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

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

BASELINE DRINKING WATER QUALITY SURVEY

CONDUCTED AT

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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 — Date: 27 February 2002
Registered Environmental Manager REM 5854

W. Robt Crumpton — Date: 27 February 2002
W. Robert Crumpton IV, REM, Project Manager
Environmental Scientist

Prepared By: Stokes Environmental Associates, Ltd.
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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	[redacted]
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 [redacted]

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 CPM'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

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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 withing 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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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:

Series	Texture	Permeability	Shrink-swell potential
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.

The subject site is situated within the Atlantic Coastal Plain Physiographic Province of Virginia,

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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.

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 is 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) residencies 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.

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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:

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Sample Point Number	QC Sample Number	Property
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.

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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.

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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.

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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 withing 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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EXECUTIVE SUMMARY

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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.

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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:

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Series	Texture	Permeability	Shrink-swell potential
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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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.

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

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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.

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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 is 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.

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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) residencies 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:

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Sample Point Number	QC Sample Number	Property
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.

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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.

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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.

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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.

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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.

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APPENDIX SECTION

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APPENDIX A - SITE AND SAMPLE LOCATION MAPS

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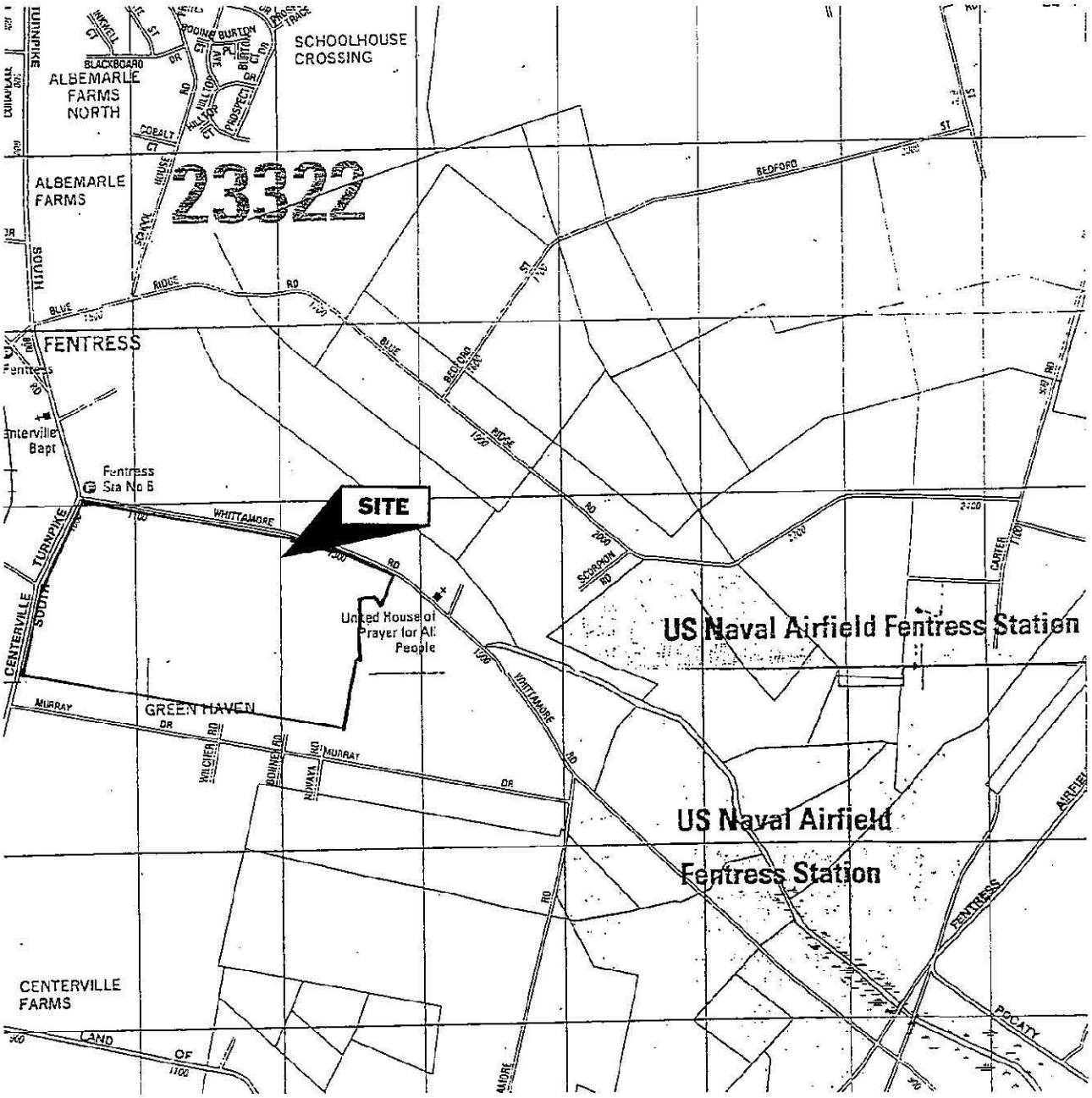
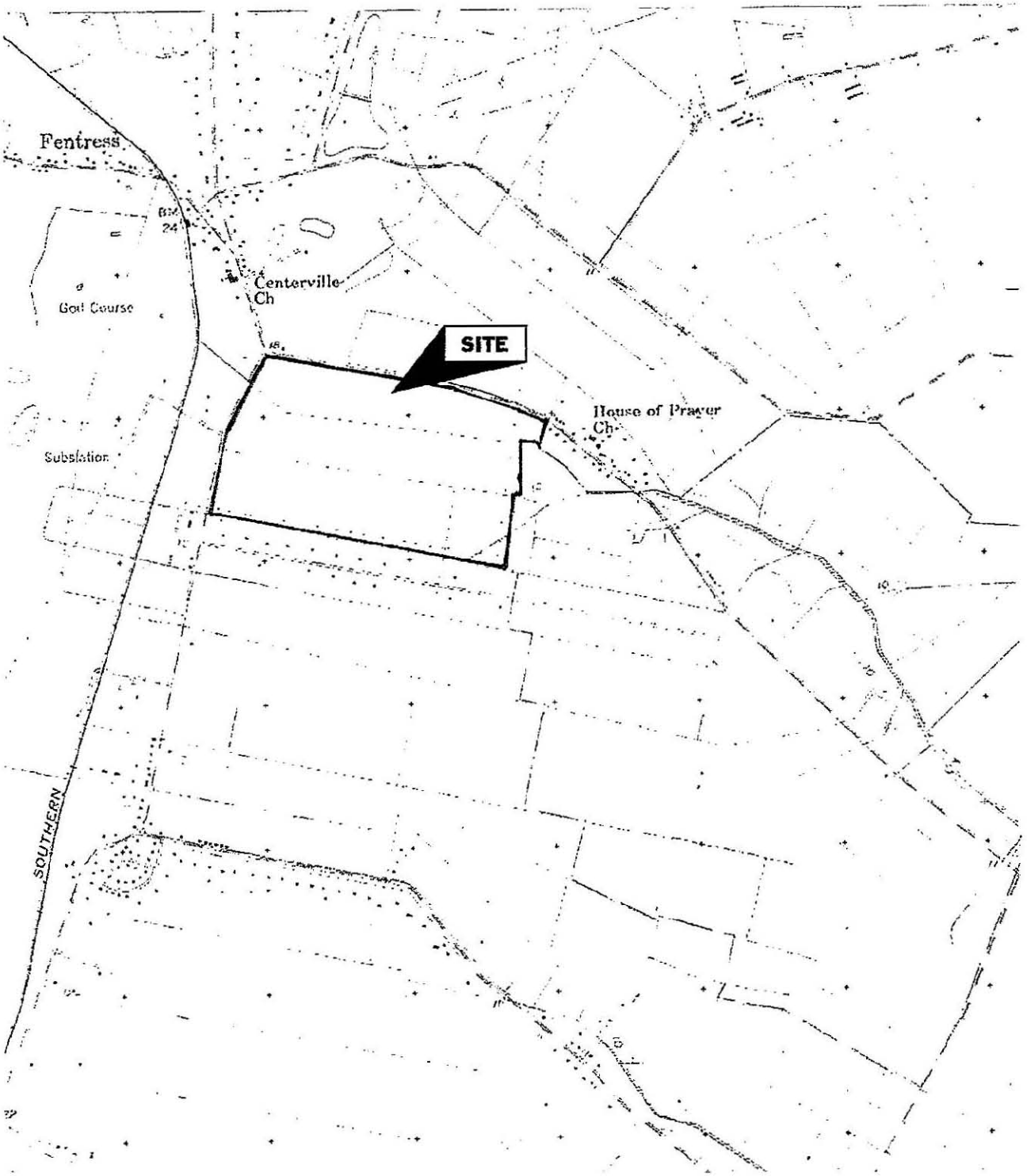


