RECEPTOR SURVEY

FOR

L.V. SUTTON ENERGY COMPLEX
801 SUTTON STEAM PLANT ROAD
WILMINGTON, NORTH CAROLINA 28401
NPDES PERMIT #NC0001422

PREPARED FOR

DUKE ENERGY PROGRESS, INC.
RALEIGH, NORTH CAROLINA

SUBMITTED: JULY 2014

Howard Frank
Project Scientist

Kathy Webb, NC PG 1328
Project Manager

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1.0 INTRODUCTION

Duke Energy Progress, Inc. (Duke Energy) owns and operates the L.V. Sutton Energy Complex (Sutton Plant) located on approximately 3,300 acres near Wilmington, North Carolina. The Sutton Plant is located along the east bank of the Cape Fear River northwest of Wilmington and west of US Highway 421. The site is shown on **Figure 1**.

The Sutton Plant started operations in 1954 and consisted of three coal-fired boilers that primarily used bituminous coal as fuel to produce steam. Ash generated from the coal combustion was stored on-site originally in the 'ash disposal area' and then in the 1971 ash pond (old ash pond) and followed by the 1984 ash pond (new ash pond) (**Figure 1**). The Sutton Plant ceased burning coal in November 2013 and switched to burning natural gas to generate power. The facility no longer generates coal ash.

The discharge from the cooling pond and the ash ponds is permitted by the North Carolina Department of Environment and Natural Resources (NCDENR) Division of Water Resources (DWR) under the National Pollution Discharge Elimination System (NPDES) Permit NC0001422.

SynTerra has completed a receptor survey to identify water supply wells, public water supplies, surface water bodies, and wellhead protection areas (if present) within a 0.5 mile radius of the Sutton Plant ash management area compliance boundary (**Figure 1**). The compliance boundary for groundwater quality in relation to the ash management area is defined in accordance with 15A NCAC 02L .0107(a) as being established at either 500 feet from the waste boundary or at the property boundary, whichever is closer to the source.

The survey scope and findings are presented in the following sections.

2.0 BACKGROUND

2.1 Plant and Ash Management Area Description

The Sutton Plant was a coal-fired electricity-generating facility with a capacity of 575-megawatts in New Hanover County, North Carolina, near the city of Wilmington. As of November, 2013, all of the coal-fired units were retired when a new, gas-fired 625-megawatt combined-cycle unit began operation. The site is located northwest of Wilmington on the west side of Highway 421. The topography at the site is relatively gentle, generally sloping downward toward the Cape Fear River.

The plant is located on the east side of the Cape Fear River. A 1,100-acre cooling pond is located between the Cape Fear River and the ash management area as shown on **Figure 1**. The ash management area consists of:

- Former ash disposal area located south of the ash ponds, on the south side of the canal;
- An ash pond built in approximately 1971 (old ash pond);
- A new clay-lined ash pond built in approximately 1984 (new ash pond) located on the northern portion of the management area.

The ash ponds are impounded by an earthen dike. The ash pond system was an integral part of the plant's wastewater treatment system which received inflows from the ash removal system, plant yard drain sump, and stormwater flows. During coal-fired electrical generation, inflows to the ash ponds were highly variable due to the cyclical nature of the operations. The Sutton Plant NPDES permit authorizes the discharge of cooling pond blowdown, recirculation cooling water, non-contact cooling water and treated wastewater from Internal Outfalls 002, 003 and 004 via Outfall 001 from the cooling pond to the Cape Fear River. The 500 foot compliance boundary circles the ash ponds and former disposal area.

2.2 Description of Surrounding Properties

Properties located within a 0.5 mile radius of the Sutton ash management area compliance boundary are located in Wilmington New Hanover County, North Carolina, with the exception of an undeveloped portion of land on the west side of the Cape Fear River in Brunswick County. The properties are primarily used for commercial and industrial purposes. There are no residential properties located within the 0.5 mile radius of the compliance boundary.

Figure 1 depicts the properties surrounding the Sutton facility.

3.0 RECEPTOR SURVEY ACTIVITIES

3.1 NCDENR Records Review

SynTerra reviewed the NCDENR Department of Environmental Health (DEH) Public Water Supply Section's (PWSS) Public Water Supply Water Sources Geographic Information System (GIS) point data set (pwsws.shp) obtained from the NC OneMap GeoSpatial Portal (http://data.nconemap.com/geoportal/catalog/main/home.page) to identify public water supply sources within a 0.5 mile radius of the Sutton Plant compliance boundary.

According to the NC OneMap website, the PWSS point data was current through November 18, 2009, and that it is the most current GIS data set of public water supply locations available from North Carolina state agencies. The GIS point data for the public water supply wells includes, but is not limited to information such as public water supply (PWS) system identification numbers, ownership information, PWS source type, well depth, and well yield.

On June 24, 2014, SynTerra reviewed the NCDENR Division of Water Resources (DWR) Source Water Assessment Program (SWAP) online database for public water supply sources to identify wells located within a 0.5 mile radius of the compliance boundary; to confirm the location of wells included in the Public Water Supply Water Sources GIS point data set, and to identify any wellhead protection areas located within a 0.5 mile radius of the compliance boundary. The NCDENR SWAP database provides detailed assessments of all public drinking water intakes and wellhead protection areas in North Carolina. The website address is: (http://swap.ncwater.org/website/swap/viewer.htm).

3.2 Cape Fear Public Utility Authority Records Review

The website for Cape Fear Public Utility Authority (CFPUA) was reviewed for water line layout information. CFPUA was also contacted to confirm the current accuracy of the water line map posted on the website (map date 11/6/2013). CFPUA confirmed the accuracy of the water line map and provided location information for customers in the area. The water line layout and customer location information provided by CFPUA is included as **Appendix A**.

3.3 Environmental Data Resources, Inc. Records Review

A review of public database information provided by Environmental Data Resources, Inc. (EDR) was also conducted. The public water well information has been incorporated in the summary table (**Table 1**) and on **Figure 1**. A copy of the EDR report is included as **Appendix B**.

3.4 USGS Hydrography Review

SynTerra reviewed the United States Geological Survey (USGS) National Hydrography Dataset (NHD) obtained from the USGS National Map Viewer (http://viewer.nationalmap.gov/viewer/) to identify surface waters within a 0.5 mile radius of the compliance boundary. Hydrography data obtained from the USGS NHD is included on **Figure 1**.

3.5 SynTerra Field Survey

During February and March, 2014, SynTerra personnel conducted a vehicular survey along public roads located within 0.5 mile radius of the compliance boundary. Observations on property use, apparent proximity to available municipal water lines and structures that may represent potential water supply wells were noted.

3.6 Previous Water Supply Well Survey Information

The results of a previous Water Supply Well Survey conducted by Catlin Engineers and Scientists, August 30, 2013 have been incorporated into the findings of this report.

4.0 FINDINGS

4.1 NCDENR Records

Four public water supply wells were identified in the Public Water Supply Water Sources GIS point data set (obtained from NC OneMap GeoSpatial Portal) or on the NCDENR SWAP online database within a 0.5 mile radius of the compliance boundary. The wells identified include:

- CFPUA Wells #3 and #4 located east of the compliance boundary;
- Wells G and OH2, previously owned by Invista and purchased by S.T. Wooten Corporation in December 2013.

The approximate locations of the wells are shown on **Figure 1**. No wellhead protection areas were identified on the NCDENR SWAP online database within a 0.5 mile radius of the compliance boundary.

