANY WORK OF ANY NATURE IS STARTED WITHIN THE LIMITS OF CITY STREETS RIGHT-OF-WAY, A PERMIT MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS, CITY OF CHESAPEAKE.
9. ADJACENT PROPERTY OWNERS MUST BE NOTIFIED 30 DAYS PRIOR TO COMMENCING CONSTRUCTION.



SILT FENCE
 SCALE: NONE



CONSTRUCTION ENTRANCE
 SCALE: NONE



ROCK CHECK DAM
 CLASS I RIP-RAP
 SCALE: NONE

EROSION & SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:
 THE PROPOSED 23.51 ACRE SITE IS LOCATED AT THE INTERSECTION OF CENTREVILLE TURNPIKE AND WHITMOR ROAD IN THE BUTTS ROAD BOROUGH OF THE CITY OF CHESAPEAKE. THE PURPOSE OF THIS PROJECT IS TO PREPARE THE SITE FOR THE CONSTRUCTION OF A GOLF COURSE AND RELATED FACILITIES.

EXISTING SITE CONDITIONS:
 THE EXISTING SITE IS OPEN WITH THE MAJORITY BEING CULTIVATED FARM LAND. THE SITE IS CROSSED BY EXISTING FARM DITCHES THAT TRANSPORT STORM WATER RUNOFF FROM THE SITE. THE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN DESIGNED ACCORDINGLY.

ADJACENT PROPERTIES:
 CENTREVILLE TURNPIKE BOUNDS THIS SITE TO THE WEST, AND WHITMOR ROAD LIES TO THE NORTH. PROPERTIES OWNED BY CHARLES TAYLOR & ROBERT G. MACDONALD, TRUSTEE BOUND THIS PROPERTY TO THE EAST, AND PROPERTIES OWNED BY MICHAEL E. CALABRESI, LOUIS F. KIRBY, MICHAEL CORNWELL, JAMES A. STEPHENSON, JOSEPH L. LOCASIO, WILLIAM R. STEPHENSON, JERRY K. HENSLY, JOSEPH E. DIAZ, JR., MARK R. WEST, GEORGE R. ARTHUR, JR., R.E. NORFLEET & BENJAMIN M. WILLIAMS II, & DEAN LEO PARKER LIE TO THE SOUTH.

OFFSITE AREAS:
 SOME OFFSITE AREA DRAINS THROUGH THIS SITE THROUGH A CANAL THAT CARRIES PUBLIC WATER. NO INTERRUPTION TO THIS FLOW IS PROPOSED.

SOILS:
 THE SOILS OF THIS AREA CONSIST OF A MIX OF PORTSMOUTH LOAM, OTHELLO-FALLSINGTON FINE SANDY LOAMS, DRACON FINE SANDY LOAM, WEEKSVILLE SILTY LOAM & ELTON SILT LOAM AS SHOWN ON THE SOIL SURVEY OF NORFOLK COUNTY, MAY 1958.

EROSION AND SEDIMENT CONTROL MEASURES:
 THE METHODS, AS SHOWN ON THIS PLAN, TO BE INSTALLED ARE: SILT FENCE, CONSTRUCTION ENTRANCE AND TEMPORARY SEDIMENT BASINS.

PERMANENT STABILIZATION:
 REFER TO THE EROSION AND SEDIMENT CONTROL NOTES ON THIS PLAN FOR SEEDING AND STABILIZATION REQUIREMENTS.

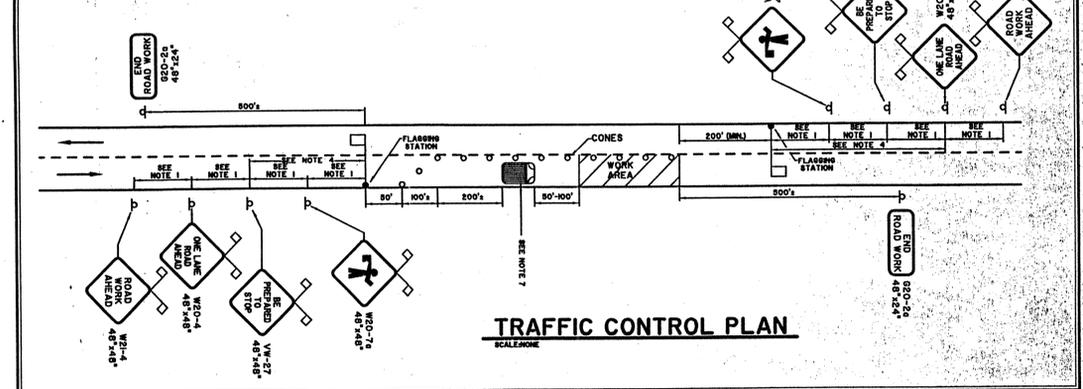
NOTES:

1. SIGN SPACING DISTANCE SHOULD BE 500'-800' WHERE THE POSTED SPEED LIMIT IS GREATER THAN 45 MPH, AND 350'-500' WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.
2. WHERE R/W OR GEOMETRIC CONDITIONS PREVENT THE USE OF 48"x48" SIGNS, 36"x36" SIGNS MAY BE USED.
3. FLAGGING STATIONS SHALL BE LOCATED FAR ENOUGH IN ADVANCE OF THE WORK ZONE TO PERMIT APPROACHING TRAFFIC TO REDUCE SPEED AND/OR STOP BEFORE PASSING THE WORK ZONE AND ALL OF SUFFICIENT DISTANCE FOR DEPARTING TRAFFIC IN THE LEFT LANE TO RETURN TO THE RIGHT LANE BEFORE REACHING OPPOSING TRAFFIC.
4. A SUPPLEMENTAL FLAGGER MAY BE REQUIRED IN THIS AREA TO GIVE ADVANCE WARNING OF THE OPERATION AHEAD BY SLOWLY APPROACHING TRAFFIC PRIOR TO REACHING THE FLAGGER STATION OR QUEUED TRAFFIC. IF THE QUEUE OF TRAFFIC REACHES THE "DE PREPARED TO STOP" SIGN, THEN THE SIGN MUST BE READJUSTED AT GREATER DISTANCES.
5. ALL FLAGGERS MUST BE STATE CERTIFIED AND HAVE THEIR CERTIFICATION CARD IN THEIR POSSESSION WHEN PERFORMING FLAGGING DUTIES. (SEE SECTION 6E-2, QUALIFICATIONS FOR FLAGGERS).
6. CARE SHOULD BE EXERCISED WHEN ESTABLISHING THE LIMITS OF THE WORK ZONE TO INSURE MAXIMUM POSSIBLE SIGHT DISTANCE IN ADVANCE OF THE FLAGGER AND TRANSITION, BASED ON THE POSTED SPEED LIMIT AND EQUAL TO OR GREATER THAN THE VALUES ON PAGE 162.
7. A TRUCK WITH AT LEAST ONE ROTATING AMBER LIGHT OR HIGH INTENSITY AMBER STROBE LIGHT, SHALL BE PARKED 50' - 100' IN ADVANCE OF FIRST WORK CREW.
8. CONE SPACING SHALL BE AT THE FOLLOWING:

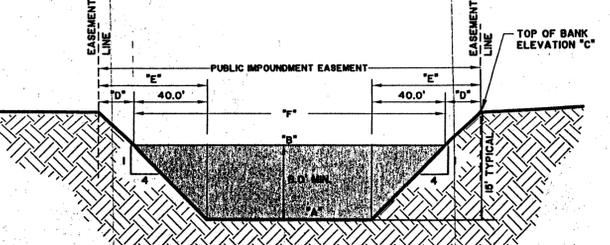
LOCATION	SPEED (MPH)	
	25-35	36
TRANSITION SPACING	20'	40'
TRAVELWAY SPACING	40'	80'

NOTES:

- WORK MAY ONLY BE PERFORMED BETWEEN 8:00 AM AND 4:00 PM
 ALL SIDE STREETS WITHIN WORK ZONE OR SIGN SEQUENCE SHALL ALSO BE SIGNED.
 THE ROADWAY SHALL BE RESTORED TO ALL TRAFFIC BY THE END OF EACH WORKDAY
 ALL OPEN HOLES OR TRENCHES SHALL BE BACKFILLED AND THE SHOULDER MADE READY TO HANDLE EMERGENCY TRAFFIC BY THE END OF EACH WORKDAY
 NO MATERIALS OF CONSTRUCTION SHALL BE STOCKPILED WITHIN THE "CLEAR ZONE" AS DEFINED BY THE VDOT "ROADSIDE DESIGN GUIDE"
 NO EQUIPMENT OR MACHINERY SHALL BE LEFT/PARKED UNATTENDED, WITHIN THE "CLEAR ZONE" AS DEFINED BY THE VDOT "ROADSIDE DESIGN GUIDE", WHILE WORK IS NOT BEING PERFORMED.
 CONTACT KEYV EPLY AT 382-3352 AT LEAST 48 HOURS PRIOR TO ANY OPEN CUTTING NEAR SIGNALIZED INTERSECTIONS.
 OPEN HOLES OR TRENCHES SHALL NOT BE LEFT UNATTENDED OR UNPROTECTED WHENEVER WORK IS NOT BEING PERFORMED.
 ANY ALL DAMAGED OR REMOVED TRAFFIC SIGNAL APPURTENANCES, TRAFFIC CONTROL DEVICES, AND/OR PAVEMENT MARKINGS SHALL BE RESTORED BY THE CONTRACTOR.



TRAFFIC CONTROL PLAN
 SCALE: NONE



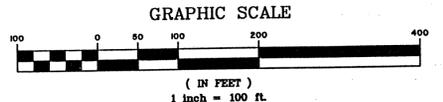
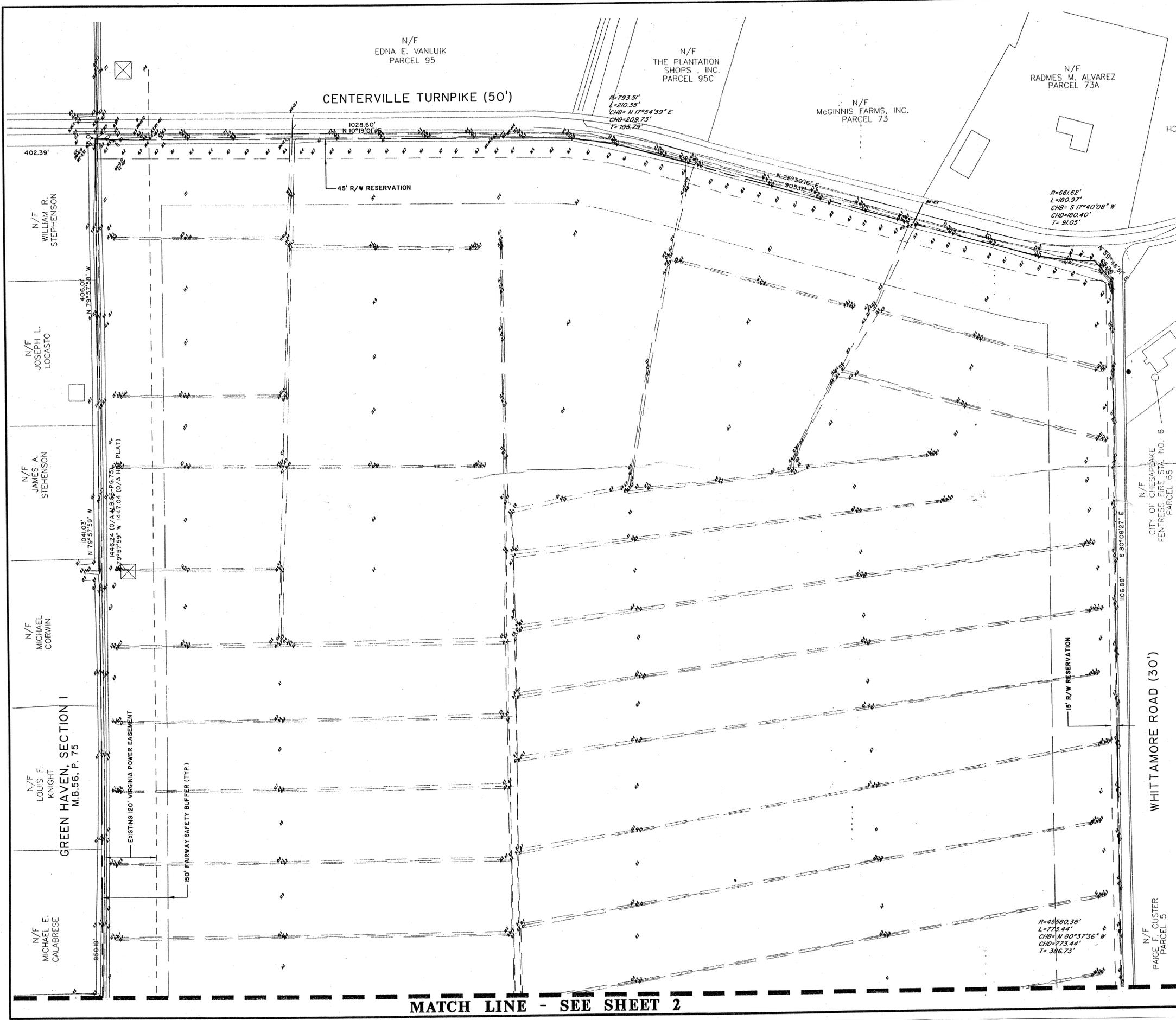
TYPICAL LAKE SECTION (LAKES 1 & 2)
 SCALE: NONE

LAKE NUMBER	"a"	"b"	"c"	"d"	"e"	"f"
LAKE No. 1	ELEV. (-) 0.5	ELEV. 7.0	ELEV. 9.5	20.0'	60.0'	VARIES
LAKE No. 2	ELEV. (-) 3.5	ELEV. 7.0	ELEV. 8.5	20.0'	60.0'	VARIES



TEMP. DITCH SECTION
 SCALE: NONE

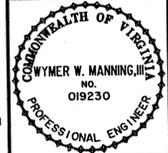
MARK	REVISION	DATE	APPR.
FILE NAME: EANDS-CORRECTED.DWG	DRAWER No.:	APPROVAL DATE:	
SITE PLAN OF			
ETHERIDGE GREENS			
GOLF COURSE			
BUTTS ROAD BOROUGH	T.P. 062000000020	CHESAPEAKE, VIRGINIA	
DETAILS AND NOTES		DATE: NOV. 2001	DRAWING NO. 4
HASSELL & FOLKES, P.C. ENGINEERS-SURVEYORS-PLANNERS CHESAPEAKE, VIRGINIA PHONE: (757) 547-8558		SCALE: AS NOTED	
DES. G.D.C.	DRN. G.D.C.	CHK. W.W.M.	PRJ. MGR. W.W.M.
		CONT. NO. 0102	



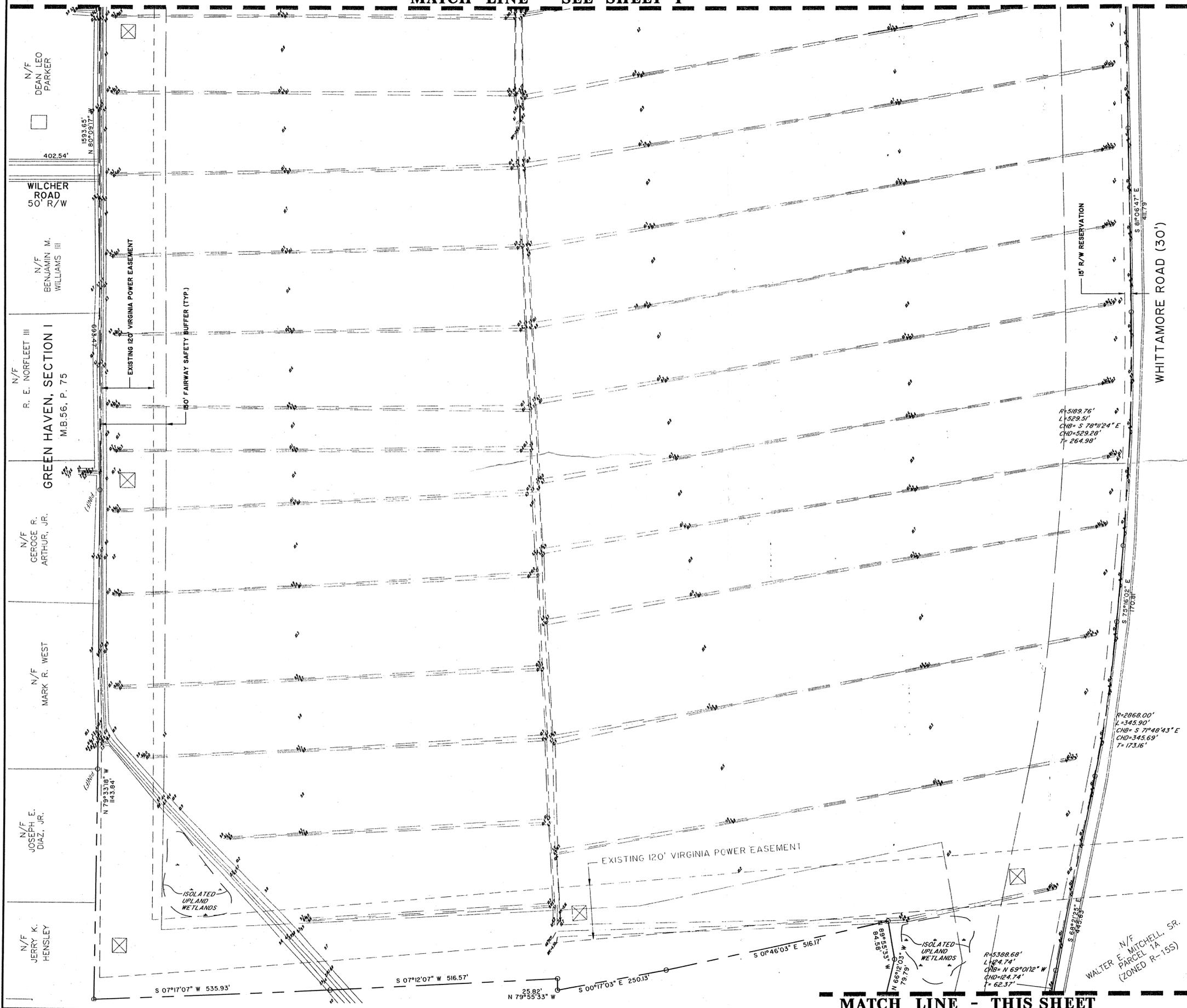
N/F PAICE F. CUSTER
 PARCEL 5
 CITY OF CHESAPEAKE
 FENTRESS FIRE STA. NO. 6
 PARCEL 65
 WHITTAMORE ROAD (30')

MATCH LINE - SEE SHEET 2

MARK	REVISION	DATE	APPR.
FILE NAME: EANDS-CORRECTED.DWG	DRAWER NO.:	APPROVAL DATE:	
SITE PLAN OF ETHERIDGE GREENS GOLF COURSE T.P. 0620000000020 CHESAPEAKE, VIRGINIA			
BUTTS ROAD BOROUGH		CHESAPEAKE, VIRGINIA	
TOPOGRAPHIC SURVEY		DATE	DRAWING NO.
HASSELL & FOLKES, P.C. ENGINEERS-SURVEYORS-PLANNERS CHESAPEAKE, VIRGINIA TELEPHONE (757) 547-9531		FEB. 2002 SCALE 1" = 100'	1 OF 2
DES.	DRN.	CHK.	PRJ. MGR.
G.D.C.	G.D.C.	W.W.M.III	W.W.M.III
		CONT. NO.	
		01012	

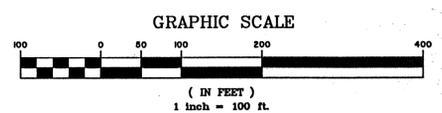
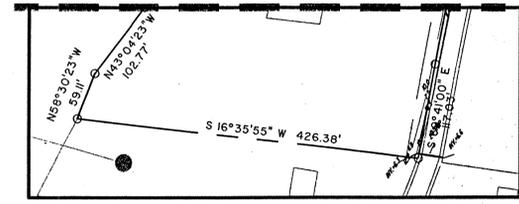


MATCH LINE - SEE SHEET 1



WHITTAMORE ROAD (30')

MATCH LINE - THIS SHEET



MARK	REVISION	DRAWER No.:	APPROVAL DATE:	APPR.
FILE NAME: EANDS-CORRECTED.DWG				
SITE PLAN OF				
ETHERIDGE GREENS				
GOLF COURSE				
BUTTS ROAD BOROUGH		T.P. 062000000020		
		CHESAPEAKE, VIRGINIA		
TOPOGRAPHIC SURVEY			DATE	DRAWING NO.
HASSELL & FOLKES, P.C.			FEB. 2002	2
ENGINEERS-SURVEYORS-PLANNERS			SCALE	
CHESAPEAKE, VIRGINIA			1" = 100'	
TELEPHONE (757) 547-9531			CONT. NO.	
DES. G.D.C.	DRN. G.D.C.	CHK. W.W.M., III	PRJ. MGR. W.W.M., III	01012

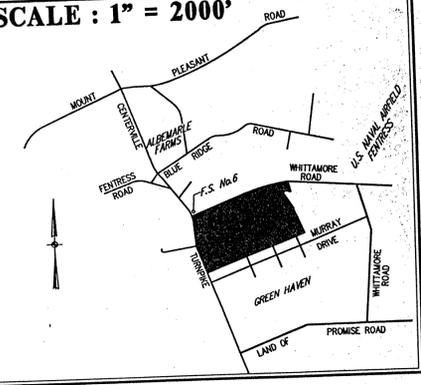
MATCH LINE - THIS SHEET

E:\Projects\Etheridge Greens\Sheets\Eands-CORRECTED.dwg, 02/04/2002 09:54:36 AM

CENTERVILLE TURNPIKE

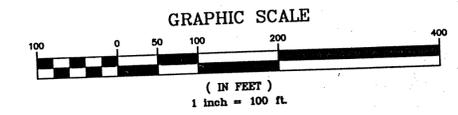
VICINITY MAP

SCALE: 1" = 2000'



WHITTAMORE ROAD

GRADES SHOWN HEREON ARE THE MINIMUM ELEVATION OF FLYASH PLACEMENT



MARK	REVISION	DATE	APPR.
FILE NAME: EANDS-CORRECTED.DWG	DRAWER No.:	APPROVAL DATE:	
SITE PLAN OF			
ETHERIDGE GREENS			
GOLF COURSE			
T.P. 062000000020			
BUTTS ROAD BOROUGH		CHESAPEAKE, VIRGINIA	
BASE GRADE PLAN			
	HASSELL & FOLKES, P.C. ENGINEERS-SURVEYORS-PLANNERS CHESAPEAKE, VIRGINIA TELEPHONE (757) 547-9531		DATE MAR., 2002
	DES. J.T.C. DRN. G.D.C. CHK. W.W.M., III PRL. MGR. W.W.M., III	SCALE 1" = 100'	DRAWING NO. 1
		CONT NO. 01012	OF 2

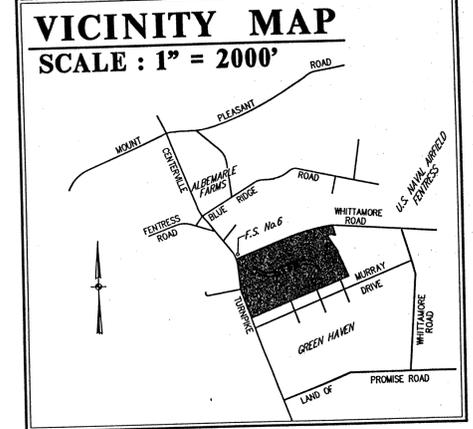
MATCH LINE - SEE SHEET 2

E:\Projects\Etheridge Greens\Golf Course\Etheridge Greens Golf Course Master Plan.dwg, 03/04/2002, 12:08:08 PM

GREEN HAVEN, SECTION I
M.B. 56, P. 75

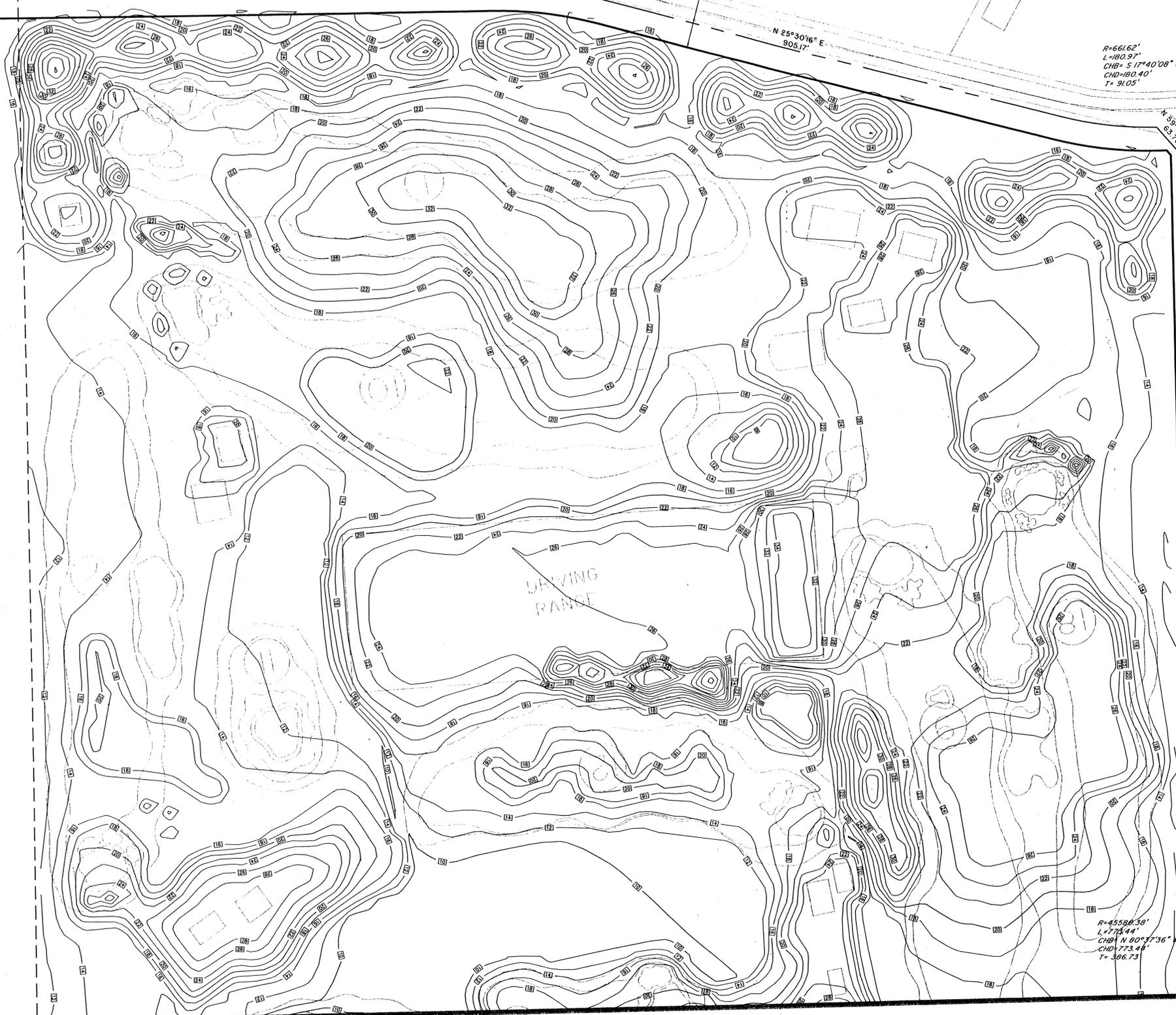


CENTERVILLE TURNPIKE



15.0'
406.01' N 79°57'56" W
154.03' N 79°57'59" W
1446.24 (O/A M.B. 56-66.75)
N 79°57'59" W 1447.04 (O/A H&F PLAT)
850.18'

GREEN HAVEN, SECTION I
M.B. 56, P. 75



R=793.51'
L=210.35'
CHB= N 17°54'39" E
CHD=209.73'
T= 105.70'

45° RIGHT-OF-WAY
RESERVATION
N 25°30'16" E
905.17'

R=661.62'
L=180.97'
CHB= S 17°40'08" W
CHD=180.40'
T= 91.05'

R=455.8838'
L=773.44'
CHB= N 80°37'36" W
CHD=773.44'
T= 306.73'

WHITMORE ROAD
15' RIGHT-OF-WAY
RESERVATION

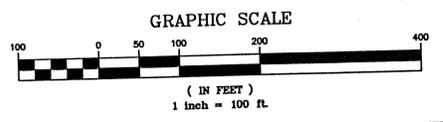
MATCH LINE - SEE SHEET 2



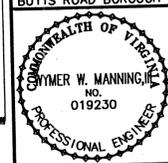
FINISHED ASH PLACEMENT SLOPES

3:1 MAX.

2% MIN.