STOKES ENVIRONMENTAL ASSOCIATES, LTD.

SITE VICINITY MAP

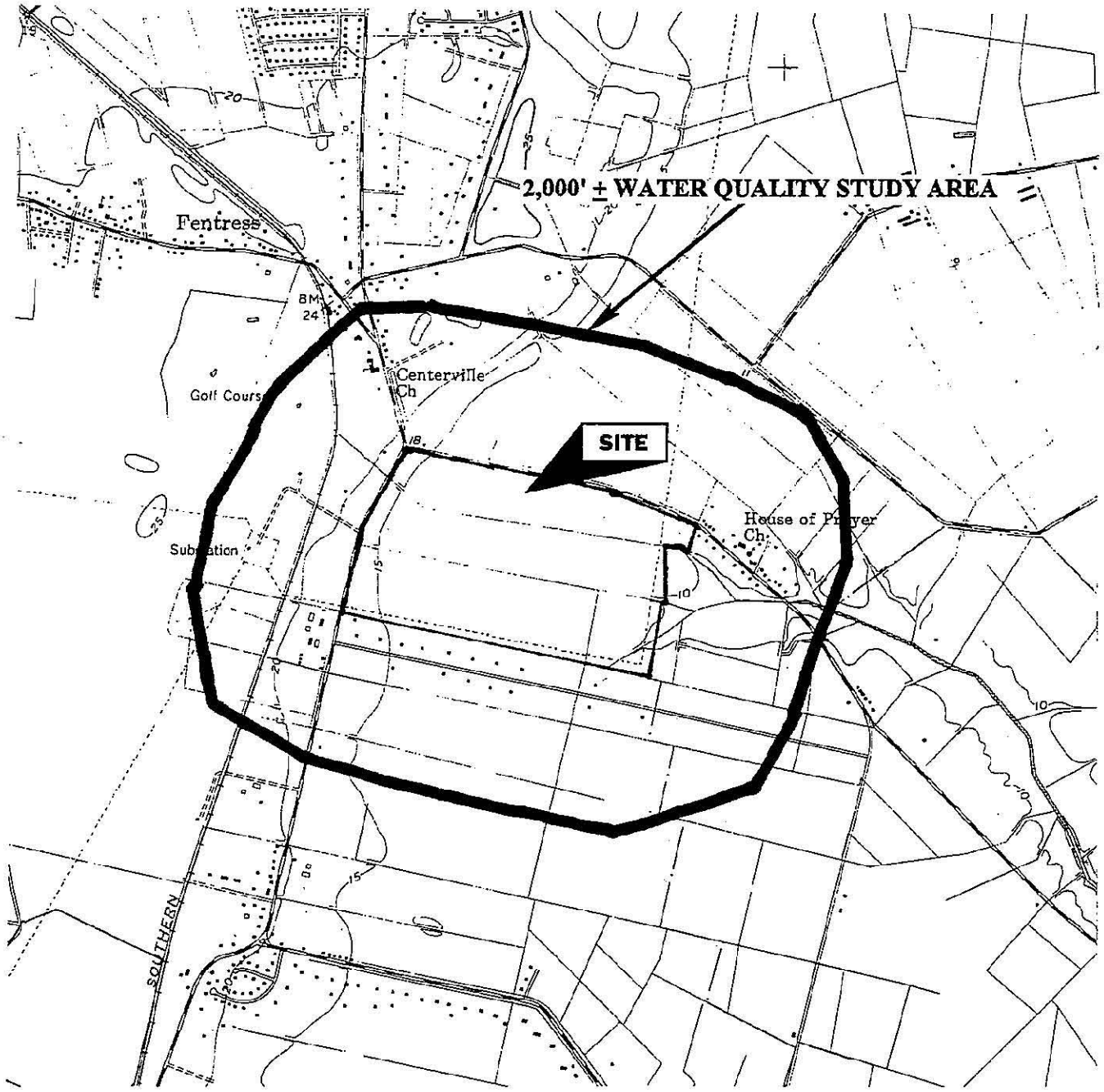
Project Name: Etheridge Greens Site
Project Number: SEA 01-1359.2
Date: 2000
Scale: 1" = 2,000'
Source: ADR of Alexandria, Greater Hampton Roads Street Map



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.

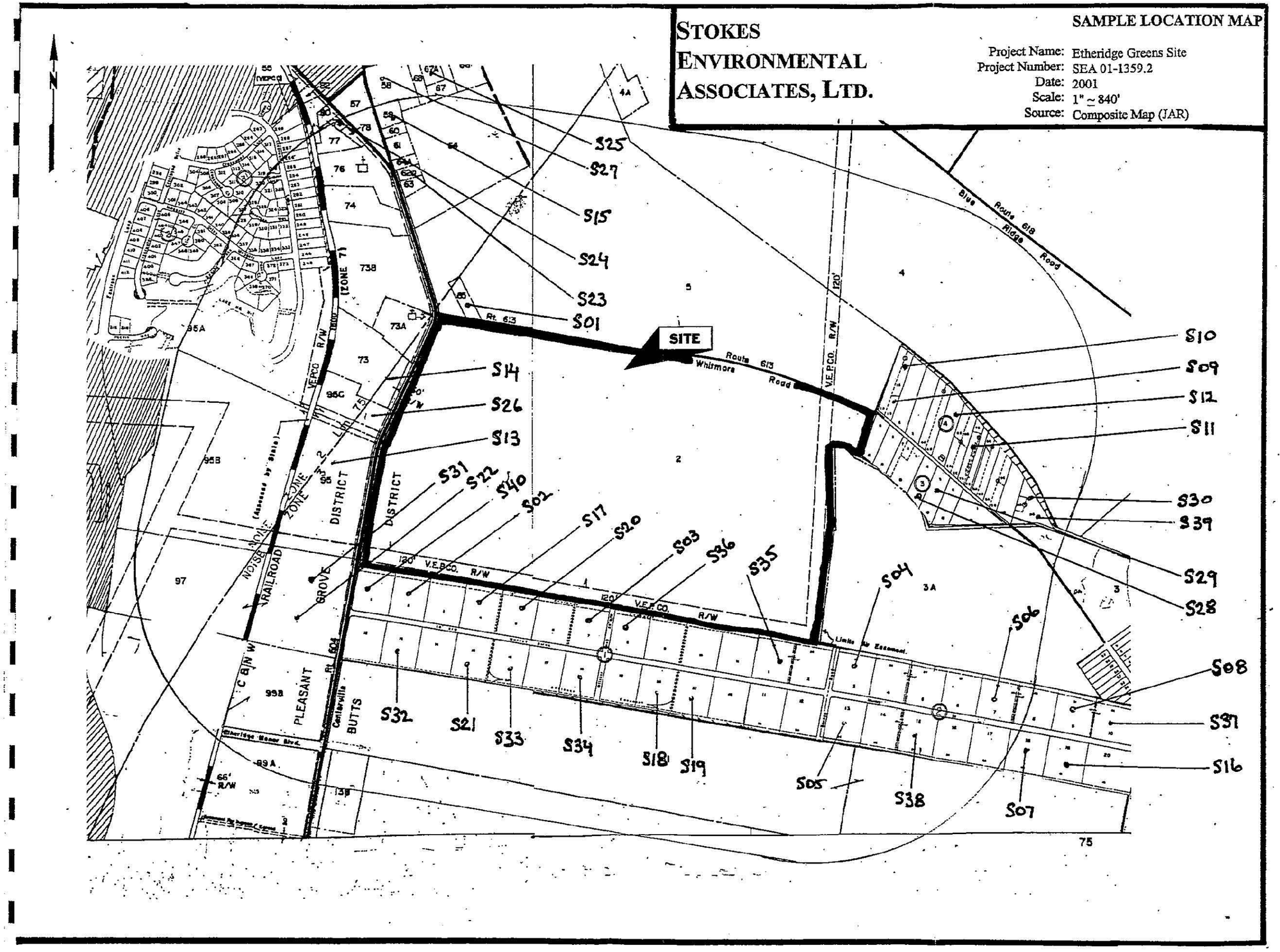
TOPOGRAPHIC MAP
(with 2,000' study area)