4.2 Cape Fear Public Utility Authority Records

The map provided by CFPUA indicates water lines are located on the southern half of Metro Circle, the southern half of Richardson Drive, Sutton Steam Plant Road, Highway 421 south of the I-140 intersection, within the Flemington residential community and along the eastern portion of Sampson Street. CFPUA map also indicates the locations of customers within the area. The water lines reported for the area are shown on **Figure 1**.

4.3 Environmental Data Resources, Inc. Records

The EDR report provided additional information on the CFPUA wells (EDR reference numbers A, C, and D), plus identified the following additional water wells in the area:

- Three wells located to the northeast of the Sutton property previously owned by Invista and purchased by S.T. Wooten Corporation in December 2013 (EDR reference numbers 1, B9/B10, and 16; well depths reportedly 93 feet, 96 feet and 90 feet respectively);
- Three wells located on Highway 421 due east of the Sutton property (EDR reference numbers 4, 6, and 13; well depths reportedly 57 feet, 40 feet and 80 feet respectively);
- One well located near the intersection of Sutton Lake Road and Fredrickson Drive (EDR reference number 2; well depth reportedly 54 feet);
- One well located on Sutton Steam Plant Road (EDR reference number 19; well depth reportedly 57 feet deep); and
- Three wells located within the Sutton Energy Complex property (EDR reference numbers 3, 5 and 11. Well 11 had a reported depth of 50 feet).

A copy of the EDR Report is provided as **Appendix B**.

4.4 USGS Hydrography Review

Small surface water features and possible wetlands are visible on the aerial photograph near the southern perimeter of the survey radius. The surface water features appear to flow toward the Cape Fear River.

An approximate 5,700 foot long section of the Cape Fear River is located within the south western portion of the survey radius (**Figure 1**). The Cape Fear River flows south.

4.5 SynTerra Field Survey

SynTerra conducted a visual reconnaissance of the survey area by driving public roadways and noting properties that appeared to be developed or occupied. Structures resembling water supply wells or well houses were noted where visible and are shown on **Figure 1** as reported/observed water supply wells (DW). Most of the area development consists of industrial and commercial properties. The locations of the wells on the CFPUA and S.T. Wooten properties could not be visually confirmed from the drive-by survey. Sutton Energy Complex water supply wells are located on Sutton Steam Plant Road and former Invista wells are located along Sutton's northeastern property line. Structures resembling wells or well houses were observed on Metro Circle, Sutton Lake Road, Highway 421, Transcom Court, Fredrickson Road, and Roymac Drive.

Additional properties within 0.5 mile radius of the compliance boundary appeared to be developed and in-use (occupied) with no apparent water supply well. These properties are noted on **Figure 1** with an assumed private water supply well (PRW). Where occupied parcels border the survey perimeter, and a well is suspected to be present, it is assumed the well is within the 0.5 mile survey area.

The locations of wells DW-3 and DW-5, shown along the northeastern property line, are uncertain due to conflicting information regarding the locations of the former Invista wells G, OH2 and H2. Three water supply wells were observed during the field survey (DW-3, DW-4, and DW-5). Well DW-4 corresponds with Invista well G, but the coordinates provided by Invista indicate wells OH2 and H (DW-2 and DW-1) are located further to the north (**Figure 1**).

The Catlin survey reported five active water supply wells located within 0.5 mile radius of the compliance boundary.

- Two of four CFPUA water supply wells, #3 and #4 located on Fredrickson Drive, are used to supply municipal water to the area. The wells are reportedly screened at a depth of approximately 50 feet with average flow rates of approximately 39,000 gallons per day (or approximately 27 gallons per minute each). Wells #1 and #2 have reportedly been abandoned or are not in use.
- Three water supply wells were reported to be in use by S.T. Wooten Corporation, located on Sutton Lake Road (Map ID#s DW-6, DW-7, and DW-8). Two of the wells are reportedly 200 feet deep and used for process water for concrete production. One of the wells, reportedly 150 feet deep, is used for irrigation, restrooms, and wetting of site materials. Flow rate information was not provided.

4.6 Summary of Receptor Survey Findings

A summary of the receptor survey is discussed below. The suspected water supply well locations shown on **Figure 1** are based upon field observations, Catlin, EDR, and NCDENR information. The suspected well locations are numbered on the map to cross-reference information provided in **Table 1**. The table summarizes property location and owner information where a water supply well may be present based upon drive-by observations, Catlin or EDR information.

- No wellhead protection areas were identified within a 0.5 mile radius of the compliance boundary;
- Approximately 18 possible private water supply wells were observed, have been reported, or are assumed to be located within the survey area, within 0.5 mile of the compliance boundary;
- Two public water supply wells owned and operated by CFPUA are in use; one additional CFPUA water supply well is no longer in-use and one CFPUA water supply well has been abandoned;
- Eight water supply wells used for plant operation are located on the Sutton Plant; wells #2, #4, #5, #6A, #6B, #6D, and #6E are in operation; well #3 is off-line.
- Three water supply wells have been reported for Invista and three water supply wells were observed. There is some uncertainty regarding the observed locations compared to the reported locations;

- Small surface water features and possible wetlands are visible on the aerial photograph near the southern perimeter of the survey radius. The surface water features appear to flow toward the Cape Fear River.
- An approximate 5,700 foot long section of the Cape Fear River is located within the south western portion of the survey radius (**Figure 1**). The Cape Fear River flows south.

FIGURE

LEGEND

- PRW-1 — ASSUMED PRIVATE WATER SUPPLY WELL
- DW-1 — REPORTED/OBSERVED WATER SUPPLY WELL
- CAPE FEAR WATER LINE (APPROXIMATE)
- HALF MILE RECEPTOR SURVEY BOUNDARY FROM THE 500 ft COMPLIANCE BOUNDARY
- DUKE ENERGY PROGRESS SUTTON PLANT
- WASTE BOUNDARY
- 500 ft COMPLIANCE BOUNDARY
- COUNTY LINE (APPROXIMATE)
- PE-SW2 — DUKE ENERGY PROGRESS PRODUCTION WELL (APPROXIMATE)
- PE-SW2 — DUKE ENERGY PROGRESS PRODUCTION WELL (SURVEYED)
- NHC-SW4 — CFPUA PRODUCTION WELL (APPROXIMATE)
- EDR 3 — EDR REPORTED DUKE ENERGY PROGRESS PRODUCTION WELL (APPROXIMATE)
- 0H2 — INVISTA REPORTED PRODUCTION WELL LOCATION

SOURCES:

JANUARY 3, 2013 AERIAL IMAGERY OBTAINED FROM GOOGLE EARTH PRO.

CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) CUSTOMERS AND WATER LINE LAYOUT WERE BASED ON FIGURE PROVIDED BY CFPUA TO SYNTERRA ON MARCH 27, 2013 TITLED FLEMINGTON AREA WATER DISTRIBUTION.

THE PROPERTY BOUNDARY FOR THE L.V. SUTTON STEAM ELECTRIC PLANT WAS BASED ON A COMPOSITE MAP PREPARED BY DAVIS-MARTIN-POWELL & ASSOC., INC. THE DRAWINGS ARE DATED JUNE, 1995 WITH REVISION NOTE FOR MARCH 4, 2004. FILE NAME IS L-D-9022-7 DWG. HORIZONTIAL DATUM IS NAD83 AND THE VERTICAL DATUM IS NGV 29.