MARK	REVISION	DATE	APPR.
FILE NAME: EANDS-CORRECTED.DWG	DRAWER No.:	APPROVAL DATE:	
BUTTS ROAD BOROUGH SITE PLAN OF ETHERIDGE GREENS GOLF COURSE T.P. 062000000020 CHESAPEAKE, VIRGINIA			
CLOSURE PLAN		DATE MAR., 2002	DRAWING NO. 1
HASSELL & FOLKES, P.C. ENGINEERS-SURVEYORS-PLANNERS CHESAPEAKE, VIRGINIA TELEPHONE (757) 547-9531		SCALE 1" = 100'	CONT. NO. 01012
DES. J.T.C.	DRN. G.D.C.	CHK. W.W.M., III	PRJ. MGR. W.W.M., III



MATCH LINE - SEE SHEET 1

402.54' 1593.65' N 80°09'17" W

WILCHER ROAD 50' R/W

GREEN HAVEN, SECTION I M.B.56, P. 75

179.569

N 79°33'18" W 1145.84

ISOLATED UPLAND WETLANDS

S 07°17'07" W 535.93'

S 07°12'07" W 516.57'

25.82' N 79°55'33" W

S 00°17'03" E 250.13'

S 0°46'03" E 516.17'

N 86°21'03" W 79.79'

R=5366.66' L=124.74' CHB=N 69°01'12" W 79.79' T=62.31'

ISOLATED UPLAND WETLANDS

15' RIGHT-OF-WAY RESERVATION

R=2868.00' L=345.90' CHB=S 7°49'43" E 345.69' T=173.16'

S 75°16'02" E 170.81'

R=5192.76' L=529.51' CHB=S 78°11'24" E 529.28' T=264.94'

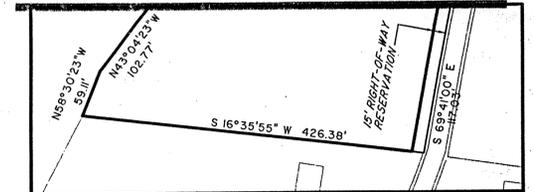
S 81°06'47" E 411.79'

15' RIGHT-OF-WAY RESERVATION

WHITTMORE ROAD



MATCH LINE - THIS SHEET

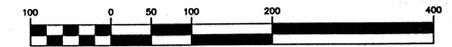


FINISHED ASH PLACEMENT SLOPES

3:1 MAX.

2% MIN.

GRAPHIC SCALE

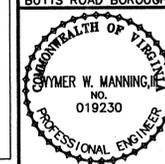


(IN FEET)
1 inch = 100 ft.

MARK	REVISION	DATE	APPR.

FILE NAME: EANDS-CORRECTED.DWG DRAWER No.: APPROVAL DATE:

SITE PLAN OF
ETHERIDGE GREENS
 GOLF COURSE
 T.P. 062000000020 CHESAPEAKE, VIRGINIA



CLOSURE PLAN		DATE	DRAWING NO.
HASELL & FOLKES, P.C. ENGINEERS-SURVEYORS-PLANNERS CHESAPEAKE, VIRGINIA TELEPHONE (757) 547-9531		MAR., 2002	2
DES. J.T.C.	DRN. G.D.C.	CHK. W.W.M., III	PRJ. MGR. W.W.M., III
SCALE 1" = 100'		CONT. NO. 01012	OF 2

MATCH LINE - THIS SHEET



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard, Virginia Beach, Virginia 23462

(757) 518-2000 Fax (757) 518-2103

www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

April 2, 2007

Mr. Mike Waugh
PGA Golf Professional
MJ Global
911 Nugent Drive
Chesapeake, Virginia 23322

Re: Change of Ownership and Final Cover Modification
Etheridge Greens Golf Course Project
Chesapeake, Virginia
CCB # 007

Dear Mr. Waugh:

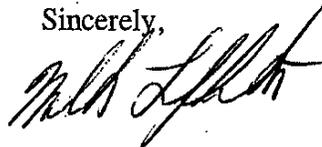
The purpose of this letter is to acknowledge receipt of your letter dated January 31, 2007 and the attached information notifying the DEQ of a change of ownership of the Etheridge Greens Golf Course project, located in Chesapeake, Virginia, which is using coal combustion by-products (or CCB's) generated at the Dominion Virginia Power Chesapeake Energy Center in Chesapeake, Virginia as fill and contouring material.

As you advised, MJ Global purchased the property from Combustion Products Management as of January 31, 2007. As you discussed with Mr. Don Brunson of the DEQ during his site visit of March 3, 2007, ash placement is approximately 90% complete and construction of the golf course is well under way. Relative to your request to modify the thickness of cover from 24 inches to 18 inches, the closure criteria of 9 VAC 20-85-120 specifies a minimum of 12 inches of earthen material and 6 inches of earthen material capable of growing indigenous plant species or plant species adapted to the area. This required a change to page 6 – section 7.B of the original submittal document which you have provided. This change is consistent with the Regulation Governing Management of Coal Combustion By-Products, 9 VAC 20-85 and is hereby approved. You should keep a copy of this letter for your records to document this approval.

Mr. Mike Waugh
MJ Global
Page 2 of 2

Thank you for your cooperation in the operations at this facility. If you have any questions, please do not hesitate to contact Don Brunson at (804) 698-4239, or me at (757) 518-2151.

Sincerely,



Milton L. Johnston
Regional Waste Programs Manager

cc: Mr. Mark L Baker, P. E.
Director of Operations
Combustion Products Management, Inc.
P. O. Box 339
Ithaca, New York 14851

Mark Sawyers
President
MJ Global, LLC
824 Lesner Drive
Norfolk, Virginia 23518

Debra Trent, TRO, DEQ
Don Brunson, CO/TRO, DEQ



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard, Virginia Beach, Virginia 23462

(757) 518-2000 Fax (757) 518-2103

www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Payler
Director

Francis L. Daniel
Regional Director

October 4, 2007

Mr. Mike Waugh
Etheridge Greens Golf Course
1001 Centerville Turnpike
Chesapeake, VA. 23322

**RE: Closure Certification for Etheridge Greens Golf Course - CCB # 007
City of Chesapeake, Virginia**

Dear Mr. Waugh:

This letter is to advise you that the requirements for closure in accordance with 9VAC20-85-100 *et seq.* have been met. The following required documentation has been submitted to the Department:

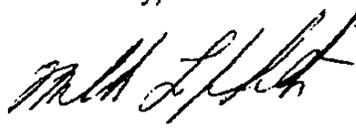
1. Construction and Closure certification was received August 16, 2007
2. Copy of Court Records of the Plat Recording filed with the City of Chesapeake was received October 3, 2007.
3. Final inspection was conducted by the Department on August 24, 2007

The Department would like to remind you that in accordance with 9VAC20-85-120.B "the use of the property after closure shall not disturb the integrity of the final cover, unless the purpose of the disturbance is to construct buildings, paved roadways, paved parking surfaces, paved walkways and sidewalks, or other similar facilities."

It is the Departments final determination that the site is officially closed.

If you have any questions regarding this matter, please contact me at 757-518-2151.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton L. Johnston". The signature is written in a cursive, somewhat stylized font.

Milton L. Johnston
Waste Program Manager

cc: John W. Blake, Blake Engineering Services of Tidewater
Keith Primm, TRO, DEQ
Jeff Deibler, TRO, DEQ
File 001087

McCALLUM

TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

To: Rick Matthews

~~5/8/04 02:23 PM~~

497 1914

SUBSURFACE EXPLORATION

PROPOSED ETHERIDGE GREENS GOLF COURSE

CHESAPEAKE, VIRGINIA

MTL PROJECT #01-2004

24 PAGES

McCALLUM

TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

February 9, 2001

Hassell and Folkes, P.C.
P.O. Box 2146
Chesapeake, VA 23320

Attention: **Jack Claud**

Subject: **Field Test Results**
Proposed Etheridge Greens Golf Course
Chesapeake, Virginia
MTL Project 012004

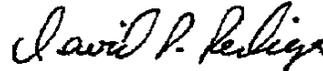
Dear **Mr. Claud:**

On February 1, 2001, our technicians, Alex Kinloch and Kelvin Mervicker, were at the above referenced project to drill hand auger borings in the planned Soil Drainage Management System drainfield. Three borings were drilled to depths of 4.5 to 5.5 ft. beneath the existing ground surface. At the completion of each boring, groundwater level measurements were made within the completed borehole. Samples of each soil stratum encountered were obtained and transported to our laboratory where they were visually classified by laboratory personnel. Detailed results of our borings are presented in this report along with a Hand Auger Boring Location Plan.

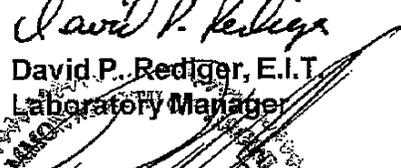
Should you have any questions concerning this report, please do not hesitate to contact this office at your earliest convenience.

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



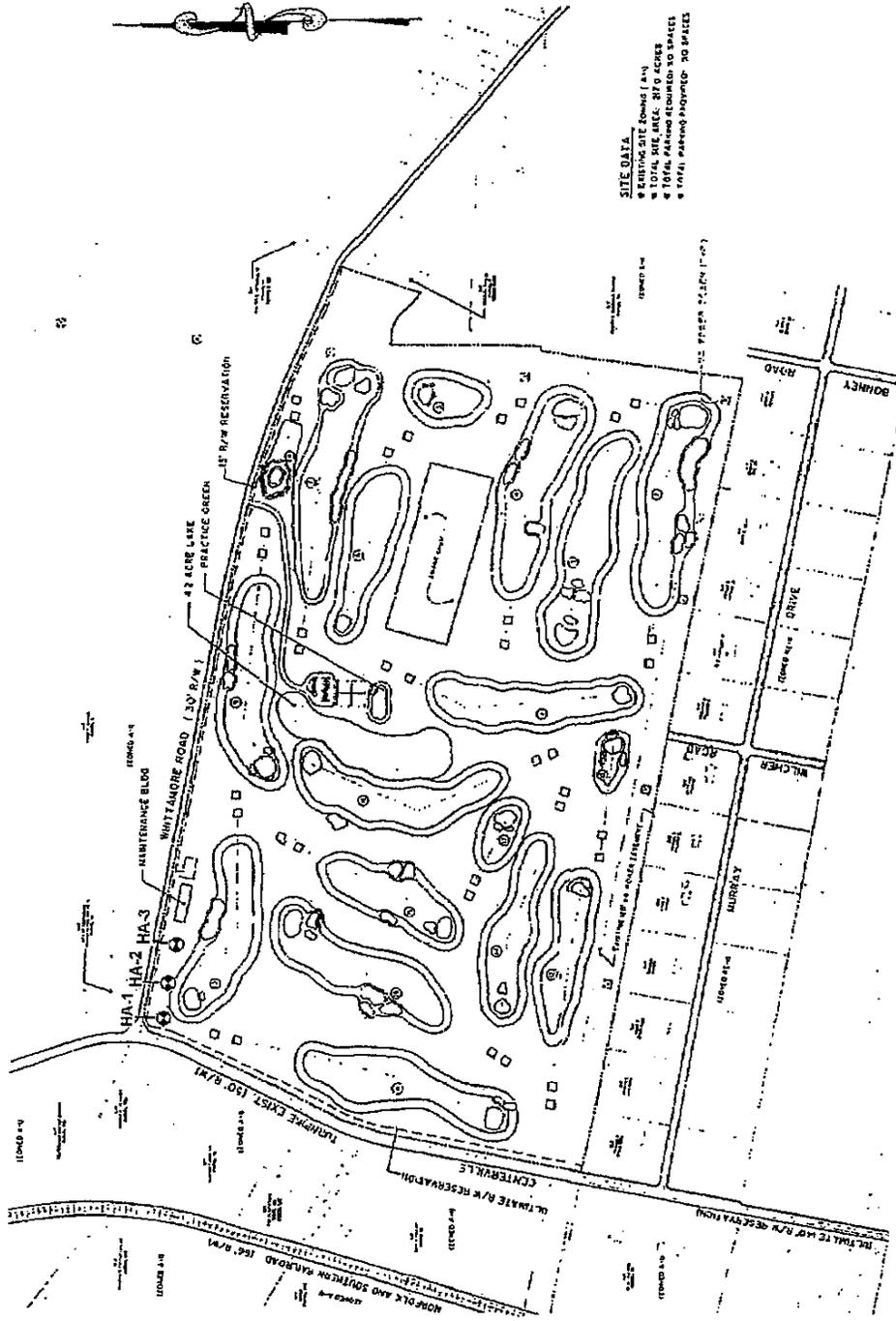
David P. Rediger, E.I.T.
Laboratory Manager



Douglas S. Kinloch, P.E.
Chief Engineer



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



SITE DATA

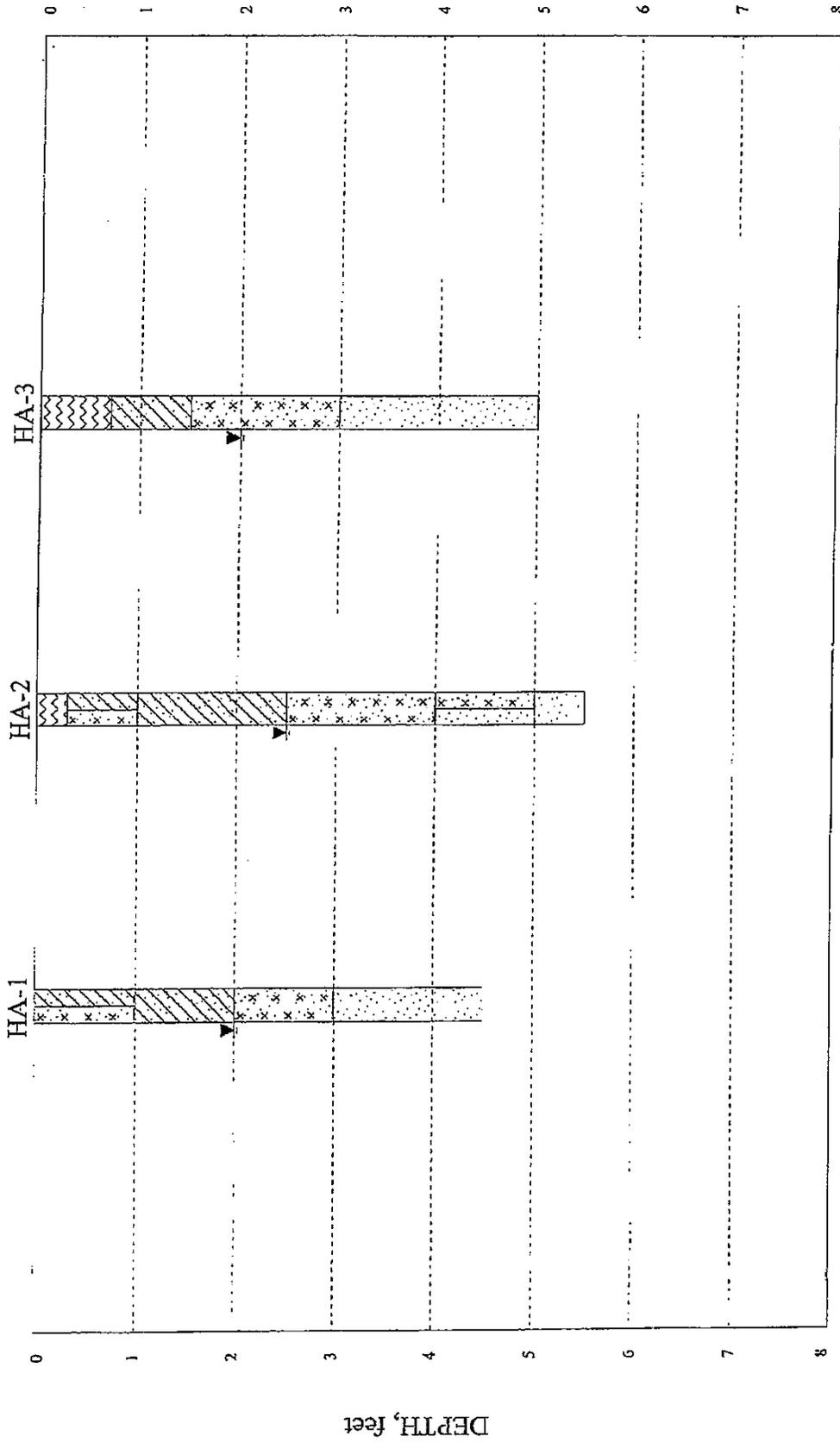
- * EXISTING SITE BOUNDARY (A.M.)
- * TOTAL SITE AREA: 870 ACRES
- * TOTAL PARKING REQUIRED: 70 SPACES
- * TOTAL PARKING PROVIDED: 30 SPACES

MCCALLUM TESTING LABORATORIES, INC.

1808 Hayward Avenue
Chesapeake, Virginia 23325-0337

Scale:	Approved By:	David P. Rediger, E.I.T.	Date:	2/19/01	
Project: Proposed Etheridge Greens Golf Course Chesapeake, Virginia					
Drawing Title:	Hand Auger Boring Location Plan			Drawing Number:	1-01-2004

Ref: Original plan drawn by Hassell & Folkes, P.C.



LEGEND

HA-1 Boring No.

Groundwater Level

Soil Type

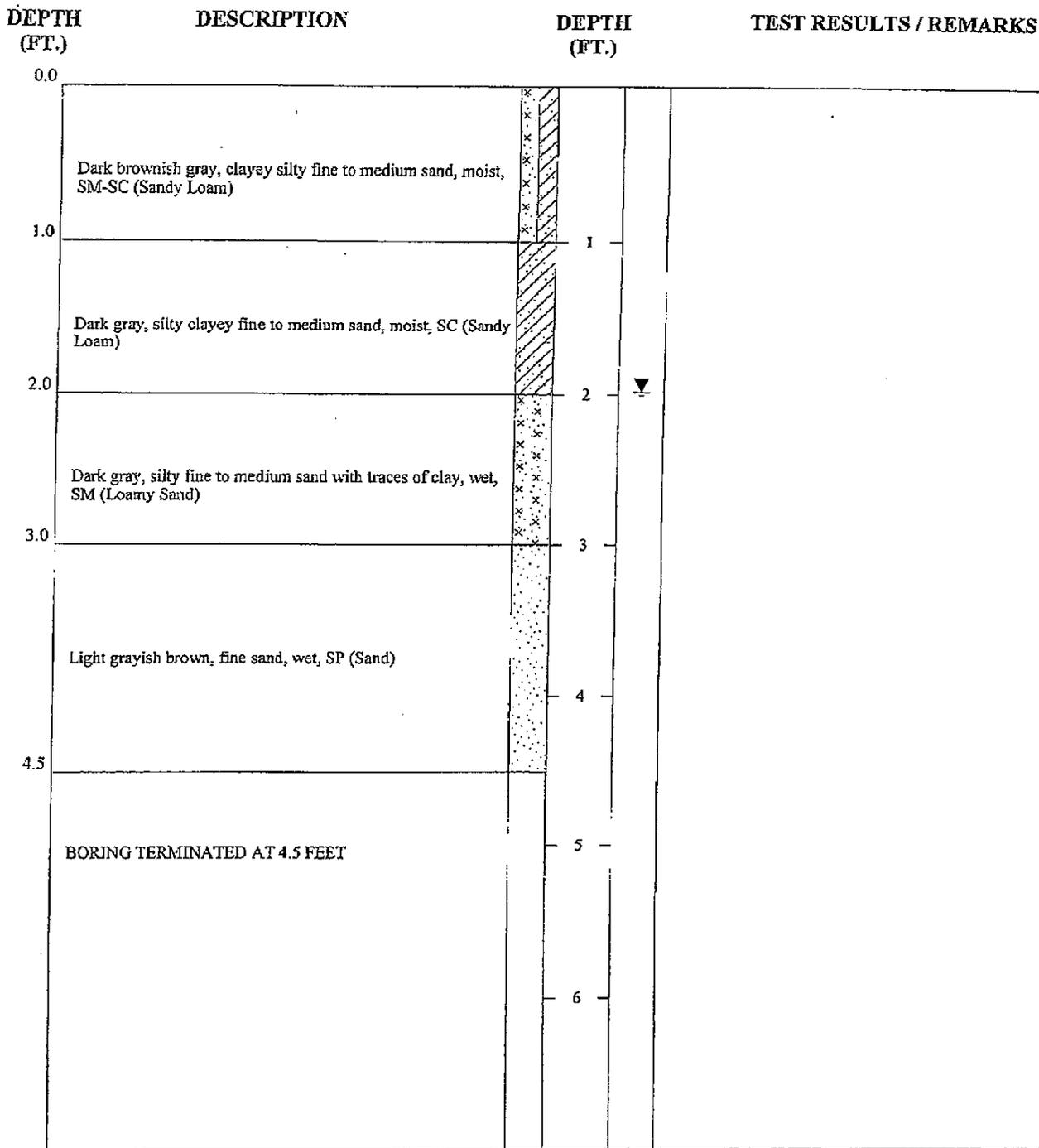
Subsurface Profile

Drawing 2

PROJECT Proposed Etheridge Greens Golf Course

PROJECT NO. 01-2004

McCALLUM TESTING LABORATORIES, INC.



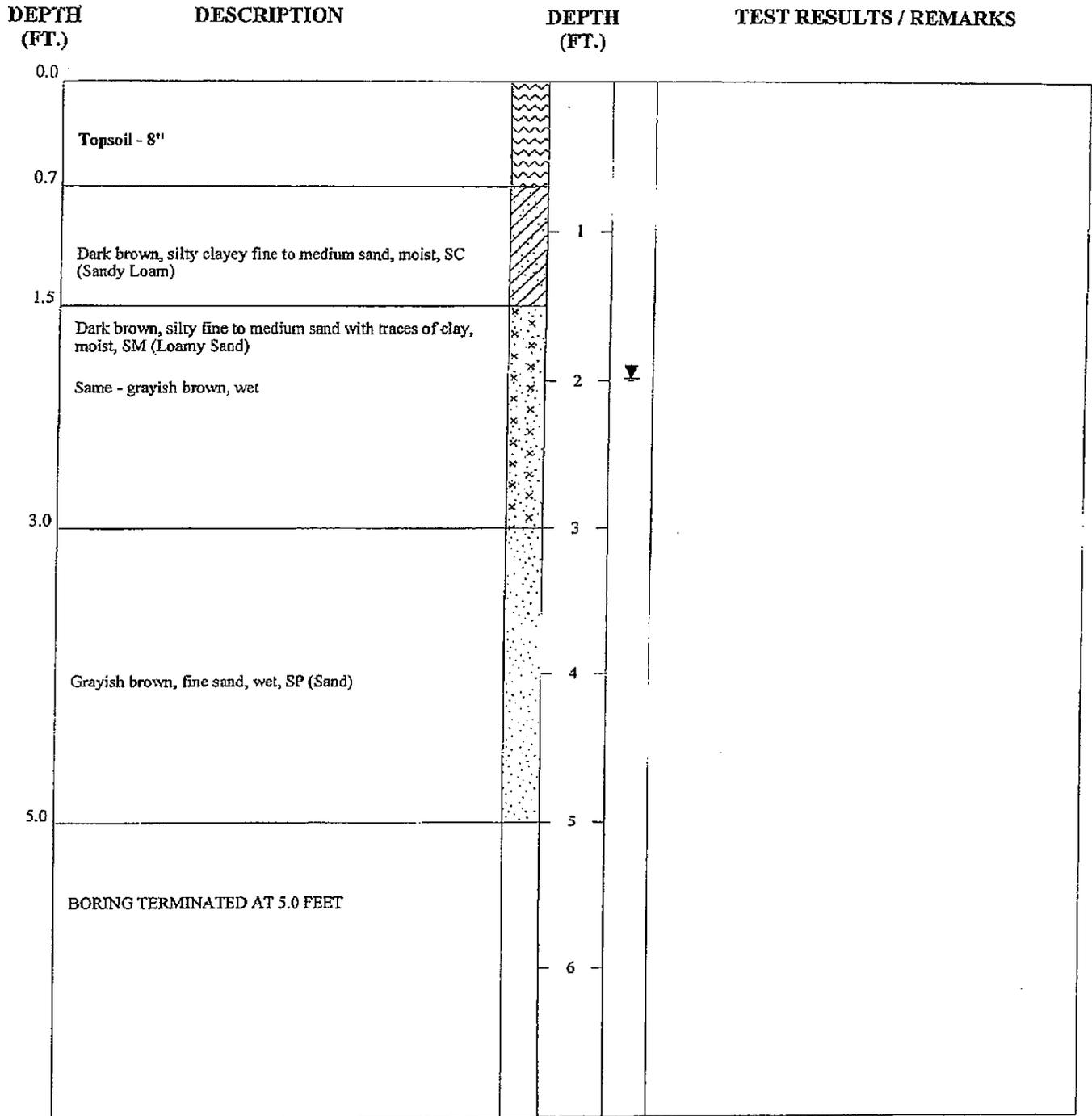
--- - Stratum Change
 ▼ - Groundwater Level at Time of Boring
 ▽ - Stabilized Groundwater Level Measured in Well
 MC% - Natural Percent Moisture (ASTM D 2216)
 LL - Liquid Limit (ASTM D 4318)
 PL - Plastic Limit (ASTM D 4318)
 PI - Plasticity Index (ASTM D 4318)
 -200 - Percent Passing a #200 Sieve (ASTM D 1140)

HAND AUGER BORING RECORD	
BORING NUMBER	HA-1
DATE DRILLED	February 1, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

DEPTH (FT.)	DESCRIPTION	DEPTH (FT.)	TEST RESULTS / REMARKS
0.0			
0.3	Topsoil - 4"		
1.0	Dark brownish gray, clayey silty fine to medium sand, moist, SM-SC (Sandy Loam)	1	
2.5	Dark gray, silty clayey fine to medium sand, moist, SC (Sandy Loam)	2	
4.0	Dark gray, silty fine to medium sand with traces of clay, wet, SM (Loamy Sand)	3	
5.0	Grayish brown, silty fine sand, wet, SP-SM (Sand)	4	
5.5	Light grayish brown, fine sand, wet, SP (Sand)	5	
	BORING TERMINATED AT 5.5 FEET	6	

— — Stratum Change
 ▼ - Groundwater Level at Time of Boring
 ▽ - Stabilized Groundwater Level Measured in Well
 MC% - Natural Percent Moisture (ASTM D 2216)
 LL - Liquid Limit (ASTM D 4318)
 PL - Plastic Limit (ASTM D 4318)
 PI - Plasticity Index (ASTM D 4318)
 -200 - Percent Passing a #200 Sieve (ASTM D 1140)

HAND AUGER BORING RECORD	
BORING NUMBER	HA-2
DATE DRILLED	February 1, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	



— - Stratum Change
 ▼ - Groundwater Level at Time of Boring
 ▽ - Stabilized Groundwater Level Measured in Well
 MC% - Natural Percent Moisture (ASTM D 2216)
 LL - Liquid Limit (ASTM D 4318)
 PL - Plastic Limit (ASTM D 4318)
 PI - Plasticity Index (ASTM D 4318)
 -200 - Percent Passing a #200 Sieve (ASTM D 1140)

HAND AUGER BORING RECORD	
BORING NUMBER	HA-3
DATE DRILLED	February 1, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

McCALLUM

TESTING LABORATORIES, INC.

Geotechnical Engineering, Materials Testing & Environmental Services

April 5, 2001

Hassell and Folkes, P.C.
325 Volvo Parkway
Chesapeake, VA 23320

Attention: **Jack Claud**

Subject: **Subsurface Exploration**
Proposed Etheridge Greens Golf Course
Chesapeake, Virginia
MTL Project 012004

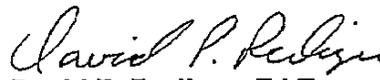
Dear Mr. Claud:

McCallum Testing Laboratories, Inc. has completed the requested subsurface exploration services for the above referenced project. A total of 12 soil test borings were drilled extending to depths of 25.5 ft. beneath the existing ground surface. Standard Penetration Tests (SPT's) were performed at 2 ft. intervals in the upper 10 ft. of boring and at 5 ft. intervals below 10 ft. All drilling and sampling were performed in accordance with applicable ASTM Standards. At the completion of drilling, groundwater level measurements were made within the completed bore holes. In addition, temporary monitoring wells were installed at 4 of the 12 boring locations and the stabilized groundwater level was measured in each. All samples obtained from the borings were visually examined and classified by our laboratory personnel according to the Unified Soils Classification System. Please note that the engineering properties of the obtained samples were not evaluated by a Geotechnical Engineer. The detailed results of the field sampling and testing are attached along with a Test Boring Location Plan.

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

Very truly yours,

McCALLUM TESTING LABORATORIES, INC.



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

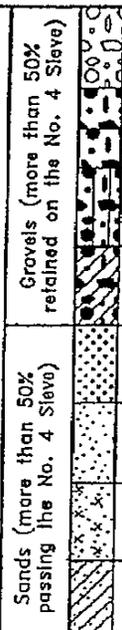
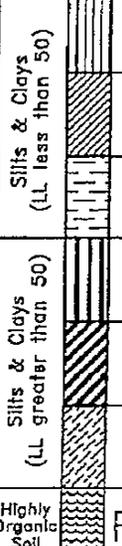
McCALLUM

TESTING LABORATORIES, INC.