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 ENVIRONMENTAL ASSOCIATES, LTD.

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

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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 HNO3 <4 C	n/a
Arsenic (As)	0.05	n/a	0.05	n/a	n/a	yes	0.002	0.001	100 ml HDPE HNO3 <4 C	n/a
Barium (Ba)	2.0	n/a	2.0	n/a	n/a	yes	0.1	0.06	100 ml HDPE 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 HNO3 <4 C	n/a
Cadmium (Cd)	0.005	n/a	0.005	n/a	n/a	yes	0.0001	0.0001	100 ml HDPE 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 HNO3 <4 C	n/a
Copper (Cu)	n/a	1.0	n/a	n/a	1.3	n/a	0.015	0.001	100 ml HDPE 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 NaOH <4 C	Interference Check
Fluoride (F)	4.0	2.0	4.0	n/a	n/a	n/a	0.1	0.1	250 ml HDPE <4 C	n/a
Iron (Fe)	n/a	0.3	n/a	0.3	n/a	n/a	0.1	0.02	100 ml HDPE HNO3 <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 HNO3 <4 C	n/a
Mercury (Hg)	0.002	n/a	0.002	n/a	n/a	yes	0.0002	0.00004	100 ml HDPE 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 HNO3 <4 C	n/a
Lead (Pb)	n/a	n/a	n/a	n/a	0.015	yes	0.001	0.001	100 ml HDPE HNO3 <4 C	n/a
Selenium (Se)	0.05	n/a	0.05	n/a	n/a	yes	0.002	0.0003	100 ml HDPE 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 HNO3 <4 C	n/a
Thallium (Tl)	0.002	n/a	0.002	n/a	n/a	n/a	0.001	0.0003	100 ml HDPE 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 HNO3 <4 C	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 Detectible Limit (MDL) and Practical Quantitative Limit (PQL) supplied by Universal Laboratories
Note: All levels are in milligrams per liter (mg/L) Total Recoverable Metals

Prepared by WRC IV
Updated: 22 January 2002

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				Well Records Requested	Well Records Found
SEA ID#	TAX MAP	SECTION	PARCEL	PROPERTY ADDRESS		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		Well Screened Interval	Selection Criteria	Groundwateer Test Results (mg/L)																
SEA ID#	Total Depth	Depth	**	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Cyanide	Fluoride	Iron	Lead	Manganese	Mercury	Nickel	Seleniu	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 seleceted	24
total selected		40

APPENDIX C - SAMPLING AND ANALYSIS DOCUMENTATION

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

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
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

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0111401

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: 0111401-002
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

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

Respectfully Submitted,

(757)623-2785

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0111401-002

UNIVERSAL LABORATORIES

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Order ID: 0111401

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: 0111401-003
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

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

Respectfully Submitted,

(757)623-2785

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20 Research Drive Hampton, Va 23666

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Order ID: 0111401

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: 0111401-004
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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0111401-004

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

Respectfully Submitted,

(757)623-2785

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0111401-004

UNIVERSAL LABORATORIES

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Order ID: 0111401

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: 0111401-005
Sample ID: S-05
Grab Date/Time: 11/30/01 11:46:00
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	0.0001	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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0111401-005