THE LOCATION OF THE FORMER ASH DISPOSAL AREAS WAS BASED ON A FIGURE 2-2 PREPARED BY BLASLAND, BOUCK & LEE, INC. THE FIGURE IS TITLED "HORIZONTAL EXTENT OF THE ASH WITHIN THE FORMER DISPOSAL AREA".

GRAPHIC SCALE

600 0 300 600 1200

(IN FEET)

synTerra

148 River Street, Suite 220
Greenville, South Carolina 29601
864-421-9999
www.synterracorp.com

DRAWN BY:	S. ARLEDGE	DATE:	2014-07-25
CHECKED BY:	H. FRANK	DATE:	2014-07-25
PROJECT MANAGER:	KATHY WEBB		
LAYOUT NAME:	FIG 1 (RECEPTOR SURVEY)		

DUKE ENERGY® PROGRESS

L.V. SUTTON ENERGY COMPLEX
801 SUTTON POWER PLANT RD
WILMINGTON, NORTH CAROLINA

FIGURE 1
RECEPTOR SURVEY MAP

TABLE

TABLE 1
PUBLIC AND PRIVATE WATER SUPPLY WELLS
WITHIN 0.5 MILE RADIUS OF ASH MANAGEMENT AREA COMPLIANCE BOUNDARY
DUKE ENERGY PROGRESS, INC./L.V. SUTTON ENERGY COMPLEX

WELL ID (Shown on Figure 1)	WELL OWNER/USER	PROPERTY ADDRESS (Well Location)	PARCEL ID NUMBER	FIELD DESCRIPTION / NOTES
	CAROLINA POWER & LIGHT CO	801 SUTTON STEAM PLANT RD	R03200-001-001-000	PE-SW2, PE-SW3, PE-SW4, PE-SW5, PE-SW6A, PE-SW6B, PE-SW6D and PE-SW6E (EDR-19 REPORTED DEPTH ~57 FT), EDR-3 (NH-438 NO DEPTH REPORTED), EDR-5 (NH-108) NO DEPTH REPORTED, EDR-11 (NDH-670) REPORTED DEPTH 50 FT)
DW-12	ABSOLUTE PROPERTIES OF THE CAROLINAS LLC	331 METRO CIR	R03200-002-025-000	NETWORK DISTRIBUTORS AND ABSOLUTE WALL AND CEILING, WELL HOUSE TO RIGHT OF DRIVEWAY
PRW-5	SAUNDERS & SAUNDERS LLC	347 METRO CIR	R03200-002-027-000	OCCUPIED, NO WELL OBSERVED
PRW-6	MAOLA MILK & ICE CREAM CO	307 METRO CIR	R03200-002-015-000	OCCUPIED, NO WELL OBSERVED
DW-11	ROYMAC PARTNERSHIP	363 METRO CIR	R03200-002-028-000	FERRELL GAS, WELL BY FENCE LINE FAUX ROCK WELL HOUSE COVER
PRW-4	QUARLES PETROLEUM	3601 FREDERICKSON RD	R03200-002-029-000	METRO CIRCLE AT CORNER OF FREDERICKSON, OCCUPIED, NO WELL OBSERVED
PRW-3	SOUTH ATLANTIC SERV INC	3773 FREDRICKSON RD	R03200-002-001-003	OCCUPIED, NO WELL OBSERVED
HNC-SW1, 2, 3 & 4	NEW HANOVER COUNTY	3405 FREDRICKSON RD	R03200-002-001-011	CFPUA WELL FIELD PROPERTY, SW-3 AND SW-4 WELLS IN USE AND MONITORED
DW-9	EZZELL TRUCKING INC	233 SUTTON LAKE RD	R03200-002-001-007	PROPERTY VACANT ON 2/19/2014, WELL OBSERVED NEAR ROAD
DW-6	S T WOOTEN CORP	230 SUTTON LAKE RD	R02400-001-004-000	WELL LOCATED FROM CATLIN SURVEY
DW-7	S T WOOTEN CORP	230 SUTTON LAKE RD	R02400-001-004-000	WELL LOCATED FROM CATLIN SURVEY
DW-8	S T WOOTEN CORP	230 SUTTON LAKE RD	R02400-001-004-000	WELL LOCATED FROM CATLIN SURVEY
DW-10	L C H HOLDINGS LLC	221 SUTTON LAKE RD	R03200-002-001-026	VACANT ON 2/19/2014, WELL PREVIOUSLY OBSERVED IN FRONT, EDR 2 REPORT, NH-711, REPORTED TO BE 54 FT DEEP
PRW-2	MASTEC NORTH AMERICA INC	3857 421 HWY	R03200-001-038-000	OCCUPIED, NO WELL OBSERVED
PRW-1	WIL FERGIE LLC	3901 421 HWY	R03200-001-035-000	PROPERTY USE UNKNOWN
DW-13	HARDING WILLIAM L LINDA R	212 TRANSCOM CT	R03200-002-023-000	CAPE FEAR CUSTOM POWDER COATING, WELL AT CORNER OF PROPERTY
PRW-7	PORTERFIELD J C JUDY C	218 ROYMAC DR	R03200-002-013-000	OCCUPIED, NO WELL OBSERVED
DW-4	S T WOOTEN CORPORATION	4101 421 HWY	R02400-001-040-000	INVISTA WELL G, INVISTA WAS PREVIOUS OWNER - PROPERTY SELL DATE 12/20/2013, EDR (1) REPORT INDICATES 93 FEET DEEP
DW-2	S T WOOTEN CORPORATION	4101 421 HWY	R02400-001-040-000	INVISTA WELL OH2, (IDENTIFIED AS OG2 BY INVISTA) INVISTA WAS PREVIOUS OWNER - PROPERTY SELL DATE 12/20/2013, EDR (B9) REPORT INDICATES 96 FEET DEEP
DW-1	S T WOOTEN CORPORATION	4101 421 HWY	R02400-001-040-000	INVISTA WELL H2, INVISTA WAS PREVIOUS OWNER - PROPERTY SELL DATE 12/20/2013, EDR (16) REPORT INDICATES 90 FEET DEEP
DW-3	S T WOOTEN CORPORATION	4101 421 HWY	R02400-001-040-000	POSSIBLE INVISTA WELL OG2, POSSIBLE CONFLICTING LOCATION WITH DW-2
DW-5	S T WOOTEN CORPORATION	4101 421 HWY	R02400-001-040-000	POSSIBLE INVISTA WELL OG2, POSSIBLE CONFLICTING LOCATION WITH DW-4

Notes:

Map Well # refers to well number shown on the Receptor Survey Map.

Parcel ID, owner and address information were obtained from the New Hanover County North Carolina website (http://www.nhcgov.com/Pages/GISData.aspx).

The Field Description/Notes column is a brief summary of SynTerra field observations or other relevant information as follows:

The name of the occupant based upon road or building signage is noted where observed.

"Occupied" indicates the site appeared to be in use based upon drive-by observations.

"Vacant" indicates the site has been developed but did not appear to be currently used based upon drive-by observations.