CHESAPEAKE, VIRGINIA

*Unified Soil Classification System
ASTM Designation D 2487*

*Standard Penetration Test (SPT)
Resistance Correlations*

Coarse Grained Soils (More than 50% of material retained on the No. 200 Sieve)		GW	Well graded gravels, gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels, gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
		SW	Well graded sands, gravelly sands, little or no fines
		SP	Poorly graded sands, gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
Fine Grained Soils (More than 50% of material passes the No. 200 Sieve)		SC	Clayey sands, sand-clay mixtures
		ML	Inorganic silts, very fine sands, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy
		OL	Organic silts and organic silty clays of low plasticity
		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, plastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity
Highly Organic Soil	PEAT	Peat and other highly organic soils	

Coarse Grained Soils

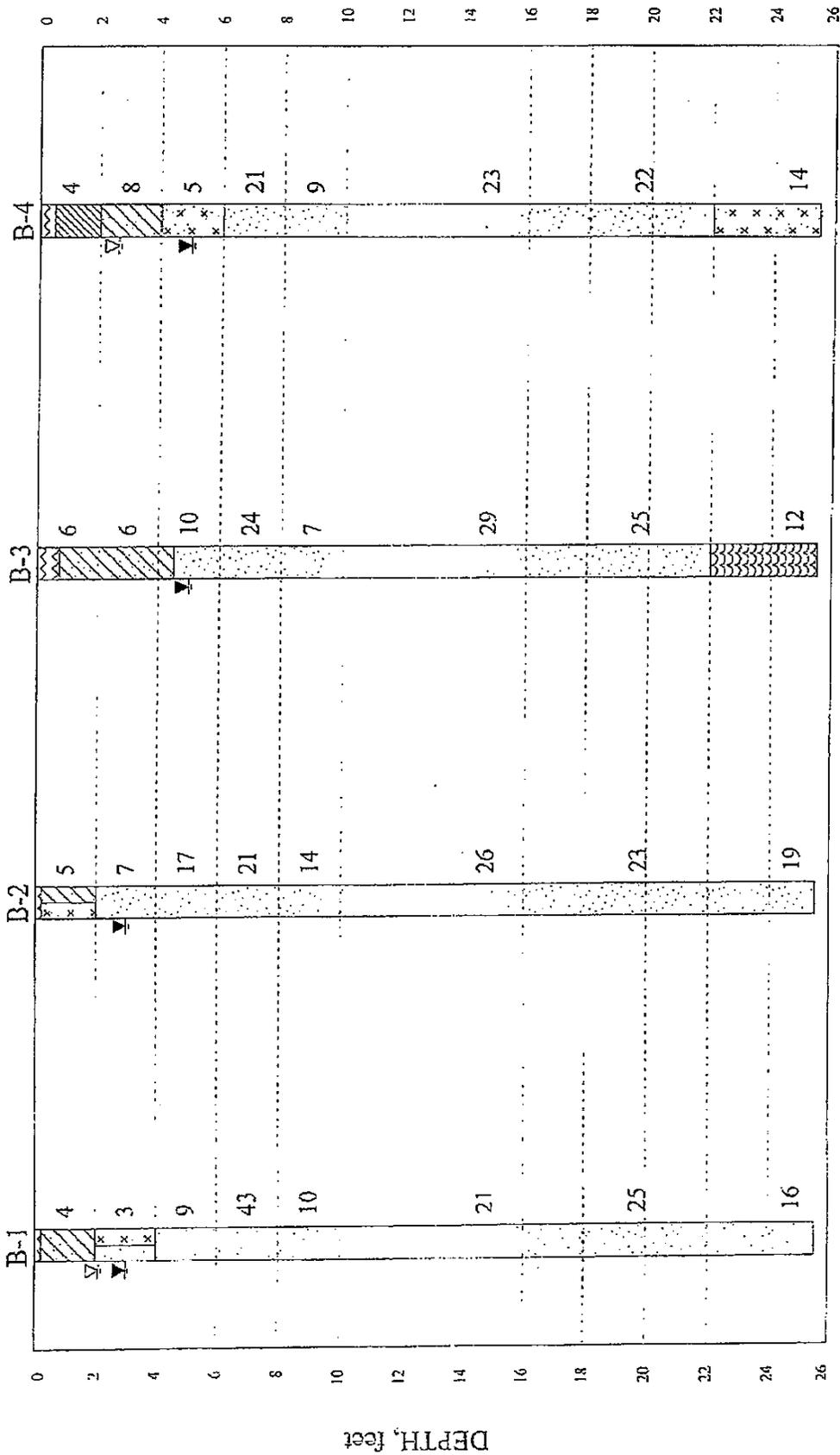
SPT
vs.
Relative Density

Blows/Ft	Relative Density
0-4	Very Loose
5-10	Loose
11-30	Medium Compact
31-50	Compact
Over 50	Very Compact

Fine Grained Soils

SPT
vs.
Consistency

Blows/Ft	Consistency
0-2	Very Soft
3-4	Soft
5-8	Medium Stiff
9-15	Stiff
16-30	Very Stiff
31-50	Hard
Over 50	Very Hard



Subsurface Profile

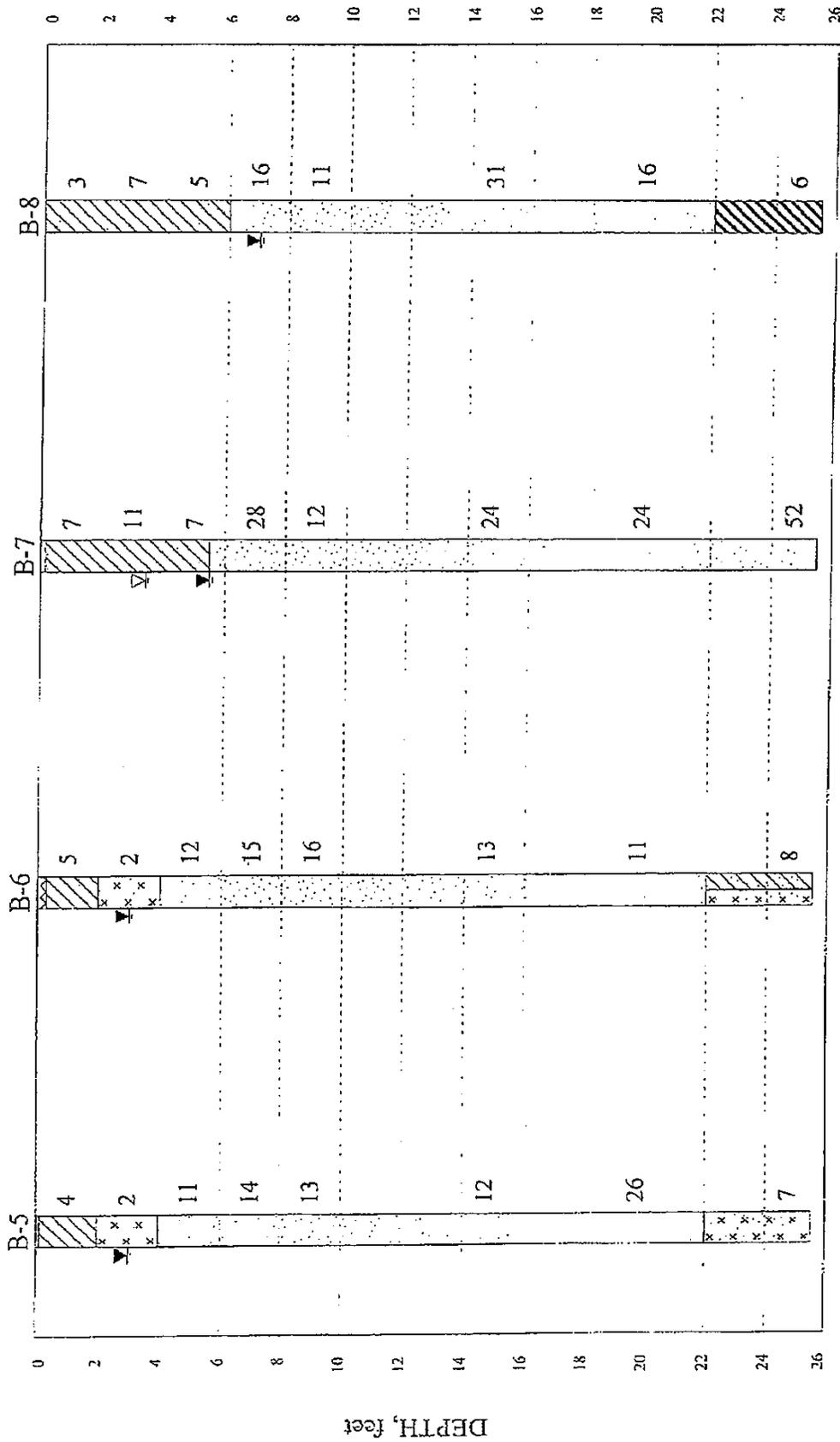
Drawing 2

PROJECT Proposed Etheridge Greens Golf Course
PROJECT NO. 01-2004

McCALLUM TESTING LABORATORIES, INC.

LEGEND

- U-1 Boring No.
- Stabilized Groundwater Level
- Groundwater Level
- Soil Type
- WELL
- Height of Hammer
- SPT Resistance



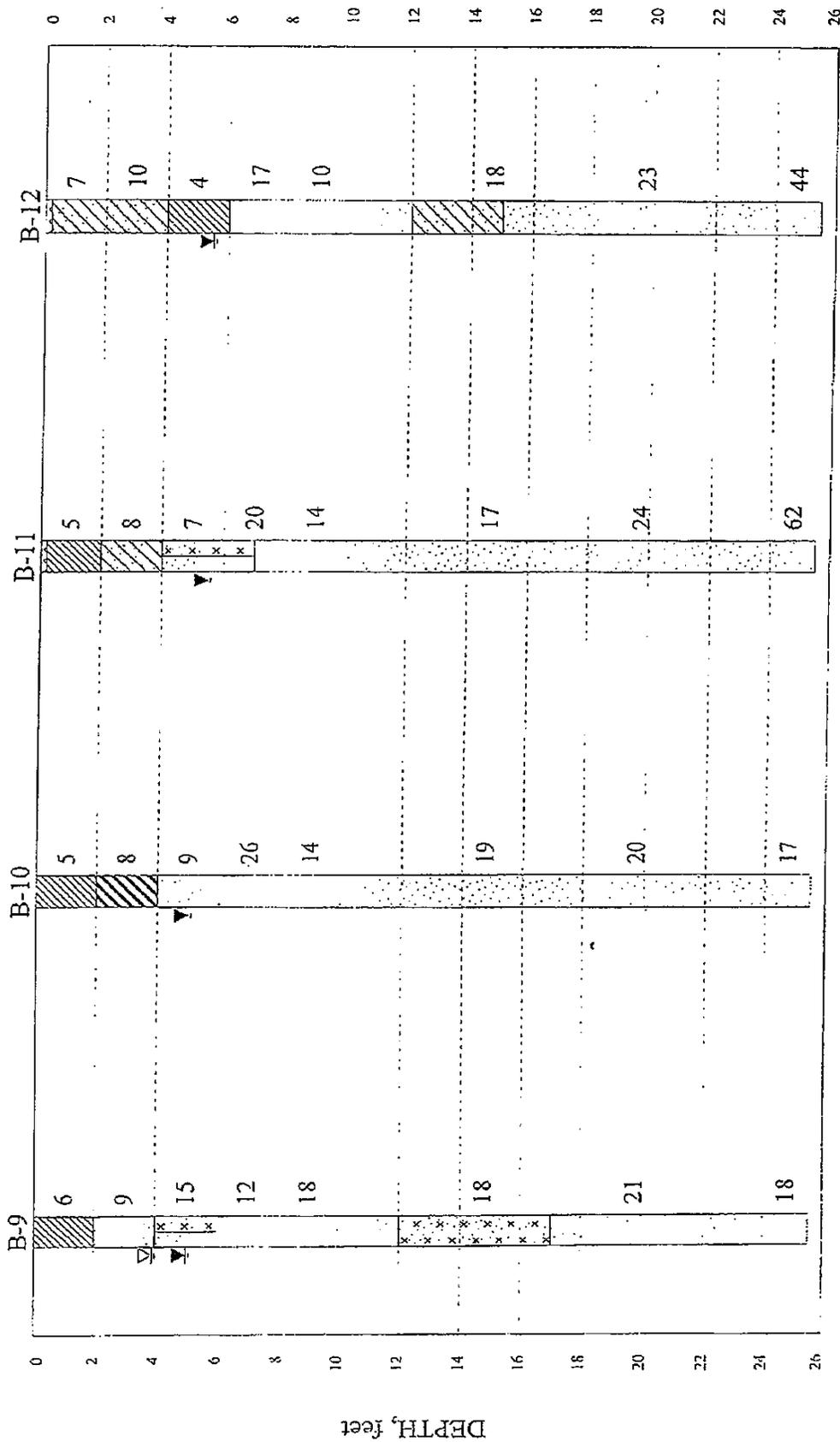
LEGEND

- Boring No.
- Stabilized Groundwater Level
- Groundwater Level
- SPT Resistance
- Soil Type
- H2O — weight of Hammer

Subsurface Profile
Drawing 3

PROJECT Proposed Etheridge Greens Golf Course
PROJECT NO. 01-2004

McCALLUM TESTING LABORATORIES, INC.



DEPTH, feet

LEGEND

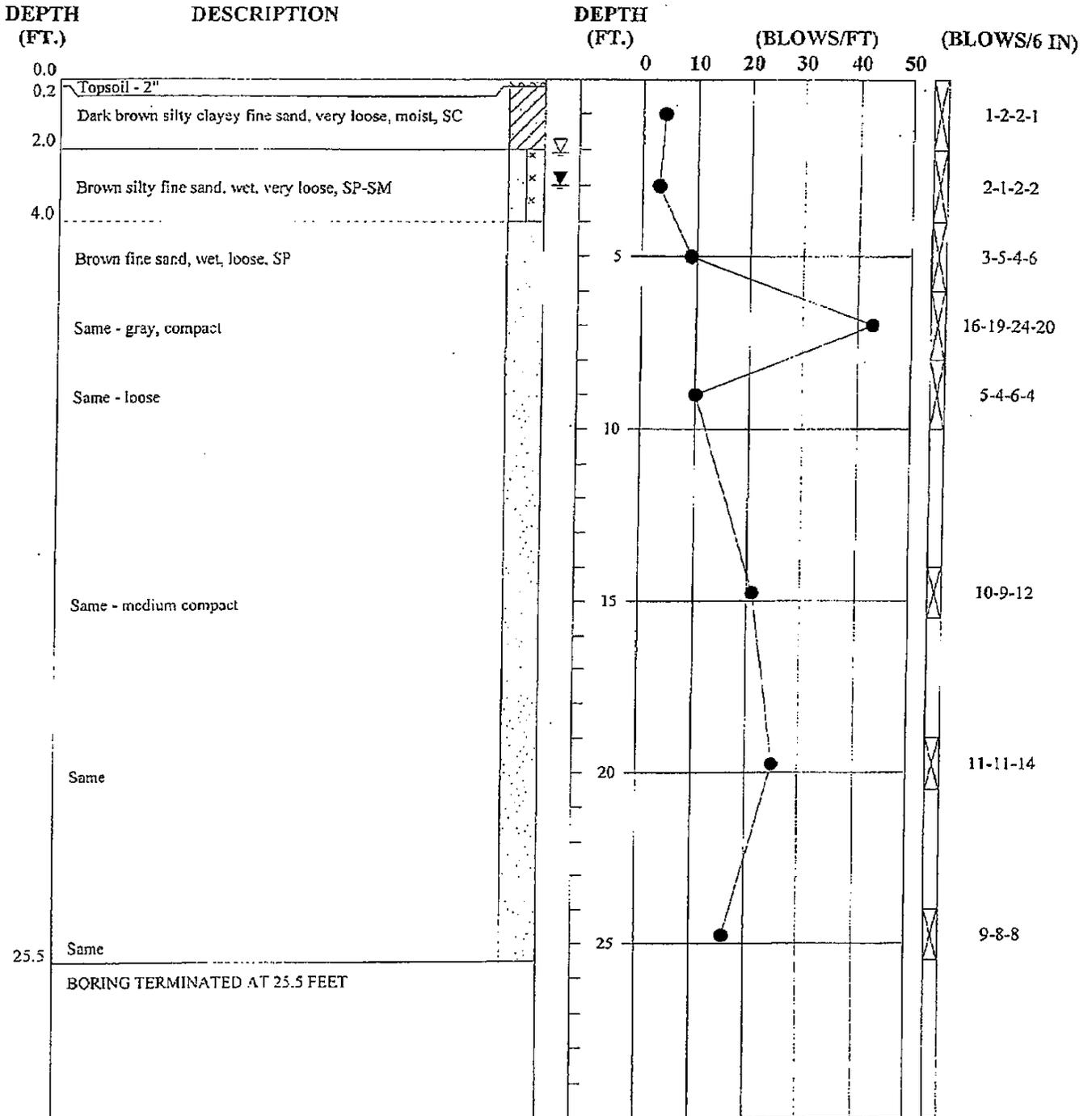
- Stabilized Groundwater
- Groundwater Level
- Soil type
- SPT Resistance
- Weight of Hammer
- Boring No.

Subsurface Profile
Drawing 4

PROJECT Proposed Ethridge Greens Golf Course
PROJECT NO. 01-2004

McCALLUM TESTING LABORATORIES, INC.

STANDARD PENETRATION RESISTANCE

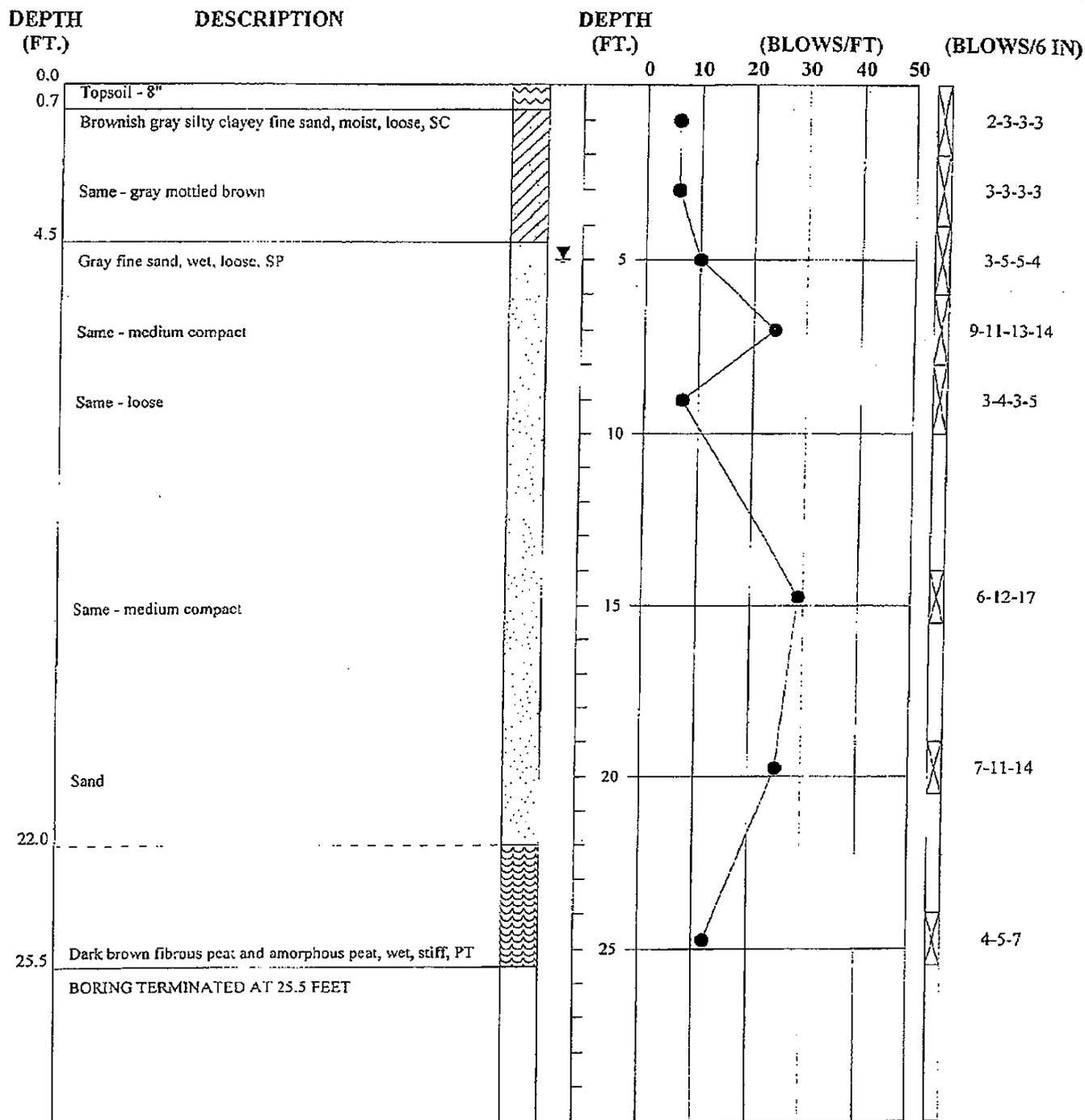


NOTES: Stabilized ground-water level measured at 2.1 ft. in temporary monitoring well.

- - - - Gradual Stratum Change
- - - - Approximate Stratum Change
- - Penetration Resistance (N - value)
- ⊗ - Standard Penetration Test
- █ - Undisturbed Sample
- ▽ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-1
DATE DRILLED	March 16, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

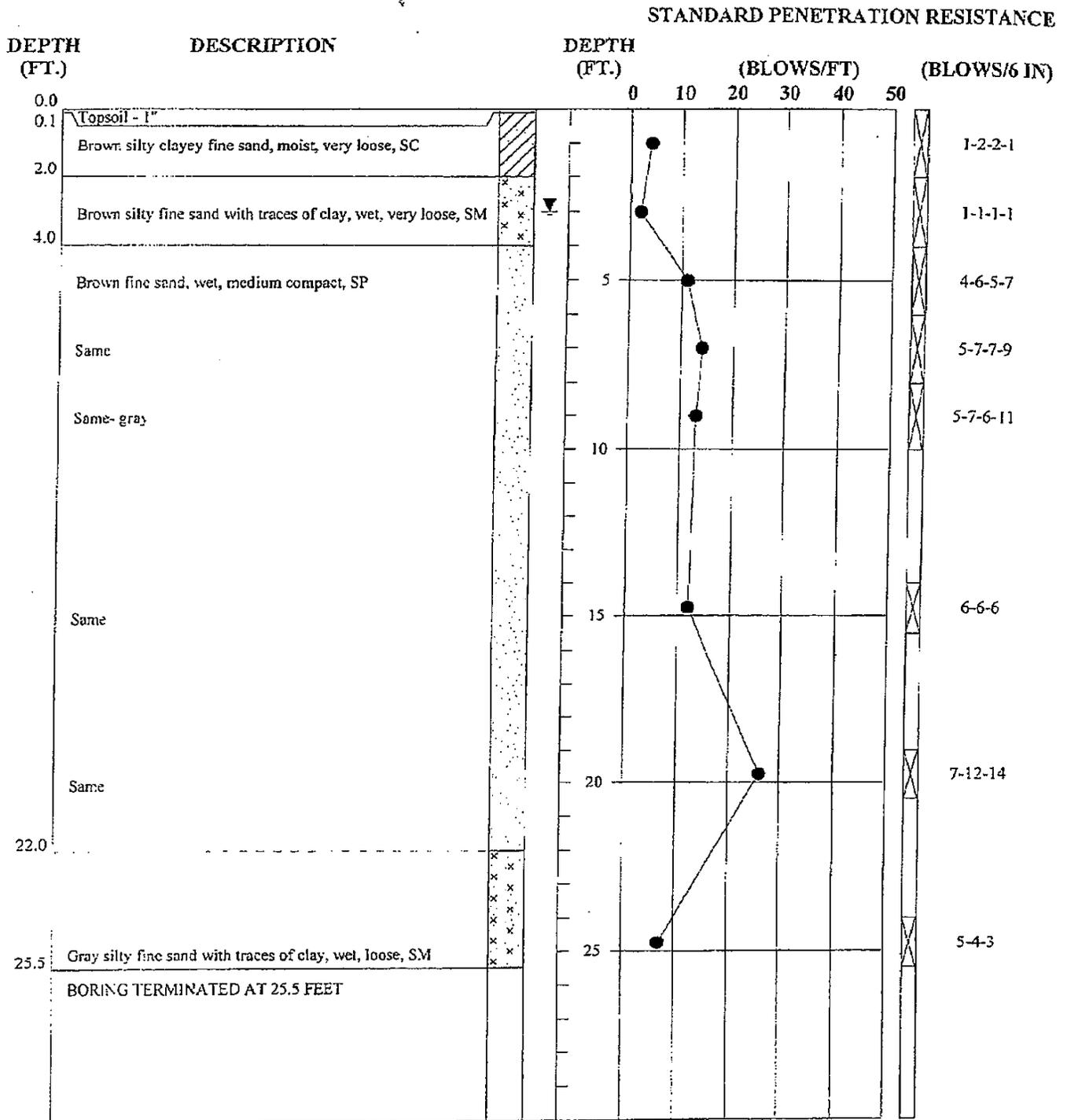
STANDARD PENETRATION RESISTANCE



NOTES:

- - Gradual Stratum Change
- - - - - Approximate Stratum Change
- - Penetration Resistance (N - value)
- ▨ - Standard Penetration Test
- ▬ - Undisturbed Sample
- ▽ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-3
DATE DRILLED	March 16, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

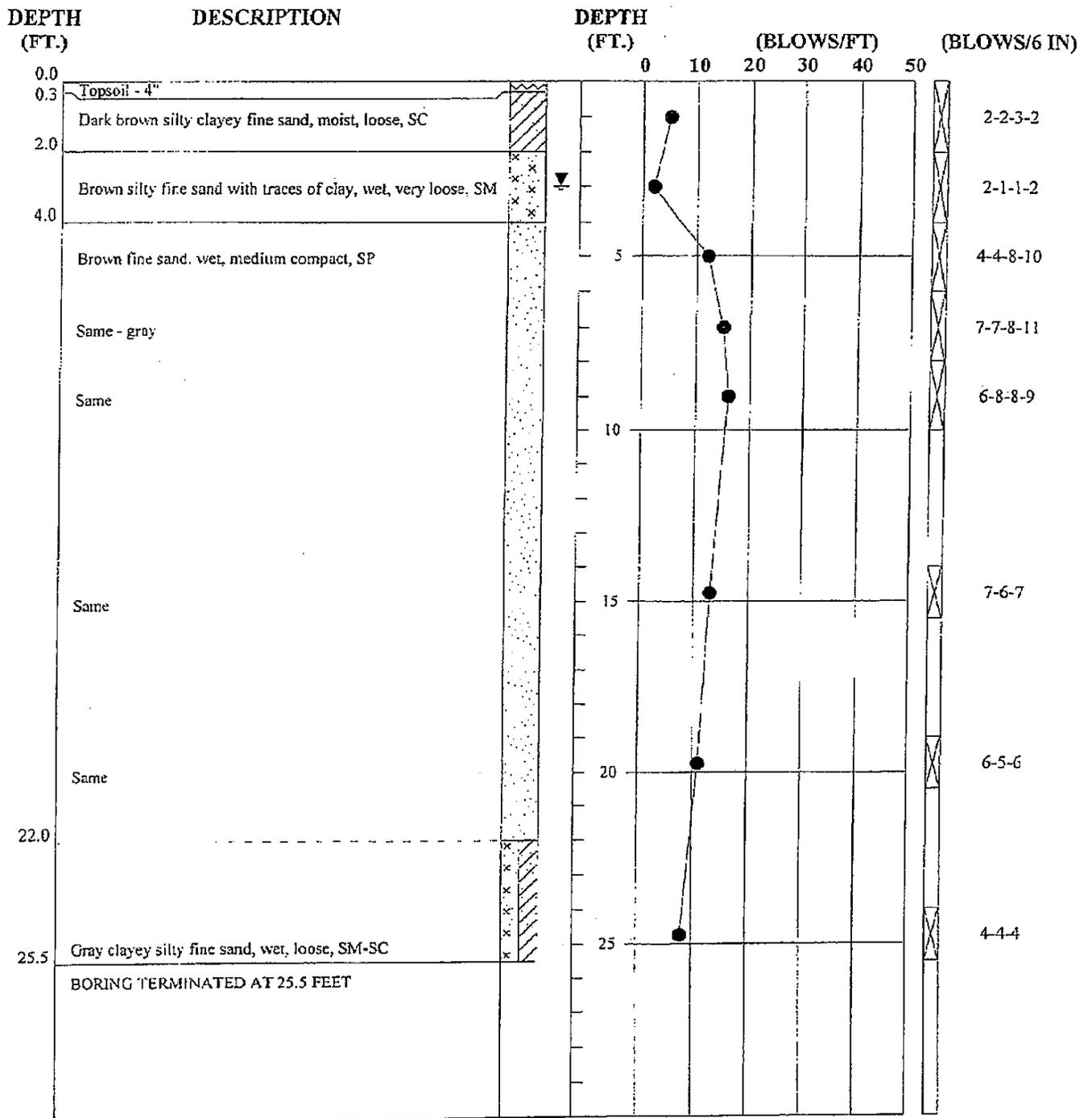


NOTES:

- Gradual Stratum Change
- Approximate Stratum Change
- - Penetration Resistance (N - value)
- ⊗ - Standard Penetration Test
- ▬ - Undisturbed Sample
- ∇ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-5
DATE DRILLED	March 16, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