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

Respectfully Submitted,

(757)623-2785

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51705
North Carolina Wastewater/Groundwater Lab # 543

0111401-005

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0111401

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: 0111401-006
Sample ID: S-06
Grab Date/Time: 11/30/01 12:04:00
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	<	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	7.50	mg/L	0.1	12/5/01 11:51:00	MK
Total Manganese	SM-3111 B	0.230	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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0111401-006

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

Respectfully Submitted,

(757)623-2785

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
ATTN:

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

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

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

Respectfully Submitted,

(757)623-2785

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 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: 0111401-008
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

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

Respectfully Submitted,

(757)623-2785

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 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: 0111401-009
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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0111401-009

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

Respectfully Submitted,

(757)623-2785

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0111401-009

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
ATTN:

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

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

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

Respectfully Submitted,

(757)623-2785

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0111401-010

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2152
FAX: (757) 865-8014

Order ID: 0111401

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: 0111401-011
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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0111401-011

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	12/6/01 17:35:00	WK

Respectfully Submitted,

(757)623-2785

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51705
North Carolina Wastewater/Groundwater Lab # 543

0111401-011

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0860
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

Order ID: 0111401

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: 0111401-012
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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0111401-012

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

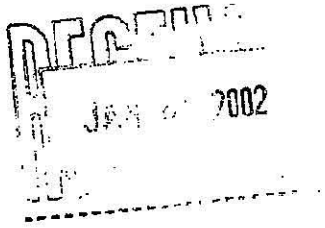
TELEPHONE: (757) 865-0830
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

Order ID: 0112013

(REPORT DATE)
22-Jan-02

REPORT OF ANALYSIS

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



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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112013-001

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	12/3/01 5:35:00 PM	WK

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112013

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

UL Sample Number: 0112013-002
Sample ID: S-14
Grab Date/Time: 12/3/01 10:05:00 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	0.0002	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	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

Respectfully Submitted,

(757)623-2785

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 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

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

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

Respectfully Submitted,

(757)623-2785

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
ATTN:

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

UL Sample Number: 0112013-004
Sample ID: S-16
Grab Date/Time: 12/3/01 11:01:00 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	<	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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112036

(REPORT DATE)
17-Jan-02

REPORT OF ANALYSIS

RECEIVED

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112036

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: 0112036-002
Sample ID: S-18
Grab Date/Time: 12/4/01 11:52:00
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	<	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 05:32:00	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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0112036-002

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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Order ID: 0112036

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: 0112036-003
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

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

Respectfully Submitted,

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Order ID: 0112036

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: 0112036-004
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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112036-004

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

Respectfully Submitted,

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UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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Order ID: 0112036

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: 0112036-005
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

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

Respectfully Submitted,

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Order ID: 0112036

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: 0112036-006
Sample ID: S-22
Grab Date/Time: 12/4/01 12:41:00
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	12/14/01 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

Respectfully Submitted,

(757)623-2765

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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Order ID: 0112036

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: 0112036-007
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

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

Respectfully Submitted,

(757)523-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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Order ID: 0112036

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: 0112036-008
Sample ID: S-24
Grab Date/Time: 12/4/01 14:12:00
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	12/14/01 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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112036-008

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)523-2785

Respectfully Submitted,

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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FAX: (757) 865-8014

Order ID: 0112036

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: 0112036-009
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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0112036-009

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

Respectfully Submitted,

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

Order ID: 0112053

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: SEA 01-1359.1
Matrix: Drinking Water

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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112053-001

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

Respectfully Submitted,

(757)523-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112053

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: SEA 01-1359.1
Matrix: Drinking Water

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

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,

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0112053-002

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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TOLL-FREE: (800) 695-2162
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Order ID: 0112053

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: SEA 01-1359.1
Matrix: Drinking Water

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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112053-003

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

Respectfully Submitted,

(757)623-2765

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112101

(REPORT DATE)
17-Jan-02

REPORT OF ANALYSIS

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: 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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112101-001

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

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

Order ID: 0112101

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: 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

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

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

Order ID: 0112101

(REPORT DATE)
17-Jan-02

REPORT OF ANALYSIS

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: 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

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112101

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: 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

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)623-2795

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112101

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: 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

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112101

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: 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

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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

Order ID: 0112101

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: 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

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

Respectfully Submitted,

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UNIVERSAL LABORATORIES

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Order ID: 0112101

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: 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

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

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Order ID: 0112101

REPORT OF ANALYSIS

(REPORT DATE)
28-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: 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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112101-009

ercury	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

Respectfully Submitted,

(757)623-2785

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

0112101-009

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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FAX: (757) 865-8014

Order ID: 0112101

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: 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

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

Respectfully Submitted,

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Order ID: 0112154

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: SEA 01-1359.1
Matrix: Drinking Water

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

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

Respectfully Submitted,

(757)623-2785

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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Order ID: 0112154

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: SEA 01-1359.1
Matrix: Drinking Water