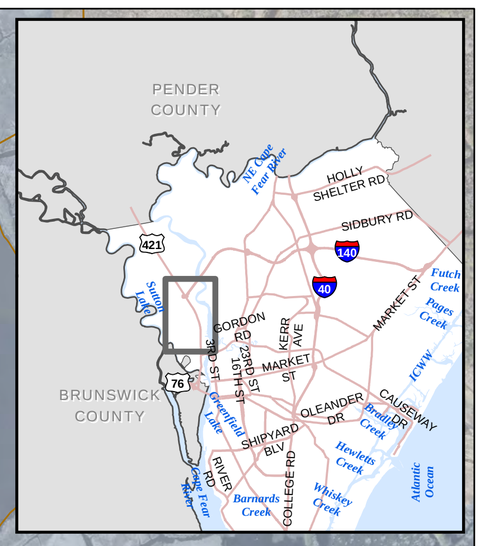
Street identification numbers observed during the drive-by survey are noted where available and may or may not match the County GIS parcel address information.

Parcels that appear to be undeveloped are considered not to have water supply wells and are not listed.

The Sutton plant water supply wells are provided for completeness.

APPENDIX A

CFPUA INFORMATION



Legend

- CFPUA Water Customers
- Proposed Waterline

CFPUA Water Mains

Diameter

- 8" or Less (or Unknown)
- 10" - 12"
- Greater Than 12"

Raw Water Mains

Owned By

- CFPUA
- CFPUA Supply Wells
- Water Tanks

Cape Fear Public Utility Authority
Stewardship. Sustainability. Service.

Flemington Area Water Distribution

Sensitive Public Security Information Non-Releasable per NCGS 132-1.7

N W E S

0 250 500 1,000 1,500 Feet

1 inch = 500 feet

MAT
Created: 10/23/2013 Last Saved: 3/26/2014
\\CFPUAFS01\shares\homedirs\matthew.tribett\My Documents\Projects\Sutton Plant Ash Pond\Flemington Area Water Distribution-24x36.mxd

APPENDIX B

EDR REPORT

Duke Energy - Sutton
801 Sutton Steam Plant Rd.
Wilmington, NC 28401

Inquiry Number: 3887607.1s
March 21, 2014

The EDR GeoCheck® Report

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

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

GEOCHECK® - PHYSICAL SETTING SOURCE REPORT

TARGET PROPERTY ADDRESS

DUKE ENERGY - SUTTON
801 SUTTON STEAM PLANT RD.
WILMINGTON, NC 28401

TARGET PROPERTY COORDINATES

Latitude (North):	34.2944 - 34° 17' 39.84''
Longitude (West):	77.9866 - 77° 59' 11.76''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	225097.0
UTM Y (Meters):	3798643.0
Elevation:	13 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	34077-C8 CASTLE HAYNE, NC
Most Recent Revision:	2000
West Map:	34078-C1 LELAND, NC
Most Recent Revision:	2001

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

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

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

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

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

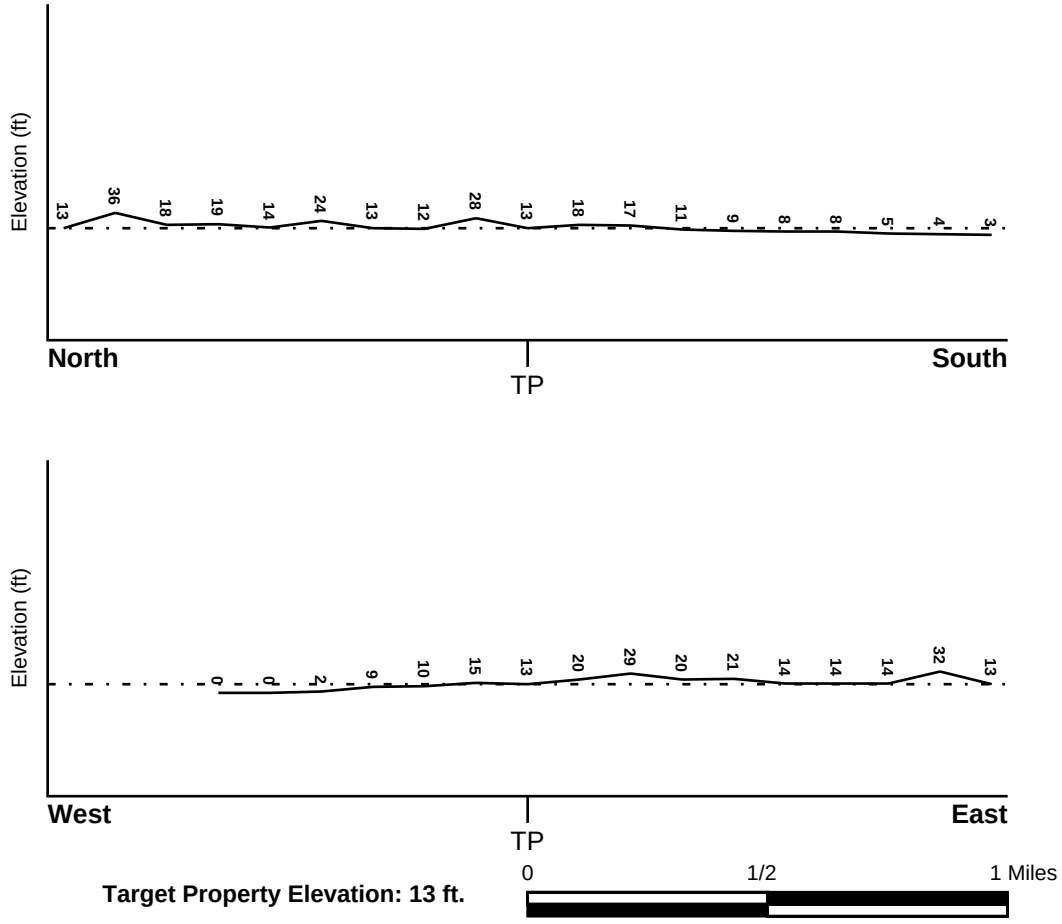
TOPOGRAPHIC INFORMATION

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

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

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

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

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
NEW HANOVER, NC	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 37129C - FEMA DFIRM Flood data

Additional Panels in search area: 37019C - FEMA DFIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CASTLE HAYNE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

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

AQUIFLOW®

Search Radius: 1.000 Mile.

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

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

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

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

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

ROCK STRATIGRAPHIC UNIT

Era:	Mesozoic
System:	Cretaceous
Series:	Navarro Group
Code:	uK4 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

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

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

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

Soil Component Name:	BAYMEADE
Soil Surface Texture:	fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

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

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	36 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 6.50 Min: 4.50
2	36 inches	49 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 6.00 Min: 2.00	Max: 6.50 Min: 4.50
3	49 inches	78 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 6.50 Min: 4.50

OTHER SOIL TYPES IN AREA

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

Soil Surface Textures: loamy fine sand
loam
sand
fine sandy loam
muck
silty clay loam

Surficial Soil Types: loamy fine sand
loam
sand
fine sandy loam
muck
silty clay loam

Shallow Soil Types: sand
sandy loam
fine sand

Deeper Soil Types: sand
loamy sand
sandy loam
fine sand
sandy clay loam
clay
clay loam

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	1.000
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000882156	1/2 - 1 Mile East
3	USGS40000882106	1/2 - 1 Mile SSW
4	USGS40000882181	1/2 - 1 Mile ENE
5	USGS40000882095	1/2 - 1 Mile SSE
B9	USGS40000882231	1/2 - 1 Mile North
B10	USGS40000882232	1/2 - 1 Mile North
11	USGS40000882089	1/2 - 1 Mile South
19	USGS40000882090	1/2 - 1 Mile SE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A8	NC0465191	1/2 - 1 Mile SE
D15	NC0465191	1/2 - 1 Mile SE
D18	NC0465191	1/2 - 1 Mile SE