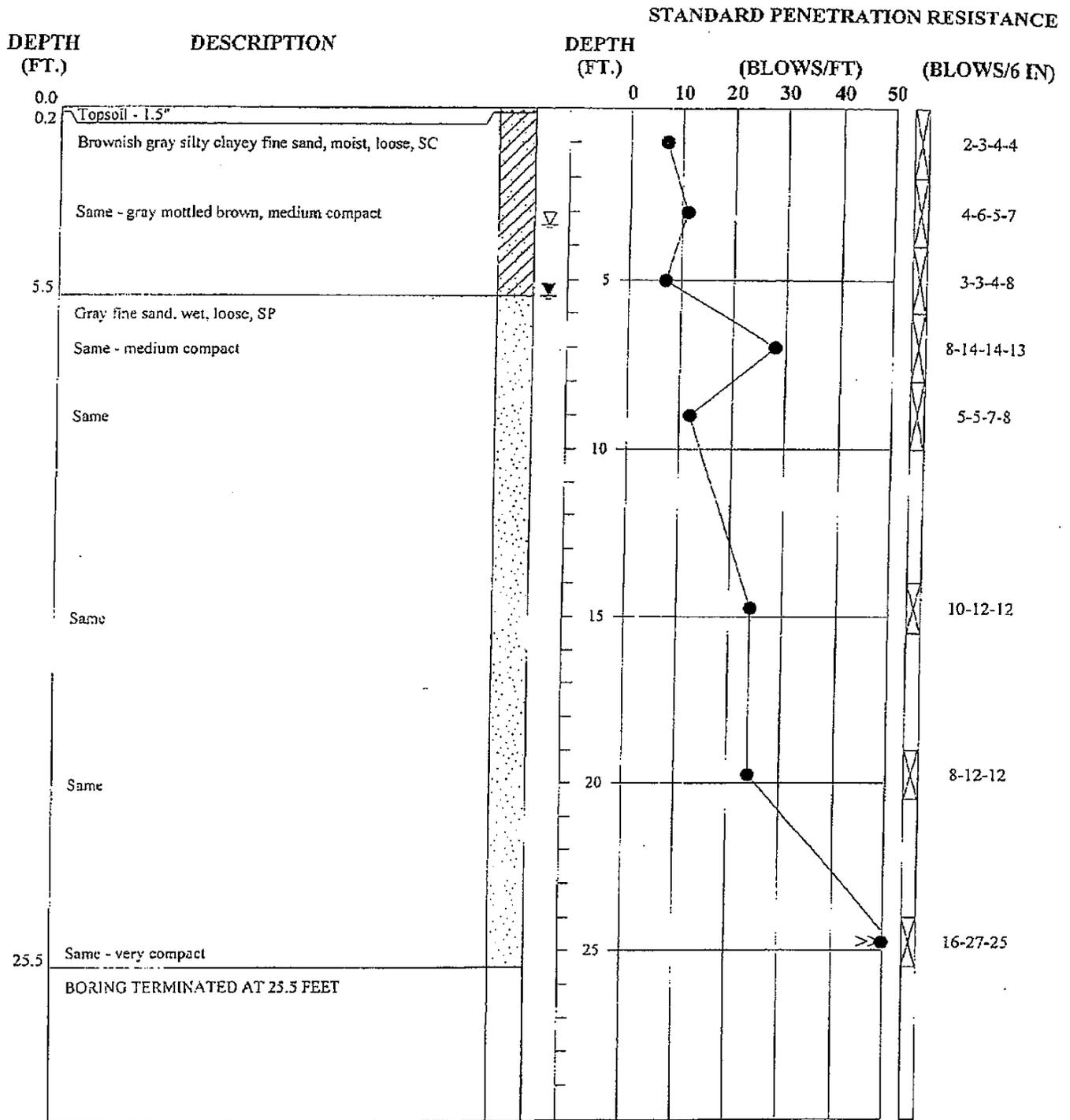
STANDARD PENETRATION RESISTANCE



NOTES:

- Gradual Stratum Change
- Approximate Stratum Change
- - Penetration Resistance (N - value)
- ⊗ - Standard Penetration Test
- ▬ - Undisturbed Sample
- ▽ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-6
DATE DRILLED	March 16, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	



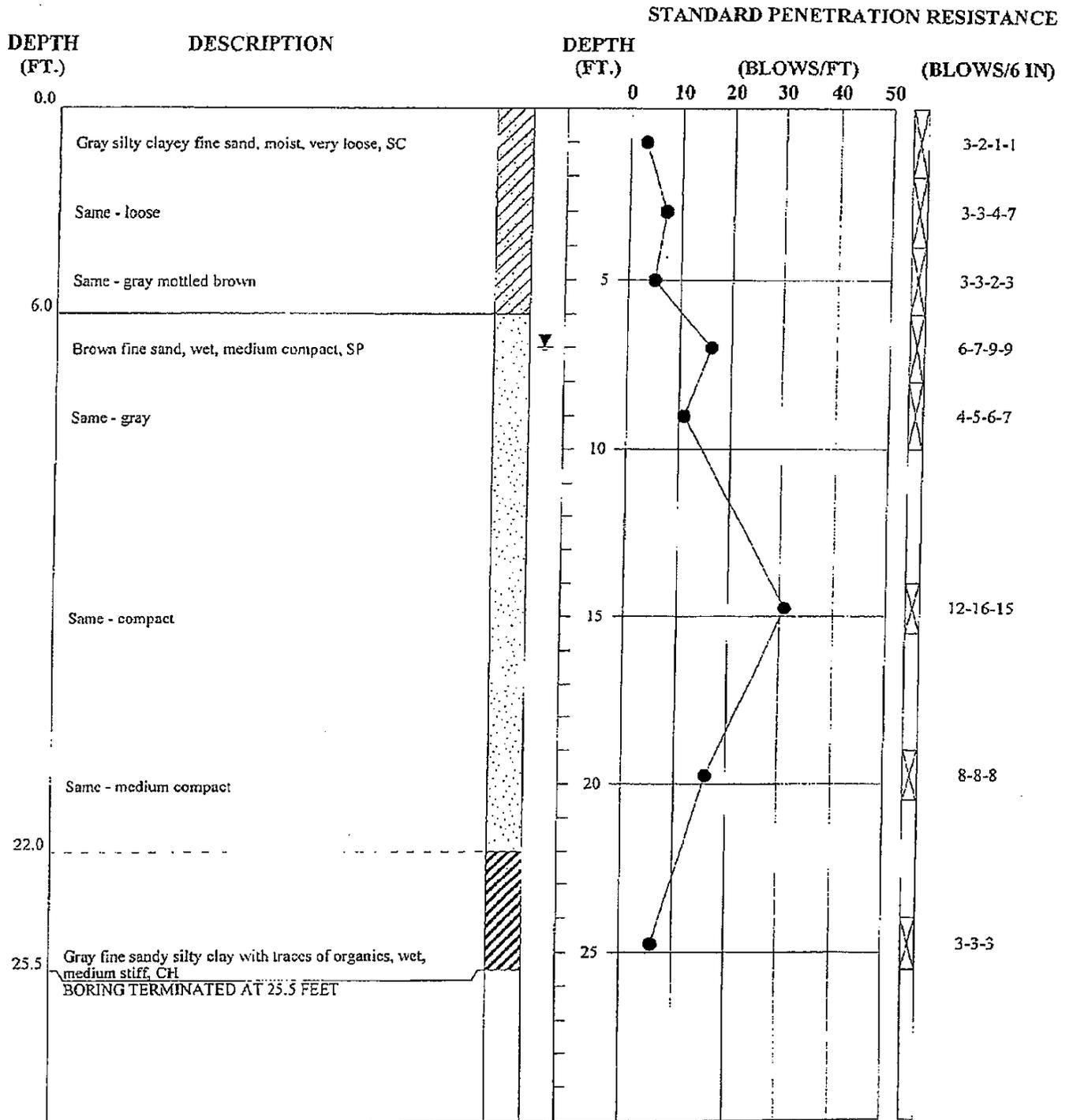
NOTES: Stabilized groundwater level measured at 3.4 ft. in temporary monitoring well.

- Gradual Stratum Change
- Approximate Stratum Change
- - Penetration Resistance (N - value)
- ▽ - Standard Penetration Test
- ▬ - Undisturbed Sample
- ▽ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD

BORING NUMBER	B-7
DATE DRILLED	March 16, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia

McCALLUM TESTING LABORATORIES, INC.

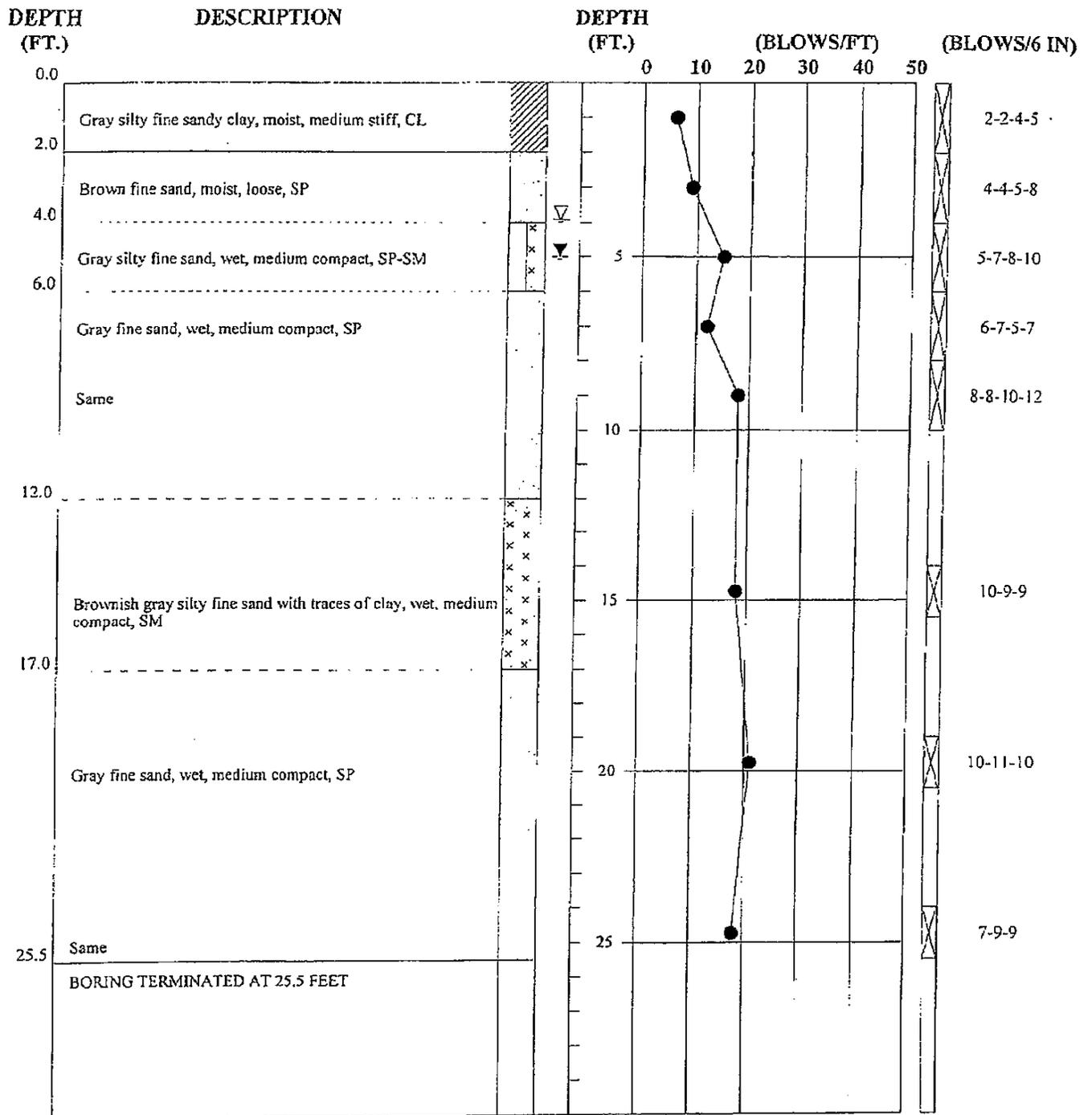


NOTES:

- Gradual Stratum Change
- Approximate Stratum Change
- - Penetration Resistance (N - value)
- ▨ - Standard Penetration Test
- ▬ - Undisturbed Sample
- ▽ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-8
DATE DRILLED	March 14, 2001
PROJECT NUMBER	01-2004
PROJECT LOCATION	Proposed Etheridge Greens Golf Course Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

STANDARD PENETRATION RESISTANCE

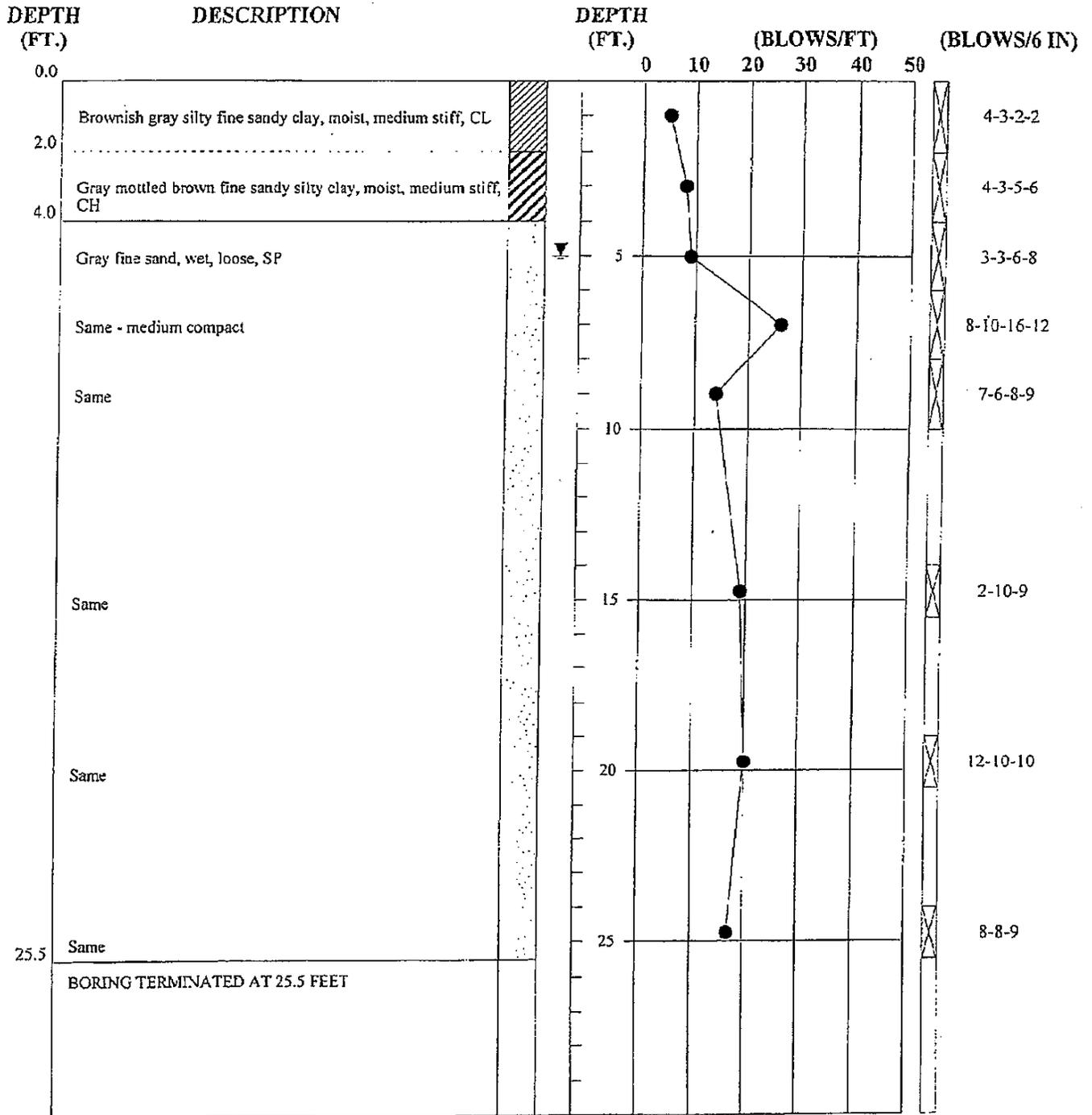


NOTES: Stabilized groundwater level measured at 3.9 ft. in temporary monitoring well.

- - - - Gradual Stratum Change
- - - - Approximate Stratum Change
- - Penetration Resistance (N - value)
- ⌵ - Standard Penetration Test
- - Undisturbed Sample
- ▽ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-9
DATE DRILLED	March 14, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

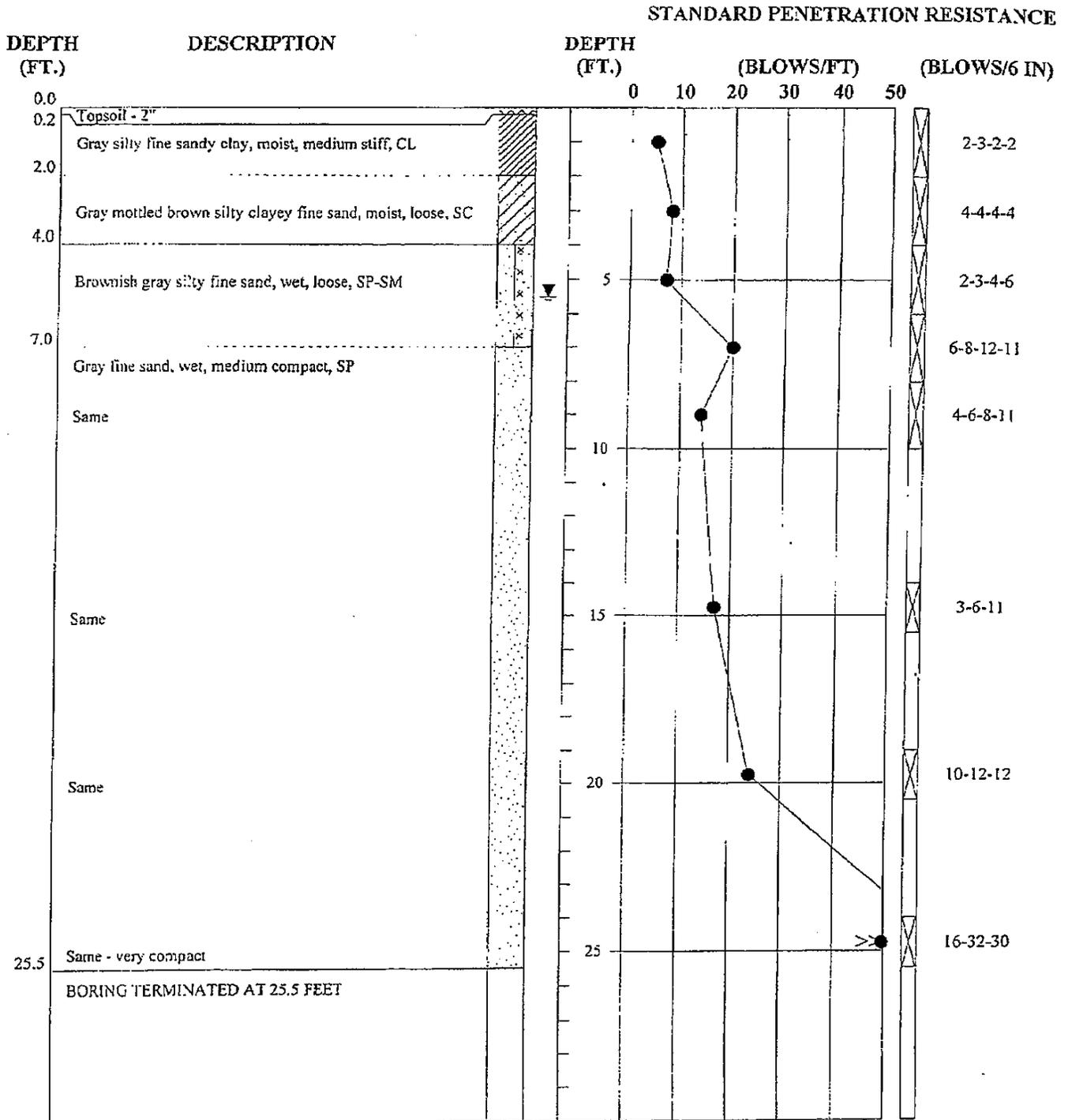
STANDARD PENETRATION RESISTANCE



NOTES:

- - - - - Gradual Stratum Change
- - - - - Approximate Stratum Change
- - Penetration Resistance (N - value)
- ⊗ - Standard Penetration Test
- - Undisturbed Sample
- ∇ - Groundwater Level at Time of Boring
- ∇ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-10
DATE DRILLED	March 14, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

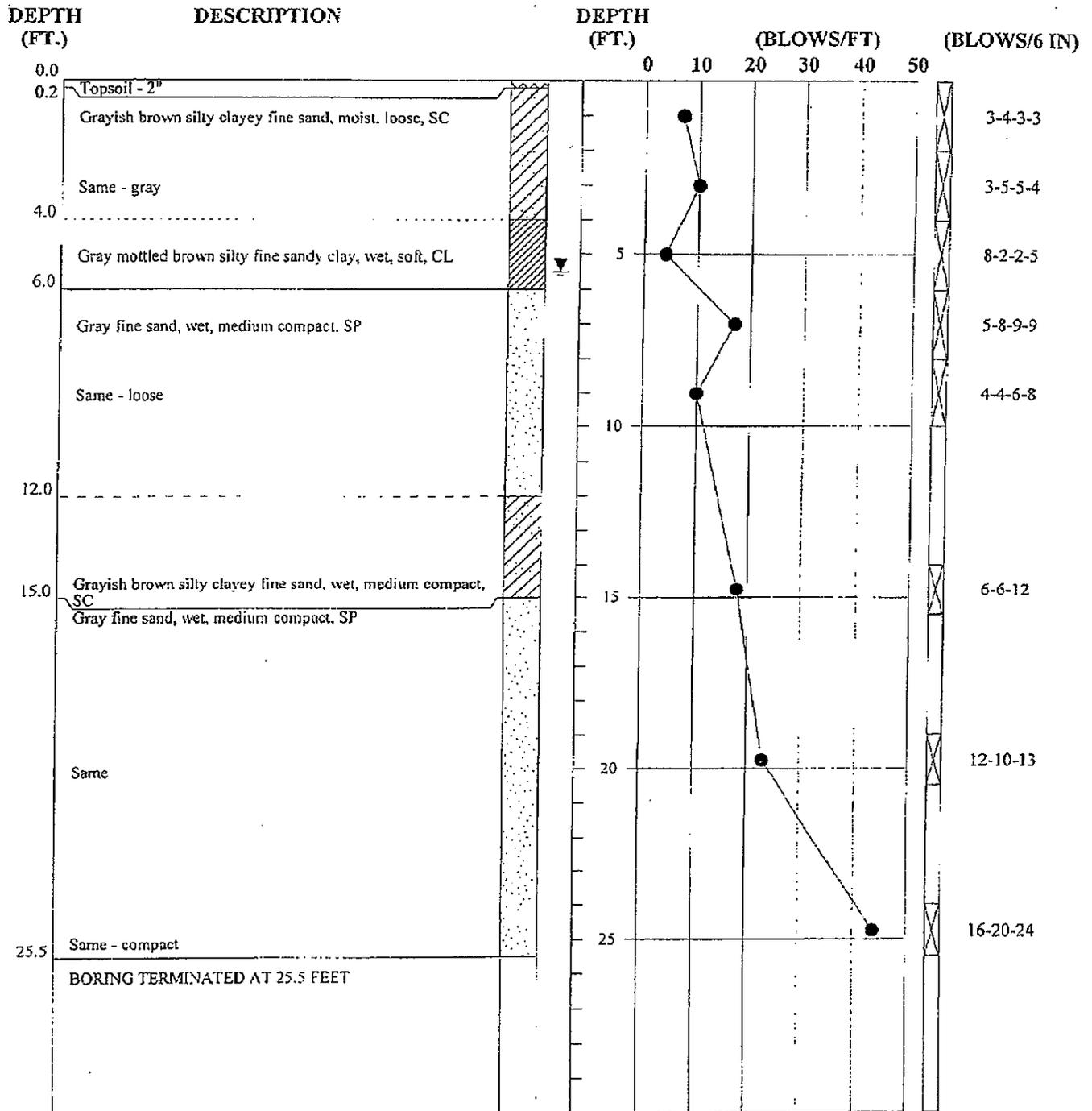


NOTES:

- Gradual Stratum Change
- Approximate Stratum Change
- - Penetration Resistance (N - value)
- ⊠ - Standard Penetration Test
- ▬ - Undisturbed Sample
- ▼ - Groundwater Level at Time of Boring
- ⊠ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-11
DATE DRILLED	March 14, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

STANDARD PENETRATION RESISTANCE



NOTES:

- - - Gradual Stratum Change
- - - Approximate Stratum Change
- - Penetration Resistance (N - value)
- ▨ - Standard Penetration Test
- - Undisturbed Sample
- ▽ - Groundwater Level at Time of Boring
- ▽ - Stabilized Groundwater Level Reading

TEST BORING RECORD	
BORING NUMBER	B-12
DATE DRILLED	March 14, 2001
PROJECT NUMBER	01-2004
PROJECT	Proposed Etheridge Greens Golf Course
LOCATION	Chesapeake, Virginia
McCALLUM TESTING LABORATORIES, INC.	

**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

BASELINE DRINKING WATER QUALITY SURVEY

**ETHERIDGE GREENS SITE
GOLF COURSE DEVELOPMENT
CHESAPEAKE, VIRGINIA**

**PREPARED FOR:
COMBUSTION PRODUCTS MANAGEMENT
C/O MR. MARK L. BAKER, P.E.
502 HUNTINGTON ROAD
EASLEY, SOUTH CAROLINA 29642**

**PREPARED BY:
STOKES ENVIRONMENTAL ASSOCIATES, LTD.
PROJECT NUMBER SEA 01-1359.2
27 FEBRUARY 2002**

BASELINE DRINKING WATER QUALITY SURVEY

CONDUCTED AT

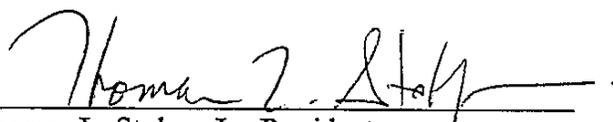
**ETHERIDGE GREENS SITE
GOLF COURSE DEVELOPMENT
CHESAPEAKE, VIRGINIA**

FOR:

**COMBUSTION PRODUCTS MANAGEMENT
C/O MR. MARK L. BAKER, P.E.
502 HUNTINGTON ROAD
EASLEY, SOUTH CAROLINA 29642**

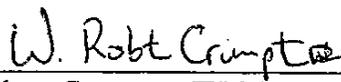
Issue Date: 27 February 2002

The following Environmental Professionals prepared this Baseline Drinking Water Study:



Thomas L. Stokes, Jr., President
Registered Environmental Manager REM 5854

27 February 2002
Date



W. Robert Crumpton IV, REM, Project Manager
Environmental Scientist

27 February 2002
Date

Prepared By: Stokes Environmental Associates, Ltd.
4101 Granby Street, Suite 404
Norfolk, Virginia 23504
(757) 623-0777 FAX (757) 623-2785

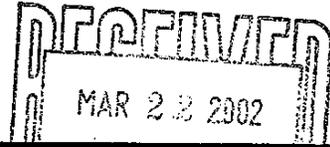
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APPENDIX D - GROUNDWATER WELL AND QUALITY DATA	
APPENDIX E - DRINKING WATER STANDARDS	
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file

TRANSMITTAL LETTER

Mark L. Baker, P.E.
 Combustion Products Management
 502 Huntington Road
 Easley, South Carolina 29642
 Phone/Fax: (864)859-9090
 Mobile: (423)534-2878
 email: mbaker@cpmash.com



SEND TO Company name DOMINION	From MARK L. BAKER
Attention DAVID BRISTOW	Date 3/20/2002
Office location GLEN ALLEN, VA	Office location
	Phone number

- Urgent
 Reply ASAP
 Please comment
 Please review
 For your information

COMMENTS

Dave,
 Attached is "Baseline Drinking Water Quality Survey" report from Stokes Environmental Assoc. dated Feb. 27, 2002. Have included entire report, no data. Have 2 originals, one will be in project file in CPIM's Whitehall, PA office, I will maintain the other.

Mark

cc: File
 Bobby DiBerardinis w/ attachments
 Steve Benza w/ attachments

**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

27 February 2002

Combustion Products Management
C/O Mr. Mark L. Baker, P.E.
502 Huntington Road
Easley, South Carolina 29604

RE: Baseline Drinking Water Quality Survey Report
Etheridge Greens Site
Golf Course Development
Chesapeake, Virginia

Dear Mr. Baker:

As per your request, enclosed are two (2) copies of the Baseline Drinking Water Quality Survey Report of the Etheridge Greens Site located in Chesapeake, Virginia.

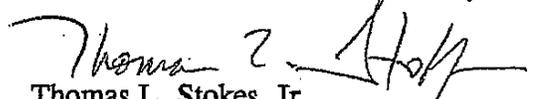
This investigation has quantified existing water quality in respect to the wells near the proposed golf course site. Findings are discussed within the enclosed study report.

This is to confirm that Stokes Environmental Associates, Ltd., has no present or prospective interest in the subject property, and that the preparers of the report have no personal bias with respect to the property or to the parties involved.

Please do not hesitate to call me or W. Robert Crumpton IV if you have any questions or need further assistance.

With best regards.

Sincerely,
Stokes Environmental Associates, Ltd.


Thomas L. Stokes, Jr.

Enclosures

TLS/wrc/A:SEA 01-1359.2\Etheridge Greens Site

**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

BASELINE DRINKING WATER QUALITY SURVEY

**ETHERIDGE GREENS SITE
GOLF COURSE DEVELOPMENT
CHESAPEAKE, VIRGINIA**

**PREPARED FOR:
COMBUSTION PRODUCTS MANAGEMENT
C/O MR. MARK L. BAKER, P.E.
502 HUNTINGTON ROAD
EASLEY, SOUTH CAROLINA 29642**

**PREPARED BY:
STOKES ENVIRONMENTAL ASSOCIATES, LTD.
PROJECT NUMBER SEA 01-1359.2
27 FEBRUARY 2002**

BASELINE DRINKING WATER QUALITY SURVEY

CONDUCTED AT

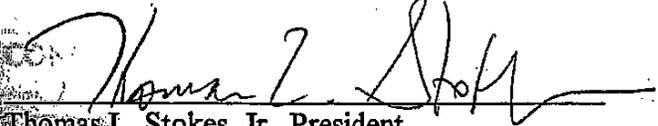
**ETHERIDGE GREENS SITE
GOLF COURSE DEVELOPMENT
CHESAPEAKE, VIRGINIA**

FOR:

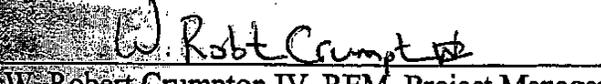
**COMBUSTION PRODUCTS MANAGEMENT
C/O MR. MARK L. BAKER, P.E.
502 HUNTINGTON ROAD
EASLEY, SOUTH CAROLINA 29642**

Issue Date: 27 February 2002

The following Environmental Professionals prepared this Baseline Drinking Water Study:


Thomas L. Stokes, Jr., President
Registered Environmental Manager REM 5854

27 February 2002
Date


W. Robert Crumpton IV, REM, Project Manager
Environmental Scientist

27 February 2002
Date

Prepared By:

Stokes Environmental Associates, Ltd.
4101 Granby Street, Suite 404
Norfolk, Virginia 23504
(757) 623-0777 FAX (757) 623-2785

Project Number SEA 01-1359.2

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QUALIFICATIONS

EXECUTIVE SUMMARY

Stokes Environmental Associates, Ltd., (SEA, Ltd.) has performed a Baseline Drinking Water Quality Study of the Etheridge Greens Site located in Chesapeake, Virginia. The purpose of the investigation was to document existing groundwater conditions in the vicinity of the subject site. In particular SEA, Ltd., was requested to evaluate the site for drinking water analytes.