UL Sample Number: 0112154-002
Sample ID: S-37
Grab Date/Time: 12/10/01 14:57:00
Composite Start: N/A
Composite Stop: N/A
Received Date: 11-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	12/14/01 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

Respectfully Submitted,

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20 Research Drive Hampton, Va 23666

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Order ID: 0112154

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: SEA 01-1359.1
Matrix: Drinking Water

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

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

Respectfully Submitted,

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UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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Order ID: 0112154

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: SEA 01-1359.1
Matrix: Drinking Water

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

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

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
0112154-004

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

Respectfully Submitted,

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UNIVERSAL LABORATORIES

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Order ID: 0112154

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: SEA 01-1359.1
Matrix: Drinking Water

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

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	12/18/01 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

Respectfully Submitted,

(757)623-2785

CHAIN-OF-CUSTODY

UNIVERSAL LABORATORIES

20 Research Drive
Hampton, VA 23666

Phone: (757) 865-0880
Fax: (757) 865-8014

Company: Stokes Environmental Associates
Street/Box: 4101 Granby Street Suite 404
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.

Analysis Required

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Preservative HNO3 Metals	Preservative RCRA <4°C Fluoride	Preservative NaOH Cyanide	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
S-01	30NOV01/0948	WRC	Water	C (G)	CN neg @ 0951	X	X	X						~~011/399~~
S-02	/1023			C (G)	CN neg @ 1028	X	X	X						011/401
S-03	/1055			C (G)	CN neg @ 1057	X	X	X						
S-04	/1129			C (G)	CN neg @ 1131	X	X	X						
S-05	/1146			C (G)	CN neg @ 1147	X	X	X						
S-06	/1204			C (G)	CN neg @ 1207	X	X	X						
S-07	/1220			C (G)	CN neg @ 1227	X	X	X						
S-08	/1244			C (G)	CN neg @ 1246	X	X	X						
S-09	/1304			C (G)	CN neg @ 1306	X	X	X						
S-10	/1313			C (G)	CN neg @ 1316	X	X	X						
S-11	/1327			C (G)	CN neg @ 1328	X	X	X						
S-12	30NOV01/1344	WRC	Water	C (G)	CN neg @ 1345	X	X	X						

Comments: Cyanide Samples Field Tested: S-01 Through S-12 were negative.

Cooler Temp at LI 4°C Pres √ >12/<2

Possible Hazards: Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:
Express Service
Express Service Approval

	Signature	Company	Date/Time
Relinquished By	W. Robert Crumpton	SEA	30NOV01 3:55
Received By	[signature]	UL	30NOV01 3:56
Relinquished By			
Received By			
Relinquished By			
Received By			

Work Order No.
Delivery Order
Trans ☐ P.U. ☐ Grab ☐ Comp ☐
Shipping/Delivery Charges
Composite Start / Composite Stop

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CHAIN-OF-CUSTODY

UNIVERSAL LABORATORIES

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Company	Stokes Environmental Associates
Street/Box	4101 Granby Street, Suite 404
City/State	Norfolk, Virginia 23504
Phone	(757)623-0177 Fax (757)623-2735
Contact:	Robert Crumpton
Job No.	SEA01-1359.1 P.O. No.

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required: Preservative HNO3 Metals	Preservative 4°C Fluoride	Preservative NaOH Cyanide	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
S-13	3Dec01/0948	Wren	Water	C G	CN Neg @0952	X	X	X						011203
S-14	/1005			C G	CN Neg @1007	X	X	X						
S-15	/1031			C G	CN Neg @1033	X	X	X						
S-16	3Dec01/1101	Wren	Water	C G	CN Neg @1103	X	X	X						
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										

Comments:

Cooler Temp at LI 4°C Pres √ 12/12

Possible Hazards: Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:

Express Service

Express Service Approval

Relinquished By	Signature W. Robt Crumpton	Company SEA	Date/Time 3Dec01
Received By	Signature	Company UL	Date/Time 3DEC01 1420
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

765

CHAIN-OF-CUSTODY

UNIVERSAL LABORATORIES

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Company: Stokes Environmental Associates
Street/Box: 4101 Granby Street, Suite 404
City/State: Norfolk Virginia 23504
Phone: (757)623-0777 Fax: (757)623-2785
Contact: Robert Crumpton
Job No. SEA01-1359.1 / P.O. No.

Analysis Required

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Preservative HNO3 Metals	Preservative <4°C Flouride	Preservative NaOH Cyanide	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
S-17	4Dec01/1142	WRC	Water	C (G)	CN neg @1143	X	X	X						0112036
S-18	/1152			C (G)	CN neg @1154	X	X	X						
S-19	/1201			C (G)	CN neg @1202	X	X	X						
S-20	/1224			C (G)	CN neg @1226	X	X	X						
S-21	/1232			C (G)	CN neg @1235	X	X	X						
S-22	/1241			C (G)	CN neg @1244	X	X	X						
S-23	/1253			C (G)	CN neg @1255	X	X	X						
S-24	/1412			C (G)	CN neg @1415	X	X	X						
S-25	4Dec01/1427	WRC	Water	C (G)	CN neg @1431	X	X	X						
~~S-26~~ WRC				C ~~G~~	~~WRC~~									
~~S-27~~ WRC				C ~~G~~	~~WRC~~									
~~S-28~~ WRC				C ~~G~~	~~WRC~~									