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

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	NC2000000000376	1/4 - 1/2 Mile NNE
6	NC2000000000369	1/2 - 1 Mile ENE
A7	NC2000000000329	1/2 - 1 Mile SE
C12	NC2000000000331	1/2 - 1 Mile SE
13	NC2000000000361	1/2 - 1 Mile East
C14	NC2000000000332	1/2 - 1 Mile SE
16	NC2000000000384	1/2 - 1 Mile North
D17	NC2000000000330	1/2 - 1 Mile SE

OTHER STATE DATABASE INFORMATION

NORTH CAROLINA NATURAL HERITAGE ELEMENT OCCURRENCES

ID	Class
NC50002414	Plants
NC50002473	Plants
NC50006414	Natural Community Occurrence
NC50006804	Animal
NC50009782	Plants
NC50012587	Natural Community Occurrence
NC50015357	Natural Community Occurrence
NC50015387	Natural Community Occurrence
NC50016198	Animal
NC50016537	Animal
NC50017263	Natural Community Occurrence
NC50018458	Natural Community Occurrence
NC50020075	Animal
NC50020453	Natural Community Occurrence
NC50021379	Animal

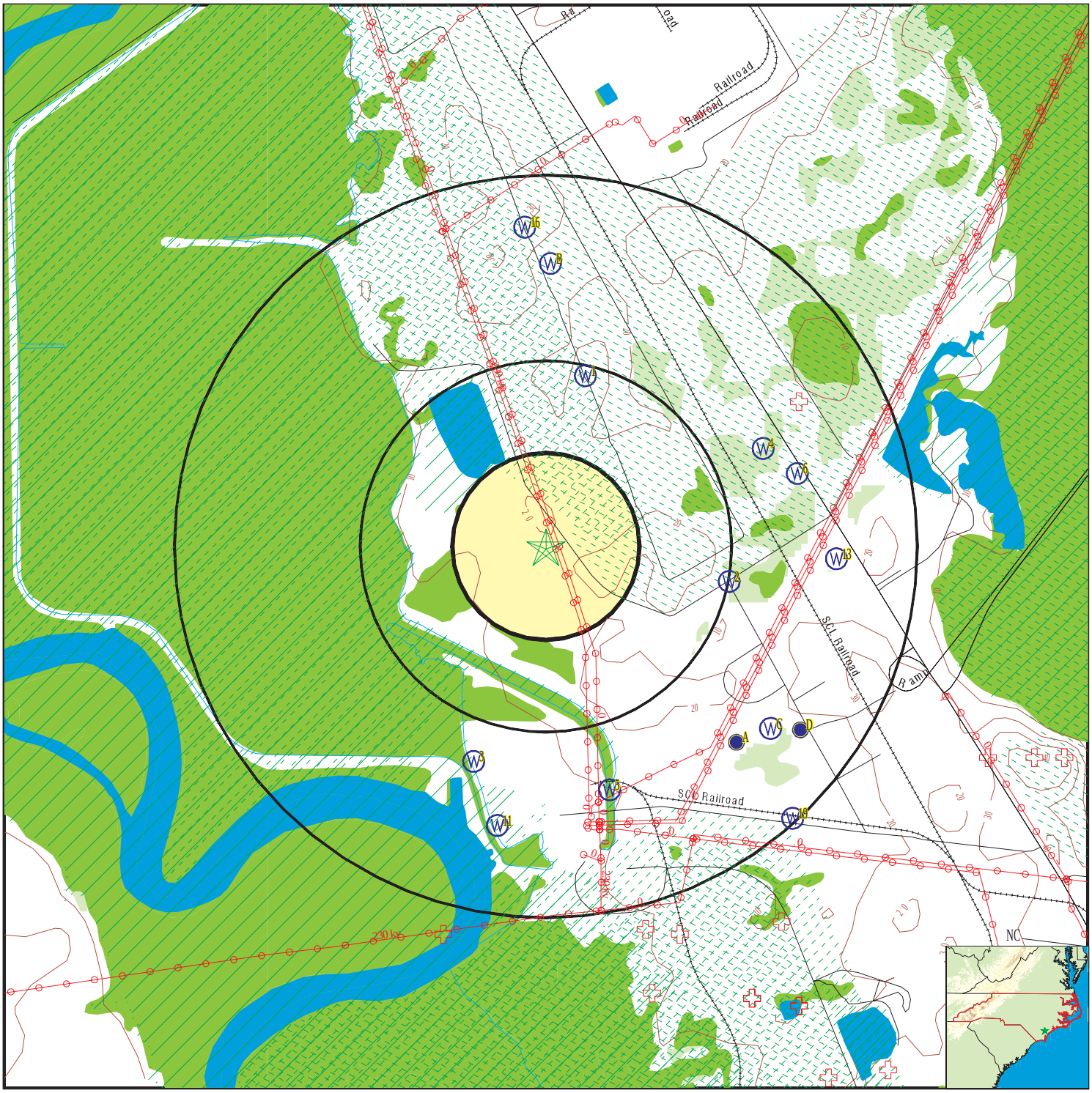
NORTH CAROLINA SIGNIFICANT NATURAL HERITAGE AREAS DATABASE:

ID	Name
NC10002993	421 SAND RIDGE
NC10002996	421 SAND RIDGE
NC10002997	421 SAND RIDGE
NC10003051	BRUNSWICK RIVER/CAPE FEAR RIVER MARSHES
NC10003396	NORTHEAST CAPE FEAR RIVER FLOODPLAIN

NORTH CAROLINA WILDLIFE RESOURCES COMMISSION GAME LANDS DATABASE

Site Name
NC30001513
NC30001514

PHYSICAL SETTING SOURCE MAP - 3887607.1s



- County Boundary
- Major Roads
- Contour Lines
- Power transmission lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Wildlife Areas
- Natural Areas
- Rare & Endangered Species

N

SITE NAME:	Duke Energy - Sutton	CLIENT:	SynTerra
ADDRESS:	801 Sutton Steam Plant Rd. Wilmington NC 28401	CONTACT:	Richard Jacobs
		INQUIRY #:	3887607.1s
LAT/LONG:	34.2944 / 77.9866	DATE:	March 21, 2014 11:22 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **NNE** **1/4 - 1/2 Mile** **Higher**	**NC WELLS**	**NC2000000000376**

Pwsidentif:	NC0465520
System nam:	INVISTA
Pws type:	NTNC
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL G
Facility a:	OOG
Latitude m:	34.301064
Longitude :	-77.984737
Availavili:	A
Well depth:	93
Well dep 1:	FT
Owner name:	INVISTA_465520
Site id:	NC2000000000376

	Database	EDR ID Number
2 **East** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000882156**

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341735077584101		
Monloc name:	NH-711		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	03030007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.2930306
Longitude:	-77.977975	Sourcemap scale:	24000
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	Northern Atlantic Coastal Plain aquifer system		
Formation type:	Peedee Formation		
Aquifer type:	Confined single aquifer		
Construction date:	19991215	Welldepth:	54
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