In order to evaluate the site, forty (40) drinking water samples were collected at locations having private wells within the vicinity of the subject site. Each sample was submitted to the laboratory for analysis for those constituents identified by the Safe Drinking Water Act (SDWA).

Most properties within the survey area utilized either the unconfined, shallow watertable aquifer (Columbia Aquifer) or the deeper, confined Yorktown-Eastover Aquifer. Published reports (please see references) for this area indicated that the water supply within these aquifers is considered "hard." The watertable aquifer was described as quite variable in quality and generally not suitable as a potable water supply. This aquifer was noted as somewhat acidic with high concentrations of iron. The most widely used potable water supply within the study area was the Yorktown-Eastover Aquifer. This aquifer was also noted to have high concentrations of iron. The U.S. Geological Survey, National Research Program, *Quality of Ground Water, Water Quality Data, Water Year October 1999 to September 2000*, indicated that water tested from wells in the vicinity of the subject site exhibited levels of iron and manganese similar those found within this report and other published studies. Sampling data for the nearby Naval Reservation, NALF-Fentress, indicated that groundwater extracted from the Yorktown-Eastover source meets both U.S. Environmental Protection Agency (EPA) and Commonwealth of Virginia safe drinking water standards.

Laboratory results indicated groundwater at each of the forty (40) properties tested did not exhibit detectible levels of antimony, barium, nickel, selenium, or cyanide. Some properties did exhibit detectible levels for: arsenic, beryllium, cadmium, chromium, fluoride, lead, mercury, and zinc. However, none of these were above levels cited in safe drinking water standards. Below are the most notable findings. Based on laboratory results:

Groundwater from nine (9) properties exhibited detectible levels of copper. Of these, two (2) samples exhibited copper concentrations that were above the national primary safe drinking water standard and also above the Virginia action level.

Groundwater from twenty-four (24) properties exhibited detectible levels of iron. Of these, fourteen (14) exhibited iron concentrations that were above national and Virginia secondary safe drinking water standard.

Groundwater from eleven (11) properties exhibited detectible levels of manganese. Of these, ten (10) exhibited manganese concentrations that were above national and Virginia secondary safe drinking water standards.

Groundwater from eleven (11) properties exhibited detectible levels of thallium. Of these, three (3) exhibited thallium concentrations that were at national and Virginia primary safe drinking water standards and one (1) exhibited concentrations above those standards.

All cyanide samples were field-checked for interference of sulfites. Each sample was negative for sulfites and no interference was detected.

Visual indicators of contamination were not noted within any sample. However, a sulfur-type odor was detected at two (2) properties within the survey area. Most residents encountered on Whittamore Road complained of the sulfur-type nuisance odor that seems to vary in detection. A reddish (iron oxide) stain was detected around the vicinity of each faucet seen within the study area.

INTRODUCTION

Stokes Environmental Associates, Ltd., (SEA, Ltd.) has performed a Baseline Drinking Water Quality Study of the Etheridge Greens Site located in Chesapeake, Virginia. The purpose of the investigation was to document existing groundwater conditions in the vicinity of the subject site. In particular SEA, Ltd., was requested to evaluate the site for drinking water analytes.

Objectives

The objective of this Baseline Drinking Water Quality Study was to confirm potable water sources used in the vicinity and to conduct groundwater sampling and analysis in order to establish drinking water quality within the subject site vicinity. This study was intended to identify contamination, or diminution of groundwater quality in randomly selected private potable water wells within 2,000 feet of the subject site.

The following tasks were completed in the course of this study:

Topography and published geological descriptions of the site vicinity were reviewed to identify known groundwater conditions. Additionally, all available data on existing wells in the vicinity was obtained from the City of Chesapeake Department of Health.

Groundwater samples were taken from forty (40) randomly selected properties, within a 2,000 foot radius of the facility, having private potable drinking water wells.

When possible, samples were collected from a point nearest the well head and prior to any water softener, filter, or other treatment device. At each of the sampling points residents were asked if any known treatment device was in line with the outlet used for sampling. Of the forty (40) residencies, only four (4) samples were obtained after known treatment devices.

Each sample was visually and olfactorily screened for observable conditions.

The immediate area around the sampling point was observed for evidence of contaminant sources.

All samples were analyzed for all inorganic chemicals for which both primary and secondary maximum contaminant levels have been published in the Safe Drinking Water Act (SDWA) and in the Virginia Waterworks Regulations, or which have a toxicity characteristic published in the Resource Conservation and Recovery Act (RCRA). Those constituents analyzed are: antimony; arsenic; barium; beryllium; cadmium; chromium; copper; cyanide; fluoride; iron; lead; manganese; mercury; nickel; selenium; silver; thallium; and zinc.

Site Description

The subject property is a 216.91 ± acre cultivated field located at southeastern intersection of Centerville Turnpike and Whittamore Road in Chesapeake, Virginia. The site is to be developed into an eighteen (18) hole golf course with a clubhouse, amenities and lakes. The topography is to be altered by the placement of combustion byproducts (coal ash) on the ground surface, which will then be capped with a layer of topsoil and sod.

Site Maps

The attached ADC of Alexandria Local Vicinity Map, *Greater Hampton Roads* (2000, scale 1" = 2,000'), shows the site location.

The attached U.S. Geological Survey (USGS) Topographic Map, *Fentress Quadrangle, Virginia* (1954, photorevised 1986; scale 1" = 2,000'), shows the general drainage patterns of the site and the surrounding vicinity and outlines the area to be disturbed. The site occurs at an elevation of approximately ten (10) to fifteen (15) feet above mean sea level. The topography is relatively flat.

The attached Sample Location Map for the established study area shows the locations of properties where samples were obtained for analysis.

Site and sample location maps are located in Appendix A.

Topography

The U. S. Geological Survey (USGS) Topographic Maps for the *Fentress Quadrangle, Virginia* (1965, photorevised 1986, scale 1" = 2,000'), included in Appendix A, showed the subject site to occur at an elevation of approximately ten (10) to fifteen (15) feet above mean sea level. Topography is relatively flat.

Soils

According to the U.S. Department of Agriculture (USDA), Soil Conservation Service, *Soil Survey of Norfolk County, Virginia* (1959), the site contains seven (7) types of soil types. These include:

<u>Series</u>	<u>Texture</u>	<u>Permeability</u>	<u>Shrink-swell potential</u>
Othello-Fallsington	Fine Sandy Loam	Slow	Low to Moderate
Portsmouth	Loam	Moderate	Low to Moderate
Bladen	Silt Loam	Slow	Moderate to High
Othello	Very Fine Sandy Loam	Slow	Low to Moderate
Elkton	Silt Loam	Slow	Low to Moderate
Elkton-Othello	Very Fine Sandy Loam	Slow	Low to Moderate
Bertie	Fine Sandy Loam	Slow	Low to Moderate

The USDA, Soil Conservation Service, *Hydric Soils of the United States (1991)*, lists Elkton; Elkton-Othello; Othello; Othello-Fallsington; Portsmouth; and Bladen series soils as hydric. The Bertie series soil is not listed as hydric.

These soils are composed of fine sand marine deposits stratified with silt and sand. The moderate to slow permeability of surface soils on most of the site may slightly inhibit the rate of vertical migration of materials from the ground surface to the watertable aquifer. The rapid permeability of the subsoil and the sandy substratum indicate a significant risk of pollutant migration associated with subsurface contaminant sources in this soil type. It is important to recognize that some solvents may alter soil permeability, resulting in potential for atypical rapid flow velocities of solvent through clays or other soils which normally have slow permeability rates.

Geology and Hydrogeology

The subject site is situated within the Atlantic Coastal Plain Physiographic Province of Virginia, Coastal Plain Geologic Column, which consists of an eastward-thickening wedge of stratified, unconsolidated and semi-consolidated alluvial and marine-deposits above a crystalline basement surface. These sediments are composed primarily of gravels, sands, silts, and clays. At the project site, depth to the crystalline basement rocks is greater than 2,500 feet.

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The groundwater flow system in the Atlantic Coastal Plain consists of an unconfined, watertable aquifer and an underlying sequence of semi-confined to confined aquifers and intervening confining units. The aquifers are composed of permeable sands and gravels through which water readily flows. The confining layers are composed of clayey materials which retard water flow. In the Atlantic Coastal Plain, the confining layers are often "leaky" allowing exchange of water between aquifers.

The regional geologic map shows the site located on Quaternary-age deposits of the Lynnhaven Member of the Tabb Formation. The Lynnhaven Member of the Tabb Formation consists of pebbly and cobbly, fine to coarse gray sand grading upward into clayey and silty fine sand and sandy silt. These materials form the surficial deposits of a broad swale and extensive lowlands bounded on the landward side by river, bay and ocean-facing scarps having toe altitudes of fifteen (15) to eighteen (18) feet. The Lynnhaven Member forms a part of the watertable, or Columbia aquifer, beneath the site.

Site-specific hydrologic reports and maps were not found to be readily available for the subject site during this investigation. Information regarding the groundwater characteristics in the vicinity of the site was obtained from published information from the Virginia State Water Control Board and the USGS. The following discussion is abstracted from these publications.

One unconfined and confined aquifer are present beneath the site in the interval from the ground surface to 100 feet below ground surface (BGS). The uppermost aquifer is the unconfined watertable, or Columbia, aquifer. According to hydrogeologic cross sections, the watertable aquifer generally occurs in the depth interval from immediately below the surface, to approximately thirty feet (30') BGS. Saturated thickness of the Columbia aquifer in this area is approximately fifteen (15) to twenty (20) feet. Precipitation is the principal source of recharge for this aquifer, and averages about forty-four inches (44") per year. Approximately twelve (12) to twenty (20) inches per year of the total precipitation twenty-seven (27) to forty-five (45) percent is estimated to infiltrate the ground surface and reach the Columbia aquifer. The remainder of the annual precipitation is lost due to surface runoff, evaporation, etc. The following median values have been reported for hydraulic characteristics of the Columbia aquifer: Well yield of thirty (30) gallons per minute, specific capacity of 6.1 gallons per minute per foot of well drawdown, median transmissivity of 1,070 square feet per day, and a horizontal hydraulic conductivity of 28.7 feet per day.

The Yorktown-Eastover confined aquifer system underlies the Columbia aquifer. The Yorktown-Eastover aquifer system is generally separated from the overlying Columbia aquifer by beds of silt, clay and sandy clay which function as an aquitard between the two aquifers. Although the

Yorktown Formation is 300 to 400 feet thick, the major water-bearing zones comprising the Yorktown-Eastover aquifer system are restricted to the upper portion of the Yorktown Formation. The remainder of the Yorktown Formation serves as aquitards between the aquifers. The top of the Yorktown-Eastover aquifer system in this area occurs at an approximate depth of forty (40) feet BGS. The recharge to the Yorktown-Eastover aquifer system is primarily through downward leakage of water from the overlying Columbia aquifer. The following median values have been reported for hydraulic characteristics of the Yorktown aquifer: Well yield of 46 gallons per minute, specific capacity of 8.1 gallons per minute per foot of well drawdown, a transmissivity of 2,460 square feet per day, and a horizontal hydraulic conductivity of 23.1 feet per day.

The flow of shallow groundwater generally follows the regional topography. Since the topography at the subject site slopes toward the south, recharge of the watertable aquifer by infiltration of precipitation should result in groundwater flow in the vicinity of the site that is generally eastward toward the tributaries of Pocaty River. However, published reports of groundwater flow directions for the site and adjacent areas were not available, and further research and (or) subsurface testing would be necessary to confirm the flow direction and to identify the location and characteristics of deeper groundwater aquifers.

Geotechnical reports were not found to be readily available for the subject site.

Geophysical Vicinity Groundwater Quality

According to the Virginia State Water Control Board (SWCB), *Ground Water Resources of the Four Cities Area, Virginia* (1981), covering the cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach, groundwater most suitable for drinking, potable water, is that of the confined Yorktown-Eastover Aquifer. However, some properties within the Etheridge Greens Site study area utilize the shallower, unconfined Columbia Aquifer known as the watertable aquifer. A general summary of water quality from the Virginia SWCB follows.

Columbia Aquifer

This watertable aquifer is unconfined, has quite variable water quality, and is generally not acceptable as a potable water supply. The most common water quality concern is naturally occurring low pH (acidic) and high iron content. According to the SWCB study (1981), the Ryznar Stability Index for many of the watertable aquifer wells is greater than ten (>10), which means that the water will cause severe corrosion upon interaction with metal well casings, plumbing and other attachments, therefore, plastic, polyvinyl chloride (PVC) installations are recommended. The iron content of the water is the major problem with this aquifer. The majority of shallow groundwater wells tested in the vicinity of the subject site indicated that iron content exceeds the Virginia State Health Department standard of 0.3 mg/L (milligrams per liter or parts per million). Water softening devices may be used to reduce iron content.

According to the SWCB study (1981), water quality analysis of groundwater from this source show the iron concentration levels to be from 0.1 to 18.6 mg/L within the "four cities area."

Yorktown-Eastover Aquifer

This aquifer is confined, has variable water quality, and is suitable as a potable water supply. A number of public and private wells tested indicated high iron content, which is naturally occurring within some areas of the aquifer. According to the SWCB study (1981), water quality analysis of groundwater from this source show the iron concentration levels to be from 0.1 to 48.0 mg/L within the "four cities area". The presence of brackish water, water containing chloride levels greater than 250 mg/L or greater than 1,000 mg/L total dissolved solids (TDS), can be a problem. However, the freshwater-saltwater interface of this aquifer generally follows the Atlantic Ocean and Chesapeake Bay shoreline blending landward.

The U.S. Geological Survey, *Hydrogeology and Analysis of the Ground-Water Flow System in the Coastal Plain of Southeastern Virginia* (1988), indicated that the Yorktown-Eastover Aquifer in some areas is a hard, sodium-calcium-bicarbonate type.

Background Water Quality Data

Water quality data obtained from the City of Chesapeake Health Department for the U.S. Naval Reserve, located approximately 12,000 feet northeast of the subject site, indicated that the water in that area meets both primary and secondary drinking water standards. Results reviewed were for inorganic chemicals, volatile organic compounds (VOCs), and nitrate/nitrite nitrogen analysis. The Fentress report noted that the Aggressive Index Number (corrosion index) was 9.408, which means that the water has a tendency to be mildly corrosive. An index number between ten (10) and twelve (12) is considered non-corrosive; the higher the number the less corrosive the water. This data is located in Appendix D of this report.

The U.S. Geological Survey, National Research Program, *Quality of Ground Water, Water Quality Data, Water Year October 1999 to September 2000*, indicated that water sampled from wells, similar to those tested in this study, within the vicinity of the subject site exhibited levels of iron from < 10 to 8,740 milligrams per liter (mg/L) and levels of manganese from < 2 to 279 mg/L. This data is located in Appendix D of this report.

METHODS

Sampling

In order to develop a study area, a 2,000 foot radius from the boundary of the subject site was established. Forty (40) of the approximately seventy (70) known residences were randomly selected for sampling. Of the forty (40) residences randomly selected, sixteen (16) either refused sampling, no longer had a well in service, or could not be reached. In order to obtain the desired representative number of forty (40) samples, an additional sixteen (16) samples were obtained from alternate residences within the study area vicinity. Each alternate address where samples were obtained is indicated by an asterick (*) on the Sampling Field Notes located in Appendix C of this report.

Each of the forty (40) sampling points was flushed for six (6) minutes prior to collecting samples. The sample location and method was thoroughly documented, and complete field notes were recorded to allow replication of the sampling.

Each sample was collected in a certified-clean, acid-washed container, which was labeled with the unique sample serial number, time, date, location, personnel, analyte, project number, and SEA identification label. A chain of custody form was completed during sampling and each container was delivered by sampling personnel to the analytical laboratory on the day of sampling to ensure integrity of samples.

Sample containers and special procedures were as follows:

Cyanide - An interference check for sulfites was performed during sampling as required using a field interference test kit by properly trained personnel. Each sample was collected in a 1000 ml polyethylene (HDPE) container. Samples were preserved with sodium hydroxide (NaOH) to a pH > 12. Samples were kept on ice and maintained at 4 degrees C.

Fluoride - Each sample was collected in a 500 ml HDPE container. Samples were preserved, as prescribed, at a temperature of 4 degrees C

Metals - Each sample was collected in a certified clean, acid washed, 1000 ml HDPE container. Samples were preserved with nitric acid (HNO₃) to a pH < 2. Samples were kept on ice and maintained at 4 degrees C.

Note: Each sampling point required a kit comprised of one (1) cyanide, one (1) fluoride and one (1) metals container.

When possible, samples were collected from a point nearest the well head and prior to any water softener, filter, or other treatment device. Four (4) samples were obtained after treatment devices: 1104 Murray Drive; 1300 Murray Drive; 1301 Murray Drive; and 1109 Whittamore Road.

A sample location map is located in Appendix A.

Analysis

All samples were tested by a laboratory which is properly certified by the State of Virginia, Department of General Services, Division of Consolidated Laboratory Services, as required for the analysis of potable water. Each sample set, containing three (3) containers, was analyzed for:

Antimony; arsenic; beryllium; cadmium; chromium; lead; selenium; silver; and thallium using U.S. EPA method EPA 200.9.

Barium using standard method SM-3111 D.

Copper; iron; manganese; and nickel using standard method SM 3111 B.

Cyanide using standard method SM-4500 CN/C/E.

Mercury using standard method SM-3112 B.

Fluoride using standard method SM-4500 F/C.

Zinc using standard method SW-846 7950.

Table 1, Summary of drinking water analytes to be tested for baseline water quality survey at the Etheridge Greens Site, Chesapeake, Virginia, is located in Appendix B.

Certificate of Analysis and Chain of Custody forms are located in Appendix C.

Quality Control

Duplicate quality control (QC) sampling at selected locations was used to verify reliability of laboratory results. Of the forty (40) sampled, three (3) QC samples were also taken resulting in a total of forty-five (45) samples. These were blind field duplicate samples, which means that the samples were collected from the same sample source, at the same date and time, but submitted as separate samples. Field blanks were not required because the analysis did not include volatile organic compounds (VOCs); as per U.S. Environmental Protection Agency (EPA) guidelines. The attached field notes, indicating sample point number with corresponding QC sample number, are located in Appendix E of this report. QC samples were taken at:

<u>Sample Point Number</u>	<u>QC Sample Number</u>	<u>Property</u>
S-26	QC-1	1004 Centerville Road
S-28	QC-2	1420 Whittamore Road
S-29	QC-3	1436 Whittamore Road

A high degree of correspondence between QC samples and standard results was observed.

Period of Investigation and Key Investigators

Background investigation and groundwater sampling of the subject site vicinity was performed during the period of 30 November 2001 through 23 January 2002 as Stokes Environmental Associates, Ltd., Project SEA 01-1359.2.

The following Environmental Professionals performed this investigation:

Mr. W. Robert Crumpton IV was the Project Manager for this Baseline Drinking Water Quality Study, and performed site visits on 30 November 2001 and the period of 3 through 10 December 2001.

Mr. Jesse A. Redd assisted with site visits and documentation for this report.

Mr. Brett R. Fisher, Geologist, URS Corporation, observed sampling conducted 30 November and 3 December 2001.

Mr. Thomas L. Stokes, Jr, and Mr. David A. Balsley, assisted in research and analysis, and provided technical review of this report.

Weather during the visits was clear at approximately 68 degrees Fahrenheit with light, variable winds.

RESULTS

Sample Analysis

Laboratory results indicated groundwater at each of the forty (40) properties tested did not exhibit detectible levels of antimony, barium, nickel, selenium, or cyanide.

The following, measured in milligrams per liter (mg/L), were noted for the remainder of the analytes (please see Appendix B, Table 4 for a summary of all results and Table 1 for comparisons to applicable safe drinking water standards):

Groundwater from two (2) properties exhibited detectible levels of arsenic of from 0.003 to 0.004 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from two (2) properties exhibited detectible levels of beryllium of from 0.0005 to 0.0008 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from twenty (20) properties exhibited detectible levels of cadmium of from 0.0001 to 0.0005 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from five (5) properties exhibited detectible levels of chromium of from 0.001 to 0.008 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from nine (9) properties exhibited detectible levels of copper of from 0.030 to 1.623 mg/L. Of these, two (2) samples exhibited copper concentrations that were above the national primary safe drinking water standard and also above the Virginia action level.

Groundwater from twenty-nine (29) properties exhibited detectible levels of fluoride of from 0.10 to 0.29 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from twenty-four (24) properties exhibited detectible levels of iron of from 0.15 to 7.50 mg/L. Of these, fourteen (14) exhibited iron concentrations that were above national and Virginia secondary safe drinking water standard.

Groundwater from twenty (20) properties exhibited detectible levels of lead of from 0.001 to 0.010 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from eleven (11) properties exhibited detectible levels of manganese of from 0.04 to 0.29 mg/L. Of these, ten (10) exhibited manganese concentrations that were above national and Virginia secondary safe drinking water standards.

Groundwater from one (1) property exhibited detectible levels of mercury at 0.0007 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from eleven (11) properties exhibited detectible levels of thallium of from 0.001 to 0.008 mg/L. Of these, three (3) exhibited thallium concentrations that were at national and Virginia primary safe drinking water standards and one (1) exhibited concentrations above those standards.

Groundwater from seven (7) properties exhibited detectible levels of zinc of from 0.021 to 0.040. None of these were above levels cited in safe drinking water standards.

Quality Control Analysis

Each of the three (3) quality control (QC) samples were within the acceptable range. Please see Appendix B, Table 4 for a summary of all results. One (1) sample pair, QC-3 and S-39, showed a relatively high variance for lead, which was attributed to the concentration of lead being near the limit of detection. Very low lead levels are subject to a greater degree of variance.

Field Screening

All cyanide samples were field-checked for interference of sulfites. Each sample was negative for sulfites and no interference was detected.

Each sample was both visually and olfactorily screened for contaminants. Visual indicators of contamination were not noted within any sample. A sulfur-type odor was detected at two (2) properties: 1300 Murray Drive and 1020 Centerville Turnpike.

Most residents encountered on Whittamore Road complained of the sulfur-type nuisance odor that seems to vary in detection.

The immediate area around the sampling point was observed for signs of contamination. A reddish (iron oxide) stain was detected around the vicinity of each faucet seen within the study area.

CONCLUSIONS

Stokes Environmental Associates, Ltd., (SEA, Ltd.) has performed a Baseline Drinking Water Quality Study of the Etheridge Greens Site located in Chesapeake, Virginia. The purpose of the investigation was to document existing groundwater conditions in the vicinity of the subject site. In particular SEA, Ltd., was requested to evaluate the site for drinking water analytes.

In order to evaluate the site, forty (40) drinking water samples were collected at locations having private wells within the vicinity of the subject site. Each sample was submitted to the laboratory for analysis for those constituents identified by the Safe Drinking Water Act (SDWA).

Most properties within the survey area utilized either the unconfined, shallow watertable aquifer (Columbia Aquifer) or the deeper, confined Yorktown-Eastover Aquifer. Published reports (please see references) for this area indicated that the water supply within these aquifers is considered "hard." The watertable aquifer was described as quite variable in quality and generally not suitable as a potable water supply. This aquifer was noted as somewhat acidic with high concentrations of iron. The most widely used potable water supply within the study area was the Yorktown-Eastover Aquifer. This aquifer was also noted to have high concentrations of iron. The U.S. Geological Survey, National Research Program, *Quality of Ground Water, Water Quality Data, Water Year October 1999 to September 2000*, indicated that water tested from wells in the vicinity of the subject site exhibited levels of iron and manganese similar those found within this report and other published studies. Sampling data for the nearby Naval Reservation, NALF-Fentress, indicated that groundwater extracted from the Yorktown-Eastover source meets both U.S. Environmental Protection Agency (EPA) and Commonwealth of Virginia safe drinking water standards.

Laboratory results indicated groundwater at each of the forty (40) properties tested did not exhibit detectible levels of antimony, barium, nickel, selenium, or cyanide. Some properties did exhibit detectible levels for: arsenic, beryllium, cadmium, chromium, fluoride, lead, mercury, and zinc. However, none of these were above levels cited in safe drinking water standards. Below are the most notable findings. Based on laboratory results:

Groundwater from nine (9) properties exhibited detectible levels of copper. Of these, two (2) samples exhibited copper concentrations that were above the national primary safe drinking water standard and also above the Virginia action level.

Groundwater from twenty-four (24) properties exhibited detectible levels of iron. Of these, fourteen (14) exhibited iron concentrations that were above national and Virginia secondary safe drinking water standard.

Groundwater from eleven (11) properties exhibited detectible levels of manganese. Of these, ten (10) exhibited manganese concentrations that were above national and Virginia secondary safe drinking water standards.

Groundwater from eleven (11) properties exhibited detectible levels of thallium. Of these, three (3) exhibited thallium concentrations that were at national and Virginia primary safe drinking water standards and one (1) exhibited concentrations above those standards.

All cyanide samples were field-checked for interference of sulfites. Each sample was negative for sulfites and no interference was detected.

Visual indicators of contamination were not noted within any sample. However, a sulfur-type odor was detected at two (2) properties within the survey area. Most residents encountered on Whittamore Road complained of the sulfur-type nuisance odor that seems to vary in detection. A reddish (iron oxide) stain was detected around the vicinity of each faucet seen within the study area.

EXECUTIVE SUMMARY

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INTRODUCTION

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Objectives

The objective of this Baseline Drinking Water Quality Study was to confirm potable water sources used in the vicinity and to conduct groundwater sampling and analysis in order to establish drinking water quality within the subject site vicinity. This study was intended to identify contamination, or diminution of groundwater quality in randomly selected private potable water wells within 2,000 feet of the subject site.

The following tasks were completed in the course of this study:

Topography and published geological descriptions of the site vicinity were reviewed to identify known groundwater conditions. Additionally, all available data on existing wells in the vicinity was obtained from the City of Chesapeake Department of Health.

Groundwater samples were taken from forty (40) randomly selected properties, within a 2,000 foot radius of the facility, having private potable drinking water wells.

When possible, samples were collected from a point nearest the well head and prior to any water softener, filter, or other treatment device. At each of the sampling points residents were asked if any known treatment device was in line with the outlet used for sampling. Of the forty (40) residencies, only four (4) samples were obtained after known treatment devices.

Each sample was visually and olfactorily screened for observable conditions.

The immediate area around the sampling point was observed for evidence of contaminant sources.

All samples were analyzed for all inorganic chemicals for which both primary and secondary maximum contaminant levels have been published in the Safe Drinking Water Act (SDWA) and in the Virginia Waterworks Regulations, or which have a toxicity characteristic published in the Resource Conservation and Recovery Act (RCRA). Those constituents analyzed are: antimony; arsenic; barium; beryllium; cadmium; chromium; copper; cyanide; fluoride; iron; lead; manganese; mercury; nickel; selenium; silver; thallium; and zinc.

Site Description

The subject property is a 216.91 ± acre cultivated field located at southeastern intersection of Centerville Turnpike and Whittamore Road in Chesapeake, Virginia. The site is to be developed into an eighteen (18) hole golf course with a clubhouse, amenities and lakes. The topography is to be altered by the placement of combustion byproducts (coal ash) on the ground surface, which will then be capped with a layer of topsoil and sod.

Site Maps

The attached ADC of Alexandria Local Vicinity Map, *Greater Hampton Roads* (2000, scale 1" = 2,000'), shows the site location.

The attached U.S. Geological Survey (USGS) Topographic Map, *Fentress Quadrangle, Virginia* (1954, photorevised 1986; scale 1" = 2,000'), shows the general drainage patterns of the site and the surrounding vicinity and outlines the area to be disturbed. The site occurs at an elevation of approximately ten (10) to fifteen (15) feet above mean sea level. The topography is relatively flat.

The attached Sample Location Map for the established study area shows the locations of properties where samples were obtained for analysis.

Site and sample location maps are located in Appendix A.

Topography

The U. S. Geological Survey (USGS) Topographic Maps for the *Fentress Quadrangle, Virginia* (1965, photorevised 1986, scale 1" = 2,000'), included in Appendix A, showed the subject site to occur at an elevation of approximately ten (10) to fifteen (15) feet above mean sea level. Topography is relatively flat.

Soils

According to the U.S. Department of Agriculture (USDA), Soil Conservation Service, *Soil Survey of Norfolk County, Virginia (1959)*, the site contains seven (7) types of soil types. These include:

<u>Series</u>	<u>Texture</u>	<u>Permeability</u>	<u>Shrink-swell potential</u>
Othello-Fallsington	Fine Sandy Loam	Slow	Low to Moderate
Portsmouth	Loam	Moderate	Low to Moderate
Bladen	Silt Loam	Slow	Moderate to High
Othello	Very Fine Sandy Loam	Slow	Low to Moderate
Elkton	Silt Loam	Slow	Low to Moderate
Elkton-Othello	Very Fine Sandy Loam	Slow	Low to Moderate
Bertie	Fine Sandy Loam	Slow	Low to Moderate

The USDA, Soil Conservation Service, *Hydric Soils of the United States (1991)*, lists Elkton; Elkton-Othello; Othello; Othello-Fallsington; Portsmouth; and Bladen series soils as hydric. The Bertie series soil is not listed as hydric.