Comments: Cyanide Samples Field Tested: S-17 through S-12 were negative.
Cooler Temp at LI 4°C Pres √ <2 >12

Possible Hazards:
Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:
Express Service:
Express Service Approval:

	Signature	Company	Date/Time
Relinquished By	W. Robert Crumpton	SEA	4Dec 01/1529
Received By	[signature]	UL	04DEC01 1529
Relinquished By			
Received By			
Relinquished By			
Received By			

Work Order No.
Delivery Order
Trans ☐ P.U. ☐ Grab ☐ Comp ☐
Shipping/Delivery Charges
Composite Start / Composite Stop

766

CHAIN-OF-CUSTODY

UNIVERSAL LABORATORIES

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Phone	(757) 623-0774 Fax (757) 623-2785
Contact:	Robert Crumpton
Job No.	SEA 01-1359.1 P.O. No. See Quote

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required: Preservative HNO3 Metals	Preservative <4°C Fluride	Preservative NaOH Cyanide	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
S-26	5 Dec 01/0934	Wreck	Water	C G	Cn Neg @ 0941	X	X	X						0112053
S-27	" /1001	"	"	C G	Cn Neg @ 1004	X	X	X						
QC-1	5 Dec 01/0934	Wreck	Water	C G	Cn Neg @ 0941	X	X	X						
				C G										
				C G										
				C G			$25							
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										

Comments: Cyanide Samples Field Tested: S-26, S-27, and QC-1 were negative

Cooler Temp at LI 3.1°C Pres √ pH <2 / >12 CN

Possible Hazards: Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:

Express Service

Express Service Approval

Relinquished By	Signature W. Robt Crumpton	Company SEA	Date/Time 5 Dec 01/1327	
Received By	Signature	Company VL	Date/Time 12-5-01 1327	
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

20 Research Drive
Hampton, VA 23666

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Company	Stokes Environmental Associates
Street/Box	4101 Granby Street, Suite 404
City/State	Norfolk, Virginia 23504
Phone	(757)623-0777 Fax (757)623-2785
Contact:	Robert Crompton
Job No.	SEA 01-1359.1 P.O. No.

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Analysis Required: Preservative HNO3 Metals	Preservative <4°C Fluoride	Preservative NaOH Cyanide	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
S-28	6Dec01/1356	WRCA	Water	C G	CN neg @1358	X	X	X						0112101
S-29	/1406			C G	CN neg @1409	X	X	X						
S-30	/1417			C G	CN neg @1421	X	X	X						
S-31	/1443			C G	CN neg @ 1446	X	X	X						
S-32	/1502			C G	CN neg @1504	X	X	X						
S-33	/1511			C G	CN neg @1513	X	X	X						
S-34	/1520			C G	CN neg @1523	X	X	X						
S-35	/1531			C G	CN neg @1533	X	X	X						
QC-2	/1356			C G	CN neg @1358	X	X	X						
QC3	6Dec01/1406	WRCA	Water	C G	CN neg @1409	X	X	X						
				C G										
				C G										

Comments: Cyanide Samples field Tested; S-28 through S-35 were negative. dispose of QC4-QC5 30days — Cooler Temp at LI 2°C — Pres √ 12/12

Possible Hazards: — Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:

Express Service

Express Service Approval

Relinquished By	Signature W. Robt Crompton	Company SEA	Date/Time 7Dec01 10:15
Received By	Signature	Company SEA	Date/Time 7Dec01 10:15
Relinquished By	Signature	Company SEA	Date/Time 7Dec01/11:10
Received By	Signature	Company UL	Date/Time 4Dec01/11:10
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 Granby Street, Suite 404
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: Preservative HNO3 Metals	Preservative <4°C Florida	Preservative NaOH Cyanide	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
S-36	10Dec01/1444	WRCH	Water	C (E) G	CN deg @1447	X	X	X						0112154
S-37	/1457			C (E) G	CN deg @1459	X	X	X						
S-38	/1507			C (E) G	CN deg @1510	X	X	X						
S-39	/1537			C (E) G	CN deg @1540	X	X	X						
S-40	10Dec01/1644	WRCH	Water	C (E) G	CN deg @1647	X	X	X						
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										

Comments: Samples S-36 - S-40 negative for interference.