3
SSW **FED USGS** **USGS40000882106**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341709077592501		
Monloc name:	NH-438 C P AND L CO		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	03030005	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.2860026
Longitude:	-77.98999	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	Surficial aquifer system		
Formation type:	Post Miocene (Quaternary + Pliocene) Rocks		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

4
ENE **FED USGS** **USGS40000882181**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341753077583601		
Monloc name:	NH-723		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	03030007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.2982246
Longitude:	-77.9763785	Sourcemap scale:	24000
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Reported		
Horiz coord refsys:	NAD83	Vert measure val:	14
Vert measure units:	feet	Vertacc measure val:	2.5
Vert accmeasure units:	feet		
Vertcollection method:	Reported		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Northern Atlantic Coastal Plain aquifer system		
Formation type:	Post Miocene (Quaternary + Pliocene) Rocks		

Aquifer type:	Unconfined single aquifer		
Construction date:	Not Reported	Welldepth:	57
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

5
SSE **FED USGS** **USGS40000882095**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341705077590201		
Monloc name:	NH-108 CAROLINA POWER		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	03030005	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.2848915
Longitude:	-77.9836009	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	10
Vert measure units:	feet	Vertacc measure val:	1
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Surficial aquifer system		
Formation type:	Post Miocene (Quaternary + Pliocene) Rocks		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

6
ENE **NC WELLS** **NC2000000000369**
1/2 - 1 Mile
Higher

Pwsidentif:	NC0465623
System nam:	ROYS BAIT & TACKLE SHOP
Pws type:	NC
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL #1
Facility a:	S01
Latitude m:	34.297245
Longitude :	-77.974771
Availavili:	A
Well depth:	40
Well dep 1:	FT
Owner name:	MARLEY, ROY
Site id:	NC2000000000369

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
NC WELLS	**NC2000000000329**

A7
SE
1/2 - 1 Mile
Higher

Pwsidentif:	NC0465191
System nam:	CFPUA/ NHC-421
Pws type:	C
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL #2
Facility a:	W02
Latitude m:	34.286667
Longitude :	-77.977778
Availavili:	A
Well depth:	50
Well dep 1:	FT
Owner name:	CAPE FEAR PUBLIC UTILITY AUTHORITY
Site id:	NC2000000000329

A8
SE
1/2 - 1 Mile
Higher

FRDS PWS **NC0465191**

Pwsid:	NC0465191	Epa region:	04
State:	NC	County:	New Hanover
Pws name:	NEW HANOVER CO--421 SECTION		
Population Served:	400	Pwssvcconn:	73
PWS Source:	Groundwater		
Pws type:	CWS		
Status:	Active	Owner type:	Local_Govt
Facility id:	65826		
Facility name:	COMMON HEADER		
Facility type:	Common_headers	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Contact name:	THOMPSON, GREG		
Original name:	THOMPSON, GREG		
Contact phone:	910-798-7139	Contact address1:	230 MARKETPLACE DR SUITE 160
Contact address2:	Not Reported		
Contact city:	WILMINGTON		
Contact zip:	28403-1672		
Facility id:	9347		
Facility name:	TREATMENT_PLT_WELLS #2,3,4		
Facility type:	Treatment_plant	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	2136		
Facility name:	STORAGE_HYDRO_1		
Facility type:	Storage	Treatment process:	ph adjustment
Treatment objective:	corrosion control		

Facility id:	35495		
Facility name:	WELL #1 (ABANDONED)		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35496		
Facility name:	WELL #2		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35497		
Facility name:	WELL #3		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35498		
Facility name:	WELL #4		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	505		
Facility name:	STORAGE_ELEVATED_1		
Facility type:	Storage	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	60512		
Facility name:	DISTRIBUTION SYSTEM		
Facility type:	Distribution_system_zone	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	65826		
Facility name:	COMMON HEADER		
Facility type:	Common_headers	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	9347		
Facility name:	TREATMENT_PLT_WELLS #2,3,4		
Facility type:	Treatment_plant	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	2136		
Facility name:	STORAGE_HYDRO_1		
Facility type:	Storage	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	35495		
Facility name:	WELL #1 (ABANDONED)		
Facility type:	Well	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	35496		
Facility name:	WELL #2		
Facility type:	Well	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		

Facility id: 35497
Facility name: WELL #3
Facility type: Well Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 35498
Facility name: WELL #4
Facility type: Well Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 505
Facility name: STORAGE_ELEVATED_1
Facility type: Storage Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 60512
Facility name: DISTRIBUTION SYSTEM
Facility type: Distribution_system_zone Treatment process: gaseous chlorination, post
Treatment objective: disinfection

PWS ID: NC0465191
Date Initiated: Not Reported Date Deactivated: Not Reported
PWS Name: NEW HANOVER COUNTY WATER
WILMINGTON, NC 28401

Addressee / Facility: System Owner/Responsible Party
RAY CHURCH OR MANAGER NOW
3002 HWY 421 NORTH
WILMINGTON, NC 28401

Addressee / Facility: System Owner/Responsible Party
NEW HANOVER COUNTY
3002 HWY 421 NORTH
WILMINGTON, NC 28401

Facility Latitude: 34 17 12.0000 Facility Longitude: 77 58 40.0000
Facility Latitude: 34 17 13.0000 Facility Longitude: 77 58 28.0000
Facility Latitude: 34 17 15.0000 Facility Longitude: 77 58 32.0000
City Served: WILMINGTON
Treatment Class: Treated Population: 300

Violations information not reported.

ENFORCEMENT INFORMATION:

System Name: NEW HANOVER CO WATER-421 S
Violation Type: CCR Inadequate Reporting
Contaminant: 7000
Compliance Period: 2000-01-19 - 2015-12-31
Violation ID: 0005835
Enforcement Date: Not Reported Enf. Action: Not Reported

B9
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000882231**

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341819077591201		
Monloc name:	NH-536 HERCOFINA WELL P-1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3054467
Longitude:	-77.9863789	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	16
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Northern Atlantic Coastal Plain aquifer system		
Formation type:	Peedee Formation		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	96
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

B10
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000882232**

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341819077591202		
Monloc name:	NH-746		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	03030007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3054467
Longitude:	-77.9863789	Sourcemap scale:	24000
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Reported		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	Northern Atlantic Coastal Plain aquifer system		
Formation type:	Peedee Formation		
Aquifer type:	Confined single aquifer		
Construction date:	Not Reported	Welldepth:	0
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

11
South
1/2 - 1 Mile
Lower | **FED USGS** | **USGS40000882089**

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341700077592101		
Monloc name:	NH-670		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	03030007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.2835026
Longitude:	-77.9888789	Sourcemap scale:	24000
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Reported		
Horiz coord refsys:	NAD83	Vert measure val:	11
Vert measure units:	feet	Vertacc measure val:	2.5
Vert accmeasure units:	feet		
Vertcollection method:	Reported		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Northern Atlantic Coastal Plain aquifer system		
Formation type:	Post Miocene (Quaternary + Pliocene) Rocks		
Aquifer type:	Unconfined single aquifer		
Construction date:	Not Reported	Welldepth:	50
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

C12
SE
1/2 - 1 Mile
Higher | **NC WELLS** | **NC2000000000331**

Pwsidentif:	NC0465191
System nam:	CFPUA/ NHC-421
Pws type:	C
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL #4
Facility a:	W04
Latitude m:	34.287083
Longitude :	-77.9765
Availavili:	A
Well depth:	55
Well dep 1:	FT
Owner name:	CAPE FEAR PUBLIC UTILITY AUTHORITY
Site id:	NC2000000000331