These soils are composed of fine sand marine deposits stratified with silt and sand. The moderate to slow permeability of surface soils on most of the site may slightly inhibit the rate of vertical migration of materials from the ground surface to the watertable aquifer. The rapid permeability of the subsoil and the sandy substratum indicate a significant risk of pollutant migration associated with subsurface contaminant sources in this soil type. It is important to recognize that some solvents may alter soil permeability, resulting in potential for atypical rapid flow velocities of solvent through clays or other soils which normally have slow permeability rates.

Geology and Hydrogeology

The subject site is situated within the Atlantic Coastal Plain Physiographic Province of Virginia, Coastal Plain Geologic Column, which consists of an eastward-thickening wedge of stratified, unconsolidated and semi-consolidated alluvial and marine-deposits above a crystalline basement surface. These sediments are composed primarily of gravels, sands, silts, and clays. At the project site, depth to the crystalline basement rocks is greater than 2,500 feet.

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The groundwater flow system in the Atlantic Coastal Plain consists of an unconfined, watertable aquifer and an underlying sequence of semi-confined to confined aquifers and intervening confining units. The aquifers are composed of permeable sands and gravels through which water readily flows. The confining layers are composed of clayey materials which retard water flow. In the Atlantic Coastal Plain, the confining layers are often "leaky" allowing exchange of water between aquifers.

The regional geologic map shows the site located on Quaternary-age deposits of the Lynnhaven Member of the Tabb Formation. The Lynnhaven Member of the Tabb Formation consists of pebbly and cobbly, fine to coarse gray sand grading upward into clayey and silty fine sand and sandy silt. These materials form the surficial deposits of a broad swale and extensive lowlands bounded on the landward side by river, bay and ocean-facing scarps having toe altitudes of fifteen (15) to eighteen (18) feet. The Lynnhaven Member forms a part of the watertable, or Columbia aquifer, beneath the site.

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One unconfined and confined aquifer are present beneath the site in the interval from the ground surface to 100 feet below ground surface (BGS). The uppermost aquifer is the unconfined watertable, or Columbia, aquifer. According to hydrogeologic cross sections, the watertable aquifer generally occurs in the depth interval from immediately below the surface, to approximately thirty feet (30') BGS. Saturated thickness of the Columbia aquifer in this area is approximately fifteen (15) to twenty (20) feet. Precipitation is the principal source of recharge for this aquifer, and averages about forty-four inches (44") per year. Approximately twelve (12) to twenty (20) inches per year of the total precipitation twenty-seven (27) to forty-five (45) percent is estimated to infiltrate the ground surface and reach the Columbia aquifer. The remainder of the annual precipitation is lost due to surface runoff, evaporation, etc. The following median values have been reported for hydraulic characteristics of the Columbia aquifer: Well yield of thirty (30) gallons per minute, specific capacity of 6.1 gallons per minute per foot of well drawdown, median transmissivity of 1,070 square feet per day, and a horizontal hydraulic conductivity of 28.7 feet per day.

The Yorktown-Eastover confined aquifer system underlies the Columbia aquifer. The Yorktown-Eastover aquifer system is generally separated from the overlying Columbia aquifer by beds of silt, clay and sandy clay which function as an aquitard between the two aquifers. Although the

Yorktown Formation is 300 to 400 feet thick, the major water-bearing zones comprising the Yorktown-Eastover aquifer system are restricted to the upper portion of the Yorktown Formation. The remainder of the Yorktown Formation serves as aquitards between the aquifers. The top of the Yorktown-Eastover aquifer system in this area occurs at an approximate depth of forty (40) feet BGS. The recharge to the Yorktown-Eastover aquifer system is primarily through downward leakage of water from the overlying Columbia aquifer. The following median values have been reported for hydraulic characteristics of the Yorktown aquifer: Well yield of 46 gallons per minute, specific capacity of 8.1 gallons per minute per foot of well drawdown, a transmissivity of 2,460 square feet per day, and a horizontal hydraulic conductivity of 23.1 feet per day.

The flow of shallow groundwater generally follows the regional topography. Since the topography at the subject site slopes toward the south, recharge of the watertable aquifer by infiltration of precipitation should result in groundwater flow in the vicinity of the site that is generally eastward toward the tributaries of Pocaty River. However, published reports of groundwater flow directions for the site and adjacent areas were not available, and further research and (or) subsurface testing would be necessary to confirm the flow direction and to identify the location and characteristics of deeper groundwater aquifers.

Geotechnical reports were not found to be readily available for the subject site.

Geophysical Vicinity Groundwater Quality

According to the Virginia State Water Control Board (SWCB), *Ground Water Resources of the Four Cities Area, Virginia* (1981), covering the cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach, groundwater most suitable for drinking, potable water, is that of the confined Yorktown-Eastover Aquifer. However, some properties within the Etheridge Greens Site study area utilize the shallower, unconfined Columbia Aquifer known as the watertable aquifer. A general summary of water quality from the Virginia SWCB follows.

Columbia Aquifer

This watertable aquifer is unconfined, has quite variable water quality, and is generally not acceptable as a potable water supply. The most common water quality concern is naturally occurring low pH (acidic) and high iron content. According to the SWCB study (1981), the Ryznar Stability Index for many of the watertable aquifer wells is greater than ten (>10), which means that the water will cause severe corrosion upon interaction with metal well casings, plumbing and other attachments, therefore, plastic, polyvinyl chloride (PVC) installations are recommended. The iron content of the water is the major problem with this aquifer. The majority of shallow groundwater wells tested in the vicinity of the subject site indicated that iron content exceeds the Virginia State Health Department standard of 0.3 mg/L (milligrams per liter or parts per million). Water softening devices may be used to reduce iron content.

According to the SWCB study (1981), water quality analysis of groundwater from this source show the iron concentration levels to be from 0.1 to 18.6 mg/L within the "four cities area."

Yorktown-Eastover Aquifer

This aquifer is confined, has variable water quality, and is suitable as a potable water supply. A number of public and private wells tested indicated high iron content, which is naturally occurring within some areas of the aquifer. According to the SWCB study (1981), water quality analysis of groundwater from this source show the iron concentration levels to be from 0.1 to 48.0 mg/L within the "four cities area". The presence of brackish water, water containing chloride levels greater than 250 mg/L or greater than 1,000 mg/L total dissolved solids (TDS), can be a problem. However, the freshwater-saltwater interface of this aquifer generally follows the Atlantic Ocean and Chesapeake Bay shoreline blending landward.

The U.S. Geological Survey, *Hydrogeology and Analysis of the Ground-Water Flow System in the Coastal Plain of Southeastern Virginia* (1988), indicated that the Yorktown-Eastover Aquifer in some areas is a hard, sodium-calcium-bicarbonate type.

Background Water Quality Data

Water quality data obtained from the City of Chesapeake Health Department for the U.S. Naval Reserve, located approximately 12,000 feet northeast of the subject site, indicated that the water in that area meets both primary and secondary drinking water standards. Results reviewed were for inorganic chemicals, volatile organic compounds (VOCs), and nitrate/nitrite nitrogen analysis. The Fentress report noted that the Aggressive Index Number (corrosion index) was 9.408, which means that the water has a tendency to be mildly corrosive. An index number between ten (10) and twelve (12) is considered non-corrosive; the higher the number the less corrosive the water. This data is located in Appendix D of this report.

The U.S. Geological Survey, National Research Program, *Quality of Ground Water, Water Quality Data, Water Year October 1999 to September 2000*, indicated that water sampled from wells, similar to those tested in this study, within the vicinity of the subject site exhibited levels of iron from < 10 to 8,740 milligrams per liter (mg/L) and levels of manganese from < 2 to 279 mg/L. This data is located in Appendix D of this report.

METHODS

Sampling

In order to develop a study area, a 2,000 foot radius from the boundary of the subject site was established. Forty (40) of the approximately seventy (70) known residences were randomly selected for sampling. Of the forty (40) residences randomly selected, sixteen (16) either refused sampling, no longer had a well in service, or could not be reached. In order to obtain the desired representative number of forty (40) samples, an additional sixteen (16) samples were obtained from alternate residences within the study area vicinity. Each alternate address where samples were obtained is indicated by an asterick (*) on the Sampling Field Notes located in Appendix C of this report.

Each of the forty (40) sampling points was flushed for six (6) minutes prior to collecting samples. The sample location and method was thoroughly documented, and complete field notes were recorded to allow replication of the sampling.

Each sample was collected in a certified-clean, acid-washed container, which was labeled with the unique sample serial number, time, date, location, personnel, analyte, project number, and SEA identification label. A chain of custody form was completed during sampling and each container was delivered by sampling personnel to the analytical laboratory on the day of sampling to ensure integrity of samples.

Sample containers and special procedures were as follows:

Cyanide - An interference check for sulfites was performed during sampling as required using a field interference test kit by properly trained personnel. Each sample was collected in a 1000 ml polyethylene (HDPE) container. Samples were preserved with sodium hydroxide (NaOH) to a pH > 12. Samples were kept on ice and maintained at 4 degrees C.

Fluoride - Each sample was collected in a 500 ml HDPE container. Samples were preserved, as prescribed, at a temperature of 4 degrees C

Metals - Each sample was collected in a certified clean, acid washed, 1000 ml HDPE container. Samples were preserved with nitric acid (HNO₃) to a pH < 2. Samples were kept on ice and maintained at 4 degrees C.

Note: Each sampling point required a kit comprised of one (1) cyanide, one (1) fluoride and one (1) metals container.

When possible, samples were collected from a point nearest the well head and prior to any water softener, filter, or other treatment device. Four (4) samples were obtained after treatment devices: 1104 Murray Drive; 1300 Murray Drive; 1301 Murray Drive; and 1109 Whittamore Road.

A sample location map is located in Appendix A.

Analysis

All samples were tested by a laboratory which is properly certified by the State of Virginia, Department of General Services, Division of Consolidated Laboratory Services, as required for the analysis of potable water. Each sample set, containing three (3) containers, was analyzed for:

Antimony; arsenic; beryllium; cadmium; chromium; lead; selenium; silver; and thallium using U.S. EPA method EPA 200.9.

Barium using standard method SM-3111 D.

Copper; iron; manganese; and nickel using standard method SM 3111 B.

Cyanide using standard method SM-4500 CN/C/E.

Mercury using standard method SM-3112 B.

Fluoride using standard method SM-4500 F/C.

Zinc using standard method SW-846 7950.

Table 1, Summary of drinking water analytes to be tested for baseline water quality survey at the Etheridge Greens Site, Chesapeake, Virginia, is located in Appendix B.

Certificate of Analysis and Chain of Custody forms are located in Appendix C.

Quality Control

Duplicate quality control (QC) sampling at selected locations was used to verify reliability of laboratory results. Of the forty (40) sampled, three (3) QC samples were also taken resulting in a total of forty-five (45) samples. These were blind field duplicate samples, which means that the samples were collected from the same sample source, at the same date and time, but submitted as separate samples. Field blanks were not required because the analysis did not include volatile organic compounds (VOCs); as per U.S. Environmental Protection Agency (EPA) guidelines. The attached field notes, indicating sample point number with corresponding QC sample number, are located in Appendix E of this report. QC samples were taken at:

<u>Sample Point Number</u>	<u>QC Sample Number</u>	<u>Property</u>
S-26	QC-1	1004 Centerville Road
S-28	QC-2	1420 Whittamore Road
S-29	QC-3	1436 Whittamore Road

A high degree of correspondence between QC samples and standard results was observed.

Period of Investigation and Key Investigators

Background investigation and groundwater sampling of the subject site vicinity was performed during the period of 30 November 2001 through 23 January 2002 as Stokes Environmental Associates, Ltd., Project SEA 01-1359.2.

The following Environmental Professionals performed this investigation:

Mr. W. Robert Crumpton IV was the Project Manager for this Baseline Drinking Water Quality Study, and performed site visits on 30 November 2001 and the period of 3 through 10 December 2001.

Mr. Jesse A. Redd assisted with site visits and documentation for this report.

Mr. Brett R. Fisher, Geologist, URS Corporation, observed sampling conducted 30 November and 3 December 2001.

Mr. Thomas L. Stokes, Jr, and Mr. David A. Balsley, assisted in research and analysis, and provided technical review of this report.

Weather during the visits was clear at approximately 68 degrees Fahrenheit with light, variable winds.

RESULTS

Sample Analysis

Laboratory results indicated groundwater at each of the forty (40) properties tested did not exhibit detectible levels of antimony, barium, nickel, selenium, or cyanide.

The following, measured in milligrams per liter (mg/L), were noted for the remainder of the analytes (please see Appendix B, Table 4 for a summary of all results and Table 1 for comparisons to applicable safe drinking water standards):

Groundwater from two (2) properties exhibited detectible levels of arsenic of from 0.003 to 0.004 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from two (2) properties exhibited detectible levels of beryllium of from 0.0005 to 0.0008 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from twenty (20) properties exhibited detectible levels of cadmium of from 0.0001 to 0.0005 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from five (5) properties exhibited detectible levels of chromium of from 0.001 to 0.008 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from nine (9) properties exhibited detectible levels of copper of from 0.030 to 1.623 mg/L. Of these, two (2) samples exhibited copper concentrations that were above the national primary safe drinking water standard and also above the Virginia action level.

Groundwater from twenty-nine (29) properties exhibited detectible levels of fluoride of from 0.10 to 0.29 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from twenty-four (24) properties exhibited detectible levels of iron of from 0.15 to 7.50 mg/L. Of these, fourteen (14) exhibited iron concentrations that were above national and Virginia secondary safe drinking water standard.

Groundwater from twenty (20) properties exhibited detectible levels of lead of from 0.001 to 0.010 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from eleven (11) properties exhibited detectible levels of manganese of from 0.04 to 0.29 mg/L. Of these, ten (10) exhibited manganese concentrations that were above national and Virginia secondary safe drinking water standards.

Groundwater from one (1) property exhibited detectible levels of mercury at 0.0007 mg/L. None of these were above levels cited in safe drinking water standards.

Groundwater from eleven (11) properties exhibited detectible levels of thallium of from 0.001 to 0.008 mg/L. Of these, three (3) exhibited thallium concentrations that were at national and Virginia primary safe drinking water standards and one (1) exhibited concentrations above those standards.

Groundwater from seven (7) properties exhibited detectible levels of zinc of from 0.021 to 0.040. None of these were above levels cited in safe drinking water standards.

Quality Control Analysis

Each of the three (3) quality control (QC) samples were within the acceptable range. Please see Appendix B, Table 4 for a summary of all results. One (1) sample pair, QC-3 and S-39, showed a relatively high variance for lead, which was attributed to the concentration of lead being near the limit of detection. Very low lead levels are subject to a greater degree of variance.

Field Screening

All cyanide samples were field-checked for interference of sulfites. Each sample was negative for sulfites and no interference was detected.

Each sample was both visually and olfactorily screened for contaminants. Visual indicators of contamination were not noted within any sample. A sulfur-type odor was detected at two (2) properties: 1300 Murray Drive and 1020 Centerville Turnpike.

Most residents encountered on Whittamore Road complained of the sulfur-type nuisance odor that seems to vary in detection.

The immediate area around the sampling point was observed for signs of contamination. A reddish (iron oxide) stain was detected around the vicinity of each faucet seen within the study area.

CONCLUSIONS

Stokes Environmental Associates, Ltd., (SEA, Ltd.) has performed a Baseline Drinking Water Quality Study of the Etheridge Greens Site located in Chesapeake, Virginia. The purpose of the investigation was to document existing groundwater conditions in the vicinity of the subject site. In particular SEA, Ltd., was requested to evaluate the site for drinking water analytes.

In order to evaluate the site, forty (40) drinking water samples were collected at locations having private wells within the vicinity of the subject site. Each sample was submitted to the laboratory for analysis for those constituents identified by the Safe Drinking Water Act (SDWA).

Most properties within the survey area utilized either the unconfined, shallow watertable aquifer (Columbia Aquifer) or the deeper, confined Yorktown-Eastover Aquifer. Published reports (please see references) for this area indicated that the water supply within these aquifers is considered "hard." The watertable aquifer was described as quite variable in quality and generally not suitable as a potable water supply. This aquifer was noted as somewhat acidic with high concentrations of iron. The most widely used potable water supply within the study area was the Yorktown-Eastover Aquifer. This aquifer was also noted to have high concentrations of iron. The U.S. Geological Survey, National Research Program, *Quality of Ground Water, Water Quality Data, Water Year October 1999 to September 2000*, indicated that water tested from wells in the vicinity of the subject site exhibited levels of iron and manganese similar those found within this report and other published studies. Sampling data for the nearby Naval Reservation, NALF-Fentress, indicated that groundwater extracted from the Yorktown-Eastover source meets both U.S. Environmental Protection Agency (EPA) and Commonwealth of Virginia safe drinking water standards.

Laboratory results indicated groundwater at each of the forty (40) properties tested did not exhibit detectible levels of antimony, barium, nickel, selenium, or cyanide. Some properties did exhibit detectible levels for: arsenic, beryllium, cadmium, chromium, fluoride, lead, mercury, and zinc. However, none of these were above levels cited in safe drinking water standards. Below are the most notable findings. Based on laboratory results:

Groundwater from nine (9) properties exhibited detectible levels of copper. Of these, two (2) samples exhibited copper concentrations that were above the national primary safe drinking water standard and also above the Virginia action level.

Groundwater from twenty-four (24) properties exhibited detectible levels of iron. Of these, fourteen (14) exhibited iron concentrations that were above national and Virginia secondary safe drinking water standard.

Groundwater from eleven (11) properties exhibited detectible levels of manganese. Of these, ten (10) exhibited manganese concentrations that were above national and Virginia secondary safe drinking water standards.

Groundwater from eleven (11) properties exhibited detectible levels of thallium. Of these, three (3) exhibited thallium concentrations that were at national and Virginia primary safe drinking water standards and one (1) exhibited concentrations above those standards.

All cyanide samples were field-checked for interference of sulfites. Each sample was negative for sulfites and no interference was detected.

Visual indicators of contamination were not noted within any sample. However, a sulfur-type odor was detected at two (2) properties within the survey area. Most residents encountered on Whittamore Road complained of the sulfur-type nuisance odor that seems to vary in detection. A reddish (iron oxide) stain was detected around the vicinity of each faucet seen within the study area.

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SITE SURVEY DISCLAIMER AND LIMITATIONS

Stokes Environmental Associates, Ltd. (SEA, Ltd.), is pleased to assist Mr. Mark L. Baker, P.E., of Combustion Products Management, in the investigation of existing groundwater conditions within the vicinity of the subject property, as outlined in this report. This report has been prepared solely for the exclusive use of Combustion Products Management and its agents for specific application to the property assessed. No other person or business entity shall have any rights with regard to our contract for this project, or any rights of reliance on this report or related documents prepared by SEA, Ltd. The scope of services included in this study may not be appropriate to the needs of other users of this document, and any such use is at the risk of user. This investigation was conducted in accordance with the scope of work, terms, and conditions outlined in the applicable contract or letter of agreement between Combustion Products Management, and SEA, Ltd. In the event of any conflict between this disclaimer and the applicable contract or letter of agreement, the contract or letter of agreement shall take precedence.

This work has been performed using reasonable care within the scope of work and in accordance with budgetary limitations. SEA, Ltd., strives to conduct its services in keeping with industry standards and in accordance with generally accepted environmental science practice. No other warranty, expressed or implied, is made.

Our conclusions and recommendations are based upon our observations at the site, the reviewed documentation, any test results reviewed, interviews, any other information provided and our previous experience in this area. The conclusions and recommendations assume that data and other information provided are reasonably accurate. It must be recognized that available agency records, addresses, maps, and other information reviewed in this assessment are often incomplete, contain errors, may not be current, may list alternate facility names or addresses, or may provide otherwise misleading data. Verification of agency data, determination of facility locations that are listed by post office box, continuous updating and other tasks related to database information are generally beyond the scope and cost allowances of this investigation. However, the Environmental Professional performing the review has made a reasonable effort to compensate for mistakes or insufficiencies in the information reviewed that are obvious in light of other information actually known to the Environmental Professional. It should also be recognized that information may be available which was not found or reviewed in this assessment. The conclusions and recommendations are based on a limited review of the site and cannot provide complete assurance that all liabilities were detected. The conclusions and recommendations do not reflect variations in site conditions not visually apparent or which could exist intermediate of the sample locations or which could exist in the future.

SEA, Ltd., has analyzed the information obtained in this investigation in keeping with existing guidelines and regulations, but cannot accurately predict what actions or interpretations any given agency may take presently, or what standards and practices may apply to the site in the future. Should such variations in regulations, guidelines or site conditions become apparent in the future, it will be necessary to reevaluate our conclusions and recommendations based upon additional analyses and onsite observations as appropriate. It should be noted that only the appropriate regulatory agencies can make the final decision with respect to the extent of their jurisdiction. This site assessment report is not intended to provide a regulatory compliance audit. Unless known conditions indicate other durations, it is generally assumed that a site assessment is viable for a period of 180 days.

The pricing for this work is based on the absence of personal liability of the preparers with respect to the work, and the understanding that any claim associated with the work shall look solely to SEA, Ltd.

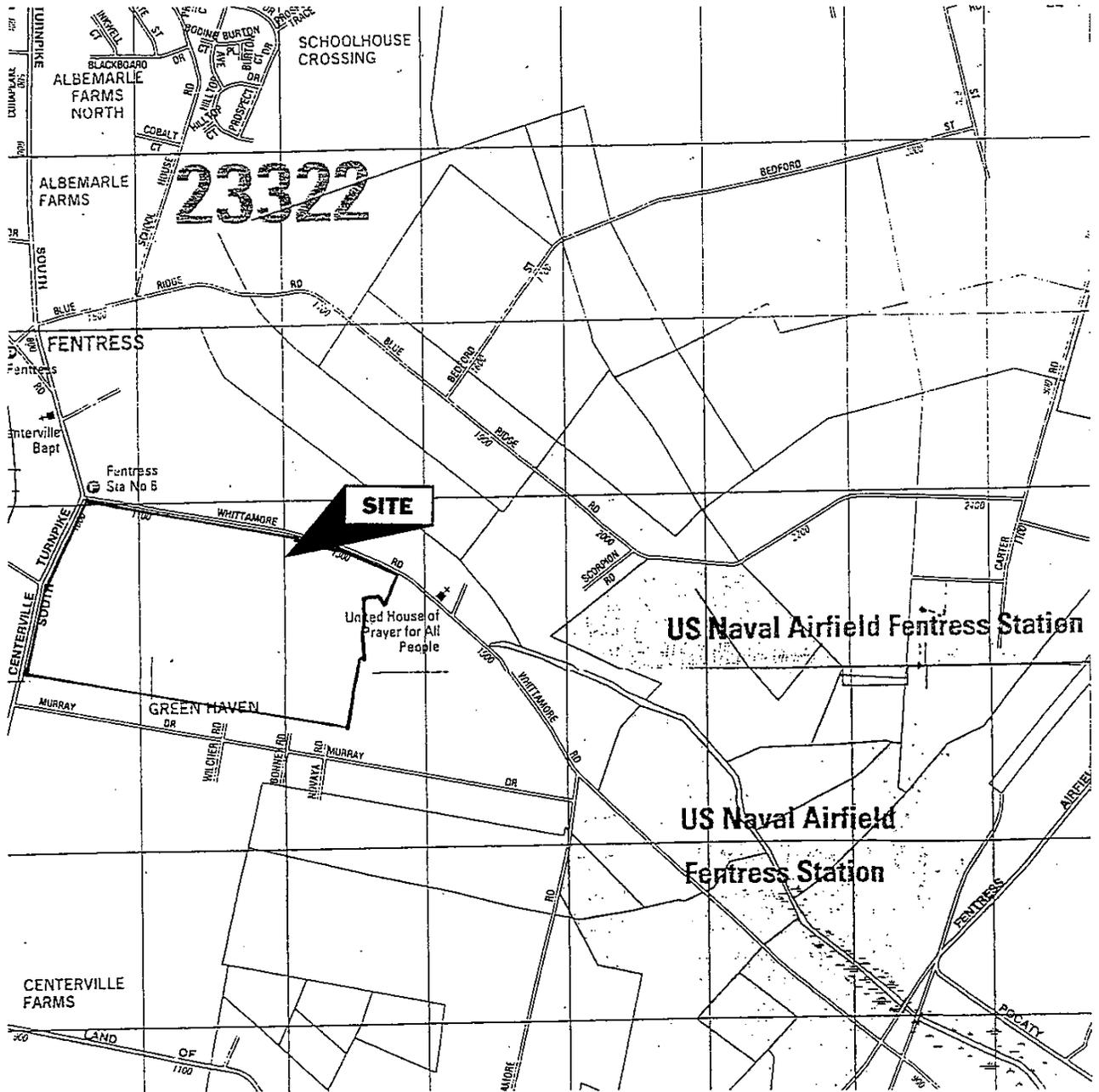
SEA, Ltd., acknowledges that it maintained in full force and effect at the time the services described in the investigation were performed, professional liability (errors and omissions) insurance with minimum policy limits of one million dollars each occurrence and one million dollars in the aggregate. SEA, Ltd., currently maintains such insurance in full force and effect and currently has no plan to terminate such insurance in the foreseeable future. SEA, Ltd.'s liability in connection with this investigation shall cease after a period of three years from the date of completion of the study, and SEA, Ltd.'s total aggregate liability in connection with the investigation shall not exceed that amount actually covered by insurances on any such claim.

Please note that no environmental investigation can wholly eliminate uncertainty regarding the potential for adverse environmental conditions in connection with a property. This study is intended to reduce, but not eliminate, such uncertainty. The investigation recognizes reasonable limits of time and cost, and is designed to provide an appropriate level of inquiry, based on existing industry standards.