Cooler Temp at LI 4°C Pres √ 42/712

Possible Hazards: Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:

Express Service

Express Service Approval

Relinquished By	Signature W Robt Crumpton	Company SEA	Date/Time 11Dec01 0855
Received By	Signature	Company	Date/Time 12-11-01 0855
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 01-1359.1 30 November 2001

Sample Location	Sample Number	Date	Time	Notes
1109 Whitmore	S-01	30NOV01	0948	Ok by Fire Chief Taken from faucet/outside CN negative @ 0951
1101 Murray				No one home.
1105 Murray	S-02	30NOV01	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	30NOV01	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 01-1359.2 30 November 2001

Sample Location	Sample Number	Date	Time	Notes
1300 Murray	S-05	30Nov01	1146	Ok by owner Taken from faucet/outside CN negative @ 1147
				SJ for Odor at time of Sampling.
1313 Murray				No one home.
1316 Murray				No one home.
1317 Murray	S-06	30Nov01	1204	Ok by owner Taken from faucet/outside CN negative @ 1207
1320 Murray	S-07	30Nov01	1220	Ok by owner Taken from faucet/outside CN negative @ 1227
1324 Murray				No one home
1325 Murray	S-08	30Nov01	1224	Ok by owner Taken from faucet/outside CN negative @ 1246
1403 Whittamore				No one home.
1405 Whittamore	S-09	30Nov01	1304	Ok by owner Taken from faucet/outside CN negative @ 1306
1407 Whittamore	S-10	30Nov01	1313	Ok by owner Taken from faucet/outside CN negative @ 1316
1441 Whittamore	S-11	30Nov01	1327	Ok by owner Taken from faucet/outside CN Negative @ 1328
1440 Whittamore				owners declined.
1433 Whittamore	S-12	30Nov01	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 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
				Sulfur 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 01-1359.1st 3 December 2001

Sample Location	Sample Number	Date	Time	Notes
1305 Murray				No one home
1215 Murray				No one home
1124 Murray				No one home
1120 Murray				No one home

Last Item Written

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	4Dec01	1142	Ok by owner Taken from faucet / outside CN negative @ 1143
1204 Murray	S-18	4Dec01	1152	Ok by owner Taken from faucet/outside CN negative @ 1154
1208 Murray	S-19	4Dec01	1201	Ok by owner Taken from faucet /outside CN negative @ 1202
1121 Murray				No one home.
1117 Murray	S-20	4Dec01	1224	Ok by owner Taken from faucet /outside CN negative @ 1226
1112 Murray	S-21	4Dec01	1232	Ok by owner Taken from faucet/outside CN negative @ 1235
1224 Centerville	S-22	4Dec01	1241	Ok by owner Taken from faucet/outside CN negative @ 1244
909 Centerville				No one home.
905 Centerville	S-23	4Dec01	1253	Ok by owner Taken from faucet/outside CN negative @ 1255
1441 Fentress	S-24	4Dec01	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 01-1359.2 Work 4 December 2001

Sample Location	Sample Number	Date	Time	Notes
1521 Blue Ridge	S-25	4Dec01	1427	ok by owner Taken from faucet/outside CN negative @1431

Last Item USED

SAMPLING FIELD NOTES:

DRINKING WATER BASELINE WATER QUALITY INVESTIGATION - ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA

SEA 01-1359, 1st 5 December 2001

Sample Location	Sample Number	Date	Time	Notes
1004 Centerville	S-26	5Dec01	0934	ok by owner Taken from faucet/outside CN negative @ 0941
1004 Centerville	QC-1	5Dec01	0934	CN negative @ 0941
1030 Centerville				No one home
909 Centerville				No one home
1505 Blue Ridge	S-27	5Dec01	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 WRCW			

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 Whittamore	S-28	6 Dec 01	1356	Ok by owner Taken from faucet/outside CN negative @ 1358
1420 Whittamore	QC-2	6 Dec 01	1356	CN negative @ 1358
1436 Whittamore	S-29	6 Dec 01	1406	ok by owner Taken from faucet/outside CN negative @ 1409
1436 Whittamore	QC-3	6 Dec 01	1406	CN negative @ 1409
1465 Whittamore				No one home.
1475 Whittamore				No one home.
1469 Whittamore	S-30	6 Dec 01	1417	Ok by owner Taken from faucet/outside CN negative @ 1421
1453 Whittamore				No one home.
1451 Whittamore				No one home.
1419 Whittamore				No one home.
1417 Whittamore				No one home.
1513 Whittamore				No one home.
1512 Whittamore				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 CN negative @ 1504
1116 Murray	S-33	6 Dec 01	1511	Ok by owner Taken from faucet/outside CN negative @ 1513
1124 Murray	S-34	6 Dec 01	1520	Ok by owner Taken from faucet/outside CN negative @ 1523
1215 Murray	S-35	6 Dec 01	1531	Ok by owner Taken from faucet/outside CN 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 Logged			

SAMPLING FIELD NOTES:

DRINKING WATER BASELINE WATER QUALITY INVESTIGATION - ETHERIDGE GREEN, CHESAPEAKE, VIRGINIA

SEA 01-1359.2 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	10Dec01	1444	Ok by owner Taken from faucet/outside CN negative @ 1447
1329 Murray	S-37	10Dec01	1457	Ok by owner Taken from faucet/outside CN 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	10Dec01	1507	Ok by owner Taken from faucet/outside CN 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 01-1359.1st 10 December 2001

Sample Location	Sample Number	Date	Time	Notes
1473 Whitemore	S-39	10Dec01	1537	Ok by owner Taken from faucet/outside CN 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	10Dec01	1644	Ok by owner Taken from faucet/outside CN negative @ 1647

Last Item Listed