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

13
East
1/2 - 1 Mile
Higher

NC WELLS **NC2000000000361**

Pwsidentif:	NC7065033
System nam:	STRAIGHTWAY MINISTRIES INC
Pws type:	NC
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL #1
Facility a:	S01
Latitude m:	34.293917
Longitude :	-77.972931
Availavili:	A
Well depth:	80
Well dep 1:	FT
Owner name:	MILLER BUILDING CORP
Site id:	NC2000000000361

C14
SE
1/2 - 1 Mile
Higher

NC WELLS **NC2000000000332**

Pwsidentif:	NC0465191
System nam:	CFPUA/ NHC-421
Pws type:	C
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL #3
Facility a:	W03
Latitude m:	34.2875
Longitude :	-77.975556
Availavili:	A
Well depth:	55
Well dep 1:	FT
Owner name:	CAPE FEAR PUBLIC UTILITY AUTHORITY
Site id:	NC2000000000332

D15
SE
1/2 - 1 Mile
Higher

FRDS PWS **NC0465191**

Pwsid:	NC0465191	Epa region:	04
State:	NC	County:	New Hanover
Pws name:	NEW HANOVER CO--421 SECTION		
Population Served:	400	Pwssvcconn:	73
PWS Source:	Groundwater		
Pws type:	CWS		
Status:	Active	Owner type:	Local_Govt
Facility id:	65826		
Facility name:	COMMON HEADER		
Facility type:	Common_headers	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		

Contact name:	THOMPSON, GREG		
Original name:	THOMPSON, GREG		
Contact phone:	910-798-7139	Contact address1:	230 MARKETPLACE DR SUITE 160
Contact address2:	Not Reported		
Contact city:	WILMINGTON		
Contact zip:	28403-1672		
Facility id:	9347		
Facility name:	TREATMENT_PLT_WELLS #2,3,4		
Facility type:	Treatment_plant	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	2136		
Facility name:	STORAGE_HYDRO_1		
Facility type:	Storage	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35495		
Facility name:	WELL #1 (ABANDONED)		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35496		
Facility name:	WELL #2		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35497		
Facility name:	WELL #3		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35498		
Facility name:	WELL #4		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	505		
Facility name:	STORAGE_ELEVATED_1		
Facility type:	Storage	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	60512		
Facility name:	DISTRIBUTION SYSTEM		
Facility type:	Distribution_system_zone	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	65826		
Facility name:	COMMON HEADER		
Facility type:	Common_headers	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	9347		
Facility name:	TREATMENT_PLT_WELLS #2,3,4		
Facility type:	Treatment_plant	Treatment process:	ph adjustment
Treatment objective:	corrosion control		

Facility id: 2136
Facility name: STORAGE_HYDRO_1
Facility type: Storage
Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 35495
Facility name: WELL #1 (ABANDONED)
Facility type: Well
Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 35496
Facility name: WELL #2
Facility type: Well
Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 35497
Facility name: WELL #3
Facility type: Well
Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 35498
Facility name: WELL #4
Facility type: Well
Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 505
Facility name: STORAGE_ELEVATED_1
Facility type: Storage
Treatment process: gaseous chlorination, post
Treatment objective: disinfection

Facility id: 60512
Facility name: DISTRIBUTION SYSTEM
Facility type: Distribution_system_zone
Treatment process: gaseous chlorination, post
Treatment objective: disinfection

PWS ID: NC0465191
Date Initiated: Not Reported Date Deactivated: Not Reported
PWS Name: NEW HANOVER COUNTY WATER
WILMINGTON, NC 28401

Addressee / Facility: System Owner/Responsible Party
RAY CHURCH OR MANAGER NOW
3002 HWY 421 NORTH
WILMINGTON, NC 28401

Addressee / Facility: System Owner/Responsible Party
NEW HANOVER COUNTY
3002 HWY 421 NORTH
WILMINGTON, NC 28401

Facility Latitude: 34 17 12.0000 Facility Longitude: 77 58 40.0000
Facility Latitude: 34 17 13.0000 Facility Longitude: 77 58 28.0000
Facility Latitude: 34 17 15.0000 Facility Longitude: 77 58 32.0000
City Served: WILMINGTON
Treatment Class: Treated Population: 300

Violations information not reported.

ENFORCEMENT INFORMATION:

System Name:	NEW HANOVER CO WATER-421 S		
Violation Type:	CCR Inadequate Reporting		
Contaminant:	7000		
Compliance Period:	2000-01-19 - 2015-12-31		
Violation ID:	0005835		
Enforcement Date:	Not Reported	Enf. Action:	Not Reported

16
North **NC WELLS** **NC2000000000384**
1/2 - 1 Mile
Higher

Pwsidentif:	NC0465520
System nam:	INVISTA
Pws type:	NTNC
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL #OH2
Facility a:	OH2
Latitude m:	34.306865
Longitude :	-77.987592
Availavili:	A
Well depth:	90
Well dep 1:	FT
Owner name:	INVISTA_465520
Site id:	NC2000000000384

D17
SE **NC WELLS** **NC2000000000330**
1/2 - 1 Mile
Higher

Pwsidentif:	NC0465191
System nam:	CFPUA/ NHC-421
Pws type:	C
County:	NEW HANOVER
City:	WILMINGTON
Primary so:	GW
Water type:	GW
Facility n:	WELL #1
Facility a:	W01
Latitude m:	34.286944
Longitude :	-77.974444
Availavili:	I
Well depth:	45
Well dep 1:	FT
Owner name:	CAPE FEAR PUBLIC UTILITY AUTHORITY
Site id:	NC2000000000330

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D18
SE
1/2 - 1 Mile
Higher

FRDS PWS **NC0465191**

Pwsid:	NC0465191	Epa region:	04
State:	NC	County:	New Hanover
Pws name:	NEW HANOVER CO--421 SECTION		
Population Served:	400	Pwssvcconn:	73
PWS Source:	Groundwater		
Pws type:	CWS		
Status:	Active	Owner type:	Local_Govt
Facility id:	65826		
Facility name:	COMMON HEADER		
Facility type:	Common_headers	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Contact name:	THOMPSON, GREG		
Original name:	THOMPSON, GREG		
Contact phone:	910-798-7139	Contact address1:	230 MARKETPLACE DR SUITE 160
Contact address2:	Not Reported		
Contact city:	WILMINGTON		
Contact zip:	28403-1672		
Facility id:	9347		
Facility name:	TREATMENT_PLT_WELLS #2,3,4		
Facility type:	Treatment_plant	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	2136		
Facility name:	STORAGE_HYDRO_1		
Facility type:	Storage	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35495		
Facility name:	WELL #1 (ABANDONED)		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35496		
Facility name:	WELL #2		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35497		
Facility name:	WELL #3		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	35498		
Facility name:	WELL #4		
Facility type:	Well	Treatment process:	ph adjustment
Treatment objective:	corrosion control		