APPENDIX SECTION

APPENDIX A - SITE AND SAMPLE LOCATION MAPS

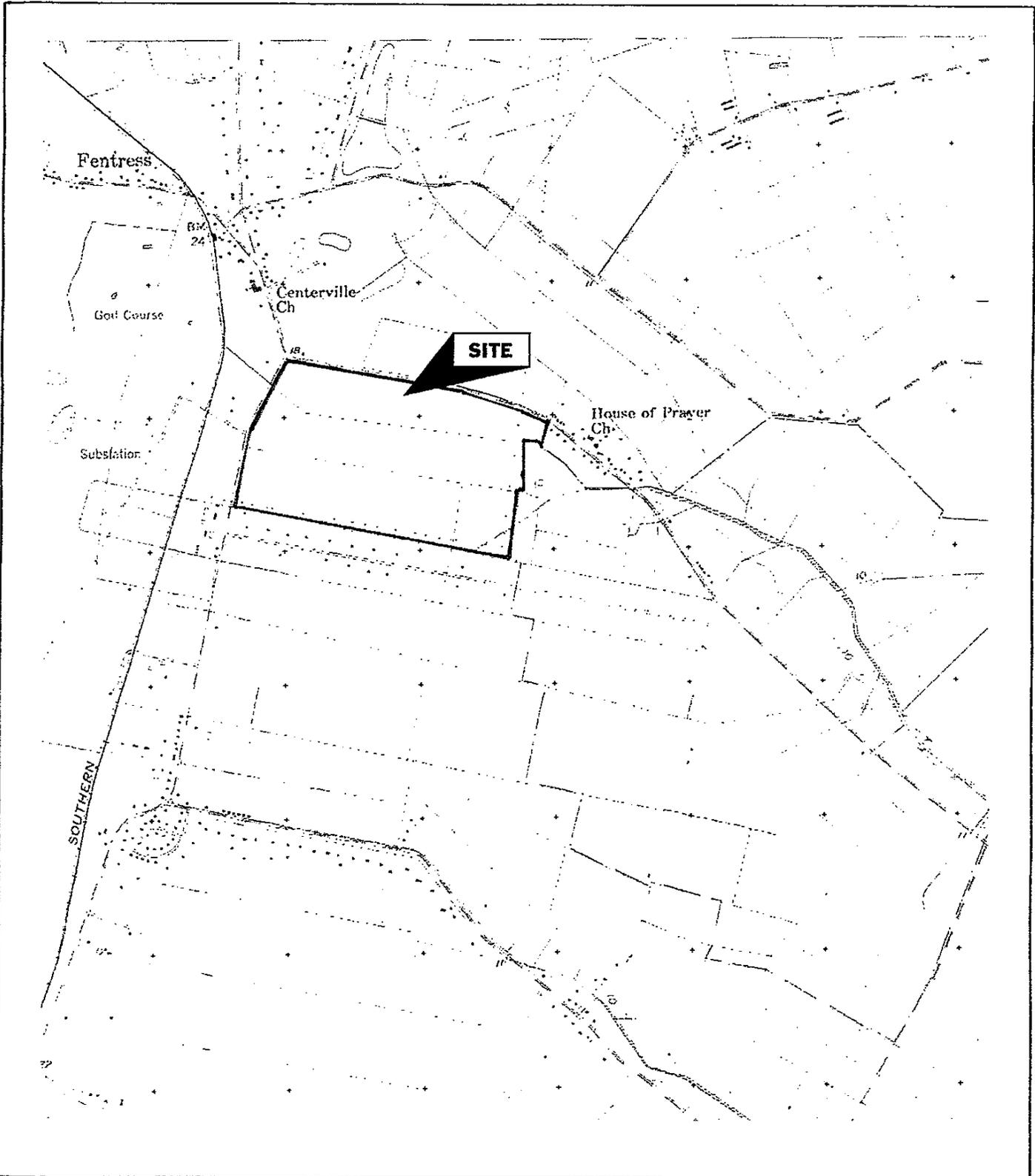
Project Number SEA 01-1359.2



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SITE VICINITY MAP

Project Name: Etheridge Greens Site
 Project Number: SEA 01-1359.2
 Date: 2000
 Scale: 1" = 2,000'
 Source: ADR of Alexandria, Greater Hampton Roads Street Map



**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

TOPOGRAPHIC MAP

Project Name: Etheridge Greens Site
Project Number: SEA 01-1359.2
Date: 1954; photorevised 1986
Scale: 1" = 2,000'
Source: USGS Topographic Quadrangle Map, Fentress
7.5 minute series



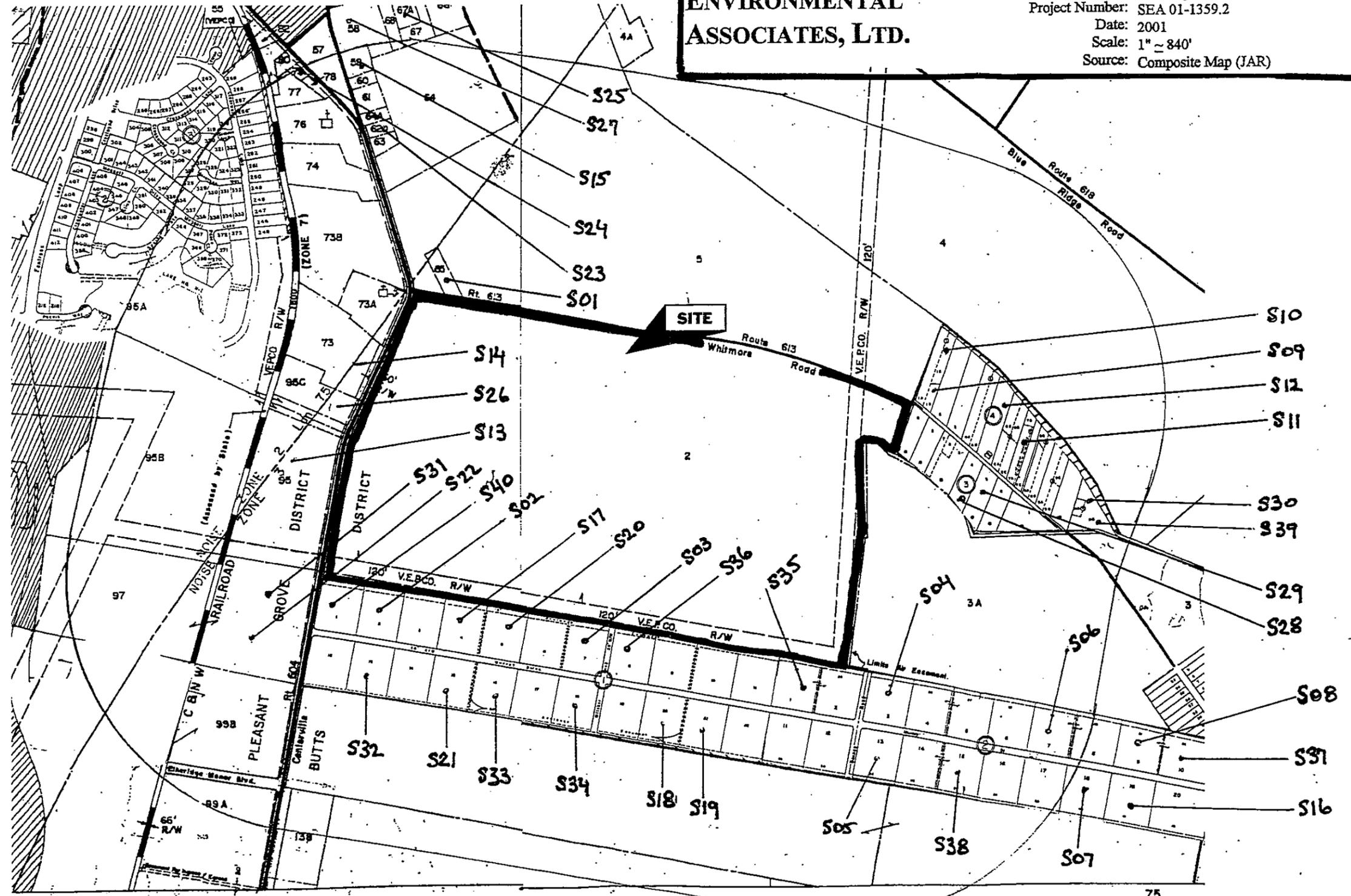
**STOKES
ENVIRONMENTAL
ASSOCIATES, LTD.**

TOPOGRAPHIC MAP
 (with 2,000' study area)
 Project Name: Etheridge Greens Site
 Project Number: SEA 01-1359.2
 Date: 1954; photorevised 1986
 Scale: 1" = 2,000'
 Source: USGS Topographic Quadrangle Map, Fentress
 7.5 minute series

**STOKES
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SAMPLE LOCATION MAP

Project Name: Etheridge Greens Site
Project Number: SEA 01-1359.2
Date: 2001
Scale: 1" = 840'
Source: Composite Map (JAR)



APPENDIX B - STUDY TABLES AND GRAPHS

Project Number SEA 01-1359.2

TABLE 1. SUMMARY OF DRINKING WATER ANALYTES TO BE TESTED FOR BASELINE WATER QUALITY SURVEY -
 ETHRIDGE GREENS, CHESAPEAKE, VIRGINIA

Element	National Primary MCL (a)	National Secondary MCL (a)	Virginia Primary MCL (b)	Virginia Secondary MCL (b)	Virginia Action Level (b)	RCRA Metals	PQL LOQ (c)	MDL (c)	Container Type	Field Screen Type
Antimony (Sb)	0.006	n/a	0.006	n/a	n/a	n/a	0.003	0.001	100 ml HDPE	n/a
Arsenic (As)	0.05	n/a	0.05	n/a	n/a	yes	0.002	0.001	HNO3 <4 C	n/a
Barium (Ba)	2.0	n/a	2.0	n/a	n/a	yes	0.1	0.06	HNO3 <4 C	n/a
Beryllium (Be)	0.004	n/a	0.004	n/a	n/a	n/a	0.0001	0.00002	100 ml HDPE	n/a
Cadmium (Cd)	0.005	n/a	0.005	n/a	n/a	yes	0.0001	0.0001	HNO3 <4 C	n/a
Chromium (Cr)	0.1	n/a	0.1	n/a	n/a	yes	0.0005	0.0002	100 ml HDPE	n/a
Copper (Cu)	n/a	1.0	n/a	n/a	1.3	n/a	0.015	0.001	HNO3 <4 C	n/a
Cyanide (Cn)	0.2	n/a	0.2	n/a	n/a	n/a	0.005	0.005	100 ml HDPE	Interference Check
Fluoride (F)	4.0	2.0	4.0	n/a	n/a	n/a	0.1	0.1	NaOH <4 C	n/a
Iron (Fe)	n/a	0.3	n/a	0.3	n/a	n/a	0.1	0.02	250 ml HDPE <4 C	n/a
Manganese (Mn)	n/a	0.05	n/a	0.05	n/a	n/a	0.03	0.01	100 ml HDPE	n/a
Mercury (Hg)	0.002	n/a	0.002	n/a	n/a	yes	0.0002	0.00004	HNO3 <4 C	n/a
Nickel (Ni)	n/a	n/a	0.1	n/a	n/a	n/a	0.05	0.01	100 ml HDPE	n/a
Lead (Pb)	n/a	n/a	n/a	n/a	0.015	yes	0.001	0.001	HNO3 <4 C	n/a
Selenium (Se)	0.05	n/a	0.05	n/a	n/a	yes	0.002	0.0003	HNO3 <4 C	n/a
Silver (Ag)	0.05	0.10	n/a	n/a	n/a	yes	0.0002	0.00005	100 ml HDPE	n/a
Thallium (Tl)	0.002	n/a	0.002	n/a	n/a	n/a	0.001	0.0003	HNO3 <4 C	n/a
Zinc (Zn)	n/a	5.0	n/a	5.0	n/a	n/a	0.015	0.001	100 ml HDPE	n/a

(a) Safe Drinking Water Act; Appendix 5.5, Inorganic Chemical List [with Maximum Contaminant Levels (MCLs)]

(b) Virginia Waterworks Regulations; Table 2.2, Inorganic Chemicals (with MCLs)

(c) Limit of Quantitative (LOQ), Method of Detectable Limit (MDL) and Practical Quantitative Limit (PQL) supplied by Universal Laboratories

Note: All levels are in milligrams per liter (mg/L) Total Recoverable Metals

Table 2. Elements in Virginia Soils

Element	Range	Mean	Deviation	N
Antimony (Sb)	<1.0 - 2.0	1.0	--	6
Arsenic (As)	0.7 - 18.4	5.1	4.1	16
Barium (Ba)	70 - 1,500	436	338	16
Beryllium (Be)	n.d. - 2.0	0.56	0.89	16
Cadmium (Cd)	--	--	--	--
Chromium (Cr)	7.0 - 300	54	71	16
Copper (Cu)	5.0 - 100	33	33	16
Cyanide *	--	--	--	--
Fluoride*	--	--	--	--
Iron (Fe)	--	--	--	--
Lead (Pb)	n.d. - 300	35	72	16
Manganese (Mn)	--	--	--	--
Mercury (Hg)	0.03 - 0.57	0.108	0.134	16
Nickel (Ni)	n.d. - 100	16	24	16
Selenium (Se)	<0.1 - 2.0	0.43	0.46	16
Silver (Ag)	--	--	--	--
Thallium (Tl)	--	--	--	--
Zinc (Zn)	13 - 2,890	233	735	15

The data represents total concentrations of elements in "native" uncontaminated soils; All concentrations are in parts per million (ppm). The data is for comparison purposes among regions and may serve as baseline data where site-specific data do not exist.

* Not listed

Dragun, James, and Andrew Chaisson. 1991. *Elements in North American Soils*.

Prepared by WRC IV

Table 3. Well Data for Etheridge Greens, Centerville Turnpike at Whittamore Road, Chesapeake, Virginia

SAMPLE	TAX MAP IDENTIFICATION			PROPERTY ADDRESS	Well Records Requested	Well Records Found
	TAX MAP	SECTION	PARCEL			yes/no
S-01	61		65	1109 Whittamore Road	yes	no
S-02	61C	1	2	1105 Murray Drive	yes	no
S-03	61C	1	7	1125 Murray Drive	yes	yes
S-04	61C	2	3	1301 Murray Drive	yes	no
S-05	61C	2	13	1300 Murray Drive	yes	yes
S-06	61C	2	7	1317 Murray Drive	yes	yes
S-07	61C	2	18	1320 Murray Drive	yes	yes
S-08	61C	2	9	1325 Murray Drive	yes	yes
S-09	62A	4	1B	1405 Whittamore Road	yes	yes
S-10	62A	4	1C	1407 Whittamore Road	yes	yes
S-11	62A	4	7A	1441 Whittamore Road	yes	no
S-12	62A	4	5	1433 Whittamore Road	yes	yes
S-13	61		95	1104 Centerville Turnpike S	yes	yes
S-14	61		73	1020 Centerville Turnpike S	yes	yes
S-15	61		59	815 Centerville Turnpike S	yes	no
S-16	61C	2	19	1324 Murray Drive	yes	yes
S-17	61C	1	4	1113 Murray Drive	yes	no
S-18	61C	1	20	1204 Murray Drive	yes	yes
S-19	61C	1	21	1208 Murray Drive	yes	yes
S-20	61C	1	5	1117 Murray Drive	yes	yes
S-21	61C	1	15	1112 Murray Drive	yes	yes
S-22	61		99B	1224 Centerville Turnpike S	yes	no
S-23	61		62	905 Centerville Turnpike	yes	no
S-24	61		78	1441 Fentress Road	yes	no
S-25	61		67	1521 Blue Ridge Road	yes	no
S-26	61		95C	1004 Centerville Turnpike S	yes	no
S-27	61		58	1505 Blue Ridge Road	yes	no
S-28	62A	3	5	1420 Whittamore Road	yes	no
S-29	62A	3	3	1436 Whittamore Road	yes	yes
S-30	62A	4	11A	1469 Whittamore Road	yes	no
S-31	61		99A	1204 Whittamore Road	yes	yes
S-32	61C	1	13	1104 Murray Drive	yes	yes
S-33	61C	1	16	1116 Murray Drive	yes	yes
S-34	61C	1	18	1124 Murray Drive	yes	yes
S-35	61C	2	1	1215 Murray Drive	yes	yes
S-36	61C	1	8	1201 Murray Drive	yes	yes
S-37	61C	2	10	1329 Murray Drive	yes	no
S-38	61C	2	15	1308 Murray Drive	yes	no
S-39	62A	4	11B	1473 Whittamore Road	yes	yes
S-40	61C	1	1	1101 Murray Drive	yes	no
QC-1	61		95C	1004 Centerville Turnpike S	yes	no
QC-2	62A	3	5	1420 Whittamore Road	yes	no
QC-3	62A	3	3	1436 Whittamore Road	yes	no

Table 4. Summary of water well test results for Etheridge Greens, Centerville Turnpike at Whittamore Road, Chesapeake, Virginia.
(Sampling between November and December 2001)

SAMPLE	Total Depth	Well Screened Interval	Selection Criteria	Groundwater Test Results (mg/L)																	
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Cyanide	Fluoride	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
S-01			x	<	0.003	<	<	<	<	<	<	<	<	0.002	<	<	<	<	<	<	<
S-02			x	<	<	<	<	<	<	0.069	<	0.17	<	0.001	<	<	<	<	<	0.001	<
S-03			x	<	<	<	<	0.0001	<	<	<	0.16	0.15	0.002	<	0.0007	<	<	<	0.002	<
S-04			x	<	<	<	<	0.0001	<	<	<	0.23	0.27	<	<	<	<	<	<	0.002	<
S-05	80'	75'-80'	b	<	<	<	<	0.0001	<	<	<	0.12	5.92	<	0.28	<	<	<	<	0.001	<
S-06	48'	43'-48'	a	<	<	<	<	<	<	<	<	0.23	7.50	<	0.23	<	<	<	<	0.001	<
S-07	80'	65'-80'	b	<	<	<	<	0.0002	<	0.051	<	0.12	0.16	<	<	<	<	<	<	0.002	<
S-08	32'	25'-32'	a	<	<	<	<	0.0001	<	<	<	0.25	<	<	<	<	<	<	<	<	<
S-09	55'	40'-55'	a	<	<	<	<	0.0002	<	<	<	0.12	<	<	<	<	<	<	<	0.001	<
S-10	41'	20'-40'	a	<	<	<	<	0.0001	<	<	<	<	0.32	<	<	<	<	<	<	<	<
S-11			x	<	<	<	<	<	<	0.032	<	0.10	0.80	<	0.08	<	<	<	<	0.001	0.021
S-12			x	<	<	<	<	0.0002	<	<	<	0.11	<	0.001	<	<	<	<	<	0.001	<
S-13	105'	95'-105'	c	<	<	<	<	0.0001	0.001	<	<	<	0.38	<	0.04	<	<	<	<	<	<
S-14	80'	70'-80'	b	<	<	<	<	0.0002	<	<	<	<	1.97	<	0.07	<	<	<	<	<	<
S-15			x	<	0.004	<	<	0.0001	0.001	<	<	<	<	0.003	<	<	<	<	<	<	<
S-16	90'	85'-90'	b	<	<	<	<	0.0001	<	<	<	0.17	<	0.002	<	<	<	<	<	<	<
S-17			x	<	<	<	<	<	<	<	<	0.16	<	0.001	<	<	<	<	<	<	<
S-18	80'	67'-80'	b	<	<	<	<	<	<	<	<	0.25	0.32	<	<	<	<	<	<	<	<
S-19	50'	40'-50'	a	<	<	<	<	<	0.001	1.623	<	0.19	1.07	0.006	0.11	<	<	<	0.0003	<	<
S-20			x	<	<	<	<	<	<	<	<	0.18	0.27	<	<	<	<	<	<	0.001	<
S-21			x	<	<	<	<	<	<	<	<	0.20	0.19	<	<	<	<	<	<	<	<
S-22			x	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
S-23			x	<	<	<	<	0.0002	<	0.115	<	<	<	0.005	<	<	<	<	<	<	<
S-24	85'		x	<	<	<	<	<	<	<	<	<	3.20	0.002	0.23	<	<	<	<	<	<
S-25	93'		x	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
S-26			x	<	<	<	0.0005	<	<	0.402	<	<	5.53	0.009	0.170	<	<	<	<	<	0.040
S-27	42'		x	<	<	<	0.0008	0.0005	<	<	<	<	1.99	<	0.26	<	<	<	<	<	0.034
S-28			x	<	<	<	<	<	<	<	<	0.15	1.17	0.001	0.290	<	<	<	<	<	<
S-29			x	<	<	<	<	0.0002	<	<	<	0.17	<	0.010	<	<	<	<	<	<	<
S-30	42'	37'-42'	a	<	<	<	<	<	<	0.030	<	0.21	1.14	<	0.10	<	<	<	<	<	<
S-31			x	<	<	<	<	<	<	<	<	0.17	1.47	0.001	<	<	<	<	<	<	0.036
S-32	122'	107'-122'	c	<	<	<	<	<	<	<	<	0.24	<	<	<	<	<	<	<	<	<
S-33			x	<	<	<	<	0.0001	<	<	<	0.24	0.22	<	<	<	<	<	<	<	<
S-34	75'		x	<	<	<	<	0.0001	<	<	<	0.26	0.31	0.004	<	<	<	<	<	<	0.021
S-35	43'	38'-43'	a	<	<	<	<	0.0004	<	<	<	0.29	<	<	<	<	<	<	<	<	0.026
S-36			x	<	<	<	<	<	<	<	<	0.29	0.23	<	<	<	<	<	<	<	<
S-37	53'	42'-53'	a	<	<	<	<	0.0001	0.001	<	<	0.37	<	<	<	<	<	<	<	0.008	<
S-38			x	<	<	<	<	0.0004	<	1.540	<	0.36	<	0.003	<	<	<	<	<	<	<
S-39			x	<	<	<	<	<	0.008	0.447	<	0.24	0.24	0.008	<	<	<	<	0.0004	<	0.040
S-40	123'	110'-123'	c	<	<	<	<	<	<	<	<	0.24	0.19	<	<	<	<	<	<	<	<
QC-1 * (S-26)			x	<	<	<	0.0005	<	<	0.362	<	<	5.67	0.002	0.180	<	<	<	<	<	0.040
QC-2 * (S-28)			x	<	<	<	<	<	<	<	<	0.18	1.12	0.001	0.263	<	<	<	<	<	<
QC-3 * (S-29)			x	<	<	<	<	0.0002	<	<	<	0.17	<	0.001	<	<	<	<	<	<	<

Notes for Table 4 corresponds to the sample point in parentheses
 Bold indicates exceedenc of a water quality regulatory benchmark (from Table 1).
 Sampling points were selected using a stratified random method, to
 assure representation of all well depths and all geographic areas

Selection Criterion	Interval	# of Wells
a	20'-50'	8
b	65'-90'	5
c	95'-122'	3
x	geographically selected	24
total selected		40

APPENDIX C - SAMPLING AND ANALYSIS DOCUMENTATION

Project Number SEA 01-1359.2



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0111401

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)

14-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

ATTN:

Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

UL Sample Number: 0111401-001

Sample ID: S-01

Grab Date/Time: 11/30/01 09:48:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 30-Nov-01

Collected By: CLIENT

APPROVED
JDA
11/30/01

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	0.003	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	0.002	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,



UNIVERSAL LABORATORIES

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REPORT OF ANALYSIS

(REPORT DATE)
14-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-002
Sample ID: S-02
Grab Date/Time: 11/30/01 10:23:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 30-Nov-01
Collected By: CLIENT

ATTN:

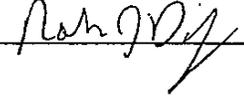
Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	0.001	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.001	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	0.069	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.17	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

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REPORT OF ANALYSIS

(REPORT DATE)

14-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-003

Sample ID: S-03

Grab Date/Time: 11/30/01

10:55:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 30-Nov-01

Collected By: CLIENT

ATTN:

Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	0.002	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.002	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	0.15	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	0.0007	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.16	mg/L	0.1	12/8/01 17:35:00	WK

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Respectfully Submitted,



UNIVERSAL LABORATORIES

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REPORT OF ANALYSIS

(REPORT DATE)

14-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-004

Sample ID: S-04

Grab Date/Time: 11/30/01

11:29:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 30-Nov-01

Collected By: CLIENT

ATTN:

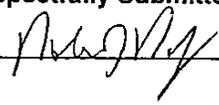
Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.002	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	0.27	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.23	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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REPORT OF ANALYSIS

(REPORT DATE)

14-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-005

Sample ID: S-05

Grab Date/Time: 11/30/01

11:46:00

ATTN:

Composite Start: N/A

Composite Stop: N/A

Received Date: 30-Nov-01

Collected By: CLIENT

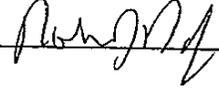
Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.001	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	5.92	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	0.280	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.12	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

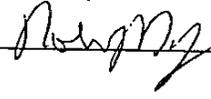
Respectfully Submitted,



Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.23	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0111401

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)

14-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-007
Sample ID: S-07
Grab Date/Time: 11/30/01 12:20:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 30-Nov-01
Collected By: CLIENT

ATTN:

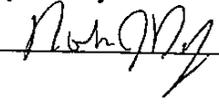
Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0002	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.002	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	0.051	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	0.16	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.12	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

Order ID: 0111401

(REPORT DATE)
14-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-008
Sample ID: S-08
Grab Date/Time: 11/30/01 12:44:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 30-Nov-01
Collected By: CLIENT

ATTN:

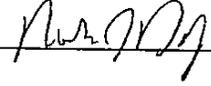
Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.25	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 595-2162
FAX: (757) 865-8014

Order ID: 0111401

(REPORT DATE)

14-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

ATTN:

Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

UL Sample Number: 0111401-009

Sample ID: S-09

Grab Date/Time: 11/30/01 13:04:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 30-Nov-01

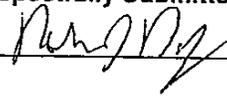
Collected By: CLIENT

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0002	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.001	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.12	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0111401

(REPORT DATE)

14-Jan-02

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-010
Sample ID: S-10
Grab Date/Time: 11/30/01 13:13:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 30-Nov-01
Collected By: CLIENT

ATTN:

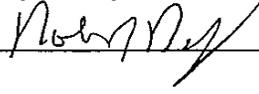
Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	0.32	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0111401

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2182
FAX: (757) 865-8014

(REPORT DATE)

14-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-011

Sample ID: S-11

Grab Date/Time: 11/30/01

13:27:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 30-Nov-01

Collected By: CLIENT

ATTN:

Project ID: Ethridge Green Chesapeake

Site: Drinking Water Wells

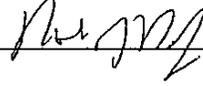
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.001	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	0.032	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	0.80	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	0.080	mg/L	0.03	12/3/01 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	0.021	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.10	mg/L	0.1	12/8/01 17:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0111401

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

(REPORT DATE)

14-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0111401-012

Sample ID: S-12

Grab Date/Time: 11/30/01

13:44:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 30-Nov-01

Collected By: CLIENT

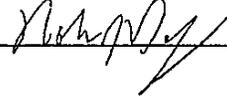
ATTN:

Project ID: Ethridge Green Chesapeake
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/4/01 09:23:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	0.0002	mg/L	0.0001	12/20/01 06:14:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	0.001	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.001	mg/L	0.001	1/2/02 15:03:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/3/01 14:35:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/3/00 16:05:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 16:25:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/4/01 15:20:00	JDA
Flouride	SM-4500 F/C	0.11	mg/L	0.1	12/8/01 17:35:00	WK

Respectfully Submitted,



(757)623-2785



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112013

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)

22-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

RECEIVED
JAN 22 2002

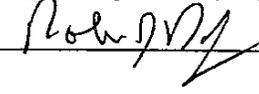
UL Sample Number: 0112013-001
Sample ID: S-13
Grab Date/Time: 12/3/01 9:48:00 AM
Composite Start: N/A
Composite Stop: N/A
Received Date: 03-Dec-01
Collected By: CLIENT

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 7:46:00 AM	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	1/21/02 6:01:00 AM	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 9:04:00 AM	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 6:14:00 AM	JDA
Total Chromium	EPA 200.9	0.001	mg/L	0.0005	12/18/01 6:27:00 AM	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 3:03:00 PM	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00 AM	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 8:03:00 AM	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 6:32:00 AM	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/4/01 2:25:00 PM	MK
Total Iron	SM-3111 B	0.38	mg/L	0.1	12/5/01 11:51:00 AM	MK
Total Manganese	SM-3111 B	0.040	mg/L	0.03	12/6/01 5:18:00 PM	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00 AM	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 4:25:00 PM	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00 AM	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 2:00:00 PM	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00 AM	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/8/01 5:35:00 PM	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

Order ID: 0112013

(REPORT DATE)

22-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112013-002

Sample ID: S-14

Grab Date/Time: 12/3/01

10:05:00 AM

ATTN:

Composite Start: N/A

Composite Stop: N/A

Received Date: 03-Dec-01

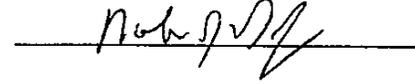
Collected By: CLIENT

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 7:46:00 AM	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	1/21/02 6:01:00 AM	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 9:04:00 AM	JDA
Total Cadmium	EPA 200.9	0.0002	mg/L	0.0001	12/20/01 6:14:00 AM	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 6:27:00 AM	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 3:03:00 PM	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 7:26:00 AM	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 8:03:00 AM	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 6:32:00 AM	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00 AM	MK
Total Iron	SM-3111 B	1.97	mg/L	0.1	12/5/01 11:51:00 AM	MK
Total Manganese	SM-3111 B	0.070	mg/L	0.03	12/6/01 5:18:00 PM	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00 AM	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 1:03:00 PM	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 3:29:00 PM	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 2:00:00 PM	JFH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00 AM	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/8/01 5:35:00 PM	WK

Respectfully Submitted,



(757)623-2785



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112013

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)

22-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112013-003

Sample ID: S-15

Grab Date/Time: 12/3/01

10:31:00 AM

Composite Start: N/A

Composite Stop: N/A

Received Date: 03-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: Drinking Water Wells

Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 7:46:00 AM	JDA
Total Arsenic	EPA 200.9	0.004	mg/L	0.002	1/21/02 6:01:00 AM	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 9:04:00 AM	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 6:14:00 AM	JDA
Total Chromium	EPA 200.9	0.001	mg/L	0.0005	12/18/01 6:27:00 AM	JDA
Total Lead	EPA 200.9	0.003	mg/L	0.001	12/18/01 3:03:00 PM	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00 AM	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 8:03:00 AM	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 6:32:00 AM	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/4/01 2:25:00 PM	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/5/01 11:51:00 AM	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 5:18:00 PM	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00 AM	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 4:25:00 PM	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00 AM	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 2:00:00 PM	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00 AM	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/8/01 5:35:00 PM	WK

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REPORT OF ANALYSIS

(REPORT DATE)

22-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112013-004

Sample ID: S-16

Grab Date/Time: 12/3/01

11:01:00 AM

ATTN:

Composite Start: N/A

Composite Stop: N/A

Received Date: 03-Dec-01

Collected By: CLIENT

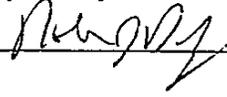
Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 7:46:00 AM	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	1/21/02 6:01:00 AM	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 9:04:00 AM	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	12/20/01 6:14:00 AM	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 6:27:00 AM	JDA
Total Lead	EPA 200.9	0.002	mg/L	0.001	12/18/01 3:03:00 PM	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/5/01 10:03:00 AM	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 8:03:00 AM	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 6:32:00 AM	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/4/01 2:25:00 PM	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/5/01 11:51:00 AM	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 5:18:00 PM	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/5/01 10:39:00 AM	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/4/01 4:25:00 PM	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/4/01 11:03:00 AM	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 2:00:00 PM	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00 AM	JDA
Flouride	SM-4500 F/C	0.17	mg/L	0.1	12/8/01 5:35:00 PM	WK

(757)623-2785

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UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112036

TELEPHONE: (757) 865-0880
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REPORT OF ANALYSIS

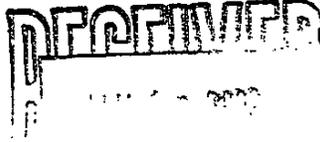
(REPORT DATE)

17-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water



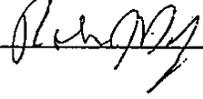
UL Sample Number: 0112036-001
Sample ID: S-17
Grab Date/Time: 12/4/01 11:42:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 04-Dec-01
Collected By: CLIENT

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.001	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	0.16	mg/L	0.1	12/15/01 20:15:00	WK

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UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112036

(REPORT DATE)

17-Jan-02

TELEPHONE: (757) 865-0880
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FAX: (757) 865-8014

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-002

Sample ID: S-18

Grab Date/Time: 12/4/01

11:52:00

ATTN:

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

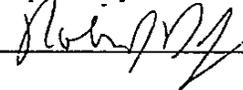
Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	0.32	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	0.25	mg/L	0.1	12/15/01 20:15:00	WK

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UNIVERSAL LABORATORIES

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REPORT OF ANALYSIS

(REPORT DATE)

17-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-003

Sample ID: S-19

Grab Date/Time: 12/4/01

12:01:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: Drinking Water Wells

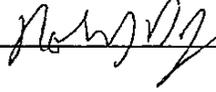
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/11/02 09:04:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	0.001	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.006	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	0.0003	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	1.623	mg/L	0.015	12/7/01 14:50:00	MK
Total Iron	SM-3111 B	1.07	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.110	mg/L	0.03	12/10/01 11:48:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/7/01 13:11:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	0.19	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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REPORT OF ANALYSIS

(REPORT DATE)
17-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-004

Sample ID: S-20

Grab Date/Time: 12/4/01

12:24:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: Drinking Water Wells

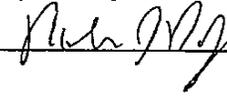
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.001	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	0.27	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	0.18	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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REPORT OF ANALYSIS

(REPORT DATE)

17-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-005

Sample ID: S-21

Grab Date/Time: 12/4/01

12:32:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: Drinking Water Wells

Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	0.19	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	0.20	mg/L	0.1	12/15/01 20:15:00	WK

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Respectfully Submitted,



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112036

(REPORT DATE)

17-Jan-02

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REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-006

Sample ID: S-22

Grab Date/Time: 12/4/01

12:41:00

ATTN:

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

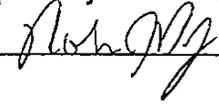
Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112036

(REPORT DATE)

17-Jan-02

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-007

Sample ID: S-23

Grab Date/Time: 12/4/01

12:53:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: Drinking Water Wells

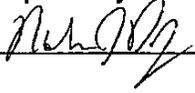
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/27/01 16:13:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0002	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.005	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	0.115	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112036

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)

17-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-008

Sample ID: S-24

Grab Date/Time: 12/4/01

14:12:00

ATTN:

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

Project ID: SEA01-1359.1

Site: Drinking Water Wells

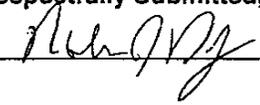
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.002	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	3.20	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.230	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/4/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112036

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)

17-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112036-009

Sample ID: S-25

Grab Date/Time: 12/4/01

14:27:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 04-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: Drinking Water Wells

Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	12/18/01 15:03:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112053

(REPORT DATE)

17-Jan-02

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

RECEIVED
JAN 17 2002

UL Sample Number: 0112053-001
Sample ID: S-26
Grab Date/Time: 12/5/01 09:34:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 05-Dec-01
Collected By: CLIENT

ATTN:

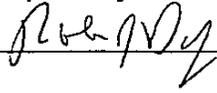
Project ID: SEA01-1359.1
Site: SEA 01-1359.1
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	0.0005	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.009	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	0.402	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	5.53	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.170	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	0.040	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

Order ID: 0112053

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112053-002

Sample ID: S-27

Grab Date/Time: 12/5/01

10:01:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 05-Dec-01

Collected By: CLIENT

ATTN:

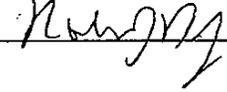
Project ID: SEA01-1359.1
Site: SEA 01-1359.1
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	0.0008	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0005	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	1.99	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.260	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	0.034	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112053

(REPORT DATE)

17-Jan-02

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112053-003

Sample ID: QC-1

Grab Date/Time: 12/5/01

09:34:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 05-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: SEA 01-1359.1

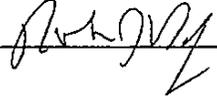
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	0.0005	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.002	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	0.362	mg/L	0.015	12/6/01 11:34:00	MK
Total Iron	SM-3111 B	5.67	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.180	mg/L	0.03	12/6/01 17:18:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/7/01 10:35:00	MK
Total Zinc	SM-3111 B	0.040	mg/L	0.015	12/6/01 13:03:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/6/01 15:29:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/7/01 10:30:00	JDA
Flouride	SM-4500 F/C	<	mg/L	0.1	12/15/01 20:15:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

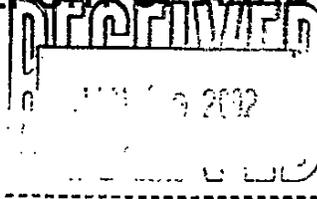
Order ID: 0112101

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS



TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-001
Sample ID: S-28
Grab Date/Time: 12/6/01 13:56:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

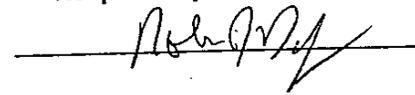
ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/13/01 09:51:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.001	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/26/01 09:57:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	1.17	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.290	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.15	mg/L	0.1	12/18/01 19:35:00	WK

Respectfully Submitted,



(757)623-2785



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-002
Sample ID: S-29
Grab Date/Time: 12/6/01 14:06:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

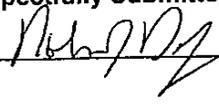
ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0002	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.010	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/26/01 09:57:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.17	mg/L	0.1	12/18/01 19:35:00	WK

Respectfully Submitted,



(757)623-2785



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

(REPORT DATE)

17-Jan-02

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-003
Sample ID: S-30
Grab Date/Time: 12/6/01 14:17:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

ATTN:

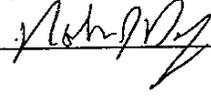
Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/26/01 09:57:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	0.030	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	1.14	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.100	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.21	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

(REPORT DATE)

17-Jan-02

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-004
Sample ID: S-31
Grab Date/Time: 12/6/01 14:43:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

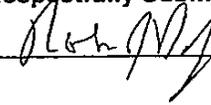
ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.001	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	1.47	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	0.036	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.17	mg/L	0.1	12/18/01 19:35:00	WK

Respectfully Submitted,



(757)623-2785



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-005
Sample ID: S-32
Grab Date/Time: 12/6/01 15:02:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.24	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

TELEPHONE: (757) 865-0880
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FAX: (757) 865-8014

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-006
Sample ID: S-33
Grab Date/Time: 12/6/01 15:11:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	0.22	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.24	mg/L	0.1	12/18/01 19:35:00	WK

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UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

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FAX: (757) 865-8014

(REPORT DATE)
17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-007
Sample ID: S-34
Grab Date/Time: 12/6/01 15:20:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

ATTN:

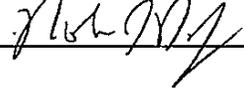
Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.004	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	0.31	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	0.021	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.26	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-008
Sample ID: S-35
Grab Date/Time: 12/6/01 15:31:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0004	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	0.026	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.29	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)

28-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-009

Sample ID: QC-2

Grab Date/Time: 12/6/01

13:56:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 07-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: Drinking Water Wells

Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.001	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	1.12	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	0.263	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.18	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112101

TELEPHONE: (757) 865-0880
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FAX: (757) 865-8014

(REPORT DATE)
17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112101-010
Sample ID: QC-3
Grab Date/Time: 12/6/01 14:06:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 07-Dec-01
Collected By: CLIENT

ATTN:

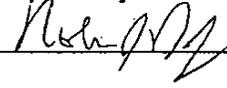
Project ID: SEA01-1359.1
Site: Drinking Water Wells
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.001	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/12/01 13:01:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/11/01 11:40:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/12/01 16:01:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/11/01 10:27:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/11/01 16:19:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/10/01 18:12:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/13/01 13:50:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/11/01 16:00:00	JDA
Flouride	SM-4500 F/C	0.18	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112154

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112154-001
Sample ID: S-36
Grab Date/Time: 12/10/01 14:44:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 11-Dec-01
Collected By: CLIENT

ATTN:

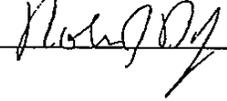
Project ID: SEA01-1359.1
Site: SEA 01-1359.1
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/13/01 13:04:00	MK
Total Iron	SM-3111 B	0.23	mg/L	0.1	12/13/01 13:50:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/14/01 15:42:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/13/01 11:41:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/13/01 12:29:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/17/01 10:50:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/20/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/21/01 14:00:00	JDA
Flouride	SM-4500 F/C	0.29	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112154

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112154-002

Sample ID: S-37

Grab Date/Time: 12/10/01 14:57:00

14:57:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 11-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: SEA 01-1359.1

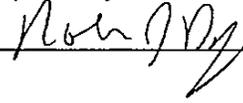
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0001	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	0.001	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	0.008	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/13/01 13:04:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/13/01 13:50:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/14/01 15:42:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/13/01 11:41:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/13/01 12:29:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/17/01 10:50:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/20/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/21/01 14:00:00	JDA
Flouride	SM-4500 F/C	0.37	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

Order ID: 0112154

(REPORT DATE)

17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112154-003

Sample ID: S-38

Grab Date/Time: 12/10/01

15:07:00

Composite Start: N/A

Composite Stop: N/A

Received Date: 11-Dec-01

Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1

Site: SEA 01-1359.1

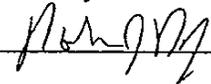
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	0.0004	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/28/01 07:59:00	JDA
Total Lead	EPA 200.9	0.003	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	1.540	mg/L	0.015	12/13/01 13:04:00	MK
Total Iron	SM-3111 B	<	mg/L	0.1	12/13/01 13:50:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/14/01 15:42:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/13/01 11:41:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/13/01 12:29:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/17/01 10:50:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/20/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/21/01 14:00:00	JDA
Flouride	SM-4500 F/C	0.36	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,





UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112154

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2152
FAX: (757) 865-8014

(REPORT DATE)
17-Jan-02

REPORT OF ANALYSIS

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112154-004
Sample ID: S-39
Grab Date/Time: 12/10/01 15:37:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 11-Dec-01
Collected By: CLIENT

ATTN:

Project ID: SEA01-1359.1
Site: SEA 01-1359.1
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 06:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	0.008	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	0.008	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	0.0004	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	0.447	mg/L	0.015	12/13/01 13:04:00	MK
Total Iron	SM-3111 B	0.24	mg/L	0.1	12/13/01 13:50:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/14/01 15:42:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/13/01 11:41:00	MK
Total Zinc	SM-3111 B	0.040	mg/L	0.015	12/13/01 12:29:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/17/01 10:50:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/20/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/21/01 14:00:00	JDA
Flouride	SM-4500 F/C	0.24	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,



UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

Order ID: 0112154

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

(REPORT DATE)
17-Jan-02

TO: STOKES ENVIRONMENTAL
4101 Grandby Street Ste 404
Norfolk VA 23504

UL Sample Number: 0112154-005
Sample ID: S-40
Grab Date/Time: 12/10/01 16:44:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 11-Dec-01
Collected By: CLIENT

ATTN:

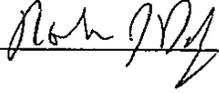
Project ID: SEA01-1359.1
Site: SEA 01-1359.1
Matrix: Drinking Water

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Total Antimony	EPA 200.9	<	mg/L	0.003	1/9/02 07:46:00	JDA
Total Arsenic	EPA 200.9	<	mg/L	0.002	12/14/01 07:41:00	JDA
Total Beryllium	EPA 200.9	<	mg/L	0.0001	1/14/02 08:53:00	JDA
Total Cadmium	EPA 200.9	<	mg/L	0.0001	1/15/02 07:22:00	JDA
Total Chromium	EPA 200.9	<	mg/L	0.0005	12/18/01 06:27:00	JDA
Total Lead	EPA 200.9	<	mg/L	0.001	1/7/02 07:44:00	JDA
Total Selenium	EPA 200.9	<	mg/L	0.002	12/17/01 07:26:00	JDA
Total Silver	EPA 200.9	<	mg/L	0.0002	1/10/02 08:03:00	JDA
Total Thallium	EPA 200.9	<	mg/L	0.001	1/16/02 06:32:00	JDA
Total Copper	SM-3111 B	<	mg/L	0.015	12/13/01 13:04:00	MK
Total Iron	SM-3111 B	0.19	mg/L	0.1	12/13/01 13:50:00	MK
Total Manganese	SM-3111 B	<	mg/L	0.03	12/14/01 15:42:00	MK
Total Nickel	SM-3111 B	<	mg/L	0.05	12/13/01 11:41:00	MK
Total Zinc	SM-3111 B	<	mg/L	0.015	12/13/01 12:29:00	MK
Total Barium	SM-3111 D	<	mg/L	0.1	12/17/01 10:50:00	MK

Mercury	SM-3112 B	<	mg/L	0.0002	12/20/01 14:00:00	JH
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	12/21/01 14:00:00	JDA
Flouride	SM-4500 F/C	0.24	mg/L	0.1	12/18/01 19:35:00	WK

(757)623-2785

Respectfully Submitted,



CHAIN-OF-CUSTODY



UNIVERSAL LABORATORIES

Company Stokes Environmental Associates
 Street/Box 4101 Granby Street Suite 104
 City/State Norfolk, Virginia 23504
 Phone (757) 623-0771 Fax (757) 623-2785
 Contact: Robert Crumpton
 Job No. SP-01-1359.1 / P.O. No.

20 Research Drive
 Hampton, VA 23666
 Phone: (757) 865-0880
 Fax: (757) 865-8014

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required						Log Number		
						Preservative	Metals	Fluoride	Cyanide	Preservative	Preservative		Preservative	Preservative
S-01	3/28/01/0948	WRC	Water	C	Change 0948	X	X	X	X					011/401
S-02	/1023			C	Change 1028	X	X	X	X					
S-03	/1055			C	Change 105	X	X	X	X					
S-04	/1129			C	Change 1131	X	X	X	X					
S-05	/1146			C	Change 1147	X	X	X	X					
S-06	/1204			C	Change 1207	X	X	X	X					
S-07	/1220			C	Change 1227	X	X	X	X					
S-08	/1244			C	Change 1246	X	X	X	X					
S-09	/1304			C	Change 1304	X	X	X	X					
S-10	/1313			C	Change 1316	X	X	X	X					
S-11	/1327			C	Change 1328	X	X	X	X					
S-12	3/28/01/1344	WRC	Water	C	Change 1348	X	X	X	X					

Comments: Cyanide Samples Field Tested: S-01 through S-12 were negative.
 Cooler Temp at LI 40C Pres V >12/22

Possible Hazards: _____ Disposal: Lab Client Charge
 Express Service _____ Express Service Approval _____

Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time
Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time
Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time

Work Order No.	Delivery Order
Trans <input type="checkbox"/>	P.U. <input type="checkbox"/>
Grab <input type="checkbox"/>	Comp <input type="checkbox"/>
Shipping/Delivery Charges	Composite Start
Composite Stop	

CHAIN-OF-CUSTODY



UNIVERSAL LABORATORIES

Company Stokes Environmental Associates
 Street/Box 4101 Grandy Street, Suite 404
 City/State Norfolk Virginia 23504
 Phone (757) 623-0177 Fax (757) 623-2735
 Contact: Robert Grumpton
 Job No. SEA-01-13591 P.O. No.

20 Research Drive
 Hampton, VA 23666
 Phone: (757) 865-0880
 Fax: (757) 865-8014

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required						Log Number	
						Preservative HNO3	Metals	Fluoride 4/0	Preservative NaOH	Preservative	Preservative		Preservative
S-13	3 Dec 01 / 0948	WRC	Water	C	① CN Neg 1033	X	X	X	X				0112013
S-14	/1005			C	① CN Neg 1007	X	X	X	X				
S-15	/1031			C	① CN Neg 1033	X	X	X	X				
S-16	3 Dec 01 / 1101	WRC	Water	C	① CN Neg 1103	X	X	X	X				
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								

Comments: _____
 Due Date: _____
 Cooler Temp at LI 4°C Pres Express Service _____
 Disposal: Lab Client Charge Express Service Approval _____

Relinquished By	Signature	<u>W. Robert Grumpton</u>	Company	<u>SEA</u>	Date/Time	<u>3 Dec 01</u>
Received By	Signature	<u>[Signature]</u>	Company	<u>UC</u>	Date/Time	<u>3 Dec 01 1420</u>
Relinquished By	Signature		Company		Date/Time	
Received By	Signature		Company		Date/Time	
Relinquished By	Signature		Company		Date/Time	
Received By	Signature		Company		Date/Time	

Work Order No. _____
 Delivery Order _____
 Trans P.U. Grab Comp
 Shipping/Delivery Charges _____
 Composite Start _____ Composite Stop _____

CHAIN-OF-CUSTODY

Company Stokes Environmental Associates
 Street/Box 4101 Granby Street, Suite 404
 City/State Norfolk Virginia 23504
 Phone (757)623-0177 Fax (757)623-2785
 Contact: Robert Compton
 Job No. SEA01-1359.1 / P.O. No.

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required						Log Number	
						Preservative HNO3		Preservative HNO3					
S-17	4 Dec 01/142	WRCB	Water	C	Change 1143	X	X	X	X	X	X	X	0112036
S-18	/1152			C	Change 1154	X	X	X	X	X	X	X	
S-19	/1201			C	Change 1202	X	X	X	X	X	X	X	
S-20	/1224			C	Change 1226	X	X	X	X	X	X	X	
S-21	/1232			C	Change 1235	X	X	X	X	X	X	X	
S-22	/1241			C	Change 1244	X	X	X	X	X	X	X	
S-23	/1253			C	Change 1255	X	X	X	X	X	X	X	
S-24	/1412			C	Change 1415	X	X	X	X	X	X	X	
S-25	4 Dec 01/127	WRCB	Water	C	Change 1431	X	X	X	X	X	X	X	
S-26				C									
S-27				C									
S-28				C									

UNIVERSAL LABORATORIES

20 Research Drive
 Hampton, VA 23666
 Phone: (757) 865-0880
 Fax: (757) 865-8014



Comments: Cyanide Samples Field Tested: S-17 through S-12 were negative.
 Cooler Temp at LI 9°C Pres V 527 12
 Due Date: _____
 Express Service _____
 Express Service Approval _____

Relinquished By	Signature	Company	Date/Time	Disposal: Lab <input type="checkbox"/> Client <input type="checkbox"/> Charge <input type="checkbox"/>
Received By	<u>Robert Compton</u>	<u>SEA</u>	<u>4 Dec 01 1529</u>	
Relinquished By	Signature	Company	Date/Time	
Received By	<u>[Signature]</u>	<u>UL</u>	<u>04 DEC 01 1529</u>	
Relinquished By	Signature	Company	Date/Time	
Received By	Signature	Company	Date/Time	
Relinquished By	Signature	Company	Date/Time	
Received By	Signature	Company	Date/Time	

Work Order No. _____
 Delivery Order _____
 Trans P.U. Grab Comp
 Shipping/Delivery Charges _____
 Composite Start _____ Composite Stop _____

CHAIN-OF-CUSTODY



UNIVERSAL LABORATORIES

Company Stokes Environmental Associates
 Street/Box 4101 Greasy Street, Suite 404
 City/State Norfolk, Virginia 23504
 Phone (757) 623-0777 Fax (757) 623-2785
 Contact: Robert Crompton
 Job No. SEA 014357.1 P.O. No.

20 Research Drive
 Hampton, VA 23666
 Phone: (757) 865-0880
 Fax: (757) 865-8014

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required						Log Number	
						Preservative Metals HMs	Preservative Florida 4/0c	Preservative Cyanide NACH	Preservative	Preservative	Preservative		Preservative
S-28	6 Dec 01/1356	WRC	Water	C	Change 1358	X	X	X					0112101
S-29	/1406			C	Change 1409	X	X	X					
S-30	/1417			C	Change 1421	X	X	X					
S-31	/1443			C	Change 1446	X	X	X					
S-32	/1502			C	Change 1504	X	X	X					
S-33	/1511			C	Change 1513	X	X	X					
S-34	/1520			C	Change 1523	X	X	X					
S-35	/1531			C	Change 1533	X	X	X					
QC-2	/1556			C	Change 1558	X	X	X					
QC-3	6 Dec 01/1406	WRC	Water	C	Change 1409	X	X	X					

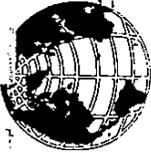
Comments: Cyanide Samples Field Tested! S-28 through S-35 were negative.

dispose of QC4-QC5 3/24/02 Cooler Temp at LI 2.00 Pres 2/2/12

Due Date: _____ Express Service _____ Express Service Approval _____

Relinquished By	Signature	Company	Date/Time
Relinquished By	<u>W. Robert Crompton</u>	<u>SEA</u>	<u>Dec 01/13</u>
Received By	<u>Jane / Kidd</u>	<u>SEA</u>	<u>Dec 01/13</u>
Relinquished By	<u>Gene A. Kelli</u>	<u>SEA</u>	<u>Dec 01/13</u>
Received By	<u>J.S. O'S</u>	<u>UL</u>	<u>Dec 01/13</u>
Relinquished By		<u>Company</u>	<u>Date/Time</u>
Received By		<u>Company</u>	<u>Date/Time</u>

Work Order No.	
Delivery Order	
Trans <input type="checkbox"/>	P.U. <input type="checkbox"/>
Grab <input type="checkbox"/>	Comp <input type="checkbox"/>
Shipping/Delivery Charges	
Composite Start	Composite Stop



CHAIN-OF-CUSTODY

UNIVERSAL LABORATORIES

Company Stokes Environmental Associates
 Street/Box 4101 Granby Street, Suite 110A
 City/State Norfolk, Virginia 23504
 Phone (757) 623-0777 Fax (757) 623-2785
 Contact: Robert Crumpton
 Job No. SEA 01-1359.1 / P.O. No.

20 Research Drive
 Hampton, VA 23666
 Phone: (757) 865-0880
 Fax: (757) 865-8014

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required						Log Number	
						Preservative Metals HMs	Preservative H2O2	Fluoride & H2O	Preservative Hard	Preservative	Preservative		Preservative
S-36	10 Dec 01 / 1444	WRC	Water	C	CM 1444	X	X	X	X				0112154
S-37	/ 1457			C	CM 1457	X	X	X	X				
S-38	/ 1507			C	CM 1510	X	X	X	X				
S-39	/ 1537			C	CM 1540	X	X	X	X				
S-40	10 Dec 01 / 1644	WRC	Water	C	CM 1647	X	X	X	X				
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								
				C	G								

Comments: Samples S-36-S-40 negative for interference.

Possible Hazards: _____
 Cooler Temp at LI 10C Pres V 62 / 712
 Disposal: Lab Client Charge

Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time
Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time
Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time

Work Order No. _____
 Delivery Order _____
 Trans P.U. Grab Comp
 Shipping/Delivery Charges _____
 Composite Start _____ Composite Stop _____

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.2¹³⁵⁹ 30 November 2001

Sample Location	Sample Number	Date	Time	Notes
1109 Whitmore	S-01	30 Nov 01	0948	OK by Firechief Taken from faucet/outside CN negative @ 0951
1101 Murray				No one home.
1105 Murray	S-02	30 Nov 01	1023	OK by owner Taken from faucet/outside CN negative @ 1028
1104 Murray				No one home.
1113 Murray				No one home.
1120 Murray				No one home.
1124 Murray				No one home.
1125 Murray	S-03	30 Nov 01	1055	OK by owner Taken from faucet/outside CN negative @ 1057
1204 Murray				Owner declined
1208 Murray				No one home.
1213 Murray				No one home.
1215 Murray				No one home.
1301 Murray	S-04	30 Nov 01	1129	OK by owner Taken from faucet/outside CN negative @ 1131
1305 Murray				No one home.

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359, 2nd 30 November 2001

Sample Location	Sample Number	Date	Time	Notes
1300 Murray	S-05	30 Nov 01	1146	ok by owner Taken from faucet/outside CN negative @ 1147 Sulfur Odor at time of Sampling
1313 Murray				No one home.
1316 Murray				No one home.
1317 Murray	S-06	30 Nov 01	1204	ok by owner Taken from faucet/outside CN negative @ 1207
1320 Murray	S-07	30 Nov 01	1220	ok by owner Taken from faucet/outside CN negative @ 1227
1324 Murray				No one home.
1325 Murray	S-08	30 Nov 01	1224	ok by owner Taken from faucet/outside CN negative @ 1246
1403 Whitamore				No one home.
1405 Whitamore	S-09	30 Nov 01	1304	ok by owner Taken from faucet/outside CN negative @ 1306
1407 Whitamore	S-10	30 Nov 01	1313	ok by owner Taken from faucet/outside CN negative @ 1316
1441 Whitamore	S-11	30 Nov 01	1327	ok by owner Taken from faucet/outside CN Negative @ 1328
1440 Whitamore				owner declined.
1433 Whitamore	S-12	30 Nov 01	1344	ok by Pastor's wife Taken from faucet/outside CN negative @ 1345

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.2 ^{under} 3 December 2001

Sample Location	Sample Number	Date	Time	Notes
908 Centerville	/	/	/	The church is now on City Water.
909 Centerville	/	/	/	No one home.
1104 Centerville	S-13	3 Dec 01	0948	Ok by owner Taken from faucet/outside CN negative @ 0950
1020 Centerville	S-14	3 Dec 01	1005	Ok by manager Taken from faucet/outside CN negative @ 1007
/	/	/	/	Sul for odor at time of sampling
815 Centerville	S-15	3 Dec 01	1031	Ok by owner Taken from faucet/outside CN negative @ 1033
1513 Blue Ridge	/	/	/	No one home.
1437 Fentress	/	/	/	Dog in fenced yard.
1403 Whittamore	/	/	/	No one home.
1457 Whittamore	/	/	/	No one home.
1469 Whittamore	/	/	/	Could not find residence.
1324 Murray	S-16	3 Dec 01	1101	Ok by owner Taken from faucet/outside CN negative @ 1103
1316 Murray	/	/	/	No one home
1313 Murray	/	/	/	No one home

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.1 4 December 2001

Sample Location	Sample Number	Date	Time	Notes
1101 Murray	/	/	/	No one home.
1104 Murray	/	/	/	No one home.
1120 Murray	/	/	/	No one home.
1113 Murray	S-17	4 Dec 01	1142	Ok by owner Taken from faucet/outside CN negative @ 1143
1201 Murray	S-18	4 Dec 01	1152	Ok by owner Taken from faucet/outside CN negative @ 1154
1208 Murray	S-19	4 Dec 01	1201	Ok by owner Taken from faucet/outside CN negative @ 1202
1121 Murray	/	/	/	No one home.
1117 Murray	S-20	4 Dec 01	1224	Ok by owner Taken from faucet/outside CN negative @ 1226
1112 Murray	S-21	4 Dec 01	1232	Ok by owner Taken from faucet/outside CN negative @ 1235
1224 Centerville	S-22	4 Dec 01	1241	Ok by owner Taken from faucet/outside CN negative @ 1244
909 Centerville	/	/	/	No one home.
905 Centerville	S-23	4 Dec 01	1253	Ok by owner Taken from faucet/outside CN negative @ 1255
1441 Fentress	S-24	4 Dec 01	1412	Ok by owner Taken from faucet/outside CN negative @ 1415
1533 Blue Ridge	/	/	/	No one home.

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.2¹ 5 December 2001

Sample Location	Sample Number	Date	Time	Notes
1004 Centerville	S-26	5 Dec 01	0934	ok by owner Taken from faucet/outside CN negative @ 0941
1004 Centerville	QC-1	5 Dec 01	0934	CN negative @ 0941
1030 Centerville				No one home
909 Centerville				No one home
1505 Blue Ridge	S-27	5 Dec 01	1001	ok by owner Taken from faucet/outside CN negative @ 1014
1513 Blue Ridge				No one home.
1521 Blue Ridge				No one home.
1313 Murray				No one home.
1316 Murray				No one home.
1329 Murray				No one home.
Last Item WRC				

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.1 6 December 2001

Sample Location	Sample Number	Date	Time	Notes
1420 Whittemore	S-28	6 Dec 01	1356	ok by owner Taken from faucet/outside CN negative @ 1358
1420 Whittemore	QC-2	6 Dec 01	1356	CN negative @ 1358
1436 Whittemore	S-29	6 Dec 01	1406	ok by owner Taken from faucet/outside CN negative @ 1409
1436 Whittemore	QC-3	6 Dec 01	1406	CN negative @ 1409
1465 Whittemore				No one home.
1475 Whittemore				No one home.
1469 Whittemore	S-30	6 Dec 01	1417	ok by owner Taken from faucet/outside CN negative @ 1421
1453 Whittemore				No one home.
1451 Whittemore				No one home.
1419 Whittemore				No one home.
1417 Whittemore				No one home.
1513 Whittemore				No one home.
1512 Whittemore				No one home.
1204 Centerville	S-31	6 Dec 01	1443	ok by owner Taken from faucet/outside CN negative @ 1446

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.2 6 December 2001

Sample Location	Sample Number	Date	Time	Notes
1104 Murray	S-32	6 Dec 01	1502	Ok by owner Taken from faucet/outside CP negative @ 1504
1116 Murray	S-33	6 Dec 01	1511	ok by owner Taken from faucet/outside CP negative @ 1513
1124 Murray	S-34	6 Dec 01	1520	ok by owner Taken from faucet/outside CP negative @ 1523
1215 Murray	S-35	6 Dec 01	1531	Ok by owner Taken from faucet/outside CP negative @ 1533
1329 Murray				No one home.
1316 Murray				No one home.
1313 Murray				No one home.
1312 Murray				No one home.
1309 Murray				No one home.
1308 Murray				No one home.
1305 Murray				No one home.
1304 Murray				No one home.
Last item used				

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.2^W 10 December 2001

Sample Location	Sample Number	Date	Time	Notes
833 Centerville				No one home.
901 Centerville				No one home.
909 Centerville				No one home.
1102 Centerville				No one home.
1200 Centerville				No one home
1201 Murray	S-36	10 Dec 01	1444	ok by owner Taken from faucet / outside Cd negative @ 1447
1329 Murray	S-37	10 Dec 01	1457	ok by owner Taken from faucet / outside Cd negative @ 1459
1316 Murray				No one home.
1313 Murray				No one home.
1312 Murray				No one home.
1309 Murray				No one home.
1308 Murray	S-38	10 Dec 01	1507	ok by owner Taken from faucet / outside Cd negative @ 1510
1304 Murray				No one home.
1305 Murray				No one home.

SAMPLING FIELD NOTES:

**DRINKING WATER BASELINE WATER QUALITY INVESTIGATION -
ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA**

SEA 01-1359.1 10 December 2001

Sample Location	Sample Number	Date	Time	Notes
1473 Whitmore	S-39	10 Dec 01	1537	Ok by owner Taken from faucet/outside Col negative @ 1540
1513 Blue Ridge				No one home.
1553 Blue Ridge				No one home.
1219 Murray				No one home.
1220 Murray				No one home.
1216 Murray				No one home.
1212 Murray				No one home.
1209 Murray				No one home.
1101 Murray	S-40	10 Dec 01	1644	Ok by owner Taken from faucet/outside CN negative @ 1647
<i>Last Item Used</i>				