Facility id:	505		
Facility name:	STORAGE_ELEVATED_1		
Facility type:	Storage	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	60512		
Facility name:	DISTRIBUTION SYSTEM		
Facility type:	Distribution_system_zone	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	65826		
Facility name:	COMMON HEADER		
Facility type:	Common_headers	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	9347		
Facility name:	TREATMENT_PLT_WELLS #2,3,4		
Facility type:	Treatment_plant	Treatment process:	ph adjustment
Treatment objective:	corrosion control		
Facility id:	2136		
Facility name:	STORAGE_HYDRO_1		
Facility type:	Storage	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	35495		
Facility name:	WELL #1 (ABANDONED)		
Facility type:	Well	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	35496		
Facility name:	WELL #2		
Facility type:	Well	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	35497		
Facility name:	WELL #3		
Facility type:	Well	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	35498		
Facility name:	WELL #4		
Facility type:	Well	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	505		
Facility name:	STORAGE_ELEVATED_1		
Facility type:	Storage	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		
Facility id:	60512		
Facility name:	DISTRIBUTION SYSTEM		
Facility type:	Distribution_system_zone	Treatment process:	gaseous chlorination, post
Treatment objective:	disinfection		

PWS ID:	NC0465191		
Date Initiated:	Not Reported	Date Deactivated:	Not Reported
PWS Name:	NEW HANOVER COUNTY WATER WILMINGTON, NC 28401		
Addressee / Facility:	System Owner/Responsible Party RAY CHURCH OR MANAGER NOW 3002 HWY 421 NORTH WILMINGTON, NC 28401		
Addressee / Facility:	System Owner/Responsible Party NEW HANOVER COUNTY 3002 HWY 421 NORTH WILMINGTON, NC 28401		
Facility Latitude:	34 17 12.0000	Facility Longitude:	77 58 40.0000
Facility Latitude:	34 17 13.0000	Facility Longitude:	77 58 28.0000
Facility Latitude:	34 17 15.0000	Facility Longitude:	77 58 32.0000
City Served:	WILMINGTON		
Treatment Class:	Treated	Population:	300

Violations information not reported.

ENFORCEMENT INFORMATION:

System Name:	NEW HANOVER CO WATER-421 S		
Violation Type:	CCR Inadequate Reporting		
Contaminant:	7000		
Compliance Period:	2000-01-19 - 2015-12-31		
Violation ID:	0005835		
Enforcement Date:	Not Reported	Enf. Action:	Not Reported

19
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000882090**

Org. Identifier:	USGS-NC		
Formal name:	USGS North Carolina Water Science Center		
Monloc Identifier:	USGS-341701077583101		
Monloc name:	NH-673		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	03030007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.2837804
Longitude:	-77.9749894	Sourcemap scale:	24000
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Reported		
Horiz coord refsys:	NAD83	Vert measure val:	18
Vert measure units:	feet	Vertacc measure val:	2.5
Vert accmeasure units:	feet		
Vertcollection method:	Reported		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Northern Atlantic Coastal Plain aquifer system		
Formation type:	Post Miocene (Quaternary + Pliocene) Rocks		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Aquifer type:	Unconfined single aquifer		
Construction date:	Not Reported	Welldepth:	57
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

NC_WILD NC30001513

Site Name:	Sutton Lake		
Owner:	Carolina Power & Light		
Site Type:	Restricted Firearms Zone	Acres:	1729.4912109375
Status:	PRV	County:	NEW HANOVER

NC_WILD NC30001514

Site Name:	Sutton Lake		
Owner:	Carolina Power & Light		
Site Type:	Archery Zone	Acres:	1530.55102539063
Status:	PRV	County:	NEW HANOVER

NC_NHEO NC50002414

GIS ID:	21861
Classification by Type:	Plants
Occurrence Status:	Historic, no evidence of destruction

NC_NHEO NC50002473

GIS ID:	12167
Classification by Type:	Plants
Occurrence Status:	Extant

NC_NHEO NC50006414

GIS ID:	11482
Classification by Type:	Natural Community Occurrence
Occurrence Status:	Extant

NC_NHEO NC50006804

GIS ID:	511811
Classification by Type:	Animal
Occurrence Status:	Extant

Map ID
Direction
Distance

Database EDR ID Number

NC_NHEO NC50009782

GIS ID: 141763
Classification by Type: Plants
Occurrence Status: Extant

NC_NHEO NC50012587

GIS ID: 11128
Classification by Type: Natural Community Occurrence
Occurrence Status: Extant

NC_NHEO NC50015357

GIS ID: 262442
Classification by Type: Natural Community Occurrence
Occurrence Status: Extant

NC_NHEO NC50015387

GIS ID: 181166
Classification by Type: Natural Community Occurrence
Occurrence Status: Extant

NC_NHEO NC50016198

GIS ID: 472861
Classification by Type: Animal
Occurrence Status: Extant

NC_NHEO NC50016537

GIS ID: 402050
Classification by Type: Animal
Occurrence Status: Extant

NC_NHEO NC50017263

North Carolina Locations of Natural Heritage Element Occurrence Sites:

GIS ID: 222185
Classification by Type: Natural Community Occurrence
Occurrence Status: Extant

NC_NHEO NC50018458

GIS ID: 781482
Classification by Type: Natural Community Occurrence
Occurrence Status: Extant

NC_NHEO NC50020075

GIS ID: 121714
Classification by Type: Animal
Occurrence Status: Extant

NC_NHEO NC50020453

GIS ID: 222185
Classification by Type: Natural Community Occurrence
Occurrence Status: Extant

NC_NHEO NC50021379

GIS ID: 783166
Classification by Type: Animal
Occurrence Status: Extant

NC_SNHA NC10002993

Site Name: 421 SAND RIDGE
Quality: SECONDARY
Acres per Polygon: 163.54

NC_SNHA NC10002996

Site Name: 421 SAND RIDGE
Quality: PRIMARY
Acres per Polygon: 1232.48

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

NC_SNHA NC10002997

Site Name: 421 SAND RIDGE
Quality: PRIMARY
Acres per Polygon: 188.46

NC_SNHA NC10003051

Site Name: BRUNSWICK RIVER/CAPE FEAR RIVER MARSHES
Quality: Not Reported
Acres per Polygon: 3872.88

NC_SNHA NC10003396

Site Name: NORTHEAST CAPE FEAR RIVER FLOODPLAIN
Quality: Not Reported
Acres per Polygon: 25679.23

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for NEW HANOVER County: 3

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

Federal Area Radon Information for NEW HANOVER COUNTY, NC

Number of sites tested: 10

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.240 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Environment & Natural Resources
Telephone: 919-733-2090

HYDROGEOLOGIC INFORMATION

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

GEOLOGIC INFORMATION

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

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

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

North Carolina Public Water Supply Wells
Source: Department of Environmental Health
Telephone: 919-715-3243

OTHER STATE DATABASE INFORMATION

NC Natural Areas: Significant Natural Heritage Areas
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
A polygon converage identifying sites (terrestrial or aquatic that have particular biodiversity significance. A site's significance may be due to the presenceof rare species, rare or hight quality natural communities, or other important ecological features.

NC Game Lands: Wildlife Resources Commission Game Lands
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
All publicly owned game lands managed by the North Carolina Wildlife Resources Commission and as listed in Hunting and Fishing Maps.

NC Natural Heritage Sites: Natural Heritage Element Occurrence Sites
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
A point coverage identifying locations of rare and endangered species, occurrences of exemplary or unique natural ecosystems (terrestrial or aquatic), and special animal habitats (e.g., colonial waterbird nesting sites).

RADON

State Database: NC Radon
Source: Department of Environment & Natural Resources
Telephone: 919-733-4984
Radon Statistical and Non Statiscal Data

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION